

OCF Resource Type Specification

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1945 **1 Scope**

1946 The OCF Resource Type Specification specifies the Resources that have been defined by OCF
1947 that may be exposed by an OCF Device.

1948 Application profile device specifications (for example those created for Smart Home or Healthcare)
1949 specify device types appropriate to the profile; such specifications use Resource Type definitions
1950 from this document.

1951 This specification is built on top of the OCF Core Specification. The OCF Core Specification
1952 specifies the OCF Framework that enables the implementation of profiles for IoT usages and
1953 ecosystems. The OCF Core Framework is scalable to support simple devices (constrained device)
1954 and more capable devices (smart device).

1955 **2 Normative references**

1956 The following documents, in whole or in part, are normatively referenced in this document and are
1957 indispensable for its application. For dated references, only the edition cited applies. For undated
1958 references, the latest edition of the referenced document (including any amendments) applies.

1959 OCF Core Specification, *Open Connectivity Foundation Core Specification*, Version 1.3.0.
1960 Available at: https://openconnectivity.org/specs/OCF_Core_Specification_v1.3.0.pdf
1961 Latest version available at: https://openconnectivity.org/specs/OCF_Core_Specification.pdf

1962 JSON SCHEMA, *JSON Schema: Core Definitions and Terminology*, Version 4.0,
1963 <http://json-schema.org/latest/json-schema-core.html>.

1964 RAML, *Restful API modelling language*, Version 0.8.
1965 <https://github.com/raml-org/raml-spec/blob/master/raml-0.8.md>

1966 ISO 8601:2004, *Data elements and interchange formats – information interchange –*
1967 *Representation of dates and times*.

1968 CIE CIE159:2004, *A colour appearance model for colour management systems: CIECAM02*,
1969 January 19, 2004.
1970 http://www.cie.co.at/index.php/Publications/index.php?i_ca_id=435

1971

1972 **3 Terms, definitions, symbols and abbreviations**

1973 **3.1 Terms and definitions**

1974 **3.1.1**

1975 **Actuator**

1976 Resource with support of the UPDATE operation.

1977 **3.1.2**

1978 **Composite Resource Type**

1979 A Resource Type defined as an OCF Collection of other Resource Types.

1980 **3.1.3**

1981 **Sensor**

1982 Resource without support of the UPDATE operation.

- 1983 **3.2 Symbols and abbreviations**
- 1984 **3.2.1**
- 1985 **CRUDN**
- 1986 Create Retrieve Update Delete Notify
- 1987 This is an acronym indicating which operations are possible on the Resource.
- 1988 **3.2.2**
- 1989 **CSV**
- 1990 Comma Separated Value List
- 1991 Comma Separated Value List is a construction to have more fields in 1 string separated by commas.
- 1992 If a value contains a comma then the comma can be escaped by adding “\” in front of the comma.
- 1993 **3.2.3**
- 1994 **OCF**
- 1995 Open Connectivity Foundation
- 1996 OCF is the standards organization which created and owns this specification.
- 1997 **3.2.4**
- 1998 **RAML**
- 1999 RESTful API modelling language
- 2000 RAML is a simple and succinct way of describing RESTful APIs. See RAML for further details.
- 2001 **3.2.5**
- 2002 **REST**
- 2003 Representational State Transfer
- 2004 REST is an architecture style for designing networked applications and relies on a stateless, client-server, cacheable communications protocol.
- 2005
- 2006 **3.2.6**
- 2007 **TBD**
- 2008 To Be Determined
- 2009 **3.3 Conventions**
- 2010 In this specification a number of terms, conditions, mechanisms, sequences, parameters, events,
- 2011 states, or similar terms are printed with the first letter of each word in uppercase and the rest
- 2012 lowercase (e.g., Resource Type). Any lowercase uses of these words have the normal technical
- 2013 English meaning.
- 2014 **4 Document conventions and organization**
- 2015 This document lists all the Resource Types currently specified by OCF. The Resources are used
- 2016 by application profile device definitions. The Resource Types mentioned in this document can be
- 2017 used by any OCF conforming device in any OCF Collection or device representation.
- 2018 For the purposes of this document, the terms and definitions given in OCF Core Specification apply.
- 2019 **4.1 Notation**
- 2020 In this document, features are described as required, recommended, allowed or DEPRECATED as
- 2021 follows:
- 2022 Required (or shall or mandatory).
- 2023 These basic features shall be implemented to comply with OCF Resource Type Specification.
- 2024 The phrases “shall not”, and “PROHIBITED” indicate behaviour that is prohibited, i.e. that if
- 2025 performed means the implementation is not in compliance.
- 2026 Recommended (or should).

2027 These features add functionality supported by the OCF Resource Type Specification and
2028 should be implemented. Recommended features take advantage of the capabilities of the OCF
2029 Resource Type Specification, usually without imposing major increase of complexity. Notice
2030 that for compliance testing, if a recommended feature is implemented, it shall meet the
2031 specified requirements to be in compliance with these guidelines. Some recommended features
2032 could become requirements in the future. The phrase “should not” indicates behaviour that is
2033 permitted but not recommended.

2034 Allowed (or allowed).

2035 These features are neither required nor recommended by OCF Resource Type Specification,
2036 but if the feature is implemented, it shall meet the specified requirements to be in compliance
2037 with these guidelines.

2038 DEPRECATED

2039 Although these features are still described in this specification, they should not be implemented
2040 except for backward compatibility. The occurrence of a deprecated feature during operation of
2041 an implementation compliant with the current specification has no effect on the
2042 implementation’s operation and does not produce any error conditions. Backward compatibility
2043 may require that a feature is implemented and functions as specified but it shall never be used
2044 by implementations compliant with this specification.

2045 Conditionally allowed (CA)

2046 The definition or behaviour depends on a condition. If the specified condition is met, then the
2047 definition or behaviour is allowed, otherwise it is not allowed.

2048 Conditionally required (CR)

2049 The definition or behaviour depends on a condition. If the specified condition is met, then the
2050 definition or behaviour is required. Otherwise the definition or behaviour is allowed as default
2051 unless specifically defined as not allowed.

2052 Strings that are to be taken literally are enclosed in “double quotes”.

2053 Words that are emphasized are printed in *italic*.

2054 **4.2 Data types**

2055 This specification adopts the types defined in the OCF Core Specification with the exceptions
2056 defined in this Section

2057 All Properties in this specification that are defined as JSON number type shall be transmitted
2058 encoded as floating point values and not integer values. Reception of Properties defined as JSON
2059 number type shall be as defined in the OCF Core Specification. See OCF Core Specification
2060 Section 12.3 for specifics.

2061 **5 Baseline Model Constructs**

2062 **5.1 URI**

2063 The URIs mentioned in this document are non-normative, they may be vendor defined.

2064 An Instance of a Resource is indicated by the URI. When more than one instance of the same
2065 Resource Type is used in an OCF Device, different URIs for the different Resource instances shall
2066 be used.

2067 An implementation shall follow the requirements defined in the OCF Core Specification with respect
2068 to population of the URI. Please refer to the OCF Core Specification Sections 6.2 and 6.3 for
2069 specific details.

2070 **5.2 Interfaces**

2071 The OCF Core Specification specifies that all Resource Types have associated with them at least
2072 one Interface; this Interface is advertised during Resource discovery. In addition the OCF Core
2073 Specification defines a number of Interfaces that can be applied to an instance of a Resource Type.

2074 The Default Interface associated with all Resource Types defined in this specification shall be the
2075 supported interface listed first within the applicable enumeration in the definition of the Resource
2076 Type (see Section 6 Resource Type definitions); with an exception being when a Resource Type
2077 definition has either Sensor or Actuator interfaces as the Default Interface, in this instance an
2078 implementation shall select one of them as the default. Thus a Server hosting such a Resource
2079 Type shall enable either oic.if.s (if a Sensor) or oic.if.a (if an Actuator) as the Interface that is
2080 exposed via "/oic/res" in addition to the mandated baseline interface ("oic.if.baseline"). A Server
2081 may also support other Interfaces in addition to the one specified as the default.

2082 The difference between using sensor/actuator and read/write interfaces is due to the fact that a
2083 sensor/actuator interface describes an action that has immediate effect on the device, either by
2084 reading the sensed value and putting the value on the wire, or as an UPDATE action that something
2085 needs to happen (e.g. actuate) on the device. The read/write interface is typically used to set a
2086 settings value on the device that might be used later when an action occurs. A typical example is
2087 setting the coffee strength that will be used when the coffee is brewed.

2088 **5.2.1 Restricting Interface Functionality**

2089 Note that the functionality associated with, or visibility of, an instance of any Resource exposed
2090 by a Device may be restricted depending upon local (per country or legislative region) regulatory
2091 requirements or other restrictions (e.g. with respect to Binary Switch in some jurisdictions the
2092 ability to remotely power on a connected device is restricted; a lock status could be read-only
2093 depending on the context)..

2094 The actual implementation of a resource can be limited by:

- 2095 • Not implementing the optional properties defined in the payload of a CRUDN operation.
- 2096 • Removing CRUDN operations

2097 If an UPDATE operation of a resource that can be actuated is not implemented, this change in
2098 behaviour is indicated by changing the interfaces accordingly.

2099 When the resource is defined with the interface "oic.if.a", and the UPDATE operation is removed
2100 then the interface listed is "oic.if.s".

2101 When the resource is defined with the interface "oic.if.rw", and the UPDATE operation is removed
2102 then the interface listed is "oic.if.r".

2103 **5.3 RAML definition**

2104 The RAML definitions used in this document are normative. By extension all defined JSON
2105 payloads shall comply with the indicated JSON schema. Note that the defined schemas have
2106 extensions that include all OCF Core Specification defined (and mandated) Properties.

2107 The RAML definitions are used to describe the payloads of the CRUDN operations on the specified
2108 Resource Type. The CRUDN operations are defined in the OCF Core Specification. The OCF Core
2109 Specification also specifies additional Properties in the payloads of the CRUDN operations. The
2110 RAML definitions in this document are not of themselves sufficient to create an implementation,
2111 additional Properties defined in the Core specification need to be added to create a compliant
2112 implementation. This specification makes use of a subset of the responses supported by RAML
2113 specifics on the use of these responses are defined in Table 4 Return codes behaviour in RAML.

2114 Note that the actual values of success and error conditions are defined in the OCF Core
 2115 Specification.

2116 The RAML definitions map the OCF CRUDN behaviour to the RAML as defined in Table .

2117 **Table 1 Conversion between OCF CRUDN and RAML definitions¹**

Resource	Create	Retrieve	Update	Delete	Notify
/example	post	get	post	delete	

2118 Notify is not part of an RAML definition but is defined in the Core specification. The semantics of
 2119 a Notify are the same as the CRUDN Read value. All Resource Types defined in this specification
 2120 support notification via the use of observe as defined in OCF Core Specification Section 11.4.2.

2121 **5.4 Property definition**

2122 **5.4.1 Common Properties**

2123 The OCF Core Specification specifies a number of Properties that may be defined for OCF
 2124 Resources. The Common Properties “if” and “rt” shall be specified for all Resource Types defined
 2125 in this specification; they are exposed within the OCF Core Specification defined /oic/res/ Resource
 2126 Type through which the OCF Server and its available Resources are discovered. The Common
 2127 Properties “p” and “n” may be specified for all Resource Types defined in this specification.

2128 If an OCF Client requires that these Properties be included in a Resource representation that is
 2129 provided in response to a RETRIEVE operation then the client shall select the OCF Core
 2130 Specification defined baseline interface (oic.if.baseline) by specifying this in a query parameter.

2131 **Table 2 Common Properties for OCF Resources**

Property Name	Property Title	Property Value	Value Type	Access Modes	Description
if	Interface	See OCF Core Specification Section 7.6.2	Array of string	Readonly	Core defined; Interface(s) supported by the Resource
rt	Resource type	See OCF Core Specification Section 7.4	Array of string	Readonly	Core defined; Resource type. The Resource Types are defined in this document. See Section 6
n	Name	See OCF Core Specification Section 7.3.2.5	string	Readonly	Core defined; human understandable name for the Resource.
id	Resource Identity	See OCF Core Specification Section 7.3.2.6	string	Readonly	Core defined; Unique identifier of the Resource (over all Resources in the OCF device)

2132

¹ Please refer to OCF Core Specification Table 26 for detailed semantics around the appropriate use of CoAP request methods

2133 **5.4.2 Resource Properties**

2134 The Properties against which the CRUDN operations are specified are defined with JSON schemas
 2135 (see JSON SCHEMA).

2136 A basic Resource Type is formulated around one single value denoting a physical property.

2137 Such a Resource Type is specified with the Properties as defined Table 3. Mandatory in the table
 2138 means that the Property shall be defined as part of the overall Resource Type schema; actual
 2139 inclusion of the Property as part of a returned or generated payload is dependent upon the schema
 2140 that applies to the operation being invoked.

2141 **Table 3 Property definitions of a Resource Type in the JSON schema**

2142

Property Name	Friendly Alias Name	Property Value	Value Type	Value Rules	Access Modes	Mandatory	Description
<code><value>, name may change dependent on the Resource</code>	<value>, name may change dependent on the Resource	Dependent on the Resource	Dependent on the Resource	Dependent on the Resource	Dependent on the Resource	yes	The current value of the Resource
<code>range</code>	Range	[Min,Max]	array	Linear range	Read-only	no	Range of input values, specified as a two element array.
<code>step</code>	Step	Dependent on the Resource	Integer or Number	Dependent on the Resource	Read-only	no	Step value across the defined range
<code>precision</code>	Precision	Dependent on the Resource	Number	Dependent on the Resource	Read-only	no	Accuracy granularity of the exposed value

2143

2144 For Resources, which by their nature have more than one physical parameter, the value Property
 2145 can be replaced with multiple Properties specifying the different physical parameters. The type of
 2146 the value shall be indicated in the RAML definition of the Resource Type and should be suitable
 2147 for the conveyed value. All Property Names and Property Values defined in this specification are
 2148 case sensitive.

2149 **5.4.3 Basic Resource Schema**

2150 All Resource Types defined herein are represented as previously noted by JSON schemas. The
 2151 RAML definitions of the Resource Types embed the Resource Type specific schema elements.

2152 **5.4.4 CRUDN Operation Response Codes**

2153 A Resource can be created or updated depending on the Resource Type definition and the allowed
 2154 CRUDN operations. The operation may have different response codes with different meanings.
 2155 This is explained in Table 4.

2156 **Table 4 Return codes behaviour in RAML**

Response Code	Meaning
200	<p>Payload of the response will confirm the change.</p> <p>The RAML definition will contain a schema to define the payload.</p>
201	<p>Payload is the URL of the Resource that was created by the server as a result of a CREATE operation.</p> <p>The RAML definition will contain schema to define the payload.</p>
204	<p>Ok, everything went well, no payload provided.</p> <p>The RAML definition does not contain a schema.</p> <p>The RAML definition may even omit this value, since it is regarded as default behaviour of an OCF Server.</p>
403	<p>Case 1:</p> <p>In the case of a RETRIEVE on a Resource with the use of a query parameter selecting specific Property values; if the server does not support the values provided then this response should be returned.</p> <p>The response payload should include the allowed values for the query parameter.</p> <p>Case 2:</p> <p>The server could not CREATE or UPDATE the Resource due to a problem with the provided payload.</p> <p>For an UPDATE, unless otherwise stated in the Resource Type definition, the response payload should include the same schema defined for a 200; indicating the current Resource Property value(s).</p>

2157 **5.5 Example Resource Definitions**

2158 Please see the OCF Resource Types in Section 6 for examples of Resource Definitions. For an
 2159 example Resource Type that models an actuator refer to Section **Error! Reference source not**
 2160 **found**. Dimming; for an example Resource Type that models a sensor refer to Section **Error!**
 2161 **Reference source not found**. Illuminance Sensor.

2162 **5.6 Observable Resource Types**

2163 The OCF Core Specification defines a mechanism by which Resources can advertise themselves
 2164 as “Observable” to an OCF Client. All Resource Types defined in this specification may be

2165 observed. Whether or not a Resource Type is made observable via use of the Policy Link
2166 Parameter is entirely implementation dependent.

2167 **5.6.1 Conditional Notification**

2168 All observable Resources may apply conditions to the generation of notifications that result from
2169 the observe action, these conditions can be time based or value based or time and value based.
2170 This is achieved by composing the Conditional Notification (oic.r.value.conditional) Resource Type
2171 with an instance of an observable Resource; that is the Resource that is exposed by the Server
2172 has an "rt" of "[["oic.r.<resource>","oic.r.value.conditional"]"]".

2173 **5.6.1.1 Conditional Notification Property Summary**

2174 Table 5 Conditional Notification Properties summarizes the Properties provided by the Conditional
2175 Notification Resource Type. At least one Property from the table shall be present in an instance
2176 of the Resource Type.

2177 **Table 5 Conditional Notification Properties**

Name	Type	R/W	Required	Description
threshold	number	RW	No	Amount by which the observed value changes before a notification is generated
minnotifyperiod	integer	RW	No	Minimum elapsed time in ms before a notification may be sent
maxnotifyperiod	integer	RW	No	Maximum elapsed time in ms after which a notification is sent

2178

2179 All Properties if exposed shall be set with initial values. All Properties may be exposed with a
2180 value of "0" (zero); this indicates that the functionality associated with the Property is not active.
2181 Any Client may update the exposed values subject to any ACL restrictions; such changes are
2182 global and apply to all notifications that are sent to all observers. A notifier may reject an update
2183 to the Property values; in such cases a diagnostic payload should be included in the rejection
2184 response indicating the valid ranges for the Properties.

2185 **5.6.1.2 Property Definition: threshold**

2186 Minimum value change between two notifications. A notification shall be sent (within the
2187 constraints of "minnotifyperiod") when the change since the last notification is greater than or equal
2188 to this value. The measurement is done against the value in the last notification that was sent;
2189 thus all notifications (within any "maxnotifyperiod" constraints that may be present) will carry values
2190 that differ by at least "threshold". A "threshold" value of "0" means that no "threshold" is applied.

2191 **5.6.1.3 Property Definition: minnotifyperiod**

2192 Minimum time (in ms) that shall occur between notifications. If a value change condition is met
2193 ("threshold" equalled or exceeded or any change in value if threshold is not present) before
2194 expiration the notification shall not be sent till the period expires. If the Property is present and set
2195 to "0" then no minimum notify period timer is run; if the Property is present and with a value greater
2196 than "0" then a minimum notify period timer shall be run equal to the value. The Property value
2197 itself is initially populated by the notifier. If the Property is not present the minimum notify period
2198 is up to the notifier. The timer shall be reset each time a notification is sent.

2199 **5.6.1.4 Property Definition: maxnotifyperiod**

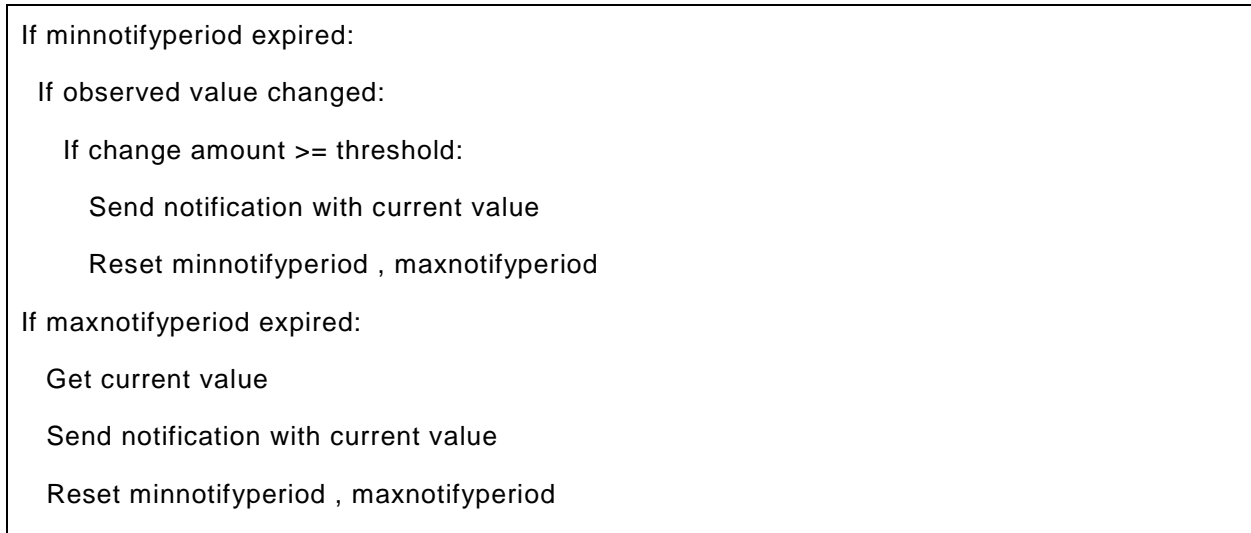
2200 Maximum time (in ms) that the notifier shall not exceed between notifications. When the timer
2201 expires a notification shall be sent. If present and set to "0" then no maximum notify period timer
2202 is run; if present and with a value greater than 0 then a maximum notify period timer shall be run

2203 equal to the value. The Property value itself shall be initially populated by the notifier. When both
2204 “minnotifyperiod” and “maxnotifyperiod” are present and both are non-zero the value of
2205 “maxnotifyperiod” shall be larger than the “minnotifyperiod”. If not present the value shall be set
2206 by the notifier. The timer shall be reset each time a notification is sent.

2207 **5.6.1.5 Governing State Machine**

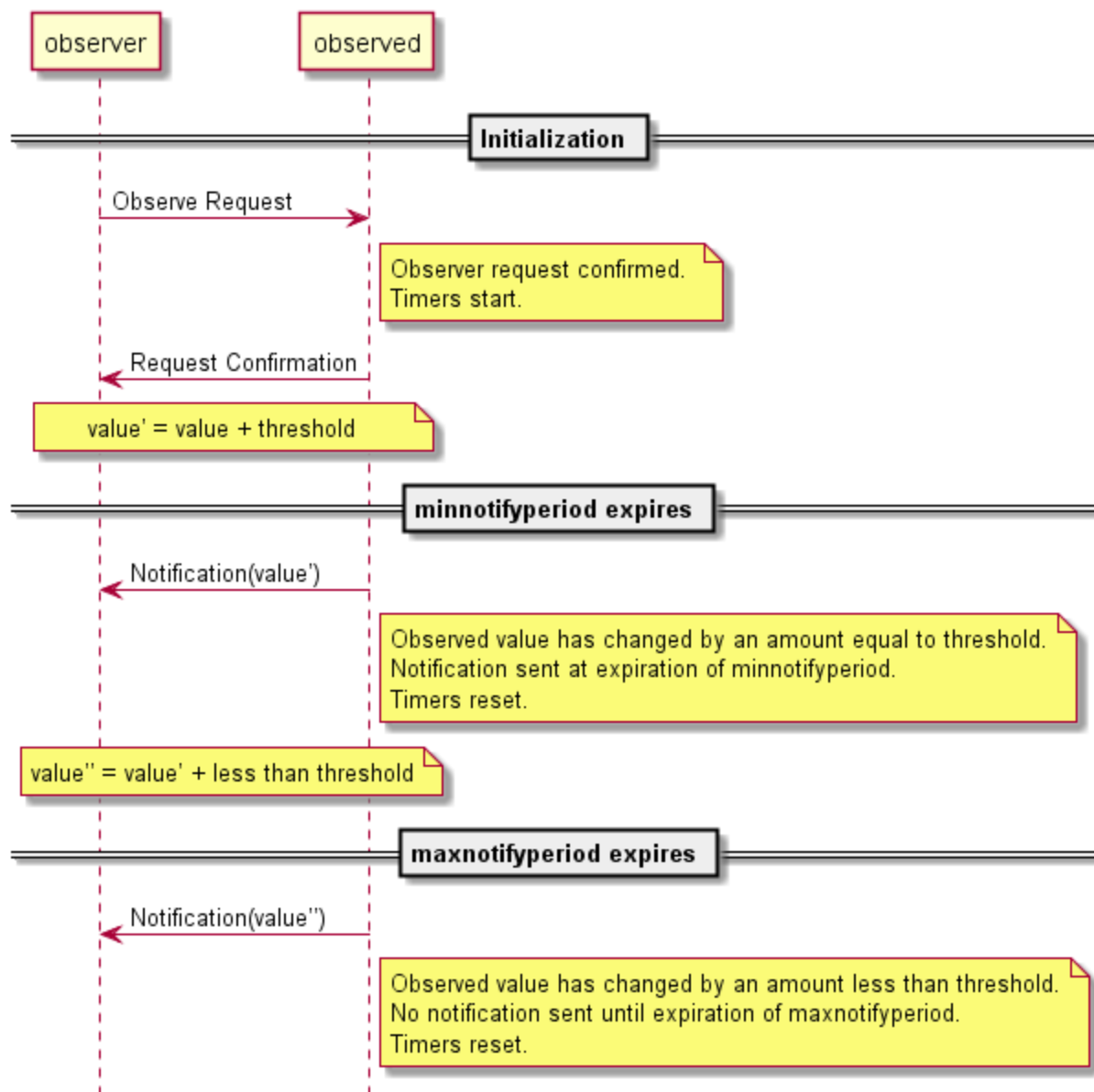
2208 The “minnotifyperiod” and “maxnotifyperiod” timers are restarted each time a notification is sent
2209 (response to the Observe). A notification is sent when value change condition (threshold) and
2210 “minnotifyperiod” are both met if both are present. If the observed Property value subsequently
2211 drops beneath threshold before the expiration of “minnotifyperiod” the notifier may take no action
2212 or a notification may be sent on expiration of “minnotifyperiod” containing the current observed
2213 Property value (at the time of the notification). If there are no timer constraints; then notifications
2214 are sent whenever the observed Property value has changed by an amount greater than or equal
2215 to “threshold”.

2216 Overall logic is defined in Figure 1: Overall conditional notification logic. Figure 2: Conditional
2217 Notification Example Flow provides an illustrative sequence.



2218 **Figure 1: Overall conditional notification logic**

2219



2220

2221

Figure 2: Conditional Notification Example Flow

2222

2223

2224 5.7 Composite Resource Types

2225 Composite Resource Types are Resources that comprises of one or more single or other composite
 2226 Resource Types, an example of which is shown in Table 6 RAML example of Composite Resource
 2227 Type. The Composite Resource Type can be viewed upon as a new single Resource Type. The
 2228 Composite Resource Type mechanism is a powerful concept since it uses existing Resource Types
 2229 in a new combination to express more contexts to a Resource without specifying new single unit
 2230 Resource Types.

2231 Composite Resource Types are defined by linking the referenced existing Resource values in to a
 2232 Collection.

2233 The linking is done by using an array of Links; refer to the OCF Core Specification section 7.8.2
2234 for more details. Note that the example listed below contains a partial schema of this definition as
2235 it is for descriptive purpose only. The Property name of the array is "links". The relationship type
2236 shall be "contains", denoting that the composite contains other Resource Types that make up the
2237 Composite Resource Type.

2238 The access to the listed Resources can be achieved in a single operation by using the OCF Core
2239 Specification defined oic.if.ll interface.

2240 **Table 6 RAML example of Composite Resource**

```
##RAML 0.8
title: OCFExampleCompositeResource
version: v1.0

/CompositeExample:
  description: |
    CompositeExample description.
    If the CompositeExample is implemented as per the example RAML the following values apply:
    The name of the Resource is "CompositeExample Name"
    The Resource Type is "oic.r.compositeexample"
    The Interface (if) can denote Sensor or Actuator
    The value of the ActuatorExample is modeled as 2 references to other implemented Resources
    In the example oic.r.SensorExample and oic.r.ActuatorExample are used.
  get:
    description: |
      retrieves the composite example Resource.
    responses:
      200:
        body:
          application/json:
            schema: |
              {
                "id": "http://openinterconnect.org/schemas/oic.r.baseResource#",
                "$schema": "http://json-schema.org/schema#",
                "title": "SensorExample",
                "definitions": {
                  "oic.r.compositeexample": {
                    "type": "object",
                    "properties": {
                      "links": {
                        "type": "array",
                        "items": {
                          "$ref": "oic.oic-link-schema.json#"
                        }
                      }
                    }
                  }
                },
                "type": "object",
                "allOf": [
                  {"$ref": "oic.core.json#/definitions/oic.core"},
                  {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
                  {"$ref": "#/definitions/oic.r.compositeexample"}
                ],
                "required": ["n", "id", "links"]
              }
            example: |
```

```

    {
      "n":      "CompositeExample Name",
      "id":     "composite_example_id",
      "links": [
        {
          "href": "/my_1st_reference",
          "rel":  "contains",
          "rt":   ["oic.r.actuatorexample"],
          "if":   ["oic.if.a"]
        },
        {
          "href": "/my_2nd_reference",
          "rel":  "contains",
          "rt":   ["oic.r.sensorexample"],
          "if":   ["oic.if.s"]
        }
      ]
    }
  ]
}

```

2241

2242 **5.8 Specification Version**

2243 Devices conformant to this specification version shall add the string “ocf.res.1.3.0” to the dmv
 2244 Property in oic.wk.d.

2245 **6 Resource Type definitions**

2246 This section contains definitions for all Resource Types; the complete set is listed in Table 7
 2247 Alphabetical list of Resource Types. Annex A.1 provides the basic underlying schema definition
 2248 against which all other Resource Types are constructed. Annex A.1 also provides an example of
 2249 the use of the “oic.if.baseline” interface that all Resource Types shall support. All other sections
 2250 provide example representations of the Resource Type following the application of the default
 2251 interface that is applied for that specific Resource Type.

2252 All Resource Types shall be created in accordance with the OCF Core Specification Section 7.2.
 2253 All comparisons against a Resource Type shall be case insensitive.

2254 All Resource Types in this document are prefixed with “oic.r” denoting that it is an OCF defined
 2255 Resource Type.

2256 **Table 7 Alphabetical list of Resource Types**

2257

Friendly (informative)	Name	Resource Type (rt)	Section
3D Printer		oic.r.printer.3d	6.87
Acceleration Sensor		oic.r.sensor.acceleration	6.55
Activity Count		oic.r.sensor.activity.count	6.23
Air Quality		oic.r.airquality	6.65
Air Quality Collection		oic.r.airqualitycollection	6.66

Altimeter	oic.r.altimeter	6.60
Atmospheric Pressure	oic.r.sensor.atmosphericpressure	6.24
Air Flow	oic.r.airflow	6.1
Air Flow Control	oic.r.airflowcontrol	6.2
Audio Controls	oic.r.audio	6.25
Auto Focus	oic.r.autofocus	6.26
Automatic Document Feeder	oic.r.automaticdocumentfeeder	6.27
Auto White Balance	oic.r.colour.autowhitebalance	6.31
Basic Resource Schema	Not Applicable	Annex A.1
Battery	oic.r.energy.battery	6.3
Battery Material	oic.r.batterymaterial	6.78
Binary switch	oic.r.switch.binary	6.4
Blood Pressure	oic.r.blood.pressure	6.88
Blood Pressure Monitor Atomic Measurement	oic.r.bloodpressuremonitor-am	6.89
BMI	oic.r.bmi	6.90
Body Fat	oic.r.body.fat	6.91
Body Fat Free Mass	oic.r.body.ffm	6.92
Body Location	oic.r.body.location	6.93
Body Location Temperature	oic.r.body.location.temperature	6.94
Body Scale Atomic Measurement	oic.r.body.scale-am	6.95
Body Soft Lean Mass	oic.r.body.slm	6.96

Body Thermometer Atomic Measurement	oic.r.bodythermometer-am	6.97
Body Water	oic.r.body.water	6.98
Brewing	oic.r.brewing	6.79
Brightness	oic.r.light.brightness	6.5
Button Switch	oic.r.button	6.28
Carbon Dioxide Sensor	oic.r.sensor.carbondioxide	6.29
Carbon Monoxide Sensor	oic.r.sensor.carbonmonoxide	6.30
Clock	oic.r.clock	6.61
Colour Chroma	oic.r.colour.chroma	6.6
Colour Hue Saturation	oic.r.colour.hs	6.77
Colour RGB	oic.r.colour.rgb	6.7
Colour Saturation	oic.r.colour.saturation	6.32
Colour Space Coordinates	oic.r.colour.csc	6.75
Colour Temperature	oic.r.colour.colourtemperature	6.76
Consumable	oic.r.consumable	6.67
Consumable Collection	oic.r.consumablecollection	6.68
Contact Sensor	oic.r.sensor.contact	6.33
Delay Defrost	oic.r.delaydefrost	6.69
Demand Response Load Control (DRLC)	oic.r.energy.drlc	6.34
Dimming	oic.r.light.dimming	6.8
Door	oic.r.door	6.9
Ecomode	oic.r.ecomode	6.70
Electric Vehicle Connector	oic.r.vehicle.connector	6.85

Electrical Energy	oic.r.energy.electrical	6.80
Energy Consumption	oic.r.energy.consumption	6.10
Energy Generation	oic.r.energy.generation	6.81
Energy Overload/Circuit Breaker	oic.r.energy.overload	6.35
Energy Usage	oic.r.energy.usage	6.11
Foaming	oic.r.foaming	6.82
Generic Sensor	oic.r.sensor	6.36
Geolocation Sensor	oic.r.sensor.geolocation	6.62
Glass Break Sensor	oic.r.sensor.glassbreak	6.37
Glucose	oic.r.glucose	6.99
Glucose Meter Complex Carbohydrates	oic.r.glucose.carb	6.100
Glucose Meter Exercise	oic.r.glucose.exercise	6.101
Glucose Meter HbA1c	oic.r.glucose.hba1c	6.102
Glucose Meter Context Health	oic.r.glucose.health	6.103
Glucose Meter Context Meal	oic.r.glucose.meal	6.104
Glucose Meter	oic.r.glucose.medication	6.105
Glucose Meter Atomic Measurement	oic.r.glucosemeter-am	6.106
Glucose Meter Context Sample Location	oic.r.glucose.samplelocation	6.107
Glucose Meter Context Tester	oic.r.glucose.testter	6.108
Grinder	oic.r.grinder	6.83
Heart Rate Zone Sensor	oic.r.sensor.heart.zone	6.38

Heating Zone	oic.r.heatingzone	6.71
Heating Zone Collection	oic.r.heatingzonecollection	6.72
Height	oic.r.height	6.63
Humidity	oic.r.humidity	6.12
Icemaker	oic.r.icemaker	6.13
Illuminance Sensor	oic.r.sensor.illuminance	6.39
Liquid Level	oic.r.liquid.level	6.84
Lock	oic.r.lock.status	6.14
Lock Code	oic.r.lock.code	6.15
Magnetic Field Direction	oic.r.sensor.magneticfielddirection	6.40
Media	oic.r.media	6.41
Media Source	oic.r.mediasource	6.42
Media Source List	oic.r.mediasourcelist	6.43
Media Source Input	oic.r.media.input	6.44
Media Source Output	oic.r.media.output	6.45
Mode	oic.r.mode	6.16
Movement	oic.r.movement.linear	6.53
Motion Sensor	oic.r.sensor.motion	6.46
Night Mode	oic.r.nightmode	6.47
Open Level	oic.r.openlevel	6.17
Operational State	oic.r.operational.state	6.18
Optical RFID Station	oic.r.orfid.station	6.109
Optical RFID Tag	oic.r.orfid.tag	6.110

Pan Tilt Zoom Movement	oic.r.ptz	6.49
Power Source	oic.r.powersource	6.111
Presence Sensor	oic.r.sensor.presence	6.48
Print Queue	oic.r.printer.queue	6.112
Pulse Rate	oic.r.pulserate	6.113
Ramp Time	oic.r.light.ramptime	6.19
Refrigeration	oic.r.refrigeration	6.20
Selectable Levels	oic.r.selectablelevels	6.73
Sensor Properties	oic.r.sensor.props	6.114
Signal Strength	oic.r.signalstrength	6.50
Sleep Sensor	oic.r.sensor.sleep	6.57
Smoke Sensor	oic.r.sensor.smoke	6.58
Speech Synthesis	oic.r.speech.tts	6.51
Temperature	oic.r.temperature	6.21
Three Axis Sensor	oic.r.sensor.threeaxis	6.59
Time Period	oic.r.time.period	6.22
Time Stamp	oic.r.time.stamp	6.86
Touch Sensor	oic.r.sensor.touch	6.52
UV Radiation	oic.r.sensor.radiation.uv	6.53
User ID	oic.r.userid	6.115
Value Conditional	oic.r.value.conditional	6.74
Water Sensor	oic.r.sensor.water	6.54
Weight	oic.r.weight	6.64

2258
2259

2260 6.1 Air Flow

2261 6.1.1 Introduction

2262 This resource describes the properties associated with air flow. The supporteddirections is the set
2263 of valid values for the direction property for a particular instance of this resource type. The direction
2264 is the directionality of the air flow if applicable, if supporteddirections is also present it must be a
2265 value from that set. Direction values are dependent on the capabilities of the unit. The speed is an
2266 integer representing the current speed level for the unit. The range (from oic.r.baseresource) is an
2267 array of the min,max values for the speed level. If not present the range defaults to [0,100].
2268 automode is the status of the automode feature; Off means automode is not enabled, On means
2269 automode is active and the speed is automatically controlled by the device.

2270 6.1.2 Example URI

2271 /AirFlowResURI

2272 6.1.3 Resource Type

2273 The resource type (rt) is defined as: oic.r.airflow.

2274 6.1.4 RAML Definition

```
2275 #%RAML 0.8
2276 title: OICAirFlow
2277 version: v1.1.0-20160519
2278 traits:
2279   - interface :
2280       queryParameters:
2281           if:
2282               enum: ["oic.if.a", "oic.if.baseline"]
2283
2284 /AirFlowResURI:
2285     description: |
2286       This resource describes the properties associated with air flow.
2287       The supporteddirections is the set of valid values for the direction property for a particular
2288 instance of this resource type.
2289       The direction is the directionality of the air flow if applicable, if supporteddirections is
2290 also present it must be a value from that set.
2291       Direction values are dependent on the capabilities of the unit.
2292       The speed is an integer representing the current speed level for the unit.
2293       The range (from oic.r.baseresource) is an array of the min,max values for the speed level
2294       If not present the range defaults to [0,100].
2295       automode is the status of the automode feature; Off means automode is not enabled, On means
2296 automode is active and the speed is automatically controlled by the device.
2297
2298     is : ['interface']
2299     get:
2300         description: |
2301           Retrieves the current air flow values.
2302
2303     responses :
2304         200:
2305             body:
2306                 application/json:
2307                     schema: /
2308                         {
2309                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlow.json#",
2310                             "$schema": "http://json-schema.org/draft-04/schema#",
2311                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2312 rights reserved.",
2313                             "title": "Air Flow",
2314                             "definitions": {
```

```

2315         "oic.r.airflow": {
2316             "type": "object",
2317             "properties": {
2318                 "supporteddirections": {
2319                     "type": "array",
2320                     "description": "Array of possible direction settings for this instance of
2321 the Resource Type",
2322                     "readOnly": true,
2323                     "items": {
2324                         "type": "string",
2325                         "minItems": 1,
2326                         "uniqueItems": true
2327                     }
2328                 },
2329                 "direction": {
2330                     "type": "string",
2331                     "description": "Directionality of the air flow"
2332                 },
2333                 "speed": {
2334                     "type": "integer",
2335                     "description": "Current speed level"
2336                 },
2337                 "automode": {
2338                     "type": "string",
2339                     "enum": ["On", "Off"],
2340                     "description": "Status of the automode feature, if on speed is set by the
2341 device"
2342                 }
2343             }
2344         },
2345     },
2346     "type": "object",
2347     "allOf": [
2348         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2349         {"$ref": "#/definitions/oic.r.airflow"}
2350     ],
2351     "required": ["speed"]
2352 }
2353
2354 example: /
2355 {
2356     "rt":          ["oic.r.airflow"],
2357     "id":          "unique_example_id",
2358     "supporteddirections": ["left","right","centre"],
2359     "direction":  "left",
2360     "speed":      5,
2361     "range":      [1,7],
2362     "automode":   "Off"
2363 }
2364
2365 post:
2366     description: |
2367     Sets the current air flow values.
2368     Only direction and speed may be set by an update operation.
2369
2370     body:
2371     application/json:
2372     schema: /
2373     {
2374         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlow.json#",
2375         "$schema": "http://json-schema.org/draft-04/schema#",
2376         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
2377 reserved.",
2378         "title": "Air Flow",
2379         "definitions": {
2380             "oic.r.airflow": {
2381                 "type": "object",

```

```

2382         "properties": {
2383             "supporteddirections": {
2384                 "type": "array",
2385                 "description": "Array of possible direction settings for this instance of the
2386 Resource Type",
2387                 "readOnly": true,
2388                 "items": {
2389                     "type": "string",
2390                     "minItems": 1,
2391                     "uniqueItems": true
2392                 }
2393             },
2394             "direction": {
2395                 "type": "string",
2396                 "description": "Directionality of the air flow"
2397             },
2398             "speed": {
2399                 "type": "integer",
2400                 "description": "Current speed level"
2401             },
2402             "automode": {
2403                 "type": "string",
2404                 "enum": ["On", "Off"],
2405                 "description": "Status of the automode feature, if on speed is set by the
2406 device"
2407             }
2408         }
2409     },
2410     "type": "object",
2411     "allOf": [
2412         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2413         {"$ref": "#/definitions/oic.r.airflow"}
2414     ],
2415     "required": ["speed"]
2416 }
2417
2418
2419 example: /
2420 {
2421     "id":         "unique_example_id",
2422     "direction": "right",
2423     "speed":     3
2424 }
2425
2426 responses :
2427 200:
2428     body:
2429     application/json:
2430         schema: /
2431         {
2432             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlow.json#",
2433             "$schema": "http://json-schema.org/draft-04/schema#",
2434             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2435 rights reserved.",
2436             "title": "Air Flow",
2437             "definitions": {
2438                 "oic.r.airflow": {
2439                     "type": "object",
2440                     "properties": {
2441                         "supporteddirections": {
2442                             "type": "array",
2443                             "description": "Array of possible direction settings for this instance of
2444 the Resource Type",
2445                             "readOnly": true,
2446                             "items": {
2447                                 "type": "string",
2448                                 "minItems": 1,

```

```

2449         "uniqueItems": true
2450     },
2451 },
2452 "direction": {
2453     "type": "string",
2454     "description": "Directionality of the air flow"
2455 },
2456 "speed": {
2457     "type": "integer",
2458     "description": "Current speed level"
2459 },
2460 "automode": {
2461     "type": "string",
2462     "enum": ["On", "Off"],
2463     "description": "Status of the automode feature, if on speed is set by the
2464 device"
2465 }
2466 }
2467 }
2468 },
2469 "type": "object",
2470 "allOf": [
2471     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2472     {"$ref": "#/definitions/oic.r.airflow"}
2473 ],
2474 "required": ["speed"]
2475 }
2476
2477 example: /
2478 {
2479     "id":         "unique_example_id",
2480     "direction": "right",
2481     "speed":     3
2482 }
2483
2484 403:
2485 description: |
2486     This response is generated by the OCF Server when the client sends:
2487     An update with an invalid property value for direction.
2488     An update with an out of range property value for speed.
2489     The server may respond with the current resource representation.
2490
2491 body:
2492 application/json:
2493     schema: /
2494     {
2495         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlow.json#",
2496         "$schema": "http://json-schema.org/draft-04/schema#",
2497         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2498 rights reserved.",
2499         "title": "Air Flow",
2500         "definitions": {
2501             "oic.r.airflow": {
2502                 "type": "object",
2503                 "properties": {
2504                     "supporteddirections": {
2505                         "type": "array",
2506                         "description": "Array of possible direction settings for this instance of
2507 the Resource Type",
2508                         "readOnly": true,
2509                         "items": {
2510                             "type": "string",
2511                             "minItems": 1,
2512                             "uniqueItems": true
2513                         }
2514                     },
2515                     "direction": {

```

```

2516         "type": "string",
2517         "description": "Directionality of the air flow"
2518     },
2519     "speed": {
2520         "type": "integer",
2521         "description": "Current speed level"
2522     },
2523     "automode": {
2524         "type": "string",
2525         "enum": ["On", "Off"],
2526         "description": "Status of the automode feature, if on speed is set by the
device"
2527     }
2528 }
2529 }
2530 }
2531 },
2532 "type": "object",
2533 "allOf": [
2534     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2535     {"$ref": "#/definitions/oic.r.airflow"}
2536 ],
2537 "required": ["speed"]
2538 }
2539
2540 example: /
2541 {
2542     "id":         "unique_example_id",
2543     "supporteddirections": ["left", "right", "centre"],
2544     "direction":  "right",
2545     "speed":     3
2546 }
2547

```

6.1.5 Property Definition

Table 8 Air Flow Property Definitions

Property name	Value type	Mandatory	Access mode	Description
automode	string			Status of the automode feature, if on speed is set by the device
direction	string			Directionality of the air flow
supporteddirections	array: see schema		Read Only	Array of possible direction settings for this instance of the Resource Type
speed	integer	yes		Current speed level

6.1.6 CRUDN behaviour

Table 9 Air Flow CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/AirFlowResURI		get	post		

2552 6.2 Air Flow Control

2553 6.2.1 Introduction

2554 This resource describes the attributes associated with control of air flow, for example as modelled
2555 by a Thermostat (fan), Room A/C or other device. The resource is a composite resource being
2556 made up as a collection of: AirFlow Resource BinarySwitch Resource

2557 6.2.2 Example URI

2558 /AirFlowControlResURI

2559 6.2.3 Resource Type

2560 The resource type (rt) is defined as: oic.r.airflowcontrol.

2561 6.2.4 RAML Definition

```
2562 #%RAML 0.8
2563 title: OICAirFlowControl
2564 version: v1.1.0-20160519
2565 traits:
2566   - interface-b :
2567     queryParameters:
2568       if:
2569         enum: ["oic.if.b"]
2570   - interface-all :
2571     queryParameters:
2572       if:
2573         enum: ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
2574
2575 /AirFlowControlResURI:
2576   description: |
2577     This resource describes the attributes associated with control of air flow,
2578     for example as modelled by a Thermostat (fan), Room A/C or other device.
2579     The resource is a composite resource being made up as a collection of:
2580     AirFlow Resource
2581     BinarySwitch Resource
2582
2583   get:
2584     description: |
2585       Retrieves the current air flow control values.
2586
2587   is : ['interface-all']
2588   responses :
2589     200:
2590       body:
2591         application/json:
2592           schema: /
2593             {
2594               "id":
2595 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlowControl.json#",
2596               "$schema": "http://json-schema.org/draft-04/schema#",
2597               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2598 rights reserved.",
2599               "title": "Air Flow Control",
2600               "definitions": {
2601                 "oic.r.airflowcontrol": {
2602                   "type": "object",
2603                   "properties": {
2604                     "airFlowControl": {
2605                       "type": "array",
2606                       "minItems": 2,
```

```

2607         "maxItems": 2,
2608         "items": {
2609             "$ref": "oic.oic-link-schema.json#/definitions/oic.oic-link"
2610         }
2611     }
2612 }
2613 }
2614 },
2615 "type": "object",
2616 "allOf": [
2617     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2618     {"$ref": "#/definitions/oic.r.airflowcontrol"}
2619 ],
2620 "required": ["airFlowControl"]
2621 }
2622
2623 example: /
2624 {
2625     "rt": ["oic.r.airflowcontrol"],
2626     "id": "unique_example_id",
2627     "airFlowControl": [
2628         {
2629             "href": "/BinarySwitchResURI",
2630             "rel": "contains",
2631             "rt": ["oic.r.switch.binary"],
2632             "if": ["oic.if.a"],
2633             "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
2634         },
2635         {
2636             "href": "/AirFlowResURI",
2637             "rel": "contains",
2638             "rt": ["oic.r.airflow"],
2639             "if": ["oic.if.a"],
2640             "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
2641         }
2642     ]
2643 }
2644
2645 post:
2646     description: |
2647         Sets the current air flow control values using the batch interface
2648
2649     is : ['interface-b']
2650     body:
2651         application/json:
2652             schema: /
2653                 {
2654                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlowControl-
2655 Batch.json#",
2656                     "$schema": "http://json-schema.org/draft-04/schema#",
2657                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
2658 reserved.",
2659                     "title": "Air Flow Control",
2660                     "definitions": {
2661                         "oic.r.airflowcontrol": {
2662                             "type": "object",
2663                             "properties": {
2664                                 "airFlowControl": {
2665                                     "type": "array",
2666                                     "items": {
2667                                         "anyOf": [
2668                                             {"$ref": "oic.r.switch.binary.json#/definitions/oic.r.switch.binary"},
2669                                             {"$ref": "oic.r.airFlow.json#/definitions/oic.r.airflow"}
2670                                         ]
2671                                     }
2672                                 }
2673                             }
2674                         }
2675                     }
2676                 }

```



```

2674     }
2675   },
2676   "type": "object",
2677   "allOf": [
2678     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2679     {"$ref": "#/definitions/oic.r.airflowcontrol"}
2680   ],
2681   "required": ["airFlowControl"]
2682 }
2683
2684 example: /
2685 {
2686   "id": "unique_example_id",
2687   "airFlowControl": [
2688     {
2689       "id": "unique_example_id",
2690       "value": true
2691     },
2692     {
2693       "id": "unique_example_id",
2694       "direction": "right",
2695       "speed": 3
2696     }
2697   ]
2698 }
2699
2700 responses :
2701 200:
2702   body:
2703     application/json:
2704       schema: /
2705         {
2706           "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlowControl-
2707 Batch.json#",
2708           "$schema": "http://json-schema.org/draft-04/schema#",
2709           "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2710 rights reserved.",
2711           "title": "Air Flow Control",
2712           "definitions": {
2713             "oic.r.airflowcontrol": {
2714               "type": "object",
2715               "properties": {
2716                 "airFlowControl": {
2717                   "type": "array",
2718                   "items": {
2719                     "anyOf": [
2720                       {"$ref": "oic.r.switch.binary.json#/definitions/oic.r.switch.binary"},
2721                       {"$ref": "oic.r.airFlow.json#/definitions/oic.r.airflow"}
2722                     ]
2723                   }
2724                 }
2725             }
2726           },
2727           "type": "object",
2728           "allOf": [
2729             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2730             {"$ref": "#/definitions/oic.r.airflowcontrol"}
2731           ],
2732           "required": ["airFlowControl"]
2733         }
2734
2735
2736 example: /
2737 {
2738   "id": "unique_example_id",
2739   "airFlowControl": [

```

```

2740         {
2741             "id": "unique_example_id",
2742             "value": true
2743         },
2744         {
2745             "id": "unique_example_id",
2746             "direction": "right",
2747             "speed": 3
2748         }
2749     ]
2750 }
2751
2752 403:
2753 description: |
2754     This response is generated by the OIC Server when the client sends:
2755     An update with an invalid property value for direction.
2756     An update with an out of range property value for speed.
2757     The server responds with the current resource representation.
2758
2759 body:
2760     application/json:
2761         schema: /
2762             {
2763                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlowControl-
2764 Batch.json#",
2765                 "$schema": "http://json-schema.org/draft-04/schema#",
2766                 "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2767 rights reserved.",
2768                 "title": "Air Flow Control",
2769                 "definitions": {
2770                     "oic.r.airflowcontrol": {
2771                         "type": "object",
2772                         "properties": {
2773                             "airFlowControl": {
2774                                 "type": "array",
2775                                 "items": {
2776                                     "anyOf": [
2777                                         {"$ref": "oic.r.switch.binary.json#/definitions/oic.r.switch.binary"},
2778                                         {"$ref": "oic.r.airFlow.json#/definitions/oic.r.airflow"}
2779                                     ]
2780                                 }
2781                             }
2782                         }
2783                     }
2784                 },
2785                 "type": "object",
2786                 "allOf": [
2787                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2788                     {"$ref": "#/definitions/oic.r.airflowcontrol"}
2789                 ],
2790                 "required": ["airFlowControl"]
2791             }
2792
2793         example: /
2794             {
2795                 "id": "unique_example_id",
2796                 "airFlowControl": [
2797                     {
2798                         "id": "unique_example_id",
2799                         "value": true
2800                     },
2801                     {
2802                         "id": "unique_example_id",
2803                         "direction": "right",
2804                         "speed": 3
2805                     }
2806                 ]

```

2807 }
2808

2809 6.2.5 Property Definition

2810 **Table 10 Air Flow Control Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
airFlowControl	array: see schema	yes		

2811 6.2.6 CRUDN behaviour

2812 **Table 11 Air Flow Control CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/AirFlowControlResURI		get	post		

2813 6.3 Battery

2814 6.3.1 Introduction

2815 This resource describes the attributes associated with a battery. The charge is an integer showing
2816 the current battery charge level as a percentage in the range 0 (fully discharged) to 100 (fully
2817 charged). The capacity represents the total capacity of battery in Amp Hours (Ah). The charging
2818 status and discharging status are represented by boolean values set to "True" indicating enabled
2819 and "False" indicating disabled. Low battery status is represented by a boolean value set to "True"
2820 indicating low charge level and "False" indicating otherwise, based upon the battery threshold
2821 represented as a percentage.

2822 6.3.2 Example URI

2823 /BatteryResURI

2824 6.3.3 Resource Type

2825 The resource type (rt) is defined as: oic.r.energy.battery.

2826 6.3.4 RAML Definition

```
2827 #%RAML 0.8
2828 title: Battery
2829 version: v1.2.0-20170814
2830 traits:
2831   - interface :
2832     queryParameters:
2833       if:
2834         enum: ["oic.if.rw", "oic.if.baseline"]
2835
2836 /BatteryResURI:
2837   description: |
2838     This resource describes the attributes associated with a battery
2839     The charge is an integer showing the current battery charge level as a percentage in the range
2840     0 (fully discharged) to 100 (fully charged)
2841     The capacity represents the total capacity of battery in Amp Hours (Ah)
2842     The charging status and discharging status are represented by boolean values set to "True"
2843     indicating enabled and "False" indicating disabled
2844     Low battery status is represented by a boolean value set to "True" indicating low charge level
2845     and "False" indicating otherwise, based upon the battery threshold represented as a percentage.
2846
2847   is : ['interface']
2848   get:
2849     description: |
2850       Retrieves the state of the battery.
2851
```

```

2852     responses :
2853         200:
2854             body:
2855                 application/json:
2856                     schema: /
2857                         {
2858                             "id":
2859 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.battery.json#",
2860                             "$schema": "http://json-schema.org/draft-04/schema#",
2861                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2862 rights reserved.",
2863                             "title": "Battery",
2864                             "definitions": {
2865                                 "oic.r.energy.battery": {
2866                                     "type": "object",
2867                                     "properties": {
2868                                         "charge" : {
2869                                             "type": "integer",
2870                                             "description": "The current charge percentage.",
2871                                             "readOnly": true,
2872                                             "minimum": 0,
2873                                             "maximum": 100
2874                                         },
2875                                         "capacity" : {
2876                                             "type": "number",
2877                                             "description": "The total capacity in Amp-hours (Ah).",
2878                                             "readOnly": true
2879                                         },
2880                                         "charging" : {
2881                                             "type": "boolean",
2882                                             "description": "The status of charging.",
2883                                             "readOnly": true
2884                                         },
2885                                         "discharging" : {
2886                                             "type": "boolean",
2887                                             "description": "The status of discharging.",
2888                                             "readOnly": true
2889                                         },
2890                                         "lowbattery" : {
2891                                             "type": "boolean",
2892                                             "description": "The status of the low battery warning based upon the
2893 defined threshold.",
2894                                             "readOnly": true
2895                                         },
2896                                         "batterythreshold" : {
2897                                             "type": "integer",
2898                                             "description": "The threshold percentage for the low battery warning.",
2899                                             "minimum": 0,
2900                                             "maximum": 100
2901                                         }
2902                                     }
2903                                 }
2904                             },
2905                             "type": "object",
2906                             "allOf": [
2907                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2908                                 {"$ref": "#/definitions/oic.r.energy.battery"}
2909                             ],
2910                             "required": [ "charge" ]
2911                         }
2912
2913                     example: /
2914                         {
2915                             "rt":      ["oic.r.energy.battery"],
2916                             "id":      "unique_example_id",
2917                             "charge":  50,
2918                             "capacity": 3000,
2919                             "charging": true,

```

```

2920         "discharging": false,
2921         "lowbattery": false,
2922         "batterythreshold": 20
2923     }
2924
2925     post:
2926         description: |
2927             Sets current battery values
2928
2929         body:
2930             application/json:
2931                 schema: /
2932                     {
2933                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.battery-
2934 Update.json#",
2935                         "$schema": "http://json-schema.org/draft-04/schema#",
2936                         "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
2937 reserved.",
2938                         "title": "Battery",
2939                         "definitions": {
2940                             "oic.r.energy.battery": {
2941                                 "type": "object",
2942                                 "properties": {
2943                                     "batterythreshold" : {
2944                                         "type": "integer",
2945                                         "description": "The threshold percentage for the low battery warning.",
2946                                         "minimum": 0,
2947                                         "maximum": 100
2948                                     }
2949                                 }
2950                             },
2951                         },
2952                         "type": "object",
2953                         "allOf": [
2954                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2955                             {"$ref": "#/definitions/oic.r.energy.battery"}
2956                         ],
2957                         "required": [ "batterythreshold" ]
2958                     }
2959
2960                 example: /
2961                     {
2962                         "id": "unique_example_id",
2963                         "batterythreshold": 20
2964                     }
2965
2966     responses :
2967         200:
2968             body:
2969                 application/json:
2970                     schema: /
2971                         {
2972                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.battery-
2973 Update.json#",
2974                             "$schema": "http://json-schema.org/draft-04/schema#",
2975                             "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
2976 reserved.",
2977                             "title": "Battery",
2978                             "definitions": {
2979                                 "oic.r.energy.battery": {
2980                                     "type": "object",
2981                                     "properties": {
2982                                         "batterythreshold" : {
2983                                             "type": "integer",

```

```

2984         "description": "The threshold percentage for the low battery warning.",
2985         "minimum": 0,
2986         "maximum": 100
2987     }
2988 }
2989 }
2990 },
2991 "type": "object",
2992 "allOf": [
2993     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2994     {"$ref": "#/definitions/oic.r.energy.battery"}
2995 ],
2996 "required": [ "batterythreshold" ]
2997 }
2998
2999 example: /
3000 {
3001     "id": "unique_example_id",
3002     "batterythreshold": 20
3003 }
3004

```

3005 6.3.5 Property Definition

3006 **Table 12 Battery Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
discharging	boolean		Read Only	The status of discharging.
lowbattery	boolean		Read Only	The status of the low battery warning based upon the defined threshold.
capacity	number		Read Only	The total capacity in Amp-hours (Ah).
batterythreshold	integer			The threshold percentage for the low battery warning.
charge	integer	yes	Read Only	The current charge percentage.
charging	boolean		Read Only	The status of charging.

3007 6.3.6 CRUDN behaviour

3008 **Table 13 Battery CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/BatteryResURI		get	post		

3009 6.4 Binary Switch

3010 6.4.1 Introduction

3011 This resource describes a binary switch (on/off). The value is a boolean. A value of 'true' means
3012 that the switch is on. A value of 'false' means that the switch is off.

3013 6.4.2 Example URI

3014 /BinarySwitchResURI

3015 6.4.3 Resource Type

3016 The resource type (rt) is defined as: oic.r.switch.binary.

3017 6.4.4 RAML Definition

```
3018 #%RAML 0.8
3019 title: OICBinarySwitch
3020 version: v1.1.0-20160519
3021 traits:
3022   - interface :
3023     queryParameters:
3024       if:
3025         enum: ["oic.if.a", "oic.if.baseline"]
3026
3027 /BinarySwitchResURI:
3028   description: |
3029     This resource describes a binary switch (on/off).
3030     The value is a boolean.
3031     A value of 'true' means that the switch is on.
3032     A value of 'false' means that the switch is off.
3033
3034   is : ['interface']
3035   get:
3036     responses :
3037       200:
3038         body:
3039           application/json:
3040             schema: /
3041               {
3042                 "id":
3043 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.switch.binary.json#",
3044                 "$schema": "http://json-schema.org/draft-04/schema#",
3045                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3046 rights reserved.",
3047                 "title": "Binary Switch",
3048                 "definitions": {
3049                   "oic.r.switch.binary": {
3050                     "type": "object",
3051                     "properties": {
3052                       "value": {
3053                         "type": "boolean",
3054                         "description": "Status of the switch"
3055                       }
3056                     }
3057                   }
3058                 },
3059                 "type": "object",
3060                 "allOf": [
3061                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3062                   {"$ref": "#/definitions/oic.r.switch.binary"}
3063                 ],
3064                 "required": [ "value" ]
3065               }
3066
3067   example: /
3068     {
3069       "rt":      ["oic.r.switch.binary"],
3070       "id":      "unique_example_id",
3071       "value":   false
3072     }
3073
3074   post:
```

```

3075     body:
3076     application/json:
3077         schema: /
3078             {
3079                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.switch.binary.json#",
3080                 "$schema": "http://json-schema.org/draft-04/schema#",
3081                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
3082 reserved.",
3083                 "title": "Binary Switch",
3084                 "definitions": {
3085                     "oic.r.switch.binary": {
3086                         "type": "object",
3087                         "properties": {
3088                             "value": {
3089                                 "type": "boolean",
3090                                 "description": "Status of the switch"
3091                             }
3092                         }
3093                     }
3094                 },
3095                 "type": "object",
3096                 "allOf": [
3097                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3098                     {"$ref": "#/definitions/oic.r.switch.binary"}
3099                 ],
3100                 "required": [ "value" ]
3101             }
3102
3103     example: /
3104         {
3105             "id": "unique_example_id",
3106             "value": true
3107         }
3108
3109     responses :
3110     200:
3111         body:
3112         application/json:
3113             schema: /
3114                 {
3115                     "id":
3116 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.switch.binary.json#",
3117                     "$schema": "http://json-schema.org/draft-04/schema#",
3118                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3119 rights reserved.",
3120                     "title": "Binary Switch",
3121                     "definitions": {
3122                         "oic.r.switch.binary": {
3123                             "type": "object",
3124                             "properties": {
3125                                 "value": {
3126                                     "type": "boolean",
3127                                     "description": "Status of the switch"
3128                                 }
3129                             }
3130                         }
3131                     },
3132                     "type": "object",
3133                     "allOf": [
3134                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3135                         {"$ref": "#/definitions/oic.r.switch.binary"}
3136                     ],
3137                     "required": [ "value" ]
3138                 }
3139

```



```

3140     example: /
3141         {
3142             "id":    "unique_example_id",
3143             "value": true
3144         }
3145

```

3146 6.4.5 Property Definition

3147 **Table 14 Binary Switch Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
value	boolean	yes		Status of the switch

3148 6.4.6 CRUDN behaviour

3149 **Table 15 Binary Switch CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/BinarySwitchResURI		get	post		

3150 6.5 Brightness

3151 6.5.1 Introduction

3152 This resource describes the brightness of a light or lamp. brightness is an integer showing the
3153 current brightness level as a quantized representation in the range 0-100. A brightness of 0 is the
3154 minimum for the resource. A brightness of 100 is the maximum for the resource.

3155 6.5.2 Example URI

3156 /BrightnessResURI

3157 6.5.3 Resource Type

3158 The resource type (rt) is defined as: oic.r.light.brightness.

3159 6.5.4 RAML Definition

```

3160 #%RAML 0.8
3161 title: OICBrightness
3162 version: v1.1.0-20160519
3163 traits:
3164   - interface :
3165       queryParameters:
3166           if:
3167               enum: ["oic.if.a", "oic.if.baseline"]
3168
3169 /BrightnessResURI:
3170   description: |
3171     This resource describes the brightness of a light or lamp.
3172     brightness is an integer showing the current brightness level as a quantized representation in
3173     the range 0-100.
3174     A brightness of 0 is the minimum for the resource.
3175     A brightness of 100 is the maximum for the resource.
3176
3177   is : ['interface']
3178   get:
3179       description: |
3180         Retrieves the current brightness level.
3181
3182   responses :
3183       200:

```

```

3184     body:
3185         application/json:
3186             schema: /
3187                 {
3188                     "id":
3189 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.brightness.json#",
3190                     "$schema": "http://json-schema.org/draft-04/schema#",
3191                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3192 rights reserved.",
3193                     "title": "Brightness",
3194                     "definitions": {
3195                         "oic.r.light.brightness": {
3196                             "type": "object",
3197                             "properties": {
3198                                 "brightness": {
3199                                     "type": "integer",
3200                                     "description": "Quantized representation in the range 0-100 of the current
3201 sensed or set value for Brightness",
3202                                     "minimum": 0,
3203                                     "maximum": 100
3204                                 }
3205                             }
3206                         }
3207                     },
3208                     "type": "object",
3209                     "allOf": [
3210                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
3211                         { "$ref": "#/definitions/oic.r.light.brightness" }
3212                     ],
3213                     "required": [ "brightness" ]
3214                 }
3215
3216     example: /
3217         {
3218             "rt":          ["oic.r.light.brightness"],
3219             "id":          "unique_example_id",
3220             "brightness": 50
3221         }
3222
3223     post:
3224     description: |
3225         Sets the desired brightness level.
3226
3227     body:
3228         application/json:
3229             schema: /
3230                 {
3231                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.brightness.json#",
3232                     "$schema": "http://json-schema.org/draft-04/schema#",
3233                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
3234 reserved.",
3235                     "title": "Brightness",
3236                     "definitions": {
3237                         "oic.r.light.brightness": {
3238                             "type": "object",
3239                             "properties": {
3240                                 "brightness": {
3241                                     "type": "integer",
3242                                     "description": "Quantized representation in the range 0-100 of the current
3243 sensed or set value for Brightness",
3244                                     "minimum": 0,
3245                                     "maximum": 100
3246                                 }
3247                             }
3248                         }
3249                 },

```

```

3250         "type": "object",
3251         "allOf": [
3252             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
3253             { "$ref": "#/definitions/oic.r.light.brightness" }
3254         ],
3255         "required": [ "brightness" ]
3256     }
3257
3258     example: /
3259         {
3260             "id":          "unique_example_id",
3261             "brightness": 10
3262         }
3263
3264     responses :
3265         200:
3266             description: |
3267                 Indicates that the brightness was changed.
3268                 The new brightness level is provided in the response.
3269
3270             body:
3271                 application/json:
3272                     schema: /
3273                         {
3274                             "id":
3275                             "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.brightness.json#",
3276                             "$schema": "http://json-schema.org/draft-04/schema#",
3277                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3278 rights reserved.",
3279                             "title": "Brightness",
3280                             "definitions": {
3281                                 "oic.r.light.brightness": {
3282                                     "type": "object",
3283                                     "properties": {
3284                                         "brightness": {
3285                                             "type": "integer",
3286                                             "description": "Quantized representation in the range 0-100 of the current
3287 sensed or set value for Brightness",
3288                                             "minimum": 0,
3289                                             "maximum": 100
3290                                         }
3291                                     }
3292                                 },
3293                             },
3294                             "type": "object",
3295                             "allOf": [
3296                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
3297                                 { "$ref": "#/definitions/oic.r.light.brightness" }
3298                             ],
3299                             "required": [ "brightness" ]
3300                         }
3301
3302                     example: /
3303                         {
3304                             "id":          "unique_example_id",
3305                             "brightness": 10
3306                         }
3307

```

6.5.5 Property Definition

Table 16 Brightness Property Definitions

Property name	Value type	Mandatory	Access mode	Description
---------------	------------	-----------	-------------	-------------

brightness	integer	yes		Quantized representation in the range 0-100 of the current sensed or set value for Brightness
------------	---------	-----	--	---

3310 **6.5.6 CRUDN behaviour**

3311 **Table 17 Brightness CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/BrightnessResURI		get	post		

3312 **6.6 ColourChromaResURI**

3313 **6.6.1 Introduction**

3314 **6.6.2 Example URI**

3315 **6.6.3 Resource Type**

3316 **6.6.4 RAML Definition**

```
3317 #%RAML 0.8
3318 title: OICColourChroma
3319 version: v1.1.0-20160519
3320 traits:
3321   - interface :
3322     queryParameters:
3323       if:
3324         enum: ["oic.if.a", "oic.if.baseline"]
```

3326 **6.6.5 Property Definition**

3327 **Table 18 ColourChromaResURI Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
---------------	------------	-----------	-------------	-------------

3328 **6.6.6 CRUDN behaviour**

3329 **Table 19 ColourChromaResURI CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
----------	--------	------	--------	--------	--------

3330 **6.7 Colour RGB**

3331 **6.7.1 Introduction**

3332 This resource specifies the actual colour in the RGB space represented as an array of integers.
 3333 Each colour value is described with a Red, Green, Blue component. These colour values are
 3334 encoded as an array of integer values ([R,G,B]). The minimum and maximum colour value per
 3335 component may be described by range (from oic.r.baseresource). When range (from
 3336 oic.r.baseresource) is omitted, then the range is [0,255].

3337 **6.7.2 Example URI**

3338 /ColourRGBResURI

3339 **6.7.3 Resource Type**

3340 The resource type (rt) is defined as: oic.r.colour.rgb.

3341 **6.7.4 RAML Definition**

```
3342 #%RAML 0.8
```

```

3343 title: OIColourRGB
3344 version: v1.1.0-20160519
3345 traits:
3346   - interface :
3347     queryParameters:
3348       if:
3349         enum: ["oic.if.a", "oic.if.baseline"]
3350
3351 /ColourRGBResURI:
3352   description: |
3353     This resource specifies the actual colour in the RGB space represented as an array of integers.
3354     Each colour value is described with a Red, Green, Blue component.
3355     These colour values are encoded as an array of integer values ([R,G,B]).
3356     The minimum and maximum colour value per component may be described by range (from
3357     oic.r.baseresource).
3358     When range (from oic.r.baseresource) is omitted, then the range is [0,255].
3359
3360   is : ['interface']
3361   get:
3362     description: |
3363       Retrieves the current colour in RGB.
3364       Value is an array of integer values in the order R,G,B.
3365
3366   responses :
3367     200:
3368       body:
3369         application/json:
3370           schema: /
3371             {
3372               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.rgb.json#",
3373               "$schema": "http://json-schema.org/draft-04/schema#",
3374               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3375 rights reserved.",
3376               "title": "Colour RGB",
3377               "definitions": {
3378                 "oic.r.colour.rgb": {
3379                   "type": "object",
3380                   "properties": {
3381                     "rgbValue": {
3382                       "type": "array",
3383                       "description": "RGB value; the first item is the R, second the G, third the
3384 B.",
3385                       "minItems": 3,
3386                       "maxItems": 3,
3387                       "items": {
3388                         "type": "integer"
3389                       }
3390                     }
3391                   }
3392                 }
3393               },
3394               "type": "object",
3395               "allOf": [
3396                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3397                 {"$ref": "#/definitions/oic.r.colour.rgb"}
3398               ],
3399               "required": ["rgbValue"]
3400             }
3401
3402   example: /
3403     {
3404       "rt":      ["oic.r.colour.rgb"],

```

```

3405         "id": "unique_example_id",
3406         "rgbValue": [255,255,255],
3407         "range": [0,255]
3408     }
3409
3410 post:
3411     description: |
3412         Sets the current colourRGB value
3413
3414     body:
3415         application/json:
3416             schema: /
3417                 {
3418                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.rgb.json#",
3419                 "$schema": "http://json-schema.org/draft-04/schema#",
3420                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
3421 reserved.",
3422                 "title": "Colour RGB",
3423                 "definitions": {
3424                 "oic.r.colour.rgb": {
3425                 "type": "object",
3426                 "properties": {
3427                 "rgbValue": {
3428                 "type": "array",
3429                 "description": "RGB value; the first item is the R, second the G, third the
3430 B.",
3431                 "minItems": 3,
3432                 "maxItems": 3,
3433                 "items": {
3434                 "type": "integer"
3435                 }
3436                 }
3437                 }
3438                 },
3439                 "type": "object",
3440                 "allOf": [
3441                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3442                 {"$ref": "#/definitions/oic.r.colour.rgb"}
3443                 ],
3444                 "required": ["rgbValue"]
3445             }
3446
3447     example: /
3448         {
3449         "id": "unique_example_id",
3450         "rgbValue": [255,0,0]
3451         }
3452
3453
3454 responses :
3455     200:
3456         body:
3457             application/json:
3458                 schema: /
3459                     {
3460                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.rgb.json#",
3461                     "$schema": "http://json-schema.org/draft-04/schema#",
3462                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3463 rights reserved.",
3464                     "title": "Colour RGB",
3465                     "definitions": {
3466                     "oic.r.colour.rgb": {
3467                     "type": "object",
3468                     "properties": {

```

```

3469         "rgbValue": {
3470             "type": "array",
3471             "description": "RGB value; the first item is the R, second the G, third the
3472 B.",
3473             "minItems": 3,
3474             "maxItems": 3,
3475             "items": {
3476                 "type": "integer"
3477             }
3478         }
3479     }
3480 }
3481 },
3482 "type": "object",
3483 "allOf": [
3484     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3485     {"$ref": "#/definitions/oic.r.colour.rgb"}
3486 ],
3487 "required": ["rgbValue"]
3488 }
3489
3490 example: /
3491 {
3492     "id": "unique_example_id",
3493     "rgbValue": [255,0,0]
3494 }
3495

```

6.7.5 Property Definition

Table 20 Colour RGB Property Definitions

Property name	Value type	Mandatory	Access mode	Description
rgbValue	array: see schema	yes		RGB value; the first item is the R, second the G, third the B.

6.7.6 CRUDN behaviour

Table 21 Colour RGB CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/ColourRGBResURI		get	post		

6.8 Dimming

6.8.1 Introduction

This resource describes a dimming function. The value is an integer showing the current dimming level. If step (from oic.r.baseresource) is present then it represents the increment between dimmer values. When range (from oic.r.baseresource) is omitted, then the range is [0,100]. A value of 0 means total dimming; a value of 100 means no dimming.

6.8.2 Example URI

/DimmingResURI

6.8.3 Resource Type

The resource type (rt) is defined as: oic.r.light.dimming.

6.8.4 RAML Definition

```

3511 #%RAML 0.8
3512 title: OICDimming
3513 version: v1.1.0-20160519
3514 traits:

```

```

3515 - interface :
3516     queryParameters:
3517         if:
3518             enum: ["oic.if.a", "oic.if.baseline"]
3519
3520 /DimmingResURI:
3521     description: |
3522         This resource describes a dimming function.
3523         The value is an integer showing the current dimming level.
3524         If step (from oic.r.baseresource) is present then it represents the increment between dimmer
3525         values.
3526         When range (from oic.r.baseresource) is omitted, then the range is [0,100].
3527         A value of 0 means total dimming; a value of 100 means no dimming.
3528
3529     is : ['interface']
3530
3531     get:
3532         description: |
3533             Retrieves the current dimming level.
3534
3535     responses :
3536         200:
3537             body:
3538                 application/json:
3539                     schema: /
3540                         {
3541                             "id":
3542                             "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.dimming.json#",
3543                             "$schema": "http://json-schema.org/draft-04/schema#",
3544                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3545                             rights reserved.",
3546                             "title": "Dimming",
3547                             "definitions": {
3548                                 "oic.r.light.dimming": {
3549                                     "type": "object",
3550                                     "properties": {
3551                                         "dimmingSetting": {
3552                                             "type": "integer",
3553                                             "description": "Current dimming value"
3554                                         }
3555                                     }
3556                                 },
3557                             "type": "object",
3558                             "allOf": [
3559                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3560                                 {"$ref": "#/definitions/oic.r.light.dimming"}
3561                             ],
3562                             "required": ["dimmingSetting"]
3563                         }
3564
3565                 example: /
3566                     {
3567                         "rt":          ["oic.r.light.dimming"],
3568                         "id":          "unique_example_id",
3569                         "dimmingSetting": 30,
3570                         "step":        5,
3571                         "range":       [0,100]
3572                     }
3573
3574     post:
3575         description: |

```



```

3576         Sets the desired dimming level.
3577
3578     body:
3579         application/json:
3580             schema: /
3581                 {
3582                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.dimming.json#",
3583                     "$schema": "http://json-schema.org/draft-04/schema#",
3584                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
3585 reserved.",
3586                     "title": "Dimming",
3587                     "definitions": {
3588                         "oic.r.light.dimming": {
3589                             "type": "object",
3590                             "properties": {
3591                                 "dimmingSetting": {
3592                                     "type": "integer",
3593                                     "description": "Current dimming value"
3594                                 }
3595                             }
3596                         }
3597                     },
3598                     "type": "object",
3599                     "allOf": [
3600                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
3601                         { "$ref": "#/definitions/oic.r.light.dimming" }
3602                     ],
3603                     "required": ["dimmingSetting"]
3604                 }
3605
3606     example: /
3607         {
3608             "id": "unique_example_id",
3609             "dimmingSetting": 40
3610         }
3611
3612     responses :
3613         200:
3614             description: |
3615                 Indicates that the dimming was changed.
3616                 The new dimming level is provided in the response.
3617
3618         body:
3619             application/json:
3620                 schema: /
3621                     {
3622                         "id":
3623 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.dimming.json#",
3624                         "$schema": "http://json-schema.org/draft-04/schema#",
3625                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3626 rights reserved.",
3627                         "title": "Dimming",
3628                         "definitions": {
3629                             "oic.r.light.dimming": {
3630                                 "type": "object",
3631                                 "properties": {
3632                                     "dimmingSetting": {
3633                                         "type": "integer",
3634                                         "description": "Current dimming value"
3635                                     }
3636                                 }
3637                             }
3638                         },
3639                         "type": "object",
3640                         "allOf": [

```

```

3641         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3642         {"$ref": "#/definitions/oic.r.light.dimming"}
3643     ],
3644     "required": ["dimmingSetting"]
3645 }
3646
3647     example: /
3648     {
3649         "id": "unique_example_id",
3650         "dimmingSetting": 40
3651     }
3652
3653     403:
3654     description: |
3655         This response is generated by the OIC Server when the client sends:
3656         An update with an out of range property value for dimmingSetting.
3657         The server responds with the current resource representation.
3658
3659     body:
3660     application/json:
3661     schema: /
3662     {
3663         "id":
3664         "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.dimming.json#",
3665         "$schema": "http://json-schema.org/draft-04/schema#",
3666         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3667         rights reserved.",
3668         "title": "Dimming",
3669         "definitions": {
3670             "oic.r.light.dimming": {
3671                 "type": "object",
3672                 "properties": {
3673                     "dimmingSetting": {
3674                         "type": "integer",
3675                         "description": "Current dimming value"
3676                     }
3677                 }
3678             }
3679         },
3680         "type": "object",
3681         "allOf": [
3682             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3683             {"$ref": "#/definitions/oic.r.light.dimming"}
3684         ],
3685         "required": ["dimmingSetting"]
3686     }
3687
3688     example: /
3689     {
3690         "id": "unique_example_id",
3691         "dimmingSetting": 40
3692     }
3693

```

6.8.5 Property Definition

Table 22 Dimming Property Definitions

Property name	Value type	Mandatory	Access mode	Description
dimmingSetting	integer	yes		Current dimming value

3696 **6.8.6 CRUDN behaviour**

3697 **Table 23 Dimming CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/DimmingResURI		get	post		

3698 **6.9 Door**

3699 **6.9.1 Introduction**

3700 This resource describes the open state of the door. A door is modelled by means of openState
 3701 (Open/Closed), openDuration (ISO 8601 Time), and openAlarm (boolean). For openState, the
 3702 value 'Open' indicates the door is open. The value 'Closed' indicates the door is closed. The type
 3703 of openDuration is an ISO 8601 Time encoded string. The openAlarm value 'true' indicates that
 3704 the open alarm is active. The openAlarm value 'false' indicates that open alarm is not active.

3705 **6.9.2 Example URI**

3706 /DoorResURI

3707 **6.9.3 Resource Type**

3708 The resource type (rt) is defined as: oic.r.door.

3709 **6.9.4 RAML Definition**

```

3710 #%RAML 0.8
3711 title: OICDoor
3712 version: v1.1.0-20160519
3713 traits:
3714   - interface-actuator :
3715     queryParameters:
3716       if:
3717         enum: ["oic.if.a", "oic.if.baseline"]
3718   - interface-all :
3719     queryParameters:
3720       if:
3721         enum: ["oic.if.a", "oic.if.s", "oic.if.baseline"]
3722
3723 /DoorResURI:
3724   description: |
3725     This resource describes the open state of the door.
3726     A door is modelled by means of openState (Open/Closed), openDuration (ISO 8601 Time), and
3727     openAlarm (boolean).
3728     For openState, the value 'Open' indicates the door is open.
3729     The value 'Closed' indicates the door is closed.
3730     The type of openDuration is an ISO 8601 Time encoded string.
3731     The openAlarm value 'true' indicates that the open alarm is active.
3732     The openAlarm value 'false' indicates that open alarm is not active.
3733
3734   get:
3735     description: |
3736       retrieves the state of the Door.
3737
3738   is : ['interface-all']
3739   responses :
3740     200:
3741       body:
3742         application/json:
3743           schema: /
  
```

```

3744     {
3745         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.door.json#",
3746         "$schema": "http://json-schema.org/draft-04/schema#",
3747         "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3748 rights reserved.",
3749         "title": "Door",
3750         "definitions": {
3751             "oic.r.door": {
3752                 "type": "object",
3753                 "properties": {
3754                     "openState": {
3755                         "type": "string",
3756                         "enum": ["Open", "Closed"],
3757                         "readOnly": true,
3758                         "description": "The state of the door (open or closed)"
3759                     },
3760                     "openDuration": {
3761                         "type": "string",
3762                         "readOnly": true,
3763                         "description": "The time duration the door has been open"
3764                     },
3765                     "openAlarm": {
3766                         "type": "boolean",
3767                         "description": "The state of the door open alarm"
3768                     }
3769                 }
3770             }
3771         },
3772         "type": "object",
3773         "allOf": [
3774             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3775             {"$ref": "#/definitions/oic.r.door"}
3776         ],
3777         "required": ["openState"]
3778     }
3779
3780     example: /
3781     {
3782         "rt" :           ["oic.r.door"],
3783         "id":           "unique_example_id",
3784         "openState":    "Open",
3785         "openDuration": "P0Y0M0DT2H25M5S",
3786         "openAlarm":    true
3787     }
3788
3789     post:
3790     description: |
3791         Sets the current Door properties.
3792         The only property that can be set as part of an update operation is
3793         the openAlarm.
3794         This can be made active (true) or inactive (false)
3795
3796     is : ['interface-actuator']
3797     body:
3798     application/json:
3799     schema: /
3800     {
3801         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.door-Update.json#",
3802         "$schema": "http://json-schema.org/draft-04/schema#",
3803         "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
3804 reserved.",
3805         "title": "Door",
3806         "definitions": {
3807             "oic.r.door": {
3808                 "type": "object",
3809                 "properties": {
3810                     "openAlarm": {

```

```

3811         "type": "boolean",
3812         "description": "The state of the door open alarm"
3813     }
3814 }
3815 },
3816 },
3817 "type": "object",
3818 "allOf": [
3819     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3820     {"$ref": "#/definitions/oic.r.door"}
3821 ]
3822 }
3823
3824 example: /
3825 {
3826     "id":          "unique_example_id",
3827     "openAlarm":  false
3828 }
3829
3830 responses :
3831     200:
3832         body:
3833             application/json:
3834                 schema: /
3835                     {
3836                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.door-Update.json#",
3837                         "$schema": "http://json-schema.org/draft-04/schema#",
3838                         "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3839 rights reserved.",
3840                         "title": "Door",
3841                         "definitions": {
3842                             "oic.r.door": {
3843                                 "type": "object",
3844                                 "properties": {
3845                                     "openAlarm": {
3846                                         "type": "boolean",
3847                                         "description": "The state of the door open alarm"
3848                                     }
3849                                 }
3850                             }
3851                         },
3852                         "type": "object",
3853                         "allOf": [
3854                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3855                             {"$ref": "#/definitions/oic.r.door"}
3856                         ]
3857                     }
3858
3859                 example: /
3860                     {
3861                         "id":          "unique_example_id",
3862                         "openAlarm":  false
3863                     }
3864

```

6.9.5 Property Definition

Table 24 Door Property Definitions

Property name	Value type	Mandatory	Access mode	Description
openDuration	string		Read Only	The time duration the door has been open

openAlarm	boolean			The state of the door open alarm
openState	string	yes	Read Only	The state of the door (open or closed)

3867 **6.9.6 CRUDN behaviour**

3868 **Table 25 Door CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/DoorResURI		get	post		

3869 **6.10 Energy Consumption**

3870 **6.10.1 Introduction**

3871 This resource describes the energy consumed by the device since power up (the energy value is
 3872 in Watt Hours [Wh]) and the instantaneous power draw of the device (the power value is in Watts
 3873 [W]) at the time the resource was queried. The power value is in Watts [W]. The energy value is in
 3874 Watt Hours [Wh].

3875 **6.10.2 Example URI**

3876 /EnergyConsumptionResURI

3877 **6.10.3 Resource Type**

3878 The resource type (rt) is defined as: oic.r.energy.consumption.

3879 **6.10.4 RAML Definition**

```

3880 #%RAML 0.8
3881 title: OICEnergyConsumption
3882 version: v1.1.0-20160519
3883 traits:
3884   - interface :
3885     queryParameters:
3886       if:
3887         enum: ["oic.if.s", "oic.if.baseline"]
3888
3889 /EnergyConsumptionResURI:
3890   description: |
3891     This resource describes the energy consumed by the device since power up (the energy value is
3892     in Watt Hours [Wh])
3893     and the instantaneous power draw of the device (the power value is in Watts [W]) at the time
3894     the resource was queried.
3895     The power value is in Watts [W].
3896     The energy value is in Watt Hours [Wh].
3897
3898   is : ['interface']
3899   get:
3900     description: |
3901       Provides the current power draw and cumulative energy usage.
3902
3903   responses :
3904     200:
3905       body:
3906         application/json:
3907           schema: /
3908             {
3909               "id":

```

```

3910 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.consumption.json#",
3911 "$schema": "http://json-schema.org/draft-04/schema#",
3912 "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3913 rights reserved.",
3914 "title": "Energy Consumption",
3915 "definitions": {
3916   "oic.r.energy.consumption": {
3917     "type": "object",
3918     "properties": {
3919       "power": {
3920         "type": "number",
3921         "readOnly": true,
3922         "description": "Instantaneous Power"
3923       },
3924       "energy": {
3925         "type": "number",
3926         "readOnly": true,
3927         "description": "Energy consumed"
3928       }
3929     }
3930   },
3931   "type": "object",
3932   "allOf": [
3933     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3934     {"$ref": "#/definitions/oic.r.energy.consumption"}
3935   ],
3936   "required": ["power", "energy"]
3937 }
3938
3939 example: /
3940 {
3941   "rt": ["oic.r.energy.consumption"],
3942   "id": "unique_example_id",
3943   "power": 2000.1,
3944   "energy": 3500.4
3945 }
3946

```

3947 6.10.5 Property Definition

3948 **Table 26 Energy Consumption Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
energy	number	yes	Read Only	Energy consumed
power	number	yes	Read Only	Instantaneous Power

3949 6.10.6 CRUDN behaviour

3950 **Table 27 Energy Consumption CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/EnergyConsumptionResURI		get			

3951 6.11 Energy Usage

3952 6.11.1 Introduction

3953 This resource describes a cumulative time-based energy usage query.. The resource is a
3954 composite resource being made up as a collection of: TimePeriod Resource EnergyConsumption
3955 Resource

3956 6.11.2 Example URI

3957 /EnergyUsageResURI

3958 6.11.3 Resource Type

3959 The resource type (rt) is defined as: oic.r.energy.usage.

3960 6.11.4 RAML Definition

```
3961 #%RAML 0.8
3962 title: OICEnergyUsage
3963 version: v1.1.0-20160519
3964 traits:
3965   - interface :
3966     queryParameters:
3967       if:
3968         enum: ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
3969
3970 /EnergyUsageResURI:
3971   description: |
3972     This resource describes a cumulative time-based energy usage query..
3973     The resource is a composite resource being made up as a collection of:
3974     TimePeriod Resource
3975     EnergyConsumption Resource
3976
3977   is : ['interface']
3978   get:
3979     description: |
3980       Retrieves the energy usage information as a composite of consumption over time.
3981
3982   responses :
3983     200:
3984       body:
3985         application/json:
3986           schema: /
3987             {
3988               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.usage.json#",
3989               "$schema": "http://json-schema.org/draft-04/schema#",
3990               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3991 rights reserved.",
3992               "title": "Energy Usage",
3993               "definitions": {
3994                 "oic.r.energy.usage": {
3995                   "type": "object",
3996                   "properties": {
3997                     "resources": {
3998                       "type": "array",
3999                       "minItems": 2,
4000                       "maxItems": 2,
4001                       "items": {
4002                         "$ref": "oic.oic-link-schema.json#/definitions/oic.oic-link"
4003                       }
4004                     }
4005                   }
4006                 },
4007               "type": "object",
4008               "allOf": [
4009                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4010                 {"$ref": "#/definitions/oic.r.energy.usage"}
4011               ],
4012               "required": ["resources"]
4013             }
4014
4015   example: /
```



```

4017     {
4018         "rt": ["oic.r.energy.usage"],
4019         "id": "unique_example_id",
4020         "resources": [
4021             {
4022                 "href": "/TimeIntervalResURI",
4023                 "rel": "contains",
4024                 "rt": ["oic.r.time.period"],
4025                 "if": ["oic.if.a"],
4026                 "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
4027             },
4028             {
4029                 "href": "/EnergyConsumptionResURI",
4030                 "rel": "contains",
4031                 "rt": ["oic.r.energy.consumption"],
4032                 "if": ["oic.if.s"],
4033                 "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
4034             }
4035         ]
4036     }
4037 
```

4038 6.11.5 CRUDN behaviour

4039 **Table 28 Energy Usage CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/EnergyUsageResURI		get			

4040 6.12 Humidity

4041 6.12.1 Introduction

4042 This resource describes a sensed or desired humidity. The value humidity is an integer describing
4043 the percentage measured relative humidity. The value desiredHumidity is an integer showing the
4044 desired target relative humidity.

4045 6.12.2 Example URI

4046 /HumidityResURI

4047 6.12.3 Resource Type

4048 The resource type (rt) is defined as: oic.r.humidity.

4049 6.12.4 RAML Definition

```

4050 #%RAML 0.8
4051 title: OICHumidity
4052 version: v1.1.0-20160519
4053 traits:
4054   - interface :
4055       queryParameters:
4056         if:
4057           enum: ["oic.if.a", "oic.if.s", "oic.if.baseline"]
4058
4059 /HumidityResURI:
4060   description: |
4061     This resource describes a sensed or desired humidity.
4062     The value humidity is an integer describing the percentage measured relative humidity.
4063     The value desiredHumidity is an integer showing the desired target relative humidity.
4064
4065   is : ['interface']
4066   get:
4067     description: |
4068       Retrieves the current (relative) humidity level.
4069 
```

```

4070     responses :
4071         200:
4072             body:
4073                 application/json:
4074                 schema: /
4075                     {
4076                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.humidity.json#",
4077                         "$schema": "http://json-schema.org/draft-04/schema#",
4078                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4079 rights reserved.",
4080                         "title": "Humidity",
4081                         "definitions": {
4082                             "oic.r.humidity": {
4083                                 "type": "object",
4084                                 "properties": {
4085                                     "humidity": {
4086                                         "type": "integer",
4087                                         "readOnly": true,
4088                                         "description": "Current sensed value for Humidity",
4089                                         "minimum": 0,
4090                                         "maximum": 100
4091                                     },
4092                                     "desiredHumidity": {
4093                                         "type": "integer",
4094                                         "description": "Desired value for Humidity",
4095                                         "minimum": 0,
4096                                         "maximum": 100
4097                                     }
4098                                 }
4099                             }
4100                         },
4101                         "type": "object",
4102                         "allOf": [
4103                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4104                             {"$ref": "#/definitions/oic.r.humidity"}
4105                         ],
4106                         "required": ["humidity"]
4107                     }
4108
4109                 example: /
4110                     {
4111                         "rt":          ["oic.r.humidity"],
4112                         "id":          "unique_example_id",
4113                         "humidity":    40,
4114                         "desiredHumidity": 40
4115                     }
4116
4117             post:
4118                 description: |
4119                     Sets the desired relative humidity level.
4120
4121                 body:
4122                     application/json:
4123                     schema: /
4124                         {
4125                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.humidity-Update.json#",
4126                             "$schema": "http://json-schema.org/draft-04/schema#",
4127                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
4128 reserved.",
4129                             "title": "Humidity",
4130                             "definitions": {
4131                                 "oic.r.humidity": {
4132                                     "type": "object",
4133                                     "properties": {
4134                                         "desiredHumidity": {

```

```

4135         "type": "integer",
4136         "description": "Desired value for Humidity",
4137         "minimum": 0,
4138         "maximum": 100
4139     }
4140 }
4141 }
4142 },
4143 "type": "object",
4144 "allOf": [
4145     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4146     {"$ref": "#/definitions/oic.r.humidity"}
4147 ]
4148 }
4149
4150 example: /
4151 {
4152     "id": "unique_example_id",
4153     "desiredHumidity" : 45
4154 }
4155
4156 responses :
4157 200:
4158     description: |
4159         Indicates that the relative humidity level was changed.
4160         The new relative humidity level is provided in the response.
4161
4162     body:
4163         application/json:
4164             schema: /
4165                 {
4166                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.humidity-
4167 Update.json#",
4168                     "$schema": "http://json-schema.org/draft-04/schema#",
4169                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4170 rights reserved.",
4171                     "title": "Humidity",
4172                     "definitions": {
4173                         "oic.r.humidity": {
4174                             "type": "object",
4175                             "properties": {
4176                                 "desiredHumidity": {
4177                                     "type": "integer",
4178                                     "description": "Desired value for Humidity",
4179                                     "minimum": 0,
4180                                     "maximum": 100
4181                                 }
4182                             }
4183                         }
4184                     },
4185                     "type": "object",
4186                     "allOf": [
4187                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4188                         {"$ref": "#/definitions/oic.r.humidity"}
4189                     ]
4190                 }
4191
4192             example: /
4193                 {
4194                     "id": "unique_example_id",
4195                     "desiredHumidity": 45
4196                 }
4197

```

4198 **6.12.5 Property Definition**

4199 **Table 29 Humidity Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
desiredHumidity	integer			Desired value for Humidity
humidity	integer	yes	Read Only	Current sensed value for Humidity

4200 **6.12.6 CRUDN behaviour**

4201 **Table 30 Humidity CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/HumidityResURI		get	post		

4202 **6.13 Ice Maker**

4203 **6.13.1 Introduction**

4204 This resource describes an the operational state of an Ice Maker. The status is a string containing
 4205 a value from the set of possible ice maker statuses. The possible statuses are defined by the
 4206 enumeration [on, off, full] A status of 'on' means that the Ice Maker is operating. A status of 'off'
 4207 means that the Ice Maker is not operating. A status of 'full' means that the ice collection bin is full
 4208 (Ice Maker is operating).

4209 **6.13.2 Example URI**

4210 /IceMakerResURI

4211 **6.13.3 Resource Type**

4212 The resource type (rt) is defined as: oic.r.icemaker.

4213 **6.13.4 RAML Definition**

```

4214 #%RAML 0.8
4215 title: OICIceMaker
4216 version: v1.1.0-20160519
4217 traits:
4218   - interface :
4219       queryParameters:
4220         if:
4221           enum: ["oic.if.a", "oic.if.baseline"]
4222
4223 /IceMakerResURI:
4224   description: |
4225     This resource describes an the operational state of an Ice Maker.
4226     The status is a string containing a value from the set of possible ice maker statuses.
4227     The possible statuses are defined by the enumeration [on, off, full]
4228     A status of 'on' means that the Ice Maker is operating.
4229     A status of 'off' means that the Ice Maker is not operating.
4230     A status of 'full' means that the ice collection bin is full (Ice Maker is operating).
4231
4232   is : ['interface']
4233   get:
4234     description: |
4235       Retrieves the current Ice Maker status.
4236
4237   responses :
4238     200:
  
```

```

4239     body:
4240         application/json:
4241             schema: /
4242                 {
4243                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.iceMaker.json#",
4244                     "$schema": "http://json-schema.org/draft-04/schema#",
4245                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4246 rights reserved.",
4247                     "title": "Ice Maker",
4248                     "definitions": {
4249                         "oic.r.iceMaker": {
4250                             "type": "object",
4251                             "properties": {
4252                                 "status": {
4253                                     "type": "string",
4254                                     "enum": ["on","off","full"],
4255                                     "description": "Status of the Ice Maker"
4256                                 }
4257                             }
4258                         }
4259                     },
4260                     "type": "object",
4261                     "allOf": [
4262                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4263                         {"$ref": "#/definitions/oic.r.iceMaker"}
4264                     ],
4265                     "required": ["status"]
4266                 }
4267
4268             example: /
4269                 {
4270                     "rt": ["oic.r.icemaker"],
4271                     "id": "unique_example_id",
4272                     "status": "on"
4273                 }
4274
4275     post:
4276         description: |
4277             Sets the desired Ice Maker status.
4278             Only valid settings for status in a Post shall be [on,off].
4279
4280     body:
4281         application/json:
4282             schema: /
4283                 {
4284                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.iceMaker-Update.json#",
4285                     "$schema": "http://json-schema.org/draft-04/schema#",
4286                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
4287 reserved.",
4288                     "title": "Ice Maker",
4289                     "definitions": {
4290                         "oic.r.icemaker": {
4291                             "type": "object",
4292                             "properties": {
4293                                 "status": {
4294                                     "enum": ["on","off"],
4295                                     "description": "Set the status of the Ice Maker"
4296                                 }
4297                             }
4298                         }
4299                     },
4300                     "type": "object",
4301                     "allOf": [
4302                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4303                         {"$ref": "#/definitions/oic.r.icemaker"}
4304                     ],

```

```

4305         "required": ["status"]
4306     }
4307
4308     example: /
4309     {
4310         "id":      "unique_example_id",
4311         "status": "off"
4312     }
4313
4314     responses :
4315         200:
4316             description: |
4317                 Indicates that the Ice Maker status was changed.
4318                 The new status is provided in the response.
4319
4320             body:
4321                 application/json:
4322                 schema: /
4323                 {
4324                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.iceMaker-
4325 Update.json#",
4326                 "$schema": "http://json-schema.org/draft-04/schema#",
4327                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4328 rights reserved.",
4329                 "title": "Ice Maker",
4330                 "definitions": {
4331                     "oic.r.icemaker": {
4332                         "type": "object",
4333                         "properties": {
4334                             "status": {
4335                                 "enum": ["on","off"],
4336                                 "description": "Set the status of the Ice Maker"
4337                             }
4338                         }
4339                     },
4340                 },
4341                 "type": "object",
4342                 "allOf": [
4343                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4344                     {"$ref": "#/definitions/oic.r.icemaker"}
4345                 ],
4346                 "required": ["status"]
4347             }
4348
4349             example: /
4350             {
4351                 "id":      "unique_example_id",
4352                 "status": "off"
4353             }
4354
4355         403:
4356             description: |
4357                 This response is generated by the OIC Server when the client sends:
4358                 An update with an invalid property value for status.
4359                 The server responds with the current resource representation.
4360
4361             body:
4362                 application/json:
4363                 schema: /
4364                 {
4365                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.iceMaker-
4366 Update.json#",
4367                 "$schema": "http://json-schema.org/draft-04/schema#",

```

```

4368         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4369 rights reserved.",
4370         "title": "Ice Maker",
4371         "definitions": {
4372             "oic.r.icemaker": {
4373                 "type": "object",
4374                 "properties": {
4375                     "status": {
4376                         "enum": ["on","off"],
4377                         "description": "Set the status of the Ice Maker"
4378                     }
4379                 }
4380             }
4381         },
4382         "type": "object",
4383         "allOf": [
4384             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4385             {"$ref": "#/definitions/oic.r.icemaker"}
4386         ],
4387         "required": ["status"]
4388     }
4389
4390     example: /
4391     {
4392         "id":      "unique_example_id",
4393         "status": "off"
4394     }
4395

```

4396 6.13.5 Property Definition

4397 **Table 31 Ice Maker Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
status	string	yes		Status of the Ice Maker

4398 6.13.6 CRUDN behaviour

4399 **Table 32 Ice Maker CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/IceMakerResURI		get	post		

4400 6.14 Lock

4401 6.14.1 Introduction

4402 Resource describing a lock. For the type of lockState, the value 'Locked' indicates that the door is
4403 Locked. The value 'Unlocked' indicates that the door is Unlocked.

4404 6.14.2 Example URI

4405 /LockStatusResURI

4406 6.14.3 Resource Type

4407 The resource type (rt) is defined as: oic.r.lock.status.

4408 6.14.4 RAML Definition

```

4409 #%RAML 0.8
4410 title: OICLock
4411 version: v1.1.0-20160519
4412 traits:
4413   - interface :
4414       queryParameters:
4415           if:
4416               enum: ["oic.if.a", "oic.if.baseline"]

```

```

4417
4418 /LockStatusResURI:
4419   description: |
4420     Resource describing a lock.
4421     For the type of lockState, the value 'Locked' indicates that the door is Locked.
4422     The value 'Unlocked' indicates that the door is Unlocked.
4423
4424   is : ['interface']
4425   get:
4426     description: |
4427       Retrieves the state of the lock.
4428
4429     responses :
4430       200:
4431         body:
4432           application/json:
4433             schema: /
4434               {
4435                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.status.json#",
4436                 "$schema": "http://json-schema.org/draft-04/schema#",
4437                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4438 rights reserved.",
4439                 "title": "Lock",
4440                 "definitions": {
4441                   "oic.r.lock.status": {
4442                     "type": "object",
4443                     "properties": {
4444                       "lockState" : {
4445                         "type": "string",
4446                         "enum": ["Locked", "Unlocked"],
4447                         "description": "State of the lock."
4448                       }
4449                     }
4450                   }
4451                 },
4452                 "type": "object",
4453                 "allOf": [
4454                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4455                   {"$ref": "#/definitions/oic.r.lock.status"}
4456                 ],
4457                 "required": ["lockState"]
4458               }
4459
4460             example: /
4461               {
4462                 "rt":          ["oic.r.lock.status"],
4463                 "id":         "unique_example_id",
4464                 "lockState":  "Locked"
4465               }
4466
4467   post:
4468     description: |
4469       Sets the current lock state.
4470
4471     body:
4472       application/json:
4473         schema: /
4474           {
4475             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.status.json#",
4476             "$schema": "http://json-schema.org/draft-04/schema#",
4477             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights

```



```

4478 reserved.",
4479     "title": "Lock",
4480     "definitions": {
4481         "oic.r.lock.status": {
4482             "type": "object",
4483             "properties": {
4484                 "lockState": {
4485                     "type": "string",
4486                     "enum": ["Locked", "Unlocked"],
4487                     "description": "State of the lock."
4488                 }
4489             }
4490         }
4491     },
4492     "type": "object",
4493     "allOf": [
4494         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4495         {"$ref": "#/definitions/oic.r.lock.status"}
4496     ],
4497     "required": ["lockState"]
4498 }
4499
4500 example: /
4501 {
4502     "id":          "unique_example_id",
4503     "lockState":  "Unlocked"
4504 }
4505
4506 responses :
4507 200:
4508   body:
4509     application/json:
4510       schema: /
4511         {
4512             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.status.json#",
4513             "$schema": "http://json-schema.org/draft-04/schema#",
4514             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4515 rights reserved.",
4516             "title": "Lock",
4517             "definitions": {
4518                 "oic.r.lock.status": {
4519                     "type": "object",
4520                     "properties": {
4521                         "lockState": {
4522                             "type": "string",
4523                             "enum": ["Locked", "Unlocked"],
4524                             "description": "State of the lock."
4525                         }
4526                     }
4527                 }
4528             },
4529             "type": "object",
4530             "allOf": [
4531                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4532                 {"$ref": "#/definitions/oic.r.lock.status"}
4533             ],
4534             "required": ["lockState"]
4535         }
4536
4537 example: /
4538 {
4539     "id":          "unique_example_id",
4540     "lockState":  "Unlocked"
4541 }
4542

```

```

4543 403:
4544   description: |
4545     This response is generated by the OIC Server when the client sends:
4546     An update with an invalid property value for lockState.
4547     The server responds with the current resource representation.
4548
4549   body:
4550     application/json:
4551     schema: /
4552       {
4553         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.status.json#",
4554         "$schema": "http://json-schema.org/draft-04/schema#",
4555         "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4556 rights reserved.",
4557         "title": "Lock",
4558         "definitions": {
4559           "oic.r.lock.status": {
4560             "type": "object",
4561             "properties": {
4562               "lockState": {
4563                 "type": "string",
4564                 "enum": ["Locked", "Unlocked"],
4565                 "description": "State of the lock."
4566               }
4567             }
4568           },
4569         },
4570         "type": "object",
4571         "allOf": [
4572           {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4573           {"$ref": "#/definitions/oic.r.lock.status"}
4574         ],
4575         "required": ["lockState"]
4576       }
4577
4578     example: /
4579       {
4580         "lockState": "Unlocked"
4581       }
4582

```

4583 6.14.5 Property Definition

4584 **Table 33 Lock Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
lockState	string	yes		State of the lock.

4585 6.14.6 CRUDN behaviour

4586 **Table 34 Lock CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/LockStatusResURI		get	post		

4587 6.15 Lock Code

4588 6.15.1 Introduction

4589 Resource describing a lock code. The lockCodeList is an array of possible codes that may be
4590 associated with a lock. These are all presented as strings.

4591 6.15.2 Example URI

4592 /LockCodeResURI

4593 6.15.3 Resource Type

4594 The resource type (rt) is defined as: oic.r.lock.code.

4595 6.15.4 RAML Definition

```
4596 #%RAML 0.8
4597 title: OICLockCode
4598 version: v1.1.0-20160519
4599 traits:
4600   - interface :
4601       queryParameters:
4602           if:
4603               enum: ["oic.if.a", "oic.if.baseline"]
4604
4605 /LockCodeResURI:
4606   description: |
4607     Resource describing a lock code.
4608     The lockCodeList is an array of possible codes that may be associated with a lock.
4609     These are all presented as strings.
4610
4611   is : ['interface']
4612   get:
4613     description: |
4614       Retrieves the current lock code values.
4615
4616     responses :
4617       200:
4618         body:
4619           application/json:
4620             schema: /
4621               {
4622                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.code.json#",
4623                 "$schema": "http://json-schema.org/draft-04/schema#",
4624                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4625 rights reserved.",
4626                 "title": "Lock Code",
4627                 "definitions": {
4628                   "oic.r.lock.code": {
4629                     "type": "object",
4630                     "properties": {
4631                       "lockCodeList" : {
4632                         "type": "array",
4633                         "items": {
4634                           "type": "string",
4635                           "description": "Value for the lock code"
4636                         }
4637                       }
4638                     }
4639                   }
4640                 },
4641                 "type": "object",
4642                 "allOf": [
4643                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4644                   {"$ref": "#/definitions/oic.r.lock.code"}
4645                 ],
4646                 "required": ["lockCodeList"]
4647               }
4648
4649   example: /
4650     {
4651       "rt":          ["oic.r.lock.code"],
```

```

4652         "id": "unique_example_id",
4653         "lockCodeList": ["012345","112233"]
4654     }
4655
4656     post:
4657         description: |
4658             Updates the current lock code values.
4659
4660     body:
4661         application/json:
4662             schema: /
4663                 {
4664                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.code.json#",
4665                     "$schema": "http://json-schema.org/draft-04/schema#",
4666                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
4667 reserved.",
4668                     "title": "Lock Code",
4669                     "definitions": {
4670                         "oic.r.lock.code": {
4671                             "type": "object",
4672                             "properties": {
4673                                 "lockCodeList" : {
4674                                     "type": "array",
4675                                     "items": {
4676                                         "type": "string",
4677                                         "description": "Value for the lock code"
4678                                     }
4679                                 }
4680                             }
4681                         },
4682                     },
4683                     "type": "object",
4684                     "allOf": [
4685                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
4686                         { "$ref": "#/definitions/oic.r.lock.code" }
4687                     ],
4688                     "required": ["lockCodeList"]
4689                 }
4690
4691             example: /
4692                 {
4693                     "id": "unique_example_id",
4694                     "lockCodeList": ["543210","332211"]
4695                 }
4696
4697     responses :
4698         200:
4699             body:
4700                 application/json:
4701                     schema: /
4702                         {
4703                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.code.json#",
4704                             "$schema": "http://json-schema.org/draft-04/schema#",
4705                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4706 rights reserved.",
4707                             "title": "Lock Code",
4708                             "definitions": {
4709                                 "oic.r.lock.code": {
4710                                     "type": "object",
4711                                     "properties": {
4712                                         "lockCodeList" : {
4713                                             "type": "array",
4714                                             "items": {
4715                                                 "type": "string",

```

```

4716         "description": "Value for the lock code"
4717     }
4718 }
4719 }
4720 }
4721 },
4722 "type": "object",
4723 "allOf": [
4724     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4725     {"$ref": "#/definitions/oic.r.lock.code"}
4726 ],
4727 "required": ["lockCodeList"]
4728 }
4729
4730 example: /
4731 {
4732     "id": "unique_example_id",
4733     "lockCodeList": ["543210", "332211"]
4734 }
4735

```

4736 6.15.5 Property Definition

4737 **Table 35 Lock Code Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
lockCodeList	array: see schema	yes		

4738 6.15.6 CRUDN behaviour

4739 **Table 36 Lock Code CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/LockCodeResURI		get	post		

4740 6.16 Mode

4741 6.16.1 Introduction

4742 This resource describes the modes of operation that a device can provide. The mode can be read
4743 or set. The supportedModes is an array of possible modes the device supports. The modes are an
4744 array of the currently active mode(s).

4745 6.16.2 Example URI

4746 /ModeResURI

4747 6.16.3 Resource Type

4748 The resource type (rt) is defined as: oic.r.mode.

4749 6.16.4 RAML Definition

```

4750 #%RAML 0.8
4751 title: OICMode
4752 version: v1.1.0-20160519
4753 traits:
4754   - interface :
4755       queryParameters:
4756           if:
4757               enum: ["oic.if.a", "oic.if.baseline"]
4758
4759 /ModeResURI:
4760     description: |
4761         This resource describes the modes of operation that a device can provide.
4762         The mode can be read or set.

```

```

4763     The supportedModes is an array of possible modes the device supports.
4764     The modes are an array of the currently active mode(s).
4765
4766     is : ['interface']
4767
4768     get:
4769         description: |
4770             Retrieves the current mode.
4771
4772     responses :
4773         200:
4774             body:
4775                 application/json:
4776                     schema: /
4777                         {
4778                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mode.json#",
4779                             "$schema": "http://json-schema.org/draft-04/schema#",
4780                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
4781                             "title": "Mode",
4782                             "definitions": {
4783                                 "oic.r.mode": {
4784                                     "type": "object",
4785                                     "properties": {
4786                                         "supportedModes": {
4787                                             "type": "array",
4788                                             "readOnly": true,
4789                                             "description": "Array of possible modes the device supports.",
4790                                             "items": {
4791                                                 "type": "string"
4792                                             }
4793                                         },
4794                                         "modes": {
4795                                             "type": "array",
4796                                             "description": "Array of the currently active mode(s)",
4797                                             "items": {
4798                                                 "type": "string"
4799                                             }
4800                                         }
4801                                     }
4802                                 },
4803                                 "type": "object",
4804                                 "allOf": [
4805                                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4806                                     {"$ref": "#/definitions/oic.r.mode"}
4807                                 ],
4808                                 "required": ["supportedModes", "modes"]
4809                             }
4810
4811     example: /
4812         {
4813             "rt": ["oic.r.mode"],
4814             "id": "unique_example_id",
4815             "supportedModes": ["active", "armedAway", "armedStay", "armedInstant"],
4816             "modes": ["active"]
4817         }
4818
4819
4820     post:
4821         description: |
4822             Sets the desired mode.
4823
4824         body:
4825             application/json:

```

```

4826     schema: /
4827     {
4828         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mode-Update.json#",
4829         "$schema": "http://json-schema.org/draft-04/schema#",
4830         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
4831 reserved.",
4832         "title": "Mode",
4833         "definitions": {
4834             "oic.r.mode": {
4835                 "type": "object",
4836                 "properties": {
4837                     "modes": {
4838                         "type": "array",
4839                         "description": "Desired mode",
4840                         "items": {
4841                             "type": "string"
4842                         }
4843                     }
4844                 }
4845             }
4846         },
4847         "type": "object",
4848         "allOf": [
4849             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4850             {"$ref": "#/definitions/oic.r.mode"}
4851         ],
4852         "required": ["modes"]
4853     }
4854
4855     example: /
4856     {
4857         "id": "unique_example_id",
4858         "modes": ["armedAway"]
4859     }
4860
4861     responses :
4862     200:
4863     body:
4864     application/json:
4865     schema: /
4866     {
4867         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mode-Update.json#",
4868         "$schema": "http://json-schema.org/draft-04/schema#",
4869         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4870 rights reserved.",
4871         "title": "Mode",
4872         "definitions": {
4873             "oic.r.mode": {
4874                 "type": "object",
4875                 "properties": {
4876                     "modes": {
4877                         "type": "array",
4878                         "description": "Desired mode",
4879                         "items": {
4880                             "type": "string"
4881                         }
4882                     }
4883                 }
4884             }
4885         },
4886         "type": "object",
4887         "allOf": [
4888             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4889             {"$ref": "#/definitions/oic.r.mode"}
4890         ],
4891         "required": ["modes"]

```

```

4892     }
4893
4894     example: /
4895     {
4896         "id": "unique_example_id",
4897         "modes": ["armedAway"]
4898     }
4899
4900 403:
4901     description: |
4902         This response is generated by the OIC Server when the client sends:
4903         An update with an value for mode that is not found in supportedModes.
4904         The server responds with the current resource representation.
4905
4906     body:
4907         application/json:
4908         schema: /
4909         {
4910             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mode.json#",
4911             "$schema": "http://json-schema.org/draft-04/schema#",
4912             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
4913             "title": "Mode",
4914             "definitions": {
4915                 "oic.r.mode": {
4916                     "type": "object",
4917                     "properties": {
4918                         "supportedModes": {
4919                             "type": "array",
4920                             "readOnly": true,
4921                             "description": "Array of possible modes the device supports.",
4922                             "items": {
4923                                 "type": "string"
4924                             }
4925                         }
4926                     },
4927                     "modes": {
4928                         "type": "array",
4929                         "description": "Array of the currently active mode(s)",
4930                         "items": {
4931                             "type": "string"
4932                         }
4933                     }
4934                 }
4935             },
4936             "type": "object",
4937             "allOf": [
4938                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4939                 {"$ref": "#/definitions/oic.r.mode"}
4940             ],
4941             "required": ["supportedModes", "modes"]
4942         }
4943
4944     example: /
4945     {
4946         "id": "unique_example_id",
4947         "supportedModes": ["active", "armedAway", "armedStay", "armedInstant"],
4948         "modes": ["active"]
4949     }
4950
4951

```

6.16.5 Property Definition

Table 37 Mode Property Definitions

Property name	Value type	Mandatory	Access mode	Description
---------------	------------	-----------	-------------	-------------

supportedModes	array: schema	see	yes	Read Only	Array of possible modes the device supports.
modes	array: schema	see	yes		Array of the currently active mode(s)

4954 **6.16.6 CRUDN behaviour**

4955 **Table 38 Mode CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/ModeResURI		get	post		

4956 **6.17 Open Level**

4957 **6.17.1 Introduction**

4958 This resource describes how open or ajar an entity such as a window, door, blind or shutter is. The
 4959 openLevel can be read (acting as a sensor). The openLevel can also be set (acting as an actuator).
 4960 The openLevel is device dependent across the range provided. When range (from
 4961 oic.r.baseresource) is omitted then 0 to 100 is assumed where 0 means closed, 100 means fully
 4962 open. If a range is provided then the lower bound=closed, upper bound=open. If step (from
 4963 oic.r.baseresource) is present then it represents the increment between possible values; if not
 4964 provided 1 is assumed.

4965 **6.17.2 Example URI**

4966 /OpenLevelResURI

4967 **6.17.3 Resource Type**

4968 The resource type (rt) is defined as: oic.r.openlevel.

4969 **6.17.4 RAML Definition**

```

4970 #%RAML 0.8
4971 title: OICOpenLevel
4972 version: v1.1.0-20160519
4973 traits:
4974   - interface :
4975     queryParameters:
4976       if:
4977         enum: ["oic.if.a", "oic.if.baseline"]
4978
4979 /OpenLevelResURI:
4980   description: |
4981     This resource describes how open or ajar an entity such as a window, door, blind or shutter is.
4982     The openLevel can be read (acting as a sensor).
4983     The openLevel can also be set (acting as an actuator).
4984     The openLevel is device dependent across the range provided.
4985     When range (from oic.r.baseresource) is omitted then 0 to 100 is assumed where 0 means closed,
4986     100 means fully open.
4987     If a range is provided then the lower bound=closed, upper bound=open.
4988     If step (from oic.r.baseresource) is present then it represents the increment between possible
4989     values; if not provided 1 is assumed.
4990
4991   is : ['interface']
4992   get:
4993     description: |
4994       Retrieves the current openLevel.
4995
4996   responses :
```

```

4997     200:
4998         body:
4999             application/json:
5000                 schema: /
5001                     {
5002                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.openLevel.json#",
5003                         "$schema": "http://json-schema.org/draft-04/schema#",
5004                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5005 rights reserved.",
5006                         "title": "Open Level",
5007                         "definitions": {
5008                             "oic.r.openlevel": {
5009                                 "type": "object",
5010                                 "properties": {
5011                                     "openLevel": {
5012                                         "type": "integer",
5013                                         "description": "How open or ajar the entity is"
5014                                     },
5015                                     "increment": {
5016                                         "type": "integer",
5017                                         "description": "Deprecated, use 'step' instead.",
5018                                         "readOnly": true
5019                                     }
5020                                 }
5021                             }
5022                         },
5023                         "type": "object",
5024                         "allOf": [
5025                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5026                             {"$ref": "#/definitions/oic.r.openlevel"}
5027                         ],
5028                         "required": ["openLevel"]
5029                     }
5030
5031                 example: /
5032                     {
5033                         "rt":          ["oic.r.openlevel"],
5034                         "id":          "unique_example_id",
5035                         "openLevel":  50,
5036                         "step":        2,
5037                         "range":       [0,100]
5038                     }
5039
5040     post:
5041         description: |
5042             Sets the desired openLevel.
5043
5044         body:
5045             application/json:
5046                 schema: /
5047                     {
5048                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.openLevel.json#",
5049                         "$schema": "http://json-schema.org/draft-04/schema#",
5050                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
5051 reserved.",
5052                         "title": "Open Level",
5053                         "definitions": {
5054                             "oic.r.openlevel": {
5055                                 "type": "object",
5056                                 "properties": {
5057                                     "openLevel": {
5058                                         "type": "integer",
5059                                         "description": "How open or ajar the entity is"
5060                                     },
5061                                     "increment": {

```

```

5062         "type": "integer",
5063         "description": "Deprecated, use 'step' instead.",
5064         "readOnly": true
5065     }
5066 }
5067 }
5068 },
5069 "type": "object",
5070 "allOf": [
5071     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5072     {"$ref": "#/definitions/oic.r.openlevel"}
5073 ],
5074 "required": ["openLevel"]
5075 }
5076
5077 example: /
5078 {
5079     "id":          "unique_example_id",
5080     "openLevel":  0
5081 }
5082
5083 responses :
5084 200:
5085     body:
5086     application/json:
5087         schema: /
5088         {
5089             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.openLevel.json#",
5090             "$schema": "http://json-schema.org/draft-04/schema#",
5091             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
5092             "title": "Open Level",
5093             "definitions": {
5094                 "oic.r.openlevel": {
5095                     "type": "object",
5096                     "properties": {
5097                         "openLevel": {
5098                             "type": "integer",
5099                             "description": "How open or ajar the entity is"
5100                         },
5101                     },
5102                     "increment": {
5103                         "type": "integer",
5104                         "description": "Deprecated, use 'step' instead.",
5105                         "readOnly": true
5106                     }
5107                 }
5108             },
5109         },
5110         "type": "object",
5111         "allOf": [
5112             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5113             {"$ref": "#/definitions/oic.r.openlevel"}
5114         ],
5115         "required": ["openLevel"]
5116     }
5117
5118     example: /
5119     {
5120         "id":          "unique_example_id",
5121         "openLevel":  0
5122     }
5123
5124 403:
5125     description: |

```

5126 This response is generated by the OIC Server when the client sends:
 5127 An update with an out of range property value for openLevel.
 5128 The server responds with the current resource representation.
 5129

```

5130 body:
5131 application/json:
5132 schema: /
5133 {
5134   "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.openLevel.json#",
5135   "$schema": "http://json-schema.org/draft-04/schema#",
5136   "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5137 rights reserved.",
5138   "title": "Open Level",
5139   "definitions": {
5140     "oic.r.openlevel": {
5141       "type": "object",
5142       "properties": {
5143         "openLevel": {
5144           "type": "integer",
5145           "description": "How open or ajar the entity is"
5146         },
5147         "increment": {
5148           "type": "integer",
5149           "description": "Deprecated, use 'step' instead.",
5150           "readOnly": true
5151         }
5152       }
5153     },
5154     "type": "object",
5155     "allOf": [
5156       {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5157       {"$ref": "#/definitions/oic.r.openlevel"}
5158     ],
5159     "required": ["openLevel"]
5160   }
5161 }
5162
5163 example: /
5164 {
5165   "id": "unique_example_id",
5166   "openLevel": 50,
5167   "step": 2,
5168   "range": [0,100]
5169 }
5170

```

5171 **6.17.5 Property Definition**

5172 **Table 39 Open Level Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
openLevel	integer	yes		How open or ajar the entity is
increment	integer		Read Only	Deprecated, use 'step' instead.

5173 **6.17.6 CRUDN behaviour**

5174 **Table 40 Open Level CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/OpenLevelResURI		get	post		

5175 6.18 Operational State

5176 6.18.1 Introduction

5177 This resource describes the operational and job states on a device. The states can be read or set,
5178 setting indicates a desired state. A device may reject an attempt to set a state that would result in
5179 adverse operational characteristics. The machineStates is an array of the possible operational
5180 states. The currentMachineState is the current state of operation of the device. The jobStates is
5181 an array of the possible job states. The currentJobState is the currently active jobState. The
5182 runningTime is the ISO8601 encoded elapsed time in the current operational state. The
5183 remainingTime is the ISO8601 encoded time till completion of the current operational state. The
5184 progressPercentage is the percentage completeness of the current jobState.

5185 6.18.2 Example URI

5186 /OperationalStateResURI

5187 6.18.3 Resource Type

5188 The resource type (rt) is defined as: oic.r.operational.state.

5189 6.18.4 RAML Definition

```
5190 #%RAML 0.8
5191 title: OICOperation
5192 version: v1.1.0-20160519
5193 traits:
5194   - interface :
5195       queryParameters:
5196           if:
5197               enum: ["oic.if.a", "oic.if.baseline"]
5198
5199 /OperationalStateResURI:
5200   description: |
5201     This resource describes the operational and job states on a device.
5202     The states can be read or set, setting indicates a desired state.
5203     A device may reject an attempt to set a state that would result
5204     in adverse operational characteristics.
5205     The machineStates is an array of the possible operational states.
5206     The currentMachineState is the current state of operation of the device.
5207     The jobStates is an array of the possible job states.
5208     The currentJobState is the currently active jobState.
5209     The runningTime is the ISO8601 encoded elapsed time in the current operational state.
5210     The remainingTime is the ISO8601 encoded time till completion of the current operational state.
5211     The progressPercentage is the percentage completeness of the current jobState.
5212
5213   is : ['interface']
5214   get:
5215     description: |
5216       Retrieves the current operational and job states.
5217
5218     responses :
5219       200:
5220         body:
5221           application/json:
5222             schema: /
5223               {
5224                 "id":
5225                   "http://openinterconnect.org/iotdatamodels/schemas/oic.r.operational.state.json#",
5226                 "$schema": "http://json-schema.org/draft-04/schema#",
5227                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5228                 rights reserved.",
5229                 "title": "Operational State",
```

```

5230     "definitions": {
5231         "oic.r.operational.state": {
5232             "type": "object",
5233             "properties": {
5234                 "machineStates": {
5235                     "type": "array",
5236                     "readOnly": true,
5237                     "description": "array of the possible operational states.",
5238                     "items": {
5239                         "type": "string"
5240                     }
5241                 },
5242                 "currentMachineState": {
5243                     "type": "string",
5244                     "description": "Current state of operation of the device."
5245                 },
5246                 "jobStates": {
5247                     "type": "array",
5248                     "readOnly": true,
5249                     "description": "array of the possible job states.",
5250                     "items": {
5251                         "type": "string"
5252                     }
5253                 },
5254                 "currentJobState": {
5255                     "type": "string",
5256                     "description": "Currently active jobState"
5257                 },
5258                 "runningTime": {
5259                     "type": "string",
5260                     "readOnly": true,
5261                     "description": "Elapsed time in the current operational state"
5262                 },
5263                 "remainingTime": {
5264                     "type": "string",
5265                     "readOnly": true,
5266                     "description": "Time till completion of the current operational state"
5267                 },
5268                 "progressPercentage": {
5269                     "type": "integer",
5270                     "readOnly": true,
5271                     "description": "Percentage completeness of the current jobState",
5272                     "minimum": 0,
5273                     "maximum": 100
5274                 }
5275             }
5276         },
5277     },
5278     "type": "object",
5279     "allOf": [
5280         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5281         {"$ref": "#/definitions/oic.r.operational.state"}
5282     ],
5283     "required": ["machineStates", "currentMachineState"]
5284 }
5285
5286 example: /
5287 {
5288     "rt": ["oic.r.operational.state"],
5289     "id": "unique_example_id",
5290     "machineStates": ["pause", "stopped", "idle", "active"],
5291     "currentMachineState": "active",
5292     "jobStates": ["preWash", "wash", "rinse", "spin", "dry", "airDry",
5293 "wrinklePrevent"],
5294     "currentJobState": "rinse",
5295     "runningTime": "PT15M20S",
5296     "remainingTime": "PT10M40S",
5297     "progressPercentage": 75
5298 }
5299

```

```

5300     post:
5301         description: |
5302             Sets the desired operational or job state.
5303
5304         body:
5305             application/json:
5306                 schema: /
5307                     {
5308                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.operational.state-
5309 Update.json#",
5310                         "$schema": "http://json-schema.org/draft-04/schema#",
5311                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
5312 reserved.",
5313                         "title": "Operational State",
5314                         "definitions": {
5315                             "oic.r.operational.state": {
5316                                 "type": "object",
5317                                 "properties": {
5318                                     "currentMachineState": {
5319                                         "type": "string",
5320                                         "description": "Current state of operation of the device."
5321                                     },
5322                                     "currentJobState": {
5323                                         "type": "string",
5324                                         "description": "Currently active jobState"
5325                                     }
5326                                 }
5327                             },
5328                         },
5329                         "type": "object",
5330                         "allOf": [
5331                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5332                             {"$ref": "#/definitions/oic.r.operational.state"}
5333                         ]
5334                     }
5335
5336         example: /
5337             {
5338                 "id": "unique_example_id",
5339                 "currentMachineState": "pause",
5340                 "currentJobState": "wash"
5341             }
5342
5343     responses :
5344         200:
5345             body:
5346                 application/json:
5347                     schema: /
5348                         {
5349                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.operational.state-
5350 Update.json#",
5351                             "$schema": "http://json-schema.org/draft-04/schema#",
5352                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5353 rights reserved.",
5354                             "title": "Operational State",
5355                             "definitions": {
5356                                 "oic.r.operational.state": {
5357                                     "type": "object",
5358                                     "properties": {
5359                                         "currentMachineState": {
5360                                             "type": "string",
5361                                             "description": "Current state of operation of the device."
5362                                         },
5363                                         "currentJobState": {
5364                                             "type": "string",

```

```

5365         "description": "Currently active jobState"
5366     }
5367 }
5368 }
5369 },
5370 "type": "object",
5371 "allOf": [
5372   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5373   {"$ref": "#/definitions/oic.r.operational.state"}
5374 ]
5375 }
5376
5377 example: /
5378 {
5379   "id": "unique_example_id",
5380   "currentMachineState": "pause",
5381   "currentJobState": "wash"
5382 }
5383
5384 403:
5385 description: |
5386   This response is generated by the OIC Server when the client sends:
5387   An update with an value for currentMachineState that is not found in machineStates.
5388   An update with an value for currentJobState that is not found in jobStates.
5389   The server responds with the current resource representation.
5390
5391 body:
5392   application/json:
5393     schema: /
5394     {
5395       "id":
5396 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.operational.state.json#",
5397       "$schema": "http://json-schema.org/draft-04/schema#",
5398       "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5399 rights reserved.",
5400       "title": "Operational State",
5401       "definitions": {
5402         "oic.r.operational.state": {
5403           "type": "object",
5404           "properties": {
5405             "machineStates": {
5406               "type": "array",
5407               "readOnly": true,
5408               "description": "array of the possible operational states.",
5409               "items": {
5410                 "type": "string"
5411               }
5412             },
5413             "currentMachineState": {
5414               "type": "string",
5415               "description": "Current state of operation of the device."
5416             },
5417             "jobStates": {
5418               "type": "array",
5419               "readOnly": true,
5420               "description": "array of the possible job states.",
5421               "items": {
5422                 "type": "string"
5423               }
5424             },
5425             "currentJobState": {
5426               "type": "string",
5427               "description": "Currently active jobState"
5428             },
5429             "runningTime": {
5430               "type": "string",
5431               "readOnly": true,

```



```

5432         "description": "Elapsed time in the current operational state"
5433     },
5434     "remainingTime": {
5435         "type": "string",
5436         "readOnly": true,
5437         "description": "Time till completion of the current operational state"
5438     },
5439     "progressPercentage": {
5440         "type": "integer",
5441         "readOnly": true,
5442         "description": "Percentage completeness of the current jobState",
5443         "minimum": 0,
5444         "maximum": 100
5445     }
5446 }
5447 }
5448 },
5449 "type": "object",
5450 "allof": [
5451     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5452     {"$ref": "#/definitions/oic.r.operational.state"}
5453 ],
5454 "required": ["machineStates", "currentMachineState"]
5455 }
5456

```

```

5457 example: /
5458 {
5459     "id": "unique_example_id",
5460     "machineStates": ["pause", "stopped", "idle", "active"],
5461     "currentMachineState": "active",
5462     "jobStates": ["preWash", "wash", "rinse", "spin", "dry", "airDry",
5463 "wrinklePrevent"],
5464     "currentJobState": "rinse",
5465     "runningTime": "PT15M20S",
5466     "remainingTime": "PT10M40S",
5467     "progressPercentage": 75
5468 }
5469

```

5470 **6.18.5 Property Definition**

5471 **Table 41 Operational State Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
currentMachineState	string	yes		Current state of operation of the device.
currentJobState	string			Currently active jobState
machineStates	array: see schema	yes	Read Only	array of the possible operational states.
runningTime	string		Read Only	Elapsed time in the current operational state
remainingTime	string		Read Only	Time till completion of the current operational state
progressPercentage	integer		Read Only	Percentage completeness of the current jobState

jobStates	array: schema	see		Read Only	array of the possible job states.
-----------	------------------	-----	--	-----------	---

5472 **6.18.6 CRUDN behaviour**

5473 **Table 42 Operational State CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/OperationalStateResURI		get	post		

5474 **6.19 Ramp Time**

5475 **6.19.1 Introduction**

5476 This resource that describes the Ramp Time of a dimming function. This specifies the actual speed
5477 of changing between 2 dimming values. Time is specified in milliseconds [ms]. When range (from
5478 oic.r.baseresource) is omitted the maximum value is 100 ms. The RampTime of 0ms indicates the
5479 minimal delay possible by the implementation.

5480 **6.19.2 Example URI**

5481 /RampTimeResURI

5482 **6.19.3 Resource Type**

5483 The resource type (rt) is defined as: oic.r.light.ramptime.

5484 **6.19.4 RAML Definition**

5485 `##RAML 0.8`

5486 `title: OICRampTime`

5487 `version: v1.1.0-20160519`

5488 `traits:`

5489 `- interface :`

5490 `queryParameters:`

5491 `if:`

5492 `enum: ["oic.if.a", "oic.if.baseline"]`

5493

5494 `/RampTimeResURI:`

5495 `description: |`

5496 `This resource that describes the Ramp Time of a dimming function.`

5497 `This specifies the actual speed of changing between 2 dimming values.`

5498 `Time is specified in milliseconds [ms].`

5499 `When range (from oic.r.baseresource) is omitted the maximum value is 100 ms.`

5500 `The RampTime of 0ms indicates the minimal delay possible by the implementation.`

5501

5502 `is : ['interface']`

5503 `get:`

5504 `description: |`

5505 `Retrieves the current RampTime.`

5506

5507 `responses :`

5508 `200:`

5509 `body:`

5510 `application/json:`

5511 `schema: |`

5512 `{`
5513 `"id":`

5514 `"http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.rampTime.json#",`

5515 `"$schema": "http://json-schema.org/draft-04/schema#",`

5516 `"description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All`

5517 `rights reserved.",`

```

5518         "title": "Ramp Time",
5519         "definitions": {
5520             "oic.r.light.ramptime": {
5521                 "type": "object",
5522                 "properties": {
5523                     "rampTime": {
5524                         "type": "integer",
5525                         "description": "Actual speed of changing between 2 dimming values"
5526                     }
5527                 }
5528             }
5529         },
5530         "type": "object",
5531         "allOf": [
5532             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5533             {"$ref": "#/definitions/oic.r.light.ramptime"}
5534         ],
5535         "required": ["rampTime"]
5536     }
5537
5538     example: /
5539     {
5540         "rt":         ["oic.r.light.ramptime"],
5541         "id":         "unique_example_id",
5542         "rampTime": 0,
5543         "range":     [0,100]
5544     }
5545
5546     post:
5547         description: |
5548             Sets the current RampTime.
5549
5550     body:
5551         application/json:
5552             schema: /
5553             {
5554                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.rampTime.json#",
5555                 "$schema": "http://json-schema.org/draft-04/schema#",
5556                 "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
5557 reserved.",
5558                 "title": "Ramp Time",
5559                 "definitions": {
5560                     "oic.r.light.ramptime": {
5561                         "type": "object",
5562                         "properties": {
5563                             "rampTime": {
5564                                 "type": "integer",
5565                                 "description": "Actual speed of changing between 2 dimming values"
5566                             }
5567                         }
5568                     }
5569                 },
5570                 "type": "object",
5571                 "allOf": [
5572                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5573                     {"$ref": "#/definitions/oic.r.light.ramptime"}
5574                 ],
5575                 "required": ["rampTime"]
5576             }
5577
5578     example: /
5579     {
5580         "id":         "unique_example_id",
5581         "rampTime": 50
5582     }
5583

```

```

5584     responses :
5585         200:
5586             body:
5587                 application/json:
5588                     schema: /
5589                         {
5590                             "id":
5591 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.rampTime.json#",
5592                             "$schema": "http://json-schema.org/draft-04/schema#",
5593                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5594 rights reserved.",
5595                             "title": "Ramp Time",
5596                             "definitions": {
5597                                 "oic.r.light.ramptime": {
5598                                     "type": "object",
5599                                     "properties": {
5600                                         "rampTime": {
5601                                             "type": "integer",
5602                                             "description": "Actual speed of changing between 2 dimming values"
5603                                         }
5604                                     }
5605                                 }
5606                             },
5607                             "type": "object",
5608                             "allOf": [
5609                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5610                                 {"$ref": "#/definitions/oic.r.light.ramptime"}
5611                             ],
5612                             "required": ["rampTime"]
5613                         }
5614
5615                     example: /
5616                         {
5617                             "id":          "unique_example_id",
5618                             "rampTime": 50
5619                         }
5620
5621         403:
5622             description: |
5623                 This response is generated by the OIC Server when the client sends:
5624                 An update with an out of range property value for rampTime.
5625                 The server responds with the current resource representation.
5626
5627             body:
5628                 application/json:
5629                     schema: /
5630                         {
5631                             "id":
5632 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.rampTime.json#",
5633                             "$schema": "http://json-schema.org/draft-04/schema#",
5634                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5635 rights reserved.",
5636                             "title": "Ramp Time",
5637                             "definitions": {
5638                                 "oic.r.light.ramptime": {
5639                                     "type": "object",
5640                                     "properties": {
5641                                         "rampTime": {
5642                                             "type": "integer",
5643                                             "description": "Actual speed of changing between 2 dimming values"
5644                                         }
5645                                     }
5646                                 }
5647                             },
5648                             "type": "object",

```

```

5649         "allOf": [
5650             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
5651             { "$ref": "#/definitions/oic.r.light.ramptime" }
5652         ],
5653         "required": ["rampTime"]
5654     }
5655
5656     example: /
5657     {
5658         "id": "unique_example_id",
5659         "rampTime": 40
5660     }
5661

```

5662 6.19.5 Property Definition

5663 **Table 43 Ramp Time Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
rampTime	integer	yes		Actual speed of changing between 2 dimming values

5664 6.19.6 CRUDN behaviour

5665 **Table 44 Ramp Time CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/RampTimeResURI		get	post		

5666 6.20 Refrigeration

5667 6.20.1 Introduction

5668 This resource describes a refrigeration function. The filter state is a read-only value providing the percentage life time remaining for the water filter. RapidFreeze is a boolean that controls the rapid freeze capability if present. RapidCool is a boolean that controls the rapid cool capability if present. Defrost is a boolean that controls the defrost cycle if present. At least one of the listed Properties shall be present in a Resource Instance.

5673 6.20.2 Example URI

5674 /RefrigerationResURI

5675 6.20.3 Resource Type

5676 The resource type (rt) is defined as: oic.r.refrigeration.

5677 6.20.4 RAML Definition

```

5678 #%RAML 0.8
5679 title: OICRefrigeration
5680 version: v1.1.0-20160519
5681 traits:
5682   - interface :
5683       queryParameters:
5684         if:
5685           enum: ["oic.if.a", "oic.if.baseline"]
5686
5687 /RefrigerationResURI:
5688   description: |
5689     This resource describes a refrigeration function.
5690     The filter state is a read-only value providing the percentage life time remaining for the
5691     water filter.

```

```

5692     RapidFreeze is a boolean that controls the rapid freeze capability if present.
5693     RapidCool is a boolean that controls the rapid cool capability if present.
5694     Defrost is a boolean that controls the defrost cycle if present.
5695     At least one of the listed Properties shall be present in a Resource Instance.
5696
5697     is : ['interface']
5698     get:
5699         description: |
5700             Retrieves the current Refrigeration function status; all Properties supported by the Device
5701             are returned.
5702
5703     responses :
5704         200:
5705             body:
5706                 application/json:
5707                     schema: /
5708                         {
5709                             "id":
5710                             "http://openinterconnect.org/iotdatamodels/schemas/oic.r.refrigeration.json#",
5711                             "$schema": "http://json-schema.org/draft-04/schema#",
5712                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5713                             rights reserved.",
5714                             "title": "Refrigeration",
5715                             "definitions": {
5716                                 "oic.r.refrigeration": {
5717                                     "type": "object",
5718                                     "anyOf": [
5719                                         {"required": ["filter"]},
5720                                         {"required": ["rapidFreeze"]},
5721                                         {"required": ["rapidCool"]},
5722                                         {"required": ["defrost"]}
5723                                     ],
5724                                     "properties": {
5725                                         "filter": {
5726                                             "type": "integer",
5727                                             "readOnly": true,
5728                                             "description": "Percentage life time remaining for the water filter",
5729                                             "minimum": 0,
5730                                             "maximum": 100
5731                                         },
5732                                         "rapidFreeze": {
5733                                             "type": "boolean",
5734                                             "description": "Indicates whether the unit has a rapid freeze capability
5735                                             active."
5736                                         },
5737                                         "rapidCool": {
5738                                             "type": "boolean",
5739                                             "description": "Indicates whether the unit has a rapid cool capability
5740                                             active"
5741                                         },
5742                                         "defrost": {
5743                                             "type": "boolean",
5744                                             "description": "Indicates whether a defrost cycle is currently active"
5745                                         }
5746                                     }
5747                                 }
5748                             },
5749                             "type": "object",
5750                             "allOf": [
5751                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5752                                 {"$ref": "#/definitions/oic.r.refrigeration"}
5753                             ]
5754                         }
5755
5756     example: /

```

```

5757         {
5758             "rt":             ["oic.r.refrigeration"],
5759             "id":             "unique_example_id",
5760             "filter":         75,
5761             "rapidFreeze":    false,
5762             "rapidCool":      false,
5763             "defrost":        true
5764         }
5765
5766     post:
5767         description: |
5768             Activates the desired Refrigeration functions.
5769             Supported values are rapidFreeze, rapidCool and defrost.
5770             At least on of the supported values shall be provided.
5771
5772     body:
5773         application/json:
5774             schema: /
5775                 {
5776                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.refrigeration-
5777 Update.json#",
5778 "$schema": "http://json-schema.org/draft-04/schema#",
5779 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
5780 reserved.",
5781 "title": "Refrigeration",
5782 "definitions": {
5783     "oic.r.refrigeration": {
5784         "type": "object",
5785         "anyOf": [
5786             {"required": ["rapidFreeze"]},
5787             {"required": ["rapidCool"]},
5788             {"required": ["defrost"]}
5789         ],
5790         "properties": {
5791             "rapidFreeze": {
5792                 "type": "boolean",
5793                 "description": "Indicates whether the unit has a rapid freeze capability
5794 active."
5795             },
5796             "rapidCool": {
5797                 "type": "boolean",
5798                 "description": "Indicates whether the unit has a rapid cool capability active"
5799             },
5800             "defrost": {
5801                 "type": "boolean",
5802                 "description": "Indicates whether a defrost cycle is currently active"
5803             }
5804         }
5805     }
5806 },
5807 "type": "object",
5808 "allOf": [
5809     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5810     {"$ref": "#/definitions/oic.r.refrigeration"}
5811 ]
5812 }
5813
5814     example: /
5815         {
5816             "id":             "unique_example_id",
5817             "rapidFreeze":    true
5818         }
5819
5820     responses :
5821         200:

```

```

5822     description: |
5823         Indicates that the Refrigeration function was changed.
5824         The new status can be provided in the response.
5825
5826     body:
5827         application/json:
5828         schema: /
5829             {
5830             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.refrigeration-
5831 Update.json#",
5832             "$schema": "http://json-schema.org/draft-04/schema#",
5833             "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5834 rights reserved.",
5835             "title": "Refrigeration",
5836             "definitions": {
5837                 "oic.r.refrigeration": {
5838                     "type": "object",
5839                     "anyOf": [
5840                         {"required": ["rapidFreeze"]},
5841                         {"required": ["rapidCool"]},
5842                         {"required": ["defrost"]}
5843                     ],
5844                     "properties": {
5845                         "rapidFreeze": {
5846                             "type": "boolean",
5847                             "description": "Indicates whether the unit has a rapid freeze capability
5848 active."
5849                         },
5850                         "rapidCool": {
5851                             "type": "boolean",
5852                             "description": "Indicates whether the unit has a rapid cool capability
5853 active"
5854                         },
5855                         "defrost": {
5856                             "type": "boolean",
5857                             "description": "Indicates whether a defrost cycle is currently active"
5858                         }
5859                     }
5860                 }
5861             },
5862             "type": "object",
5863             "allOf": [
5864                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5865                 {"$ref": "#/definitions/oic.r.refrigeration"}
5866             ]
5867         }
5868
5869     example: /
5870         {
5871             "id": "unique_example_id",
5872             "rapidFreeze": true
5873         }
5874

```

6.20.5 Property Definition

Table 45 Refrigeration Property Definitions

Property name	Value type	Mandatory	Access mode	Description
filter	integer	yes	Read Only	Percentage life time remaining for the water filter
rapidFreeze	boolean	yes		Indicates whether the unit has a rapid

				freeze capability active.
defrost	boolean	yes		Indicates whether a defrost cycle is currently active
rapidCool	boolean	yes		Indicates whether the unit has a rapid cool capability active

5877 **6.20.6 CRUDN behaviour**

5878 **Table 46 Refrigeration CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/RefrigerationResURI		get	post		

5879 **6.21 Temperature**

5880 **6.21.1 Introduction**

5881 This resource describes a sensed or actuated Temperature value. The temperature describes the
5882 current value measured. The units is a single value that is one of C, F or K. It provides the unit of
5883 measurement for the temperature value. It is a read-only value that is provided by the server. If
5884 the units Property is missing the default is Celsius [C]. When range (from oic.r.baseresource) is
5885 omitted the default is +/- MAXINT.

5886 **6.21.2 Example URI**

5887 /TemperatureResURI

5888 **6.21.3 Resource Type**

5889 The resource type (rt) is defined as: oic.r.temperature.

5890 **6.21.4 RAML Definition**

```
5891 #%RAML 0.8
5892 title: OICTemperature
5893 version: v1.1.0-20160519
5894 traits:
5895   - interface :
5896     queryParameters:
5897       if:
5898         enum: ["oic.if.a", "oic.if.s", "oic.if.baseline"]
5899
5900 /TemperatureResURI:
5901   description: |
5902     This resource describes a sensed or actuated Temperature value.
5903     The temperature describes the current value measured.
5904     The units is a single value that is one of C, F or K.
5905     It provides the unit of measurement for the temperature value.
5906     It is a read-only value that is provided by the server.
5907     If the units Property is missing the default is Celsius [C].
5908     When range (from oic.r.baseresource) is omitted the default is +/- MAXINT.
5909
5910   is : ['interface']
5911   get:
5912     description: |
5913       Retrieves the current temperature value.
5914       A client can specify the units for the requested temperature by use of a query parameter.
5915       If no query parameter is provided the server provides its default measure or set value.
```

```

5916         It is recommended to return always the units Property in the result.
5917
5918     queryParameters:
5919         units:
5920             enum: CFK
5921     responses :
5922         200:
5923             body:
5924                 application/json:
5925                     schema: /
5926                         {
5927                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.temperature.json#",
5928                             "$schema": "http://json-schema.org/draft-04/schema#",
5929                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5930 rights reserved.",
5931                             "title": "Temperature",
5932                             "definitions": {
5933                                 "oic.r.temperature": {
5934                                     "type": "object",
5935                                     "properties": {
5936                                         "temperature": {
5937                                             "type": "number",
5938                                             "description": "Current temperature setting or measurement"
5939                                         },
5940                                         "units": {
5941                                             "type": "string",
5942                                             "enum": ["C", "F", "K"],
5943                                             "description": "Units for the temperature value",
5944                                             "readOnly": true
5945                                         }
5946                                     }
5947                                 }
5948                             },
5949                             "type": "object",
5950                             "allOf": [
5951                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5952                                 {"$ref": "#/definitions/oic.r.temperature"}
5953                             ],
5954                             "required": ["temperature"]
5955                         }
5956
5957         example: /
5958             {
5959                 "rt":           ["oic.r.temperature"],
5960                 "id":          "unique_example_id",
5961                 "temperature": 20.0,
5962                 "units":       "C",
5963                 "range":       [0.0,100.0]
5964             }
5965
5966         403:
5967             description: |
5968                 This response is generated by the OIC Server when the client sends:
5969                 A retrieve with q queryParameter indicating a unit that the server does not support.
5970                 The server responds with the current resource representation including the
5971                 units property illustrating the supported units and the error.
5972
5973             body:
5974                 application/json:
5975                     schema: /
5976                         {
5977                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.temperature.json#",
5978                             "$schema": "http://json-schema.org/draft-04/schema#",

```

```

5979         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5980 rights reserved.",
5981         "title": "Temperature",
5982         "definitions": {
5983             "oic.r.temperature": {
5984                 "type": "object",
5985                 "properties": {
5986                     "temperature": {
5987                         "type": "number",
5988                         "description": "Current temperature setting or measurement"
5989                     },
5990                     "units": {
5991                         "type": "string",
5992                         "enum": ["C","F","K"],
5993                         "description": "Units for the temperature value",
5994                         "readOnly": true
5995                     }
5996                 }
5997             }
5998         },
5999         "type": "object",
6000         "allOf": [
6001             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6002             {"$ref": "#/definitions/oic.r.temperature"}
6003         ],
6004         "required": ["temperature"]
6005     }
6006
6007     example: /
6008     {
6009         "id":          "unique_example_id",
6010         "temperature": 20.0,
6011         "units":       "C"
6012     }
6013
6014     post:
6015         description: |
6016             Sets the desired temperature value.
6017             If a unit is included and the server does not support the unit indicated the request will
6018 fail.
6019             If the units are omitted value is taken to be in C.
6020
6021     body:
6022     application/json:
6023         schema: /
6024         {
6025             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.temperature.json#",
6026             "$schema": "http://json-schema.org/draft-04/schema#",
6027             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
6028 reserved.",
6029             "title": "Temperature",
6030             "definitions": {
6031                 "oic.r.temperature": {
6032                     "type": "object",
6033                     "properties": {
6034                         "temperature": {
6035                             "type": "number",
6036                             "description": "Current temperature setting or measurement"
6037                         },
6038                         "units": {
6039                             "type": "string",
6040                             "enum": ["C","F","K"],
6041                             "description": "Units for the temperature value",
6042                             "readOnly": true
6043                         }
6044                     }
6045                 }
6046             }
6047         }

```

```

6046     },
6047     "type": "object",
6048     "allOf": [
6049       {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6050       {"$ref": "#/definitions/oic.r.temperature"}
6051     ],
6052     "required": ["temperature"]
6053   }
6054
6055   example: /
6056     {
6057       "id":          "unique_example_id",
6058       "temperature": 18.0
6059     }
6060
6061   responses :
6062     200:
6063       body:
6064         application/json:
6065           schema: /
6066             {
6067               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.temperature.json#",
6068               "$schema": "http://json-schema.org/draft-04/schema#",
6069               "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6070 rights reserved.",
6071               "title": "Temperature",
6072               "definitions": {
6073                 "oic.r.temperature": {
6074                   "type": "object",
6075                   "properties": {
6076                     "temperature": {
6077                       "type": "number",
6078                       "description": "Current temperature setting or measurement"
6079                     },
6080                     "units": {
6081                       "type": "string",
6082                       "enum": ["C", "F", "K"],
6083                       "description": "Units for the temperature value",
6084                       "readOnly": true
6085                     }
6086                   }
6087                 }
6088               },
6089               "type": "object",
6090               "allOf": [
6091                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6092                 {"$ref": "#/definitions/oic.r.temperature"}
6093               ],
6094               "required": ["temperature"]
6095             }
6096
6097           example: /
6098             {
6099               "id":          "unique_example_id",
6100               "temperature": 18.0
6101             }
6102
6103     403:
6104       description: |
6105         This response is generated by the OIC Server when the client sends:
6106         An update with an out of range property value for temperature.
6107         An update with an unsupported unit for this server.
6108         The server responds with the current resource representation including
6109         the range property illustrating the supported range and the error.
6110

```

```

6111     body:
6112         application/json:
6113             schema: /
6114                 {
6115                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.temperature.json#",
6116                     "$schema": "http://json-schema.org/draft-04/schema#",
6117                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6118 rights reserved.",
6119                     "title": "Temperature",
6120                     "definitions": {
6121                         "oic.r.temperature": {
6122                             "type": "object",
6123                             "properties": {
6124                                 "temperature": {
6125                                     "type": "number",
6126                                     "description": "Current temperature setting or measurement"
6127                                 },
6128                                 "units": {
6129                                     "type": "string",
6130                                     "enum": ["C","F","K"],
6131                                     "description": "Units for the temperature value",
6132                                     "readOnly": true
6133                                 }
6134                             }
6135                         }
6136                     },
6137                     "type": "object",
6138                     "allOf": [
6139                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6140                         {"$ref": "#/definitions/oic.r.temperature"}
6141                     ],
6142                     "required": ["temperature"]
6143                 }
6144
6145             example: /
6146                 {
6147                     "id": "unique_example_id",
6148                     "temperature": 20.0,
6149                     "units": "C",
6150                     "range": [0.0,100.0]
6151                 }
6152

```

6.21.5 Property Definition

Table 47 Temperature Property Definitions

Property name	Value type	Mandatory	Access mode	Description
units	string		Read Only	Units for the temperature value
temperature	number	yes		Current temperature setting or measurement

6.21.6 CRUDN behaviour

Table 48 Temperature CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/TemperatureResURI		get	post		

6157 6.22 Time Period

6158 6.22.1 Introduction

6159 This resource describes the time period over which any additionally provided information is derived
6160 or bounded. The startTime and stopTime are ISO8601 encoded strings. startTime must be present.
6161 The interval is the interval of the time period in minutes, if present this value must be no less than
6162 1 minute. stoptime and interval are mutually exclusive; both Properties cannot be present in a
6163 Resource instance.

6164 6.22.2 Example URI

6165 /TimePeriodResURI

6166 6.22.3 Resource Type

6167 The resource type (rt) is defined as: oic.r.time.period.

6168 6.22.4 RAML Definition

6169 `##RAML 0.8`

6170 `title: OICTimePeriod`

6171 `version: v1.1.0-20160519`

6172 `traits:`

6173 `- interface :`

6174 `queryParameters:`

6175 `if:`

6176 `enum: ["oic.if.a", "oic.if.baseline"]`

6177

6178 `/TimePeriodResURI:`

6179 `description: |`

6180 `This resource describes the time period over which any additionally provided`

6181 `information is derived or bounded.`

6182 `The startTime and stopTime are ISO8601 encoded strings`

6183 `startTime must be present.`

6184 `The interval is the interval of the time period in minutes, if present this value must be no`

6185 `less than 1 minute.`

6186 `stoptime and interval are mutually exclusive; both Properties cannot be present in a Resource`

6187 `instance.`

6188

6189 `is : ['interface']`

6190 `get:`

6191 `description: |`

6192 `Defines a time period for information retrieval, action or other behaviour.`

6193

6194 `responses :`

6195 `200:`

6196 `body:`

6197 `application/json:`

6198 `schema: /`

6199 `{`

6200 `"id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.time.period.json#",`

6201 `"$schema": "http://json-schema.org/draft-04/schema#",`

6202 `"description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All`

6203 `rights reserved.",`

6204 `"title": "Time Period",`

6205 `"definitions": {`

6206 `"oic.r.time.period": {`

6207 `"type": "object",`

6208 `"properties": {`

6209 `"startTime":{`

6210 `"type": "string",`

6211 `"description": "Start time for the time period"`

```

6212         },
6213         "stopTime": {
6214             "type": "string",
6215             "description": "Stop time for the time period, if present interval cannot
6216 be present"
6217         },
6218         "interval": {
6219             "type": "integer",
6220             "description": "Time interval in minutes after the startTime, if present
6221 stopTime cannot be present"
6222         }
6223     },
6224     "required": ["startTime"]
6225 }
6226 },
6227 "type": "object",
6228 "allOf": [
6229     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6230     {"$ref": "#/definitions/oic.r.time.period"}
6231 ]
6232 }
6233
6234 example: /
6235 {
6236     "rt": ["oic.r.time.period"],
6237     "id": "unique_example_id",
6238     "startTime": "2015-01-09T14:30Z",
6239     "stopTime": "2015-01-09T14:45Z"
6240 }
6241
6242 post:
6243     description: |
6244         Sets or updates a time period for information retrieval, action or other behavior.
6245
6246     body:
6247         application/json:
6248             schema: /
6249             {
6250                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.time.period.json#",
6251                 "$schema": "http://json-schema.org/draft-04/schema#",
6252                 "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
6253 reserved.",
6254                 "title": "Time Period",
6255                 "definitions": {
6256                     "oic.r.time.period": {
6257                         "type": "object",
6258                         "properties": {
6259                             "startTime": {
6260                                 "type": "string",
6261                                 "description": "Start time for the time period"
6262                             },
6263                             "stopTime": {
6264                                 "type": "string",
6265                                 "description": "Stop time for the time period, if present interval cannot be
6266 present"
6267                             },
6268                             "interval": {
6269                                 "type": "integer",
6270                                 "description": "Time interval in minutes after the startTime, if present
6271 stopTime cannot be present"
6272                             }
6273                         },
6274                         "required": ["startTime"]
6275                     }
6276                 },
6277                 "type": "object",
6278                 "allOf": [

```

```

6279         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6280         {"$ref": "#/definitions/oic.r.time.period"}
6281     ]
6282 }
6283
6284     example: /
6285     {
6286         "id":          "unique_example_id",
6287         "startTime":  "2015-01-09T14:30Z",
6288         "stopTime":   "2015-01-09T14:45Z"
6289     }
6290
6291     responses :
6292     200:
6293         body:
6294         application/json:
6295             schema: /
6296             {
6297                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.time.period.json#",
6298                 "$schema": "http://json-schema.org/draft-04/schema#",
6299                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6300 rights reserved.",
6301                 "title": "Time Period",
6302                 "definitions": {
6303                     "oic.r.time.period": {
6304                         "type": "object",
6305                         "properties": {
6306                             "startTime": {
6307                                 "type": "string",
6308                                 "description": "Start time for the time period"
6309                             },
6310                             "stopTime": {
6311                                 "type": "string",
6312                                 "description": "Stop time for the time period, if present interval cannot
6313 be present"
6314                             },
6315                             "interval": {
6316                                 "type": "integer",
6317                                 "description": "Time interval in minutes after the startTime, if present
6318 stopTime cannot be present"
6319                             }
6320                         },
6321                         "required": ["startTime"]
6322                     }
6323                 },
6324                 "type": "object",
6325                 "allOf": [
6326                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6327                     {"$ref": "#/definitions/oic.r.time.period"}
6328                 ]
6329             }
6330
6331     example: /
6332     {
6333         "id":          "unique_example_id",
6334         "startTime":  "2015-01-09T14:30Z",
6335         "stopTime":   "2015-01-09T14:45Z"
6336     }
6337

```

6.22.5 Property Definition

Table 49 Time Period Property Definitions

Property name	Value type	Mandatory	Access mode	Description
---------------	------------	-----------	-------------	-------------

stopTime	string			Stop time for the time period, if present interval cannot be present
startTime	string	yes		Start time for the time period
interval	integer			Time interval in minutes after the startTime, if present stopTime cannot be present

6340 **6.22.6 CRUDN behaviour**

6341 **Table 50 Time Period CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/TimePeriodResURI		get	post		

6342 **6.23 Activity Count**

6343 **6.23.1 Introduction**

6344 This resource specifies an activity count. The resource can be readonly (oic.if.s interface) in which
6345 instance it represents a count. The resource can be readwrite (oic.if.a interface) in which instance
6346 it represents a goal or target for a count. The count property is an integer representing either the
6347 current count or goal value.

6348 **6.23.2 Example URI**

6349 /ActivityCountResURI

6350 **6.23.3 Resource Type**

6351 The resource type (rt) is defined as: oic.r.sensor.activity.count.

6352 **6.23.4 RAML Definition**

```

6353 #%RAML 0.8
6354 title: OICActivityCount
6355 version: v1.1.0-20160519
6356 traits:
6357   - interface :
6358     queryParameters:
6359       if:
6360         enum: ["oic.if.s", "oic.if.a", "oic.if.baseline"]
6361
6362 /ActivityCountResURI:
6363   description: |
6364     This resource specifies an activity count.
6365     The resource can be readonly (oic.if.s interface) in which instance it represents a count.
6366     The resource can be readwrite (oic.if.a interface) in which instance it represents a goal or
6367     target for a count.
6368     The count property is an integer representing either the current count or goal value.
6369
6370   is : ['interface']
6371   get:
6372     description: |
6373       Retrieves the current activity count.
6374

```

```

6375     responses :
6376         200:
6377             body:
6378                 application/json:
6379                 schema: /
6380                     {
6381                         "id":
6382 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.activity.count.json#",
6383                         "$schema": "http://json-schema.org/draft-04/schema#",
6384                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6385 rights reserved.",
6386                         "title": "Activity Count Sensor",
6387                         "definitions": {
6388                             "oic.r.sensor.activity.count": {
6389                                 "properties": {
6390                                     "count": {
6391                                         "type": "integer",
6392                                         "description": "Current or Target count."
6393                                     }
6394                                 }
6395                             },
6396                         },
6397                         "type": "object",
6398                         "allOf": [
6399                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6400                             {"$ref": "#/definitions/oic.r.sensor.activity.count"}
6401                         ],
6402                         "required": ["count"]
6403                     }
6404
6405                 example: /
6406                     {
6407                         "rt":      ["oic.r.sensor.activity.count"],
6408                         "id":      "unique_example_id",
6409                         "count":  2500
6410                     }
6411
6412     post:
6413         description: |
6414             Sets the count target
6415
6416         body:
6417             application/json:
6418             schema: /
6419                 {
6420                     "id":
6421 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.activity.count.json#",
6422                     "$schema": "http://json-schema.org/draft-04/schema#",
6423                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
6424 reserved.",
6425                     "title": "Activity Count Sensor",
6426                     "definitions": {
6427                         "oic.r.sensor.activity.count": {
6428                             "properties": {
6429                                 "count": {
6430                                     "type": "integer",
6431                                     "description": "Current or Target count."
6432                                 }
6433                             }
6434                         },
6435                     },
6436                     "type": "object",
6437                     "allOf": [
6438                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6439                         {"$ref": "#/definitions/oic.r.sensor.activity.count"}

```

```

6440     ],
6441     "required": ["count"]
6442   }
6443
6444   example: /
6445     {
6446       "id":      "unique_example_id",
6447       "count":  5000
6448     }
6449
6450   responses :
6451     200:
6452       body:
6453         application/json:
6454           schema: /
6455             {
6456               "id":
6457 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.activity.count.json#",
6458               "$schema": "http://json-schema.org/draft-04/schema#",
6459               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6460 rights reserved.",
6461               "title": "Activity Count Sensor",
6462               "definitions": {
6463                 "oic.r.sensor.activity.count": {
6464                   "properties": {
6465                     "count": {
6466                       "type": "integer",
6467                       "description": "Current or Target count."
6468                     }
6469                 }
6470             }
6471           },
6472           "type": "object",
6473           "allOf": [
6474             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6475             {"$ref": "#/definitions/oic.r.sensor.activity.count"}
6476           ],
6477           "required": ["count"]
6478         }
6479
6480     example: /
6481       {
6482         "id":      "unique_example_id",
6483         "count":  5000
6484       }
6485

```

6.23.5 Property Definition

Table 51 Activity Count Property Definitions

Property name	Value type	Mandatory	Access mode	Description
count	integer	yes		Current or Target count.

6.23.6 CRUDN behaviour

Table 52 Activity Count CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/ActivityCountResURI		get	post		

6490 6.24 Atmospheric Pressure Sensor

6491 6.24.1 Introduction

6492 This resource provides a measurement of Mean Sea Level Pressure experienced at the measuring
6493 point expressed in millibars. The value is float which describes the atmospheric pressure in hPa
6494 (hectoPascals). Note that hPa and the also commonly used unit of millibars (mbar) are numerically
6495 equivalent.

6496 6.24.2 Example URI

6497 /AtmosphericPressureResURI

6498 6.24.3 Resource Type

6499 The resource type (rt) is defined as: oic.r.sensor.atmosphericpressure.

6500 6.24.4 RAML Definition

```
6501 #%RAML 0.8
6502 title: OICAtmosphericPressureSensor
6503 version: v1.1.0-20160519
6504 traits:
6505   - interface :
6506     queryParameters:
6507       if:
6508         enum: ["oic.if.s", "oic.if.baseline"]
6509
6510 /AtmosphericPressureResURI:
6511   description: |
6512     This resource provides a measurement of Mean Sea Level Pressure experienced at the measuring
6513     point expressed in millibars.
6514     The value is float which describes the atmospheric pressure in hPa (hectoPascals).
6515     Note that hPa and the also commonly used unit of millibars (mbar) are numerically equivalent.
6516
6517   is : ['interface']
6518   get:
6519     responses :
6520       200:
6521         body:
6522           application/json:
6523             schema: /
6524               {
6525                 "id":
6526                 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.atmosphericPressure.json#",
6527                 "$schema": "http://json-schema.org/draft-04/schema#",
6528                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6529 rights reserved.",
6530                 "title": "Atmospheric Pressure Sensor",
6531                 "definitions": {
6532                   "oic.r.sensor.atmosphericpressure": {
6533                     "properties": {
6534                       "atmosphericPressure": {
6535                         "type": "number",
6536                         "readOnly": true,
6537                         "description": "Current atmospheric pressure in hPa."
6538                       }
6539                     }
6540                   }
6541                 },
6542                 "type": "object",
6543                 "allOf": [
6544                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6545                   {"$ref": "#/definitions/oic.r.sensor.atmosphericpressure"}
6546                 ],
```

```

6547         "required": ["atmosphericPressure"]
6548     }
6549
6550     example: /
6551     {
6552         "rt":             ["oic.r.sensor.atmosphericpressure"],
6553         "id":             "unique_example_id",
6554         "atmosphericPressure": 1000.4
6555     }
6556

```

6557 6.24.5 Property Definition

6558 **Table 53 Atmospheric Pressure Sensor Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
atmosphericPressure	number	yes	Read Only	Current atmospheric pressure in hPa.

6559 6.24.6 CRUDN behaviour

6560 **Table 54 Atmospheric Pressure Sensor CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/AtmosphericPressureResURI		get			

6561 6.25 Audio Controls

6562 6.25.1 Introduction

6563 This resource defines basic audio control functions. The volume is an integer containing a
6564 percentage [0,100]. A volume of 0 (zero) means no sound produced. A volume of 100 means
6565 maximum sound production. The mute control is implemented as a boolean. A mute value of true
6566 means that the device is muted (no audio). A mute value of false means that the device is not
6567 muted (audio).

6568 6.25.2 Example URI

6569 /AudioResURI

6570 6.25.3 Resource Type

6571 The resource type (rt) is defined as: oic.r.audio.

6572 6.25.4 RAML Definition

```

6573 #%RAML 0.8
6574 title: OICAudio
6575 version: v1.1.0-20160519
6576 traits:
6577   - interface :
6578       queryParameters:
6579         if:
6580           enum: ["oic.if.a", "oic.if.baseline"]
6581
6582 /AudioResURI:
6583   description: |
6584     This resource defines basic audio control functions.
6585     The volume is an integer containing a percentage [0,100].
6586     A volume of 0 (zero) means no sound produced.
6587     A volume of 100 means maximum sound production.
6588     The mute control is implemented as a boolean.
6589     A mute value of true means that the device is muted (no audio).
6590     A mute value of false means that the device is not muted (audio).
6591

```

```

6592     is : ['interface']
6593     get:
6594         responses :
6595             200:
6596                 body:
6597                     application/json:
6598                         schema: /
6599                             {
6600                                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.audio.json#",
6601                                 "$schema": "http://json-schema.org/draft-04/schema#",
6602                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6603 rights reserved.",
6604                                 "definitions": {
6605                                     "oic.r.audio": {
6606                                         "type": "object",
6607                                         "properties": {
6608                                             "volume": {
6609                                                 "type": "integer",
6610                                                 "description": "Volume setting of an audio rendering device.",
6611                                                 "minimum": 0,
6612                                                 "maximum": 100
6613                                             },
6614                                             "mute": {
6615                                                 "type": "boolean",
6616                                                 "description": "Mute setting of an audio rendering device"
6617                                             }
6618                                         }
6619                                     }
6620                                 },
6621                                 "type": "object",
6622                                 "allOf": [
6623                                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6624                                     {"$ref": "#/definitions/oic.r.audio"}
6625                                 ],
6626                                 "required": ["volume","mute"]
6627                             }
6628
6629                         example: /
6630                             {
6631                                 "rt":      ["oic.r.audio"],
6632                                 "id":      "unique_example_id",
6633                                 "volume": 50,
6634                                 "mute":    false
6635                             }
6636
6637     post:
6638         body:
6639             application/json:
6640                 schema: /
6641                     {
6642                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.audio.json#",
6643                         "$schema": "http://json-schema.org/draft-04/schema#",
6644                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
6645 reserved.",
6646                         "definitions": {
6647                             "oic.r.audio": {
6648                                 "type": "object",
6649                                 "properties": {
6650                                     "volume": {
6651                                         "type": "integer",
6652                                         "description": "Volume setting of an audio rendering device.",
6653                                         "minimum": 0,
6654                                         "maximum": 100
6655                                     },
6656                                     "mute": {

```

```

6657         "type": "boolean",
6658         "description": "Mute setting of an audio rendering device"
6659     }
6660 }
6661 },
6662 },
6663     "type": "object",
6664     "allOf": [
6665         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6666         {"$ref": "#/definitions/oic.r.audio"}
6667     ],
6668     "required": ["volume", "mute"]
6669 }
6670
6671 example: /
6672 {
6673     "id": "unique_example_id",
6674     "volume": 75,
6675     "mute": false
6676 }
6677
6678 responses :
6679 200:
6680     body:
6681     application/json:
6682     schema: /
6683     {
6684         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.audio.json#",
6685         "$schema": "http://json-schema.org/draft-04/schema#",
6686         "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6687 rights reserved.",
6688         "definitions": {
6689             "oic.r.audio": {
6690                 "type": "object",
6691                 "properties": {
6692                     "volume": {
6693                         "type": "integer",
6694                         "description": "Volume setting of an audio rendering device.",
6695                         "minimum": 0,
6696                         "maximum": 100
6697                     },
6698                     "mute": {
6699                         "type": "boolean",
6700                         "description": "Mute setting of an audio rendering device"
6701                     }
6702                 }
6703             }
6704         },
6705         "type": "object",
6706         "allOf": [
6707             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6708             {"$ref": "#/definitions/oic.r.audio"}
6709         ],
6710         "required": ["volume", "mute"]
6711     }
6712
6713 example: /
6714 {
6715     "id": "unique_example_id",
6716     "volume": 75,
6717     "mute": false
6718 }
6719

```

6720 **6.25.5 Property Definition**

6721 **Table 55 Audio Controls Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
volume	integer	yes		Volume setting of an audio rendering device.
mute	boolean	yes		Mute setting of an audio rendering device

6722 **6.25.6 CRUDN behaviour**

6723 **Table 56 Audio Controls CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/AudioResURI		get	post		

6724 **6.26 Auto Focus**

6725 **6.26.1 Introduction**

6726 This resource describes an auto focus on/off feature. The value is a boolean. An AutoFocus value
 6727 of 'true' means that the switch is on. An AutoFocus value of 'false' means that the switch is off.
 6728 Note that when Pan Tilt Zoom (see 'Pan Tilt Zoom' Resource definition) is used the autofocus
 6729 works only in the selected area.

6730 **6.26.2 Example URI**

6731 /AutoFocusResURI

6732 **6.26.3 Resource Type**

6733 The resource type (rt) is defined as: oic.r.autofocus.

6734 **6.26.4 RAML Definition**

```

6735 #%RAML 0.8
6736 title: OICAutoFocus
6737 version: v1.1.0-20160519
6738 traits:
6739   - interface :
6740     queryParameters:
6741       if:
6742         enum: ["oic.if.a", "oic.if.baseline"]
6743
6744 /AutoFocusResURI:
6745   description: |
6746     This resource describes an auto focus on/off feature.
6747     The value is a boolean.
6748     An AutoFocus value of 'true' means that the switch is on.
6749     An AutoFocus value of 'false' means that the switch is off.
6750     Note that when Pan Tilt Zoom (see 'Pan Tilt Zoom' Resource definition) is used the autofocus
6751     works only in the selected area.
6752
6753   is : ['interface']
6754   get:
6755     responses :
6756       200:
6757         body:
6758           application/json:
6759             schema: /
  
```



```

6760     {
6761         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.autofocus.json#",
6762         "$schema": "http://json-schema.org/draft-04/schema#",
6763         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6764 rights reserved.",
6765         "title": "Auto Focus",
6766         "definitions": {
6767             "oic.r.autofocus": {
6768                 "type": "object",
6769                 "properties": {
6770                     "autoFocus": {
6771                         "type": "boolean",
6772                         "description": "Status of the Auto Focus"
6773                     }
6774                 }
6775             }
6776         },
6777         "type": "object",
6778         "allOf": [
6779             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6780             {"$ref": "#/definitions/oic.r.autofocus"}
6781         ],
6782         "required": [ "autoFocus" ]
6783     }
6784
6785     example: /
6786     {
6787         "rt":          ["oic.r.autofocus"],
6788         "id":          "unique_example_id",
6789         "autoFocus":  false
6790     }
6791
6792     post:
6793     body:
6794     application/json:
6795     schema: /
6796     {
6797         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.autofocus.json#",
6798         "$schema": "http://json-schema.org/draft-04/schema#",
6799         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
6800 reserved.",
6801         "title": "Auto Focus",
6802         "definitions": {
6803             "oic.r.autofocus": {
6804                 "type": "object",
6805                 "properties": {
6806                     "autoFocus": {
6807                         "type": "boolean",
6808                         "description": "Status of the Auto Focus"
6809                     }
6810                 }
6811             }
6812         },
6813         "type": "object",
6814         "allOf": [
6815             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6816             {"$ref": "#/definitions/oic.r.autofocus"}
6817         ],
6818         "required": [ "autoFocus" ]
6819     }
6820
6821     example: /
6822     {
6823         "id":          "unique_example_id",
6824         "autoFocus":  true
6825     }
6826

```

```

6827     responses :
6828         200:
6829             body:
6830                 application/json:
6831                 schema: /
6832                     {
6833                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.autofocus.json#",
6834                         "$schema": "http://json-schema.org/draft-04/schema#",
6835                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6836 rights reserved.",
6837                         "title": "Auto Focus",
6838                         "definitions": {
6839                             "oic.r.autofocus": {
6840                                 "type": "object",
6841                                 "properties": {
6842                                     "autoFocus": {
6843                                         "type": "boolean",
6844                                         "description": "Status of the Auto Focus"
6845                                     }
6846                                 }
6847                             },
6848                             "type": "object",
6849                             "allOf": [
6850                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6851                                 {"$ref": "#/definitions/oic.r.autofocus"}
6852                             ],
6853                             "required": [ "autoFocus" ]
6854                         }
6855                     }
6856
6857                 example: /
6858                     {
6859                         "id": "unique_example_id",
6860                         "autoFocus": true
6861                     }
6862

```

6863 6.26.5 Property Definition

6864 **Table 57 Auto Focus Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
autoFocus	boolean	yes		Status of the Auto Focus

6865 6.26.6 CRUDN behaviour

6866 **Table 58 Auto Focus CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/AutoFocusResURI		get	post		

6867 6.27 Automatic Document Feeder

6868 6.27.1 Introduction

6869 This resource describes the state of an automatic document feeder, typically used with a scanner.
6870 The states are read only. The adfStates is an array of the possible operational states.
6871 adfProcessing is the OK state, other states are errors or require 'user attention'. The
6872 currentAdfState is the current value of the ADF state on the device.

6873 6.27.2 Example URI

6874 /AutomaticDocumentFeederResURI

6875 6.27.3 Resource Type

6876 The resource type (rt) is defined as: oic.r.automaticdocumentfeeder.

6877 6.27.4 RAML Definition

```
6878 #%RAML 0.8
6879 title: OICAAutomaticDocumentFeeder
6880 version: v1.1.0-20160519
6881 traits:
6882   - interface :
6883     queryParameters:
6884       if:
6885         enum: ["oic.if.s", "oic.if.baseline"]
6886
6887 /AutomaticDocumentFeederResURI:
6888   description: |
6889     This resource describes the state of an automatic document feeder, typically used with a
6890     scanner.
6891     The states are read only.
6892     The adfStates is an array of the possible operational states.
6893     adfProcessing is the OK state, other states are errors or require 'user attention'.
6894     The currentAdfState is the current value of the ADF state on the device.
6895
6896   is : ['interface']
6897   get:
6898     description: |
6899       Retrieves the current automatic document feeder state.
6900
6901   responses :
6902     200:
6903       body:
6904         application/json:
6905           schema: /
6906             {
6907               "id":
6908 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.automaticDocumentFeeder.json#",
6909               "$schema": "http://json-schema.org/draft-04/schema#",
6910               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6911 rights reserved.",
6912               "title": "Automatic Document Feeder",
6913               "definitions": {
6914                 "oic.r.automaticdocumentfeeder": {
6915                   "type": "object",
6916                   "properties": {
6917                     "adfStates": {
6918                       "type": "array",
6919                       "readOnly": true,
6920                       "description": "array of the possible adf states.",
6921                       "items": {
6922                         "type": "string"
6923                       }
6924                     },
6925                     "currentAdfState": {
6926                       "type": "string",
6927                       "readOnly": true,
6928                       "description": "Current adf state."
6929                     }
6930                   }
6931                 }
6932             },
6933             "type": "object",
6934             "allOf": [
6935               {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
```

```

6936         {"$ref": "#/definitions/oic.r.automaticdocumentfeeder"}
6937     },
6938     "required": ["adfStates", "currentAdfState"]
6939 }
6940
6941     example: /
6942     {
6943         "rt":             ["oic.r.automaticdocumentfeeder"],
6944         "id":             "unique_example_id",
6945         "adfStates":     ["adfProcessing", "adfEmpty", "adfJam", "adfLoaded",
6946 "adfMispick", "adfHatchOpen", "adfDuplexPageTooShort", "adfDuplexPageTooLong",
6947 "adfMultipickDetected", "adfInputTrayFailed", "adfInputTrayOverloaded"],
6948         "currentAdfState": "adfProcessing"
6949     }
6950

```

6.27.5 Property Definition

Table 59 Automatic Document Feeder Property Definitions

Property name	Value type	Mandatory	Access mode	Description
adfStates	array: see schema	yes	Read Only	array of the possible adf states.
currentAdfState	string	yes	Read Only	Current adf state.

6.27.6 CRUDN behaviour

Table 60 Automatic Document Feeder CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/AutomaticDocumentFeederResURI		get			

6.28 Button Switch

6.28.1 Introduction

This resource describes the operation of a button style switch. The value is a boolean. A value of 'true' means that the button is being pushed/pressed. A value of 'false' means that the button is not being pushed/pressed.

6.28.2 Example URI

/ButtonResURI

6.28.3 Resource Type

The resource type (rt) is defined as: oic.r.button.

6.28.4 RAML Definition

```

6965 #%RAML 0.8
6966 title: OICButton
6967 version: v1.1.0-20160519
6968 traits:
6969   - interface :
6970       queryParameters:
6971         if:
6972           enum: ["oic.if.s", "oic.if.baseline"]
6973
6974 /ButtonResURI:
6975   description: |
6976     This resource describes the operation of a button style switch.
6977     The value is a boolean.
6978     A value of 'true' means that the button is being pushed/pressed.

```

```

6979     A value of 'false' means that the button is not being pushed/pressed.
6980
6981     is : ['interface']
6982     get:
6983         responses :
6984             200:
6985                 body:
6986                     application/json:
6987                         schema: /
6988                             {
6989                                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.button.json#",
6990                                 "$schema": "http://json-schema.org/draft-04/schema#",
6991                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6992 rights reserved.",
6993                                 "title": "Button Switch",
6994                                 "definitions": {
6995                                     "oic.r.button": {
6996                                         "properties": {
6997                                             "value": {
6998                                                 "type": "boolean",
6999                                                 "readOnly": true,
7000                                                 "description": "Status of the button"
7001                                             }
7002                                         }
7003                                     }
7004                                 },
7005                                 "type": "object",
7006                                 "allOf": [
7007                                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7008                                     {"$ref": "#/definitions/oic.r.button"}
7009                                 ],
7010                                 "required": ["value"]
7011                             }
7012
7013                         example: /
7014                             {
7015                                 "rt": ["oic.r.button"],
7016                                 "id": "unique_example_id",
7017                                 "value": true
7018                             }
7019

```

7020 6.28.5 Property Definition

7021 **Table 61 Button Switch Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
value	boolean	yes	Read Only	Status of the button

7022 6.28.6 CRUDN behaviour

7023 **Table 62 Button Switch CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/ButtonResURI		get			

7024 6.29 Carbon Dioxide Sensor

7025 6.29.1 Introduction

7026 This resource describes whether carbon dioxide has been sensed or not. The value is a boolean.
7027 A value of 'true' means that carbon dioxide has been detected. A value of 'false' means that carbon
7028 dioxide has not been detected.

```

7029 6.29.2 Example URI
7030 /CarbonDioxideResURI
7031 6.29.3 Resource Type
7032 The resource type (rt) is defined as: oic.r.sensor.carbondioxide.
7033 6.29.4 RAML Definition
7034 #%RAML 0.8
7035 title: OICCarbonDioxideSensor
7036 version: v1.1.0-20160519
7037 traits:
7038   - interface :
7039     queryParameters:
7040       if:
7041         enum: ["oic.if.s", "oic.if.baseline"]
7042
7043 /CarbonDioxideResURI:
7044   description: |
7045     This resource describes whether carbon dioxide has been sensed or not.
7046     The value is a boolean.
7047     A value of 'true' means that carbon dioxide has been detected.
7048     A value of 'false' means that carbon dioxide has not been detected.
7049
7050   is : ['interface']
7051   get:
7052     responses :
7053       200:
7054         body:
7055           application/json:
7056             schema: /
7057               {
7058                 "id":
7059 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.carbondioxide.json#",
7060                 "$schema": "http://json-schema.org/draft-04/schema#",
7061                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7062 rights reserved.",
7063                 "title": "Carbon Dioxide Sensor",
7064                 "definitions": {
7065                   "oic.r.sensor.carbondioxide": {
7066                     "allOf": [
7067                       {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
7068                     ]
7069                   }
7070                 },
7071                 "type": "object",
7072                 "allOf": [
7073                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7074                   {"$ref": "#/definitions/oic.r.sensor.carbondioxide"}
7075                 ],
7076                 "required": ["value"]
7077               }
7078
7079           example: /
7080             {
7081               "rt": ["oic.r.sensor.carbondioxide"],
7082               "id": "unique_example_id",
7083               "value": true
7084             }
7085

```

7086 **6.29.5 Property Definition**

7087 **Table 63 Carbon Dioxide Sensor Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
value	boolean	yes	Read Only	True = Sensed, False = Not Sensed.

7088 **6.29.6 CRUDN behaviour**

7089 **Table 64 Carbon Dioxide Sensor CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/CarbonDioxideResURI		get			

7090 **6.30 Carbon Monoxide Sensor**

7091 **6.30.1 Introduction**

7092 This resource describes whether carbon monoxide has been sensed or not. The value is a boolean.
 7093 A value of 'true' means that carbon monoxide has been detected. A value of 'false' means that
 7094 carbon monoxide has not been detected.

7095 **6.30.2 Example URI**

7096 /CarbonMonoxideResURI

7097 **6.30.3 Resource Type**

7098 The resource type (rt) is defined as: oic.r.sensor.carbonmonoxide.

7099 **6.30.4 RAML Definition**

```

7100 #%RAML 0.8
7101 title: OICCarbonMonoxideSensor
7102 version: v1.1.0-20160519
7103 traits:
7104   - interface :
7105     queryParameters:
7106       if:
7107         enum: ["oic.if.s", "oic.if.baseline"]
7108
7109 /CarbonMonoxideResURI:
7110   description: |
7111     This resource describes whether carbon monoxide has been sensed or not.
7112     The value is a boolean.
7113     A value of 'true' means that carbon monoxide has been detected.
7114     A value of 'false' means that carbon monoxide has not been detected.
7115
7116   is : ['interface']
7117   get:
7118     responses :
7119       200:
7120         body:
7121           application/json:
7122             schema: /
7123               {
7124                 "id":
7125                 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.carbonMonoxide.json#",
7126                 "$schema": "http://json-schema.org/draft-04/schema#",
7127                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7128 rights reserved.",
7129                 "title": "Carbon Monoxide Sensor",
  
```

```

7130     "definitions": {
7131       "oic.r.sensor.carbonmonoxide": {
7132         "allof": [
7133           {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
7134         ]
7135       }
7136     },
7137     "type": "object",
7138     "allof": [
7139       {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7140       {"$ref": "#/definitions/oic.r.sensor.carbonmonoxide"}
7141     ],
7142     "required": ["value"]
7143   }
7144
7145   example: /
7146   {
7147     "rt":      ["oic.r.sensor.carbonmonoxide"],
7148     "id":      "unique_example_id",
7149     "value":   true
7150   }
7151

```

6.30.5 Property Definition

Table 65 Carbon Monoxide Sensor Property Definitions

Property name	Value type	Mandatory	Access mode	Description
value	boolean	yes	Read Only	True = Sensed, False = Not Sensed.

6.30.6 CRUDN behaviour

Table 66 Carbon Monoxide Sensor CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/CarbonMonoxideResURI		get			

6.31 Auto White Balance

6.31.1 Introduction

This resource describes an auto balance on/off feature. The value is a boolean. An AutoWhiteBalance value of 'true' means that the switch is on. An AutoWhiteBalance value of 'false' means that the switch is off.

6.31.2 Example URI

/AutoWhiteBalanceResURI

6.31.3 Resource Type

The resource type (rt) is defined as: oic.r.colour.autowhitebalance.

6.31.4 RAML Definition

```

7166 #%RAML 0.8
7167 title: OICAutoWhiteBalance
7168 version: v1.1.0-20160519
7169 traits:
7170   - interface :
7171     queryParameters:
7172       if:
7173         enum: ["oic.if.a", "oic.if.baseline"]
7174
7175 /AutoWhiteBalanceResURI:

```



```

7176     description: |
7177         This resource describes an auto balance on/off feature.
7178         The value is a boolean.
7179         An AutoWhiteBalance value of 'true' means that the switch is on.
7180         An AutoWhiteBalance value of 'false' means that the switch is off.
7181
7182     is : ['interface']
7183
7184     get:
7185         responses :
7186             200:
7187                 body:
7188                     application/json:
7189                         schema: /
7190                             {
7191                                 "id":
7192 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.autowhitebalance.json#",
7193                                 "$schema": "http://json-schema.org/draft-04/schema#",
7194                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7195 rights reserved.",
7196                                 "title": "Auto White Balance",
7197                                 "definitions": {
7198                                     "oic.r.colour.autowhitebalance": {
7199                                         "type": "object",
7200                                         "properties": {
7201                                             "autoWhiteBalance": {
7202                                                 "type": "boolean",
7203                                                 "description": "Status of the Auto White balance"
7204                                             }
7205                                         }
7206                                     },
7207                                     "type": "object",
7208                                     "allOf": [
7209                                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7210                                         {"$ref": "#/definitions/oic.r.colour.autowhitebalance"}
7211                                     ],
7212                                     "required": [ "autoWhiteBalance" ]
7213                                 }
7214
7215                         example: /
7216                             {
7217                                 "rt":          ["oic.r.colour.autowhitebalance"],
7218                                 "id":          "unique_example_id",
7219                                 "autoWhiteBalance": false
7220                             }
7221
7222     post:
7223         body:
7224             application/json:
7225                 schema: /
7226                     {
7227                         "id":
7228 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.autowhitebalance.json#",
7229                         "$schema": "http://json-schema.org/draft-04/schema#",
7230                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
7231 reserved.",
7232                         "title": "Auto White Balance",
7233                         "definitions": {
7234                             "oic.r.colour.autowhitebalance": {
7235                                 "type": "object",
7236                                 "properties": {
7237                                     "autoWhiteBalance": {
7238                                         "type": "boolean",
7239                                         "description": "Status of the Auto White balance"
7240                                     }
7241                                 }
7242                             }
7243

```

```

7241     }
7242   }
7243 },
7244 "type": "object",
7245 "allOf": [
7246   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7247   {"$ref": "#/definitions/oic.r.colour.automwhitebalance"}
7248 ],
7249 "required": [ "autoWhiteBalance" ]
7250 }
7251
7252 example: /
7253 {
7254   "id": "unique_example_id",
7255   "autoWhiteBalance": true
7256 }
7257
7258 responses :
7259 200:
7260   body:
7261     application/json:
7262       schema: /
7263         {
7264           "id":
7265 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.automwhitebalance.json#",
7266           "$schema": "http://json-schema.org/draft-04/schema#",
7267           "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7268 rights reserved.",
7269           "title": "Auto White Balance",
7270           "definitions": {
7271             "oic.r.colour.automwhitebalance": {
7272               "type": "object",
7273               "properties": {
7274                 "autoWhiteBalance": {
7275                   "type": "boolean",
7276                   "description": "Status of the Auto White balance"
7277                 }
7278             }
7279           },
7280         },
7281         "type": "object",
7282         "allOf": [
7283           {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7284           {"$ref": "#/definitions/oic.r.colour.automwhitebalance"}
7285         ],
7286         "required": [ "autoWhiteBalance" ]
7287       }
7288
7289 example: /
7290 {
7291   "id": "unique_example_id",
7292   "autoWhiteBalance": true
7293 }
7294

```

6.31.5 Property Definition

Table 67 Auto White Balance Property Definitions

Property name	Value type	Mandatory	Access mode	Description
autoWhiteBalance	boolean	yes		Status of the Auto White balance

7297 **6.31.6 CRUDN behaviour**

7298 **Table 68 Auto White Balance CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/AutoWhiteBalanceResURI		get	post		

7299 **6.32 Colour Saturation**

7300 **6.32.1 Introduction**

7301 This resource describes a Colour saturation value. The value is an integer. A coloursaturation has
 7302 a range of [0,100]. A coloursaturation value of 0 means producing black and white images. A
 7303 coloursaturation value of 50 means producing device specific normal colour images. A
 7304 coloursaturation value of 100 means producing device very full colour images.

7305 **6.32.2 Example URI**

7306 /ColourSaturationResURI

7307 **6.32.3 Resource Type**

7308 The resource type (rt) is defined as: oic.r.colour.saturation.

7309 **6.32.4 RAML Definition**

```

7310 #%RAML 0.8
7311 title: OICColourSaturation
7312 version: v1.1.0-20160519
7313 traits:
7314   - interface :
7315       queryParameters:
7316         if:
7317           enum: ["oic.if.a", "oic.if.baseline"]
7318
7319 /ColourSaturationResURI:
7320   description: |
7321     This resource describes a Colour saturation value.
7322     The value is an integer.
7323     A coloursaturation has a range of [0,100].
7324     A coloursaturation value of 0 means producing black and white images.
7325     A coloursaturation value of 50 means producing device specific normal colour images.
7326     A coloursaturation value of 100 means producing device very full colour images.
7327
7328   is : ['interface']
7329   get:
7330     responses :
7331       200:
7332         body:
7333           application/json:
7334             schema: /
7335               {
7336                 "id":
7337 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.saturation.json#",
7338                 "$schema": "http://json-schema.org/draft-04/schema#",
7339                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7340 rights reserved.",
7341                 "title": "Colour Saturation",
7342                 "definitions": {
7343                   "oic.r.colour.saturation": {
7344                     "type": "object",
7345                     "properties": {
7346                       "colourSaturation": {
7347                         "type": "integer",

```

```

7348         "description": "The colour saturation value",
7349         "minimum": 0,
7350         "maximum": 100
7351     }
7352 }
7353 }
7354 },
7355 "type": "object",
7356 "allOf": [
7357     {"$ref": "oic.core.json#/definitions/oic.core"},
7358     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7359     {"$ref": "#/definitions/oic.r.colour.saturation"}
7360 ],
7361 "required": [ "colourSaturation" ]
7362 }
7363
7364 example: /
7365 {
7366     "rt":             ["oic.r.colour.saturation"],
7367     "id":             "unique_example_id",
7368     "colourSaturation": 50
7369 }
7370
7371 post:
7372 body:
7373 application/json:
7374 schema: /
7375 {
7376     "id":
7377 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.saturation.json#",
7378     "$schema": "http://json-schema.org/draft-04/schema#",
7379     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
7380 reserved.",
7381     "title": "Colour Saturation",
7382     "definitions": {
7383         "oic.r.colour.saturation": {
7384             "type": "object",
7385             "properties": {
7386                 "colourSaturation": {
7387                     "type": "integer",
7388                     "description": "The colour saturation value",
7389                     "minimum": 0,
7390                     "maximum": 100
7391                 }
7392             }
7393         },
7394     },
7395     "type": "object",
7396     "allOf": [
7397         {"$ref": "oic.core.json#/definitions/oic.core"},
7398         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7399         {"$ref": "#/definitions/oic.r.colour.saturation"}
7400     ],
7401     "required": [ "colourSaturation" ]
7402 }
7403
7404 example: /
7405 {
7406     "id":             "unique_example_id",
7407     "colourSaturation": 60
7408 }
7409
7410 responses :
7411 200:
7412 body:

```

```

7413     application/json:
7414         schema: /
7415             {
7416                 "id":
7417 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.saturation.json#",
7418                 "$schema": "http://json-schema.org/draft-04/schema#",
7419                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7420 rights reserved.",
7421                 "title": "Colour Saturation",
7422                 "definitions": {
7423                     "oic.r.colour.saturation": {
7424                         "type": "object",
7425                         "properties": {
7426                             "colourSaturation": {
7427                                 "type": "integer",
7428                                 "description": "The colour saturation value",
7429                                 "minimum": 0,
7430                                 "maximum": 100
7431                             }
7432                         }
7433                     }
7434                 },
7435                 "type": "object",
7436                 "allOf": [
7437                     {"$ref": "oic.core.json#/definitions/oic.core"},
7438                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7439                     {"$ref": "#/definitions/oic.r.colour.saturation"}
7440                 ],
7441                 "required": [ "colourSaturation" ]
7442             }
7443
7444         example: /
7445             {
7446                 "id": "unique_example_id",
7447                 "colourSaturation": 60
7448             }
7449

```

7450 6.32.5 Property Definition

7451 **Table 69 Colour Saturation Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
colourSaturation	integer	yes		The colour saturation value

7452 6.32.6 CRUDN behaviour

7453 **Table 70 Colour Saturation CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/ColourSaturationResURI		get	post		

7454 6.33 Contact Sensor

7455 6.33.1 Introduction

7456 This resource describes whether a contact sensor has been tripped or not. Typical use case is in
7457 Security Systems detecting window or door open. The value is a boolean. A value of 'true' means
7458 that contact has been broken (open). A value of 'false' means that contact is in place (closed).

7459 6.33.2 Example URI

7460 /ContactResURI

7461 6.33.3 Resource Type

7462 The resource type (rt) is defined as: oic.r.sensor.contact.

7463 **6.33.4 RAML Definition**

```

7464 #%RAML 0.8
7465 title: OIContactSensor
7466 version: v1.1.0-20160519
7467 traits:
7468   - interface :
7469     queryParameters:
7470       if:
7471         enum: ["oic.if.s", "oic.if.baseline"]
7472
7473 /ContactResURI:
7474   description: |
7475     This resource describes whether a contact sensor has been tripped or not.
7476     Typical use case is in Security Systems detecting window or door open.
7477     The value is a boolean.
7478     A value of 'true' means that contact has been broken (open).
7479     A value of 'false' means that contact is in place (closed).
7480
7481   is : ['interface']
7482   get:
7483     responses :
7484       200:
7485         body:
7486           application/json:
7487             schema: /
7488               {
7489                 "id":
7490 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.contact.json#",
7491                 "$schema": "http://json-schema.org/draft-04/schema#",
7492                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7493 rights reserved.",
7494                 "title": "Contact Sensor",
7495                 "definitions": {
7496                   "oic.r.sensor.contact": {
7497                     "allOf": [
7498                       {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
7499                     ]
7500                   }
7501                 },
7502                 "type": "object",
7503                 "allOf": [
7504                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7505                   {"$ref": "#/definitions/oic.r.sensor.contact"}
7506                 ],
7507                 "required": ["value"]
7508               }
7509
7510           example: /
7511             {
7512               "rt": ["oic.r.sensor.contact"],
7513               "id": "unique_example_id",
7514               "value": true
7515             }
7516

```

7517 **6.33.5 Property Definition**

7518 **Table 71 Contact Sensor Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
---------------	------------	-----------	-------------	-------------

value	boolean	yes	Read Only	True = Sensed, False = Not Sensed.
-------	---------	-----	-----------	---------------------------------------

7519 **6.33.6 CRUDN behaviour**

7520 **Table 72 Contact Sensor CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/ContactResURI		get			

7521 **6.34 Demand Response Load Control (DRLC).**

7522 **6.34.1 Introduction**

7523 This resource describes any to be applied or currently being applied DRLC signal. The DRType is
 7524 the ApplianceLoadReductionType defined in Zigbee/HA Smart Energy Profile 2.0. Start is a string
 7525 containing an ISO8601 encoded start time. The duration value is in minutes. Override indicates
 7526 whether the consumer has overridden the request (true) or not (false).

7527 **6.34.2 Example URI**

7528 /DRLCResURI

7529 **6.34.3 Resource Type**

7530 The resource type (rt) is defined as: oic.r.energy.drlc.

7531 **6.34.4 RAML Definition**

```

7532 #%RAML 0.8
7533 title: OICDRLC
7534 version: v1.1.0-20160519
7535 traits:
7536   - interface :
7537     queryParameters:
7538       if:
7539         enum: ["oic.if.b", "oic.if.baseline"]
7540
7541 /DRLCResURI:
7542   description: |
7543     This resource describes any to be applied or currently being applied DRLC signal.
7544     The DRType is the ApplianceLoadReductionType defined in Zigbee/HA Smart Energy Profile 2.0.
7545     Start is a string containing an ISO8601 encoded start time.
7546     The duration value is in minutes.
7547     Override indicates whether the consumer has overridden the request (true) or not (false).
7548
7549   is : ['interface']
7550   get:
7551     description: |
7552       Provides the current DRLC action that is being applied.
7553
7554   responses :
7555     200:
7556       body:
7557         application/json:
7558           schema: /
7559           {
7560             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.drlc.json#",
7561             "$schema": "http://json-schema.org/draft-04/schema#",
7562             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7563 rights reserved.",
7564             "definitions": {
  
```

```

7565         "oic.r.energy.dr1c": {
7566             "type": "object",
7567             "properties": {
7568                 "DRType": {
7569                     "type": "integer",
7570                     "description": "The to be applied demand-response type"
7571                 },
7572                 "start": {
7573                     "type": "string",
7574                     "description": "The start time for the application of DR"
7575                 },
7576                 "duration": {
7577                     "type": "integer",
7578                     "description": "The duration of the to be applied DR type"
7579                 },
7580                 "override": {
7581                     "type": "boolean",
7582                     "description": "Whether the consumer has overridden the application of DR"
7583                 }
7584             }
7585         },
7586     },
7587     "type": "object",
7588     "allOf": [
7589         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7590         {"$ref": "#/definitions/oic.r.energy.dr1c"}
7591     ],
7592     "required": ["DRType"]
7593 }
7594
7595 example: /
7596 {
7597     "rt":         ["oic.r.energy.dr1c"],
7598     "id":         "unique_example_id",
7599     "DRType":    1,
7600     "start":     "2015-01-09T16:45Z",
7601     "duration": 10,
7602     "override":  false
7603 }
7604
7605 put:
7606     description: |
7607         Provides the DR1C action to be applied to the device or updates an existing action.
7608
7609     body:
7610         application/json:
7611             schema: /
7612                 {
7613                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.dr1c.json#",
7614                     "$schema": "http://json-schema.org/draft-04/schema#",
7615                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
7616 reserved.",
7617                     "definitions": {
7618                         "oic.r.energy.dr1c": {
7619                             "type": "object",
7620                             "properties": {
7621                                 "DRType": {
7622                                     "type": "integer",
7623                                     "description": "The to be applied demand-response type"
7624                                 },
7625                                 "start": {
7626                                     "type": "string",
7627                                     "description": "The start time for the application of DR"
7628                                 },
7629                                 "duration": {
7630                                     "type": "integer",
7631                                     "description": "The duration of the to be applied DR type"

```



```

7632         },
7633         "override": {
7634             "type": "boolean",
7635             "description": "Whether the consumer has overridden the application of DR"
7636         }
7637     }
7638 },
7639 },
7640 "type": "object",
7641 "allOf": [
7642     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7643     {"$ref": "#/definitions/oic.r.energy.drlc"}
7644 ],
7645 "required": ["DRType"]
7646 }
7647
7648 example: /
7649 {
7650     "rt": ["oic.r.energy.drlc"],
7651     "id": "unique_example_id",
7652     "DRType": 1,
7653     "start": "2015-01-09T16:45Z",
7654     "duration": 10
7655 }
7656
7657 responses :
7658 200:
7659     description: |
7660         Indicates that the target DRLC resource was changed.
7661         The new resource attributes are provided in the response.
7662
7663     body:
7664         application/json:
7665             schema: /
7666                 {
7667                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.drlc.json#",
7668                     "$schema": "http://json-schema.org/draft-04/schema#",
7669                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7670 rights reserved.",
7671                     "definitions": {
7672                         "oic.r.energy.drlc": {
7673                             "type": "object",
7674                             "properties": {
7675                                 "DRType": {
7676                                     "type": "integer",
7677                                     "description": "The to be applied demand-response type"
7678                                 },
7679                                 "start": {
7680                                     "type": "string",
7681                                     "description": "The start time for the application of DR"
7682                                 },
7683                                 "duration": {
7684                                     "type": "integer",
7685                                     "description": "The duration of the to be applied DR type"
7686                                 },
7687                                 "override": {
7688                                     "type": "boolean",
7689                                     "description": "Whether the consumer has overridden the application of DR"
7690                                 }
7691                             }
7692                         }
7693                     },
7694                     "type": "object",
7695                     "allOf": [
7696                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7697                         {"$ref": "#/definitions/oic.r.energy.drlc"}
7698                     ],

```

```

7699         "required": ["DRType"]
7700     }
7701
7702     example: /
7703     {
7704         "DRType": 1,
7705         "id": "unique_example_id",
7706         "start": "2015-01-09T17:00Z",
7707         "duration": 15,
7708         "override": false
7709     }
7710
7711 201:
7712     description: |
7713         Indicates successful creation of the DRLC resource with the attributes provided.
7714         The response includes the URI of the created resource.
7715
7716     body:
7717         application/json:
7718         schema: /
7719         {
7720             "id": "http://openinterconnect.org/iotdatamodels/chemas/oic.create.json#",
7721             "$schema": "http://json-schema.org/draft-04/schema#",
7722             "description": "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
7723 reserved.",
7724             "definitions": {
7725                 "oic.create": {
7726                     "type": "object",
7727                     "properties": {
7728                         "ResURI": { "type": "string"}
7729                     }
7730             },
7731             "type": "object",
7732             "allOf": [
7733                 {"$ref": "#/definitions/oic.create"}
7734             ]
7735         }
7736
7737     example: /
7738     {
7739         "ResURI": "/MyDevice/MyDRLCURI"
7740     }
7741
7742

```

6.34.5 Property Definition

Table 73 Demand Response Load Control (DRLC). Property Definitions

Property name	Value type	Mandatory	Access mode	Description
DRType	integer	yes		The to be applied demand-response type
start	string			The start time for the application of DR
duration	integer			The duration of the to be applied DR type
override	boolean			Whether the consumer has

				overridden the application of DR
--	--	--	--	----------------------------------

7745 **6.34.6 CRUDN behaviour**

7746 **Table 74 Demand Response Load Control (DRLC). CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/DRLCResURI	put	get			

7747 **6.35 Energy Overload/Circuit Breaker**

7748 **6.35.1 Introduction**

7749 This resource describes whether an energy overload detector/circuit breaker is currently tripped.
 7750 The value is a boolean. A value of 'true' means that energy overload has been tripped. A value of
 7751 'false' means that energy overload has not been tripped.

7752 **6.35.2 Example URI**

7753 /EnergyOverloadResURI

7754 **6.35.3 Resource Type**

7755 The resource type (rt) is defined as: oic.r.energy.overload.

7756 **6.35.4 RAML Definition**

```

7757 #%RAML 0.8
7758 title: OICEnergyOverload
7759 version: v1.1.0-20160519
7760 traits:
7761   - interface :
7762     queryParameters:
7763       if:
7764         enum: ["oic.if.s", "oic.if.baseline"]
7765
7766 /EnergyOverloadResURI:
7767   description: |
7768     This resource describes whether an energy overload detector/circuit breaker
7769     is currently tripped.
7770     The value is a boolean.
7771     A value of 'true' means that energy overload has been tripped.
7772     A value of 'false' means that energy overload has not been tripped.
7773
7774   is : ['interface']
7775   get:
7776     responses :
7777       200:
7778         body:
7779           application/json:
7780             schema: /
7781               {
7782                 "id":
7783 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.overload.json#",
7784                 "$schema": "http://json-schema.org/draft-04/schema#",
7785                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7786 rights reserved.",
7787                 "title": "Energy Overload Sensor",
7788                 "definitions": {
7789                   "oic.r.energy.overload": {
7790                     "allOf": [
7791                       {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
7792                     ]
7793                   }
7794                 }
7795             }
  
```

```

7793     },
7794     },
7795     "type": "object",
7796     "allOf": [
7797         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7798         {"$ref": "#/definitions/oic.r.energy.overload"}
7799     ],
7800     "required": ["value"]
7801 }
7802
7803 example: /
7804 {
7805     "rt": ["oic.r.energy.overload"],
7806     "id": "unique_example_id",
7807     "value": true
7808 }
7809

```

7810 6.35.5 Property Definition

7811 **Table 75 Energy Overload/Circuit Breaker Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
value	boolean	yes	Read Only	True = Sensed, False = Not Sensed.

7812 6.35.6 CRUDN behaviour

7813 **Table 76 Energy Overload/Circuit Breaker CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/EnergyOverloadResURI		get			

7814 6.36 Generic Sensor

7815 6.36.1 Introduction

7816 This resource describes whether some value or property or entity has been sensed or not. The
7817 value is a boolean. A value of 'true' means that the target has been sensed. A value of 'false'
7818 means that the target has not been sensed.

7819 6.36.2 Example URI

7820 /GenericSensorResURI

7821 6.36.3 Resource Type

7822 The resource type (rt) is defined as: oic.r.sensor.

7823 6.36.4 RAML Definition

```

7824 #%RAML 0.8
7825 title: OICGenericSensor
7826 version: v1.1.0-20160519
7827 traits:
7828   - interface :
7829       queryParameters:
7830           if:
7831               enum: ["oic.if.s", "oic.if.baseline"]
7832
7833 /GenericSensorResURI:
7834   description: |
7835     This resource describes whether some value or property or entity has been sensed or not.
7836     The value is a boolean.
7837     A value of 'true' means that the target has been sensed.

```

```

7838     A value of 'false' means that the target has not been sensed.
7839
7840     is : ['interface']
7841     get:
7842         responses :
7843             200:
7844                 body:
7845                     application/json:
7846                         schema: /
7847                             {
7848                                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.json#",
7849                                 "$schema": "http://json-schema.org/draft-04/schema#",
7850                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7851 rights reserved.",
7852                                 "title": "Generic Sensor",
7853                                 "definitions": {
7854                                     "oic.r.sensor": {
7855                                         "type": "object",
7856                                         "properties": {
7857                                             "value": {
7858                                                 "type": "boolean",
7859                                                 "readOnly": true,
7860                                                 "description": "true = sensed, false = not sensed."
7861                                             }
7862                                         }
7863                                     }
7864                                 },
7865                                 "type": "object",
7866                                 "allOf": [
7867                                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7868                                     {"$ref": "#/definitions/oic.r.sensor"}
7869                                 ]
7870                             }
7871
7872                         example: /
7873                             {
7874                                 "rt": ["oic.r.sensor"],
7875                                 "id": "unique_example_id",
7876                                 "value": true
7877                             }
7878

```

6.36.5 Property Definition

Table 77 Generic Sensor Property Definitions

Property name	Value type	Mandatory	Access mode	Description
value	boolean		Read Only	true = sensed, false = not sensed.

6.36.6 CRUDN behaviour

Table 78 Generic Sensor CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/GenericSensorResURI		get			

6.37 Glass Break Sensor

6.37.1 Introduction

This resource describes a glass break sensor. The value is a boolean. A value of 'true' means that glass break has been sensed. A value of 'false' means that glass break not been sensed.

```

7887 6.37.2 Example URI
7888 /GlassBreakResURI
7889 6.37.3 Resource Type
7890 The resource type (rt) is defined as: oic.r.sensor.glassbreak.
7891 6.37.4 RAML Definition
7892 #%RAML 0.8
7893 title: OICGlassBreakSensor
7894 version: v1.1.0-20160519
7895 traits:
7896 - interface :
7897     queryParameters:
7898         if:
7899             enum: ["oic.if.s", "oic.if.baseline"]
7900
7901 /GlassBreakResURI:
7902     description: |
7903         This resource describes a glass break sensor.
7904         The value is a boolean.
7905         A value of 'true' means that glass break has been sensed.
7906         A value of 'false' means that glass break not been sensed.
7907
7908     is : ['interface']
7909     get:
7910         responses :
7911             200:
7912                 body:
7913                     application/json:
7914                         schema: /
7915                             {
7916                                 "id":
7917 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.glassBreak.json#",
7918                                 "$schema": "http://json-schema.org/draft-04/schema#",
7919                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7920 rights reserved.",
7921                                 "title": "Glass Break Sensor",
7922                                 "definitions": {
7923                                     "oic.r.sensor.glassbreak": {
7924                                         "allOf": [
7925                                             {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
7926                                         ]
7927                                     }
7928                                 },
7929                                 "type": "object",
7930                                 "allOf": [
7931                                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7932                                     {"$ref": "#/definitions/oic.r.sensor.glassbreak"}
7933                                 ],
7934                                 "required": ["value"]
7935                             }
7936
7937     example: /
7938         {
7939             "rt": ["oic.r.sensor.glassbreak"],
7940             "id": "unique_example_id",
7941             "value": true
7942         }
7943

```

7944 **6.37.5 Property Definition**

7945 **Table 79 Glass Break Sensor Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
value	boolean	yes	Read Only	True = Sensed, False = Not Sensed.

7946 **6.37.6 CRUDN behaviour**

7947 **Table 80 Glass Break Sensor CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/GlassBreakResURI		get			

7948 **6.38 Heart Rate Zone**

7949 **6.38.1 Introduction**

7950 This resource describes a measured heart rate by the current Zone using the Zoladz method The
 7951 Zoladz method defines Zones based on maximum heart rate; Zone 1 is the lowest, Zone 5 is the
 7952 highest. The heartRateZone is an enumeration containing one of: "Zone1", "Zone2", "Zone3",
 7953 "Zone4", "Zone5".

7954 **6.38.2 Example URI**

7955 /HeartRateZoneResURI

7956 **6.38.3 Resource Type**

7957 The resource type (rt) is defined as: oic.r.sensor.heart.zone.

7958 **6.38.4 RAML Definition**

```

7959 #%RAML 0.8
7960 title: OICHeartRateZone
7961 version: v1.1.0-20160519
7962 traits:
7963   - interface :
7964     queryParameters:
7965       if:
7966         enum: ["oic.if.s", "oic.if.baseline"]
7967
7968 /HeartRateZoneResURI:
7969   description: |
7970     This resource describes a measured heart rate by the current Zone using the Zoladz method
7971     The Zoladz method defines Zones based on maximum heart rate; Zone 1 is the lowest, Zone 5 is
7972     the highest.
7973     The heartRateZone is an enumeration containing one of: "Zone1", "Zone2", "Zone3", "Zone4",
7974     "Zone5".
7975
7976   is : ['interface']
7977   get:
7978     responses :
7979       200:
7980         body:
7981           application/json:
7982             schema: /
7983               {
7984                 "id":
7985                 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.heart.zone.json#",
7986                 "$schema": "http://json-schema.org/draft-04/schema#",
  
```

```

7987         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7988 rights reserved.",
7989         "title": "Heart Rate Zone",
7990         "definitions": {
7991             "oic.r.sensor.heart.zone": {
7992                 "properties": {
7993                     "heartRateZone": {
7994                         "type": "string",
7995                         "enum": ["Zone1", "Zone2", "Zone3", "Zone4", "Zone5"],
7996                         "readOnly": true,
7997                         "description": "Current heart rate zone based on the Zoladz system."
7998                     }
7999                 }
8000             }
8001         },
8002         "type": "object",
8003         "allOf": [
8004             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8005             {"$ref": "#/definitions/oic.r.sensor.heart.zone"}
8006         ],
8007         "required": ["heartRateZone"]
8008     }
8009
8010     example: /
8011     {
8012         "rt":             ["oic.r.sensor.heart.zone"],
8013         "id":             "unique_example_id",
8014         "heartRateZone": "Zone3"
8015     }
8016

```

8017 6.38.5 Property Definition

8018 **Table 81 Heart Rate Zone Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
heartRateZone	string	yes	Read Only	Current heart rate zone based on the Zoladz system.

8019 6.38.6 CRUDN behaviour

8020 **Table 82 Heart Rate Zone CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/HeartRateZoneResURI		get			

8021 6.39 Illuminance Sensor

8022 6.39.1 Introduction

8023 This resource describes an illuminance sensor. Illuminance is a float and represents the sensed
8024 luminous flux per unit area in lux.

8025 6.39.2 Example URI

8026 /IlluminanceSensorResURI

8027 6.39.3 Resource Type

8028 The resource type (rt) is defined as: oic.r.sensor.illuminance.

8029 6.39.4 RAML Definition

8030 `##RAML 0.8`

8031 `title: OICIlluminanceSensor`

8032 `version: v1.1.0-20160519`

8033 `traits:`


```

8034 - interface :
8035   queryParameters:
8036     if:
8037       enum: ["oic.if.s", "oic.if.baseline"]
8038
8039 /IlluminanceSensorResURI:
8040   description: |
8041     This resource describes an illuminance sensor.
8042     Illuminance is a float and represents the sensed luminous flux per unit area in lux.
8043
8044   is : ['interface']
8045   get:
8046     responses :
8047       200:
8048         body:
8049           application/json:
8050             schema: /
8051               {
8052                 "id":
8053 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.illuminance.json#",
8054                 "$schema": "http://json-schema.org/draft-04/schema#",
8055                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8056 rights reserved.",
8057                 "title": "Illuminance Sensor",
8058                 "definitions": {
8059                   "oic.r.sensor.illuminance": {
8060                     "properties": {
8061                       "illuminance": {
8062                         "type": "number",
8063                         "readOnly": true,
8064                         "description": "Sensed luminous flux per unit area in lux."
8065                       }
8066                     }
8067                   }
8068                 },
8069                 "type": "object",
8070                 "allOf": [
8071                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8072                   {"$ref": "#/definitions/oic.r.sensor.illuminance"}
8073                 ],
8074                 "required": ["illuminance"]
8075               }
8076
8077           example: /
8078             {
8079               "rt":          ["oic.r.sensor.illuminance"],
8080               "id":         "unique_example_id",
8081               "illuminance": 450.0
8082             }
8083

```

6.39.5 Property Definition

Table 83 Illuminance Sensor Property Definitions

Property name	Value type	Mandatory	Access mode	Description
illuminance	number	yes	Read Only	Sensed luminous flux per unit area in lux.

8086 **6.39.6 CRUDN behaviour**

8087 **Table 84 Illuminance Sensor CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/IlluminanceSensorResURI		get			

8088 **6.40 Magnetic Field Direction Sensor**

8089 **6.40.1 Introduction**

8090 This resource describes the direction of the Earth's magnetic field at the observer's current point
 8091 in space. Typical use case includes measurement of compass readings on a personal device. The
 8092 value is an array containing Hx, Hy, Hz (in that order) each of which are floats. Each of Hx, Hy and
 8093 Hz are expressed in A/m (Amperes per metre)

8094 **6.40.2 Example URI**

8095 /MagneticFieldDirectionResURI

8096 **6.40.3 Resource Type**

8097 The resource type (rt) is defined as: oic.r.sensor.magneticfielddirection.

8098 **6.40.4 RAML Definition**

8099 `##RAML 0.8`

8100 `title: OICMagneticFieldDirection`

8101 `version: v1.1.0-20160519`

8102 `traits:`

8103 `- interface :`

8104 `queryParameters:`

8105 `if:`

8106 `enum: ["oic.if.s", "oic.if.baseline"]`

8107

8108 `/MagneticFieldDirectionResURI:`

8109 `description: |`

8110 `This resource describes the direction of the Earth's magnetic field at the observer's current`
 8111 `point in space.`

8112 `Typical use case includes measurement of compass readings on a personal device.`

8113 `The value is an array containing Hx, Hy, Hz (in that order) each of which are floats.`

8114 `Each of Hx, Hy and Hz are expressed in A/m (Amperes per metre)`

8115

8116 `is : ['interface']`

8117 `get:`

8118 `responses :`

8119 `200:`

8120 `body:`

8121 `application/json:`

8122 `schema: |`

8123 `{`

8124 `"id":`

8125 `"http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.magneticFieldDirection.json#",`

8126 `"$schema": "http://json-schema.org/draft-04/schema#",`

8127 `"description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All`
 8128 `rights reserved.",`

8129 `"title": "Magnetic Field Direction Sensor",`

8130 `"definitions": {`

8131 `"oic.r.sensor.magneticfielddirection": {`

8132 `"properties": {`

8133 `"value": {`

8134 `"type": "array",`

8135 `"readOnly": true,`

8136 `"description": "Array containing Hx, Hy, Hz.",`

```

8137         "minItems": 3,
8138         "maxItems": 3,
8139         "items": {
8140             "type": "number"
8141         }
8142     }
8143 }
8144 }
8145 },
8146 "type": "object",
8147 "allOf": [
8148     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8149     {"$ref": "#/definitions/oic.r.sensor.magneticfielddirection"}
8150 ],
8151 "required": ["value"]
8152 }
8153
8154 example: /
8155 {
8156     "rt": ["oic.r.sensor.magneticfielddirection"],
8157     "id": "unique_example_id",
8158     "value": [100.0,15.0,90.0]
8159 }
8160

```

8161 6.40.5 Property Definition

8162 **Table 85 Magnetic Field Direction Sensor Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
value	array: see schema	yes	Read Only	Array containing Hx, Hy, Hz.

8163 6.40.6 CRUDN behaviour

8164 **Table 86 Magnetic Field Direction Sensor CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/MagneticFieldDirectionResURI		get			

8165 6.41 Media

8166 6.41.1 Introduction

8167 This resource specifies the media types that an OCF Server supports. The resource is an array of
8168 media elements. Each element contains: A URL at which the specified media type can be
8169 accessed. A string array containing the definition of the media using SDP. Each entry in the
8170 sdp array is an SDP line. Each line shall follow the SDP description syntax as defined in the
8171 SDP specification. The SDP specification can be found at <http://tools.ietf.org/html/rfc4566>.

8172 6.41.2 Example URI

8173 /MediaResURI

8174 6.41.3 Resource Type

8175 The resource type (rt) is defined as: oic.r.media.

8176 6.41.4 RAML Definition

```

8177 #%RAML 0.8
8178 title: OICMedia
8179 version: v1.1.0-20160519
8180 traits:
8181   - interface :
8182       queryParameters:
8183         if:
8184           enum: ["oic.if.s", "oic.if.baseline"]

```

```

8185
8186 /MediaResURI:
8187   description: |
8188     This resource specifies the media types that an OCF Server supports.
8189     The resource is an array of media elements
8190     Each element contains:
8191       A URL at which the specified media type can be accessed.
8192       A string array containing the definition of the media using SDP.
8193       Each entry in the sdp array is an SDP line.
8194       Each line shall follow the SDP description syntax as defined in the SDP specification.
8195     The SDP specification can be found at http://tools.ietf.org/html/rfc4566.
8196
8197   is : ['interface']
8198
8199   get:
8200     description: |
8201       Retrieves the current media resource.
8202
8203   responses :
8204     200:
8205       body:
8206         application/json:
8207           schema: /
8208             {
8209               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.media.json#",
8210               "$schema": "http://json-schema.org/draft-04/schema#",
8211               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
8212               "title": "Media",
8213               "definitions": {
8214                 "oic.r.media": {
8215                   "properties": {
8216                     "media": {
8217                       "type": "array",
8218                       "items": {
8219                         "type": "object",
8220                         "properties": {
8221                           "url": {
8222                             "type": "string",
8223                             "description": "url for the media instance"
8224                           },
8225                           "sdp": {
8226                             "type": "array",
8227                             "description": "Array of strings, one per SDP line",
8228                             "items": {
8229                               "type": "string",
8230                               "description": "SDP media or attribute line"
8231                             }
8232                           }
8233                         }
8234                       }
8235                     }
8236                   }
8237                 },
8238               "type": "object",
8239               "allOf": [
8240                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8241                 {"$ref": "#/definitions/oic.r.media"}
8242               ],
8243               "required": ["media"]
8244             }
8245           }
8246
8247   example: /

```

```

8248     {
8249         "rt": ["oic.r.media"],
8250         "id": "unique_example_id",
8251         "media": [
8252             {
8253                 "url": "some example url",
8254                 "sdp": [
8255                     "m=video 1 RTP/AVP 96",
8256                     "a=rtpmap:96 H264/9000",
8257                     "a=fmtp:96 profile-level-id=42A028;packetization-mode=1"
8258                 ]
8259             },
8260             {
8261                 "url": "some other example1 url",
8262                 "sdp": [
8263                     "m=audio 2 RTP/AVP 97",
8264                     "a=rtpmap:97 MP4A-LATM/90000"
8265                 ]
8266             },
8267             {
8268                 "url": "some other example2 url",
8269                 "sdp": [
8270                     "m=video 3 RTP/AVP 98",
8271                     "a=rtpmap:98 jpeg/90000",
8272                     "a=fmtp:98 sampling=YCbCr-4:2:0;width=256;height=256"
8273                 ]
8274             }
8275         ]
8276     }
8277 }

```

8278 6.41.5 Property Definition

8279 **Table 87 Media Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
media	array: schema	see	yes	
url (media)	string			url for the media instance
sdp (media)	array: schema	see		Array of strings, one per SDP line

8280 6.41.6 CRUDN behaviour

8281 **Table 88 Media CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/MediaResURI		get			

8282 6.42 Media Source

8283 6.42.1 Introduction

8284 This resource defines a media source that exists on a device. The source can be an input source
8285 or output source, this resource is agnostic of that. The sourceName specifies a pre-defined media
8286 input or output (e.g."HDMI", "DVI") The sourceNumber is a numeric identifier to specify the
8287 instance (e.g. "PC", 1) The sourceType is an enumeration defining whether the source is audio,
8288 video or both. The status is a boolean that determines if the specific source instance is selected
8289 or not. A status of true means that the source instance is selected. A status of false means
8290 that the source instance is not selected.

8291 6.42.2 Example URI

8292 /mediaSourceResURI

8293 6.42.3 Resource Type

8294 The resource type (rt) is defined as: oic.r.mediasource.

8295 6.42.4 RAML Definition

```
8296 #%RAML 0.8
8297 title: OIC Media Source
8298 version: v1.1.0-20160519
8299 traits:
8300   - interface :
8301       queryParameters:
8302           if:
8303               enum: ["oic.if.a", "oic.if.baseline"]
8304
8305 /mediaSourceResURI:
8306   description: |
8307     This resource defines a media source that exists on a device.
8308     The source can be an input source or output source, this resource is agnostic of that.
8309     The sourceName specifies a pre-defined media input or output (e.g."HDMI", "DVI")
8310     The sourceNumber is a numeric identifier to specify the instance (e.g
8311     "PC", 1)
8312     The sourceType is an enumeration defining whether the source is audio, video or both.
8313     The status is a boolean that determines if the specific source instance is selected or not.
8314     A status of true means that the source instance is selected.
8315     A status of false means that the source instance is not selected.
8316
8317   is : ['interface']
8318   get:
8319       responses :
8320           200:
8321               body:
8322                   application/json:
8323                       schema: /
8324                           {
8325                               "$schema": "http://json-schema.org/draft-04/schema#",
8326                               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8327 rights reserved.",
8328                               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSource.json#",
8329                               "title": "Media Source",
8330                               "definitions": {
8331                                   "oic.r.mediasource": {
8332                                       "properties": {
8333                                           "sourceName": {
8334                                               "type": "string",
8335                                               "description": "Specifies a pre-defined media input or output"
8336                                           },
8337                                           "sourceNumber": {
8338                                               "type": [ "integer", "string" ],
8339                                               "readOnly": true,
8340                                               "description": "Numeric identifier to specify the instance"
8341                                           },
8342                                           "sourceType": {
8343                                               "type": "string",
8344                                               "enum": [ "audioOnly", "videoOnly", "audioPlusVideo" ],
8345                                               "readOnly": true,
8346                                               "description": "Specifies the type of the source"
8347                                           },
8348                                           "status": {
8349                                               "type": "boolean",
8350                                               "description": "Specifies if the specific source instance is selected or
8351 not"
8352                                           }
8353                                       }
8354                                   }
8355                               }
8356                           }
```

```

8355     },
8356     "type": "object",
8357     "allOf": [
8358         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8359         {"$ref": "#/definitions/oic.r.mediasource"}
8360     ],
8361     "required": ["sourceName", "status"]
8362 }
8363
8364 example: /
8365 {
8366     "rt":          ["oic.r.mediasource"],
8367     "id":          "unique_example_id",
8368     "sourceName": "HDMI-CEC",
8369     "sourceNumber": "1",
8370     "sourceType": "audioPlusVideo",
8371     "status":     true
8372 }
8373
8374 post:
8375     description: |
8376         Changes the status of the source.
8377         Allows changes of the sourceName and the status.
8378
8379     body:
8380         application/json:
8381             schema: /
8382                 {
8383                     "$schema": "http://json-schema.org/draft-04/schema#",
8384                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
8385 reserved.",
8386                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSource.json#",
8387                     "title": "Media Source",
8388                     "definitions": {
8389                         "oic.r.mediasource": {
8390                             "properties": {
8391                                 "sourceName": {
8392                                     "type": "string",
8393                                     "description": "Specifies a pre-defined media input or output"
8394                                 },
8395                                 "sourceNumber": {
8396                                     "type": [ "integer", "string" ],
8397                                     "readOnly": true,
8398                                     "description": "Numeric identifier to specify the instance"
8399                                 },
8400                                 "sourceType": {
8401                                     "type": "string",
8402                                     "enum": [ "audioOnly", "videoOnly", "audioPlusVideo" ],
8403                                     "readOnly": true,
8404                                     "description": "Specifies the type of the source"
8405                                 },
8406                                 "status": {
8407                                     "type": "boolean",
8408                                     "description": "Specifies if the specific source instance is selected or not"
8409                                 }
8410                             }
8411                         }
8412                     },
8413                     "type": "object",
8414                     "allOf": [
8415                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8416                         {"$ref": "#/definitions/oic.r.mediasource"}
8417                     ],
8418                     "required": ["sourceName", "status"]
8419                 }
8420
8421 example: /

```

```

8422     {
8423         "id":          "unique_example_id",
8424         "sourceName": "my new name",
8425         "sourceNumber": "1",
8426         "status":     true
8427     }
8428
8429     responses :
8430         200:
8431             body:
8432                 application/json:
8433                     schema: /
8434                         {
8435                             "$schema": "http://json-schema.org/draft-04/schema#",
8436                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8437 rights reserved.",
8438                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSource.json#",
8439                             "title": "Media Source",
8440                             "definitions": {
8441                                 "oic.r.mediasource": {
8442                                     "properties": {
8443                                         "sourceName": {
8444                                             "type": "string",
8445                                             "description": "Specifies a pre-defined media input or output"
8446                                         },
8447                                         "sourceNumber": {
8448                                             "type": [ "integer", "string" ],
8449                                             "readOnly": true,
8450                                             "description": "Numeric identifier to specify the instance"
8451                                         },
8452                                         "sourceType": {
8453                                             "type": "string",
8454                                             "enum": [ "audioOnly", "videoOnly", "audioPlusVideo" ],
8455                                             "readOnly": true,
8456                                             "description": "Specifies the type of the source"
8457                                         },
8458                                         "status": {
8459                                             "type": "boolean",
8460                                             "description": "Specifies if the specific source instance is selected or
8461 not"
8462                                         }
8463                                     }
8464                                 },
8465                             "type": "object",
8466                             "allOf": [
8467                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8468                                 { "$ref": "#/definitions/oic.r.mediasource" }
8469                             ],
8470                             "required": [ "sourceName", "status" ]
8471                         }
8472
8473         example: /
8474             {
8475                 "id":          "unique_example_id",
8476                 "sourceName": "my new name",
8477                 "sourceNumber": "1",
8478                 "status":     true
8479             }
8480
8481

```

6.42.5 Property Definition

Table 89 Media Source Property Definitions

Property name	Value type	Mandatory	Access mode	Description
---------------	------------	-----------	-------------	-------------

sourceName	string	yes		Specifies a pre-defined media input or output
status	boolean	yes		Specifies if the specific source instance is selected or not
sourceNumber	[u'integer', u'string']		Read Only	Numeric identifier to specify the instance
sourceType	string		Read Only	Specifies the type of the source

8484 **6.42.6 CRUDN behaviour**

8485 **Table 90 Media Source CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/mediaSourceResURI		get	post		

8486 **6.43 Media Source List**

8487 **6.43.1 Introduction**

8488 This resource provides the list of media sources available on the device. The sources are an array
8489 of mediaSource(s) as separately defined. The basic resource type oic.r.mediaSourceList does not
8490 provide any indications whether the source is input or output. Hence, two specializations of this
8491 resource exist. When a device exposes input sources then an instance of this resource with a
8492 resource type of oic.r.media.input is exposed. When a device exposes output sources then an
8493 instance of this resource with a resource type of oic.r.media.output is exposed. A device that
8494 exposes both input and output media sources then exposes two instances of this resource, one
8495 with a resource type or oic.r.media.input and one with a resource type of oic.r.media.output

8496 **6.43.2 Example URI**

8497 /mediaSourceListResURI

8498 **6.43.3 Resource Type**

8499 The resource type (rt) is defined as: oic.r.mediasourcelist.

8500 **6.43.4 RAML Definition**

```
8501 #%RAML 0.8
8502 title: OICMediaSourceList
8503 version: v1.1.0-20160519
8504 traits:
8505   - interface :
8506     queryParameters:
8507       if:
8508         enum: ["oic.if.a", "oic.if.baseline"]
8509
8510 /mediaSourceListResURI:
8511   description: |
8512     This resource provides the list of media sources available on the device.
8513     The sources are an array of mediaSource(s) as separately defined.
8514     The basic resource type oic.r.mediaSourceList does not provide any indications whether the
8515     source is input or output.
8516     Hence, two specializations of this resource exist.
8517     When a device exposes input sources then an instance of this resource with a resource type of
8518     oic.r.media.input is exposed.
```

8519 When a device exposes output sources then an instance of this resource with a resource type of
 8520 oic.r.media.output is exposed.
 8521 A device that exposes both input and output media sources then exposes two instances of this
 8522 resource,
 8523 one with a resource type of oic.r.media.input and one with a resource type of
 8524 oic.r.media.output
 8525

```

8526   is : ['interface']
8527   get:
8528     responses :
8529       200:
8530         body:
8531           application/json:
8532             schema: /
8533               {
8534                 "$schema": "http://json-schema.org/draft-04/schema#",
8535                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8536 rights reserved.",
8537                 "id":
8538 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
8539                 "title": "Media Source List",
8540                 "definitions": {
8541                   "oic.r.mediasourcelist": {
8542                     "properties": {
8543                       "sources": {
8544                         "type": "array",
8545                         "items": {
8546                           "oneOf": [
8547                             { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
8548                           ]
8549                         }
8550                       }
8551                     }
8552                   },
8553                 },
8554                 "type": "object",
8555                 "allOf": [
8556                   { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8557                   { "$ref": "#/definitions/oic.r.mediasourcelist" }
8558                 ],
8559                 "required": ["sources"]
8560               }
8561
8562           example: /
8563             {
8564               "rt": ["oic.r.mediasourcelist"],
8565               "id": "unique_example_id",
8566               "sources": [
8567                 {
8568                   "sourceName": "HDMI-CEC",
8569                   "sourceNumber": "1",
8570                   "sourceType": "audioPlusVideo",
8571                   "status": true
8572                 },
8573                 {
8574                   "sourceName": "dualRCA",
8575                   "sourceNumber": "1",
8576                   "sourceType": "audioOnly",
8577                   "status": false
8578                 }
8579               ]
8580             }
8581
8582           post:
8583             description: |

```

```

8584         Changes the status of the source(s).
8585         Allows changes of the sourceName and the status.
8586
8587     body:
8588         application/json:
8589         schema: /
8590             {
8591                 "$schema": "http://json-schema.org/draft-04/schema#",
8592                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
8593 reserved.",
8594                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
8595                 "title": "Media Source List",
8596                 "definitions": {
8597                     "oic.r.mediasourcelist": {
8598                         "properties": {
8599                             "sources": {
8600                                 "type": "array",
8601                                 "items": {
8602                                     "oneOf": [
8603                                         { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
8604                                     ]
8605                                 }
8606                             }
8607                         }
8608                     }
8609                 },
8610                 "type": "object",
8611                 "allOf": [
8612                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8613                     { "$ref": "#/definitions/oic.r.mediasourcelist" }
8614                 ],
8615                 "required": [ "sources" ]
8616             }
8617
8618     example: /
8619         {
8620             "id": "unique_example_id",
8621             "sources": [
8622                 {
8623                     "sourceName": "my new name",
8624                     "sourceNumber": "1",
8625                     "status": true
8626                 }
8627             ]
8628         }
8629
8630     responses :
8631         200:
8632         body:
8633         application/json:
8634         schema: /
8635             {
8636                 "$schema": "http://json-schema.org/draft-04/schema#",
8637                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8638 rights reserved.",
8639                 "id":
8640 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
8641                 "title": "Media Source List",
8642                 "definitions": {
8643                     "oic.r.mediasourcelist": {
8644                         "properties": {
8645                             "sources": {
8646                                 "type": "array",
8647                                 "items": {
8648                                     "oneOf": [

```

```

8649         { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
8650     ]
8651 }
8652 }
8653 }
8654 }
8655 },
8656 "type": "object",
8657 "allOf": [
8658     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8659     { "$ref": "#/definitions/oic.r.mediasourcelist" }
8660 ],
8661 "required": ["sources"]
8662 }
8663
8664 example: /
8665     {
8666         "id": "unique_example_id",
8667         "sources": [
8668             {
8669                 "sourceName": "my new name",
8670                 "sourceNumber": "1",
8671                 "status": true
8672             }
8673         ]
8674     }
8675 }

```

6.43.5 Property Definition

Table 91 Media Source List Property Definitions

Property name	Value type	Mandatory	Access mode	Description
sources	array: see schema	yes		
sourceName	string	yes		Specifies a pre-defined media input or output
status	boolean	yes		Specifies if the specific source instance is selected or not
sourceNumber	[u'integer', u'string']		Read Only	Numeric identifier to specify the instance
sourceType	string		Read Only	Specifies the type of the source

6.43.6 CRUDN behaviour

Table 92 Media Source List CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/mediaSourceListResURI		get	post		

6.43.7 Referenced JSON schemas

6.43.7.1 oic.r.mediaSource.json

```

8682 {
8683     "$schema": "http://json-schema.org/draft-04/schema#",
8684     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights reserved.",
8685     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSource.json#",

```

```

8687     "title": "Media Source",
8688     "definitions": {
8689       "oic.r.mediasource": {
8690         "properties": {
8691           "sourceName": {
8692             "type": "string",
8693             "description": "Specifies a pre-defined media input or output"
8694           },
8695           "sourceNumber": {
8696             "type": [ "integer", "string" ],
8697             "readOnly": true,
8698             "description": "Numeric identifier to specify the instance"
8699           },
8700           "sourceType": {
8701             "type": "string",
8702             "enum": [ "audioOnly", "videoOnly", "audioPlusVideo" ],
8703             "readOnly": true,
8704             "description": "Specifies the type of the source"
8705           },
8706           "status": {
8707             "type": "boolean",
8708             "description": "Specifies if the specific source instance is selected or not"
8709           }
8710         }
8711       }
8712     },
8713     "type": "object",
8714     "allOf": [
8715       { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8716       { "$ref": "#/definitions/oic.r.mediasource" }
8717     ],
8718     "required": [ "sourceName", "status" ]
8719   }
8720 }

```

8721 6.44 Media Source Input

8722 6.44.1 Introduction

8723 This resource provides the list of input media sources available on the device. The sources are an
8724 array of mediaSource(s) as separately defined.

8725 6.44.2 Example URI

8726 /mediaSourceInputResURI

8727 6.44.3 Resource Type

8728 The resource type (rt) is defined as: oic.r.media.input.

8729 6.44.4 RAML Definition

```

8730 %%RAML 0.8
8731 title: OICMediaSourceInput
8732 version: v1.1.0-20160519
8733 traits:
8734   - interface :
8735     queryParameters:
8736       if:
8737         enum: [ "oic.if.a", "oic.if.baseline" ]
8738
8739 /mediaSourceInputResURI:
8740   description: |
8741     This resource provides the list of input media sources available on the device.
8742     The sources are an array of mediaSource(s) as separately defined.
8743
8744   is : ['interface']
8745   get:

```

```

8746     responses :
8747         200:
8748             body:
8749                 application/json:
8750                 schema: /
8751                     {
8752                         "$schema": "http://json-schema.org/draft-04/schema#",
8753                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8754 rights reserved.",
8755                         "id":
8756 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
8757                         "title": "Media Source List",
8758                         "definitions": {
8759                             "oic.r.mediasourcelist": {
8760                                 "properties": {
8761                                     "sources": {
8762                                         "type": "array",
8763                                         "items": {
8764                                             "oneOf": [
8765                                                 { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediaSource" }
8766                                             ]
8767                                         }
8768                                     }
8769                                 }
8770                             },
8771                         "type": "object",
8772                         "allOf": [
8773                             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8774                             { "$ref": "#/definitions/oic.r.mediasourcelist" }
8775                         ],
8776                         "required": ["sources"]
8777                     }
8778
8779
8780                 example: /
8781                     {
8782                         "rt": ["oic.r.media.input"],
8783                         "id": "unique_example_id",
8784                         "sources": [
8785                             {
8786                                 "sourceName": "HDMI-CEC",
8787                                 "sourceNumber": "1",
8788                                 "sourceType": "audioPlusVideo",
8789                                 "status": true
8790                             },
8791                             {
8792                                 "sourceName": "dualRCA",
8793                                 "sourceNumber": "1",
8794                                 "sourceType": "audioOnly",
8795                                 "status": false
8796                             }
8797                         ]
8798                     }
8799
8800             post:
8801                 description: |
8802                     Changes the status of the source(s).
8803                     Allows changes of the sourceName and the status.
8804
8805                 body:
8806                     application/json:
8807                     schema: /
8808                         {
8809                             "$schema": "http://json-schema.org/draft-04/schema#",
8810                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights

```

```

8811 reserved.",
8812     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
8813     "title": "Media Source List",
8814     "definitions": {
8815         "oic.r.mediasourcelist": {
8816             "properties": {
8817                 "sources": {
8818                     "type": "array",
8819                     "items": {
8820                         "oneOf": [
8821                             { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
8822                         ]
8823                     }
8824                 }
8825             }
8826         }
8827     },
8828     "type": "object",
8829     "allOf": [
8830         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8831         { "$ref": "#/definitions/oic.r.mediasourcelist" }
8832     ],
8833     "required": ["sources"]
8834 }
8835
8836 example: /
8837 {
8838     "id": "unique_example_id",
8839     "sources": [
8840         {
8841             "sourceName": "my new name",
8842             "sourceNumber": "1",
8843             "status": true
8844         }
8845     ]
8846 }
8847
8848 responses :
8849 200:
8850   body:
8851     application/json:
8852       schema: /
8853         {
8854           "$schema": "http://json-schema.org/draft-04/schema#",
8855           "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8856 rights reserved.",
8857           "id":
8858 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
8859           "title": "Media Source List",
8860           "definitions": {
8861             "oic.r.mediasourcelist": {
8862               "properties": {
8863                 "sources": {
8864                     "type": "array",
8865                     "items": {
8866                         "oneOf": [
8867                             { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
8868                         ]
8869                     }
8870                 }
8871             }
8872           }
8873         },
8874         "type": "object",
8875         "allOf": [
8876             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8877             { "$ref": "#/definitions/oic.r.mediasourcelist" }

```

```

8878     ],
8879     "required": ["sources"]
8880   }
8881
8882   example: /
8883     {
8884       "id":      "unique_example_id",
8885       "sources": [
8886         {
8887           "sourceName": "my new name",
8888           "sourceNumber": "1",
8889           "status":      true
8890         }
8891       ]
8892     }
8893

```

8894 6.44.5 Property Definition

8895 **Table 93 Media Source Input Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
sources	array: see schema	yes		

8896 6.44.6 CRUDN behaviour

8897 **Table 94 Media Source Input CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/mediaSourceInputResURI		get	post		

8898 6.45 Media Source Output

8899 6.45.1 Introduction

8900 This resource provides the list of output media sources available on the device. The sources are
8901 an array of mediaSource(s) as separately defined.

8902 6.45.2 Example URI

8903 /mediaSourceOutputResURI

8904 6.45.3 Resource Type

8905 The resource type (rt) is defined as: oic.r.media.output.

8906 6.45.4 RAML Definition

```

8907 #%RAML 0.8
8908 title: OICMediaSourceOutput
8909 version: v1.1.0-20160519
8910 traits:
8911   - interface :
8912     queryParameters:
8913       if:
8914         enum: ["oic.if.a", "oic.if.baseline"]
8915
8916 /mediaSourceOutputResURI:
8917   description: |
8918     This resource provides the list of output media sources available on the device.
8919     The sources are an array of mediaSource(s) as separately defined.
8920
8921   is : ['interface']
8922   get:
8923     responses :

```



```

8924     200:
8925     body:
8926         application/json:
8927         schema: /
8928             {
8929                 "$schema": "http://json-schema.org/draft-04/schema#",
8930                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8931 rights reserved.",
8932                 "id":
8933 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
8934                 "title": "Media Source List",
8935                 "definitions": {
8936                     "oic.r.mediasourcelist": {
8937                         "properties": {
8938                             "sources": {
8939                                 "type": "array",
8940                                 "items": {
8941                                     "oneOf": [
8942                                         { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
8943                                     ]
8944                                 }
8945                             }
8946                         }
8947                     },
8948                 },
8949                 "type": "object",
8950                 "allOf": [
8951                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8952                     { "$ref": "#/definitions/oic.r.mediasourcelist" }
8953                 ],
8954                 "required": ["sources"]
8955             }
8956
8957     example: /
8958         {
8959             "rt": ["oic.r.media.output"],
8960             "id": "unique_example_id",
8961             "sources": [
8962                 {
8963                     "sourceName": "HDMI-CEC",
8964                     "sourceNumber": "1",
8965                     "sourceType": "audioPlusVideo",
8966                     "status": true
8967                 },
8968                 {
8969                     "sourceName": "dualRCA",
8970                     "sourceNumber": "1",
8971                     "sourceType": "audioOnly",
8972                     "status": false
8973                 }
8974             ]
8975         }
8976
8977     post:
8978     description: |
8979     Changes the status of the source(s).
8980     Allows changes of the sourceName and the status.
8981
8982     body:
8983         application/json:
8984         schema: /
8985             {
8986                 "$schema": "http://json-schema.org/draft-04/schema#",
8987                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
8988 reserved.",

```

```

8989     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
8990     "title": "Media Source List",
8991     "definitions": {
8992         "oic.r.mediasourcelist": {
8993             "properties": {
8994                 "sources": {
8995                     "type": "array",
8996                     "items": {
8997                         "oneOf": [
8998                             { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
8999                         ]
9000                     }
9001                 }
9002             }
9003         },
9004     },
9005     "type": "object",
9006     "allOf": [
9007         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
9008         { "$ref": "#/definitions/oic.r.mediasourcelist" }
9009     ],
9010     "required": ["sources"]
9011 }
9012

```

```

9013 example: /
9014 {
9015     "id": "unique_example_id",
9016     "sources": [
9017         {
9018             "sourceName": "my new name",
9019             "sourceNumber": "1",
9020             "status": true
9021         }
9022     ]
9023 }
9024

```

```

9025 responses :
9026 200:
9027 body:
9028 application/json:
9029 schema: /
9030 {
9031     "$schema": "http://json-schema.org/draft-04/schema#",
9032     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9033 rights reserved.",
9034     "id":
9035 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
9036     "title": "Media Source List",
9037     "definitions": {
9038         "oic.r.mediasourcelist": {
9039             "properties": {
9040                 "sources": {
9041                     "type": "array",
9042                     "items": {
9043                         "oneOf": [
9044                             { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
9045                         ]
9046                     }
9047                 }
9048             }
9049         },
9050     },
9051     "type": "object",
9052     "allOf": [
9053         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
9054         { "$ref": "#/definitions/oic.r.mediasourcelist" }
9055     ],

```

```

9056         "required": ["sources"]
9057     }
9058
9059     example: /
9060     {
9061         "id":      "unique_example_id",
9062         "sources": [
9063             {
9064                 "sourceName":  "my new name",
9065                 "sourceNumber": "1",
9066                 "status":      true
9067             }
9068         ]
9069     }
9070

```

6.45.5 Property Definition

Table 95 Media Source Output Property Definitions

Property name	Value type	Mandatory	Access mode	Description
sources	array: schema	see	yes	

6.45.6 CRUDN behaviour

Table 96 Media Source Output CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/mediaSourceOutputResURI		get	post		

6.46 Motion Sensor

6.46.1 Introduction

This resource describes whether motion has been sensed or not. The value is a boolean. A value of 'true' means that motion has been sensed. A value of 'false' means that motion not been sensed.

6.46.2 Example URI

/MotionResURI

6.46.3 Resource Type

The resource type (rt) is defined as: oic.r.sensor.motion.

6.46.4 RAML Definition

```

9084 #%RAML 0.8
9085 title: OICMotionSensor
9086 version: v1.1.0-20160519
9087 traits:
9088   - interface :
9089       queryParameters:
9090           if:
9091               enum: ["oic.if.s", "oic.if.baseline"]
9092
9093 /MotionResURI:
9094   description: |
9095     This resource describes whether motion has been sensed or not.
9096     The value is a boolean.
9097     A value of 'true' means that motion has been sensed.
9098     A value of 'false' means that motion not been sensed.
9099
9100   is : ['interface']
9101   get:

```

```

9102     responses :
9103         200:
9104             body:
9105                 application/json:
9106                 schema: /
9107                     {
9108                         "id":
9109 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.motion.json#",
9110                         "$schema": "http://json-schema.org/draft-04/schema#",
9111                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9112 rights reserved.",
9113                         "title": "Motion Sensor",
9114                         "definitions": {
9115                             "oic.r.sensor.motion": {
9116                                 "allOf": [
9117                                     {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
9118                                 ]
9119                             }
9120                         },
9121                         "type": "object",
9122                         "allOf": [
9123                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9124                             {"$ref": "#/definitions/oic.r.sensor.motion"}
9125                         ],
9126                         "required": ["value"]
9127                     }
9128
9129                 example: /
9130                     {
9131                         "rt":      ["oic.r.sensor.motion"],
9132                         "id":      "unique_example_id",
9133                         "value": true
9134                     }
9135

```

9136 6.46.5 Property Definition

9137 **Table 97 Motion Sensor Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
value	boolean	yes	Read Only	True = Sensed, False = Not Sensed.

9138 6.46.6 CRUDN behaviour

9139 **Table 98 Motion Sensor CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/MotionResURI		get			

9140 6.47 Night Mode

9141 6.47.1 Introduction

9142 This resource describes a night mode on/off feature. A nightMode value of 'true' means that the
9143 feature is on. A nightMode value of 'false' means that the feature is off.

9144 6.47.2 Example URI

9145 /NightModeResURI

9146 6.47.3 Resource Type

9147 The resource type (rt) is defined as: oic.r.nightmode.

9148 **6.47.4 RAML Definition**

```
9149 #%RAML 0.8
9150 title: OICNightMode
9151 version: v1.1.0-20160519
9152 traits:
9153   - interface :
9154     queryParameters:
9155       if:
9156         enum: ["oic.if.a", "oic.if.baseline"]
9157
9158 /NightModeResURI:
9159   description: |
9160     This resource describes a night mode on/off feature.
9161     A nightMode value of 'true' means that the feature is on.
9162     A nightMode value of 'false' means that the feature is off.
9163
9164   is : ['interface']
9165   get:
9166     responses :
9167       200:
9168         body:
9169           application/json:
9170             schema: /
9171               {
9172                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.nightMode.json#",
9173                 "$schema": "http://json-schema.org/draft-04/schema#",
9174                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9175 rights reserved.",
9176                 "title": "Night Mode",
9177                 "definitions": {
9178                   "oic.r.nightmode": {
9179                     "type": "object",
9180                     "properties": {
9181                       "nightMode": {
9182                         "type": "boolean",
9183                         "description": "Status of the Night Mode"
9184                       }
9185                     }
9186                   }
9187                 },
9188                 "type": "object",
9189                 "allOf": [
9190                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9191                   {"$ref": "#/definitions/oic.r.nightmode"}
9192                 ],
9193                 "required": [ "nightMode" ]
9194               }
9195
9196           example: /
9197             {
9198               "rt":          ["oic.r.nightmode"],
9199               "id":          "unique_example_id",
9200               "nightMode":  false
9201             }
9202
9203   post:
9204     body:
9205       application/json:
9206         schema: /
9207           {
9208             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.nightMode.json#",
```

```

9209     "$schema": "http://json-schema.org/draft-04/schema#",
9210     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
9211 reserved.",
9212     "title": "Night Mode",
9213     "definitions": {
9214         "oic.r.nightmode": {
9215             "type": "object",
9216             "properties": {
9217                 "nightMode": {
9218                     "type": "boolean",
9219                     "description": "Status of the Night Mode"
9220                 }
9221             }
9222         },
9223     },
9224     "type": "object",
9225     "allOf": [
9226         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9227         {"$ref": "#/definitions/oic.r.nightmode"}
9228     ],
9229     "required": [ "nightMode" ]
9230 }
9231
9232 example: /
9233 {
9234     "id":          "unique_example_id",
9235     "nightMode":  true
9236 }
9237
9238 responses :
9239 200:
9240   body:
9241     application/json:
9242       schema: /
9243         {
9244           "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.nightMode.json#",
9245           "$schema": "http://json-schema.org/draft-04/schema#",
9246           "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9247 rights reserved.",
9248           "title": "Night Mode",
9249           "definitions": {
9250             "oic.r.nightmode": {
9251                 "type": "object",
9252                 "properties": {
9253                     "nightMode": {
9254                         "type": "boolean",
9255                         "description": "Status of the Night Mode"
9256                     }
9257                 }
9258             },
9259         },
9260         "type": "object",
9261         "allOf": [
9262             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9263             {"$ref": "#/definitions/oic.r.nightmode"}
9264         ],
9265         "required": [ "nightMode" ]
9266     }
9267
9268 example: /
9269 {
9270     "id":          "unique_example_id",
9271     "nightMode":  true
9272 }
9273

```

9274 **6.47.5 Property Definition**

9275 **Table 99 Night Mode Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
nightMode	boolean	yes		Status of the Night Mode

9276 **6.47.6 CRUDN behaviour**

9277 **Table 100 Night Mode CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/NightModeResURI		get	post		

9278 **6.48 Presence Sensor**

9279 **6.48.1 Introduction**

9280 This resource describes whether presence has been sensed or not. The value is a boolean. A
 9281 value of 'true' means that presence has been sensed. A value of 'false' means that presence not
 9282 been sensed.

9283 **6.48.2 Example URI**

9284 /PresenceResURI

9285 **6.48.3 Resource Type**

9286 The resource type (rt) is defined as: oic.r.sensor.presence.

9287 **6.48.4 RAML Definition**

```

9288 #%RAML 0.8
9289 title: OICPresenceSensor
9290 version: v1.1.0-20160519
9291 traits:
9292   - interface :
9293     queryParameters:
9294       if:
9295         enum: ["oic.if.s", "oic.if.baseline"]
9296
9297 /PresenceResURI:
9298   description: |
9299     This resource describes whether presence has been sensed or not.
9300     The value is a boolean.
9301     A value of 'true' means that presence has been sensed.
9302     A value of 'false' means that presence not been sensed.
9303
9304   is : ['interface']
9305   get:
9306     responses :
9307       200:
9308         body:
9309           application/json:
9310             schema: /
9311               {
9312                 "id":
9313 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.presence.json#",
9314                 "$schema": "http://json-schema.org/draft-04/schema#",
9315                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9316 rights reserved.",
9317                 "title": "Presence Sensor",
9318                 "definitions": {
  
```

```

9319         "oic.r.sensor.presence": {
9320             "allof": [
9321                 {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
9322             ]
9323         },
9324     },
9325     "type": "object",
9326     "allof": [
9327         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9328         {"$ref": "#/definitions/oic.r.sensor.presence"}
9329     ],
9330     "required": ["value"]
9331 }
9332
9333 example: /
9334 {
9335     "rt": ["oic.r.sensor.presence"],
9336     "id": "unique_example_id",
9337     "value": true
9338 }
9339

```

9340 6.48.5 Property Definition

9341 **Table 101 Presence Sensor Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
value	boolean	yes	Read Only	True = Sensed, False = Not Sensed.

9342 6.48.6 CRUDN behaviour

9343 **Table 102 Presence Sensor CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/PresenceResURI		get			

9344 6.49 Pan Tilt Zoom Movement

9345 6.49.1 Introduction

9346 This resource specifies the pan tilt and zoom capabilities of a device. The resource rt is dynamic
9347 and reflects whether the values apply to physical movement of the device or digital/virtual
9348 enhancements to the image. For physical movement the rt is 'oic.r.movement.ptz'. For
9349 digital/virtual image enhancements the rt is 'oic.r.image.ptz'. The Pan and Tilt are specified in
9350 degrees. The Zoom Factor is a value in the range 1-100 for linear (optical) zoom. The Zoom Factor
9351 is a value in the range [1x, 2x, 4x, 8x, 16x, 32x] for digital zoom. If there is no zoom value to set
9352 the Zoom Factor shall be '1x'. The value 0 degrees means neutral, this is the vendor defined setting.
9353 Note that this resource also can be used to create an offset for physical movement. When that is
9354 the case, the rt value is: oic.r.movement.offset.ptz Note that this resource also can be used to
9355 create an offset for image movement. When that is the case, the rt value is: oic.r.image.offset.ptz
9356 When the pan_range value is omitted, then the range is [-180.0,180.0]. If pan is not supported
9357 then the range shall be [0.0,0.0] When the tilt_range value is omitted, then the range is [-
9358 180.0,180.0]. If tilt is not supported then the range shall be [0.0,0.0]

9359 6.49.2 Example URI

9360 /PanTiltZoomResURI

9361 6.49.3 Resource Type

9362 The resource type (rt) is defined as: oic.r.ptz.

9363 6.49.4 RAML Definition

9364 [#%RAML 0.8](#)


```

9365 title: OICPanTiltZoom
9366 version: v1.1.0-20160519
9367 traits:
9368   - interface :
9369     queryParameters:
9370       if:
9371         enum: ["oic.if.a", "oic.if.baseline"]
9372
9373 /PanTiltZoomResURI:
9374   description: |
9375     This resource specifies the pan tilt and zoom capabilities of a device.
9376     The resource rt is dynamic and reflects whether the values apply to
9377     physical movement of the device or digital/virtual enhancements to the image.
9378     For physical movement the rt is 'oic.r.movement.ptz'.
9379     For digital/virtual image enhancements the rt is 'oic.r.image.ptz'.
9380     The Pan and Tilt are specified in degrees.
9381     The Zoom Factor is a value in the range 1-100 for linear (optical) zoom.
9382     The Zoom Factor is a value in the range [1x, 2x, 4x, 8x, 16x, 32x] for digital zoom.
9383     If there is no zoom value to set the Zoom Factor shall be '1x'.
9384     The value 0 degrees means neutral, this is the vendor defined setting.
9385     Note that this resource also can be used to create an offset for physical movement.
9386     When that is the case, the rt value is: oic.r.movement.offset.ptz
9387     Note that this resource also can be used to create an offset for image movement.
9388     When that is the case, the rt value is: oic.r.image.offset.ptz
9389     When the pan_range value is omitted, then the range is [-180.0,180.0].
9390     If pan is not supported then the range shall be [0.0,0.0]
9391     When the tilt_range value is omitted, then the range is [-180.0,180.0].
9392     If tilt is not supported then the range shall be [0.0,0.0]
9393
9394   is : ['interface']
9395   get:
9396     description: |
9397       Retrieves the current pan, tilt and zoom setting.
9398
9399     responses :
9400       200:
9401         body:
9402           application/json:
9403             schema: /
9404               {
9405                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.ptz.json#",
9406                 "$schema": "http://json-schema.org/draft-04/schema#",
9407                 "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9408 rights reserved.",
9409                 "title": "Pan Tilt Zoom",
9410                 "definitions": {
9411                   "oic.r.ptz": {
9412                     "type": "object",
9413                     "properties": {
9414                       "pan": {
9415                         "type": "number",
9416                         "description": "horizontal pan in degrees"
9417                       },
9418                       "tilt": {
9419                         "type": "number",
9420                         "description": "vertical tilt in degrees"
9421                       },
9422                       "pan_range": {
9423                         "type": "array",
9424                         "readOnly": true,
9425                         "description": "Min and Max values for the pan setting",
9426                         "minItems": 2,
9427                         "maxItems": 2,
9428                         "items": {

```

```

9429         "type": "number"
9430     }
9431 },
9432 "tilt_range": {
9433     "type": "array",
9434     "readOnly": true,
9435     "description": "Min and Max values for the tilt setting",
9436     "minItems": 2,
9437     "maxItems": 2,
9438     "items": {
9439         "type": "number"
9440     }
9441 },
9442 "zoomFactor": {
9443     "type": "string",
9444     "description": "The Zoomfactor value"
9445 },
9446 "zoomFactorRange": {
9447     "type": "string",
9448     "enum": ["linear", "1x", "2x", "4x", "8x", "16x", "32x"],
9449     "readOnly": true,
9450     "description": "allowed Zoom Factor values. Linear equates to a 1-100
9451 min/max."
9452 }
9453 }
9454 }
9455 },
9456 "type": "object",
9457 "allOf": [
9458     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9459     {"$ref": "#/definitions/oic.r.ptz"}
9460 ],
9461 "required": ["pan", "tilt", "zoomFactor"]
9462 }
9463
9464 example: /
9465 {
9466     "rt":          ["oic.r.ptz"],
9467     "id":          "unique_example_id",
9468     "pan":         0.0,
9469     "tilt":        0.0,
9470     "zoomFactor": "2x"
9471 }
9472
9473 post:
9474     description: |
9475     Sets the current pan, tilt and zoom value
9476
9477     body:
9478     application/json:
9479     schema: /
9480     {
9481         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.ptz.json#",
9482         "$schema": "http://json-schema.org/draft-04/schema#",
9483         "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
9484 reserved.",
9485         "title": "Pan Tilt Zoom",
9486         "definitions": {
9487             "oic.r.ptz": {
9488                 "type": "object",
9489                 "properties": {
9490                     "pan": {
9491                         "type": "number",
9492                         "description": "horizontal pan in degrees"
9493                     },
9494                     "tilt": {
9495                         "type": "number",

```

```

9496         "description": "vertical tilt in degrees"
9497     },
9498     "pan_range": {
9499         "type": "array",
9500         "readOnly": true,
9501         "description": "Min and Max values for the pan setting",
9502         "minItems": 2,
9503         "maxItems": 2,
9504         "items": {
9505             "type": "number"
9506         }
9507     },
9508     "tilt_range": {
9509         "type": "array",
9510         "readOnly": true,
9511         "description": "Min and Max values for the tilt setting",
9512         "minItems": 2,
9513         "maxItems": 2,
9514         "items": {
9515             "type": "number"
9516         }
9517     },
9518     "zoomFactor": {
9519         "type": "string",
9520         "description": "The Zoomfactor value"
9521     },
9522     "zoomFactorRange": {
9523         "type": "string",
9524         "enum": ["linear", "1x", "2x", "4x", "8x", "16x", "32x"],
9525         "readOnly": true,
9526         "description": "allowed Zoom Factor values. Linear equates to a 1-100 min/max."
9527     }
9528 }
9529 },
9530 },
9531 "type": "object",
9532 "allOf": [
9533     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9534     {"$ref": "#/definitions/oic.r.ptz"}
9535 ],
9536 "required": ["pan", "tilt", "zoomFactor"]
9537 }
9538
9539 example: /
9540 {
9541     "id": "unique_example_id",
9542     "pan": 10.0,
9543     "tilt": -10.0,
9544     "zoomFactor": "4x"
9545 }
9546
9547 responses :
9548 200:
9549     body:
9550         application/json:
9551             schema: /
9552                 {
9553                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.ptz.json#",
9554                     "$schema": "http://json-schema.org/draft-04/schema#",
9555                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9556 rights reserved.",
9557                     "title": "Pan Tilt Zoom",
9558                     "definitions": {
9559                         "oic.r.ptz": {
9560                             "type": "object",
9561                             "properties": {
9562                                 "pan": {

```

```

9563         "type": "number",
9564         "description": "horizontal pan in degrees"
9565     },
9566     "tilt": {
9567         "type": "number",
9568         "description": "vertical tilt in degrees"
9569     },
9570     "pan_range": {
9571         "type": "array",
9572         "readOnly": true,
9573         "description": "Min and Max values for the pan setting",
9574         "minItems": 2,
9575         "maxItems": 2,
9576         "items": {
9577             "type": "number"
9578         }
9579     },
9580     "tilt_range": {
9581         "type": "array",
9582         "readOnly": true,
9583         "description": "Min and Max values for the tilt setting",
9584         "minItems": 2,
9585         "maxItems": 2,
9586         "items": {
9587             "type": "number"
9588         }
9589     },
9590     "zoomFactor": {
9591         "type": "string",
9592         "description": "The Zoomfactor value"
9593     },
9594     "zoomFactorRange": {
9595         "type": "string",
9596         "enum": ["linear", "1x", "2x", "4x", "8x", "16x", "32x"],
9597         "readOnly": true,
9598         "description": "allowed Zoom Factor values. Linear equates to a 1-100
9599 min/max."
9600     }
9601 }
9602 }
9603 },
9604 "type": "object",
9605 "allof": [
9606     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9607     {"$ref": "#/definitions/oic.r.ptz"}
9608 ],
9609 "required": ["pan", "tilt", "zoomFactor"]
9610 }
9611
9612 example: /
9613 {
9614     "id":          "unique_example_id",
9615     "pan":         10.0,
9616     "tilt":        -10.0,
9617     "zoomFactor": "4x"
9618 }
9619

```

6.49.5 Property Definition

Table 103 Pan Tilt Zoom Movement Property Definitions

Property name	Value type	Mandatory	Access mode	Description
tilt_range	array: see schema		Read Only	Min and Max values for the tilt setting
zoomFactor	string	yes		The Zoomfactor value

tilt	number	yes		vertical tilt in degrees
pan_range	array: see schema		Read Only	Min and Max values for the pan setting
zoomFactorRange	string		Read Only	allowed Zoom Factor values. Linear equates to a 1-100 min/max.
pan	number	yes		horizontal pan in degrees

9622 **6.49.6 CRUDN behaviour**

9623 **Table 104 Pan Tilt Zoom Movement CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/PanTiltZoomResURI		get	post		

9624 **6.50 Signal Strength**

9625 **6.50.1 Introduction**

9626 This resource describes the strength of a signal by means of lqi and rssi. The lqi is a floating point
 9627 number that represents Link Quality Indicator. The rssi is a floating point number that represents
 9628 the received signal strength indicator.

9629 **6.50.2 Example URI**

9630 /SignalStrengthResURI

9631 **6.50.3 Resource Type**

9632 The resource type (rt) is defined as: oic.r.signalstrength.

9633 **6.50.4 RAML Definition**

```

9634 #%RAML 0.8
9635 title: OICSignalStrength
9636 version: v1.1.0-20160519
9637 traits:
9638   - interface :
9639     queryParameters:
9640       if:
9641         enum: ["oic.if.s", "oic.if.baseline"]
9642
9643 /SignalStrengthResURI:
9644   description: |
9645     This resource describes the strength of a signal by means of lqi and rssi.
9646     The lqi is a floating point number that represents Link Quality Indicator.
9647     The rssi is a floating point number that represents the received signal strength indicator.
9648
9649   is : ['interface']
9650   get:
9651     responses :
9652       200:
9653         body:
9654           application/json:
9655             schema: /
9656               {
9657                 "id":
  
```

```

9658 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.signalStrength.json#",
9659 "$schema": "http://json-schema.org/draft-04/schema#",
9660 "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9661 rights reserved.",
9662 "title": "Signal Strength",
9663 "definitions": {
9664   "oic.r.signalstrength": {
9665     "type": "object",
9666     "properties": {
9667       "lqi": {
9668         "type": "number",
9669         "readOnly": true,
9670         "description": "current value of Link Quality Indicator"
9671       },
9672       "rssi": {
9673         "type": "number",
9674         "readOnly": true,
9675         "description": "current value of Received Signal Strength Indicator"
9676       }
9677     }
9678   },
9679 "type": "object",
9680 "allOf": [
9681   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9682   {"$ref": "#/definitions/oic.r.signalstrength"}
9683 ],
9684 "required": ["lqi", "rssi"]
9685 }
9686
9687
9688 example: /
9689 {
9690   "rt": ["oic.r.signalstrength"],
9691   "id": "unique_example_id",
9692   "lqi": 10.0,
9693   "rssi": 55.0
9694 }
9695

```

9696 6.50.5 Property Definition

9697 **Table 105 Signal Strength Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
rssi	number	yes	Read Only	current value of Received Signal Strength Indicator
lqi	number	yes	Read Only	current value of Link Quality Indicator

9698 6.50.6 CRUDN behaviour

9699 **Table 106 Signal Strength CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/SignalStrengthResURI		get			

9700 6.51 Speech Synthesis-TTS

9701 6.51.1 Introduction

9702 This resource may be created on the OIC Server that is capable of rendering speech by an OIC
9703 Client and allows the client to provide an SSML document with text to render or may be created
9704 on the OIC Server by some resident application. The audio rendered is at this stage local to the
9705 Server (i.e. not streamed). The utterance is an SSML document. The supportedLanguages is an

9706 array of the RFC 5646 defined language tags that are supported. The supportedVoices is an SSML
9707 document fragment indicating the voices that are supported.

9708 **6.51.2 Example URI**

9709 /SpeechTTSResURI

9710 **6.51.3 Resource Type**

9711 The resource type (rt) is defined as: oic.r.speech.tts.

9712 **6.51.4 RAML Definition**

```
9713 #%RAML 0.8
9714 title: OICSpeechTTS
9715 version: v1.1.0-20160519
9716 traits:
9717   - interface :
9718     queryParameters:
9719       if:
9720         enum: ["oic.if.a", "oic.if.baseline"]
9721
9722 /SpeechTTSResURI:
9723   description: |
9724     This resource may be created on the OIC Server that is capable of rendering speech by an OIC
9725 Client
9726     and allows the client to provide an SSML document with text to render
9727     or may be created on the OIC Server by some resident application.
9728     The audio rendered is at this stage local to the Server (i.e
9729     not streamed).
9730     The utterance is an SSML document.
9731     The supportedLanguages is an array of the RFC 5646 defined language tags that are supported.
9732     The supportedVoices is an SSML document fragment indicating the voices that are supported.
9733
9734   is : ['interface']
9735   get:
9736     description: |
9737       Utterance in the example shall be a properly escaped (JSON rules) SSML document
9738       An example is given below:
9739       "<?xml version=\"1.0\" encoding=\"ISO-8859-1\"?>\n\r
9740       < speak version=\"1.1\" xmlns=\"http://www.w3.org/2001/10/synthesis\" \n\r
9741       \txmlns:xsi=\"http://www.w3.org/2001/XMLSchema-instance\" \n\r
9742       \txsi:schemaLocation=\"http://www.w3.org/2001/10/synthesis\n\r
9743       \thttp://www.w3.org/TR/speech-synthesis11/synthesis.xsd\" \n\r
9744       \txml:lang=\"en-US\">\n\r
9745       \n\r
9746       \tThe title of the movie is:\n\r
9747       \t\"Monty Pythons The Meaning of Life\"\n\r
9748       \twhich is directed by Terry Jones.\n\r
9749       </speak\"
9750
9751     responses :
9752       200:
9753         body:
9754           application/json:
9755             schema: /
9756             {
9757               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.speech.tts.json#",
9758               "$schema": "http://json-schema.org/draft-04/schema#",
9759               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9760 rights reserved.",
9761               "title": "Speech Synthesis-TTS",
9762               "definitions": {
9763                 "oic.r.speech.tts": {
```

```

9764         "type": "object",
9765         "properties": {
9766             "utterance": {
9767                 "type": "string",
9768                 "description": "SSML document including the speech body"
9769             },
9770             "supportedLanguages": {
9771                 "type": "array",
9772                 "readOnly": true,
9773                 "description": "array of supported language tags",
9774                 "items": {
9775                     "type": "string"
9776                 }
9777             },
9778             "supportedVoices": {
9779                 "type": "string",
9780                 "readOnly": true,
9781                 "description": "SSML document fragment indicating supported voices"
9782             }
9783         }
9784     },
9785     "type": "object",
9786     "allOf": [
9787         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9788         {"$ref": "#/definitions/oic.r.speech.tts"}
9789     ],
9790     "required": ["utterance"]
9791 }
9792
9793
9794     example: /
9795     {
9796         "rt":             ["oic.r.speech.tts"],
9797         "id":             "unique_example_id",
9798         "utterance":     "SSML Document",
9799         "supportedLanguages": ["en-US", "en-GB", "fr-CA"],
9800         "supportedVoices": "<voice gender=\"female\" variant=\"2\"></voice>\n\r<voice
name=\"Mike\"></voice>"
9801     }
9802
9803
9804     post:
9805         description: |
9806             Changes the utterance being rendered.
9807             Example shows a change in language selected.
9808
9809     body:
9810         application/json:
9811             schema: /
9812             {
9813                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.speech.tts.json#",
9814                 "$schema": "http://json-schema.org/draft-04/schema#",
9815                 "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
reserved.",
9816                 "title": "Speech Synthesis-TTS",
9817                 "definitions": {
9818                     "oic.r.speech.tts": {
9819                         "type": "object",
9820                         "properties": {
9821                             "utterance": {
9822                                 "type": "string",
9823                                 "description": "SSML document including the speech body"
9824                             },
9825                         },
9826                         "supportedLanguages": {
9827                             "type": "array",
9828                             "readOnly": true,
9829                             "description": "array of supported language tags",
9830                             "items": {

```



```

9831         "type": "string"
9832     }
9833 },
9834     "supportedVoices": {
9835         "type": "string",
9836         "readOnly": true,
9837         "description": "SSML document fragment indicating supported voices"
9838     }
9839 }
9840 },
9841 },
9842     "type": "object",
9843     "allOf": [
9844         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9845         {"$ref": "#/definitions/oic.r.speech.tts"}
9846     ],
9847     "required": ["utterance"]
9848 }
9849
9850 example: /
9851 {
9852     "rt":         ["oic.r.speech.tts"],
9853     "id":         "unique_example_id",
9854     "utterance": "SSML Document"
9855 }
9856
9857 responses :
9858     200:
9859         body:
9860             application/json:
9861                 schema: /
9862                 {
9863                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.speech.tts.json#",
9864                     "$schema": "http://json-schema.org/draft-04/schema#",
9865                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9866 rights reserved.",
9867                     "title": "Speech Synthesis-TTS",
9868                     "definitions": {
9869                         "oic.r.speech.tts": {
9870                             "type": "object",
9871                             "properties": {
9872                                 "utterance": {
9873                                     "type": "string",
9874                                     "description": "SSML document including the speech body"
9875                                 },
9876                                 "supportedLanguages": {
9877                                     "type": "array",
9878                                     "readOnly": true,
9879                                     "description": "array of supported language tags",
9880                                     "items": {
9881                                         "type": "string"
9882                                     }
9883                                 },
9884                                 "supportedVoices": {
9885                                     "type": "string",
9886                                     "readOnly": true,
9887                                     "description": "SSML document fragment indicating supported voices"
9888                                 }
9889                             }
9890                         }
9891                     },
9892                     "type": "object",
9893                     "allOf": [
9894                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9895                         {"$ref": "#/definitions/oic.r.speech.tts"}
9896                     ],
9897                     "required": ["utterance"]

```

```

9898     }
9899
9900     example: /
9901     {
9902         "rt":          ["oic.r.speech.tts"],
9903         "id":          "unique_example_id",
9904         "utterance":   "SSML Document"
9905     }
9906

```

6.51.5 Property Definition

Table 107 Speech Synthesis-TTS Property Definitions

Property name	Value type	Mandatory	Access mode	Description
supportedVoices	string		Read Only	SSML document fragment indicating supported voices
utterance	string	yes		SSML document including the speech body
supportedLanguages	array: see schema		Read Only	array of supported language tags

6.51.6 CRUDN behaviour

Table 108 Speech Synthesis-TTS CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/SpeechTTSResURI		get	post		

6.52 Touch Sensor

6.52.1 Introduction

This resource describes whether touch has been sensed or not. The value is a boolean. A value of 'true' means that touch has been sensed. A value of 'false' means that touch not been sensed.

6.52.2 Example URI

/TouchResURI

6.52.3 Resource Type

The resource type (rt) is defined as: oic.r.sensor.touch.

6.52.4 RAML Definition

```

9920 #%RAML 0.8
9921 title: OICTouchSensor
9922 version: v1.1.0-20160519
9923 traits:
9924   - interface :
9925       queryParameters:
9926         if:
9927           enum: ["oic.if.s", "oic.if.baseline"]
9928
9929 /TouchResURI:
9930   description: |
9931     This resource describes whether touch has been sensed or not.
9932     The value is a boolean.

```

9933 A value of 'true' means that touch has been sensed.
 9934 A value of 'false' means that touch not been sensed.
 9935

```

9936 is : ['interface']
9937 get:
9938   responses :
9939     200:
9940       body:
9941         application/json:
9942           schema: /
9943             {
9944               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.touch.json#",
9945               "$schema": "http://json-schema.org/draft-04/schema#",
9946               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9947 rights reserved.",
9948               "title": "Touch Sensor",
9949               "definitions": {
9950                 "oic.r.sensor.touch": {
9951                   "allOf": [
9952                     {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
9953                   ]
9954                 }
9955             },
9956             "type": "object",
9957             "allOf": [
9958               {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9959               {"$ref": "#/definitions/oic.r.sensor.touch"}
9960             ],
9961             "required": ["value"]
9962           }
9963
9964       example: /
9965         {
9966           "rt": ["oic.r.sensor.touch"],
9967           "id": "unique_example_id",
9968           "value": true
9969         }
9970
  
```

9971 **6.52.5 Property Definition**

9972 **Table 109 Touch Sensor Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
value	boolean	yes	Read Only	True = Sensed, False = Not Sensed.

9973 **6.52.6 CRUDN behaviour**

9974 **Table 110 Touch Sensor CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/TouchResURI		get			

9975 **6.53 UV Radiation**

9976 **6.53.1 Introduction**

9977 This resource specifies UV radiation measurement. The measurement is the current measured UV
 9978 Index

9979 **6.53.2 Example URI**

9980 /UVRadiationResURI

9981 **6.53.3 Resource Type**

9982 The resource type (rt) is defined as: oic.r.sensor.radiation.uv.

9983 **6.53.4 RAML Definition**

9984 `##RAML 0.8`

9985 `title: OICUVRadiation`

9986 `version: v1.1.0-20160519`

9987 `traits:`

9988 `- interface :`

9989 `queryParameters:`

9990 `if:`

9991 `enum: ["oic.if.s", "oic.if.baseline"]`

9992

9993 `/UVRadiationResURI:`

9994 `description: |`

9995 `This resource specifies UV radiation measurement.`

9996 `The measurement is the current measured UV Index`

9997

9998 `is : ['interface']`

9999 `get:`

10000 `description: |`

10001 `Retrieves the current UV Radiation value`

10002

10003 `responses :`

10004 `200:`

10005 `body:`

10006 `application/json:`

10007 `schema: /`

10008 `{`

10009 `"id":`

10010 `"http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.radiation.uv.json#",`

10011 `"$schema": "http://json-schema.org/draft-04/schema#",`

10012 `"description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All`

10013 `rights reserved.",`

10014 `"title": "UV Radiation",`

10015 `"definitions": {`

10016 `"oic.r.sensor.radiation.uv": {`

10017 `"type": "object",`

10018 `"properties": {`

10019 `"measurement": {`

10020 `"type": "number",`

10021 `"readOnly": true,`

10022 `"description": "The measured UV Index"`

10023 `}`

10024 `}`

10025 `}`

10026 `},`

10027 `"type": "object",`

10028 `"allOf": [`

10029 `{"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},`

10030 `{"$ref": "#/definitions/oic.r.sensor.radiation.uv"}`

10031 `],`

10032 `"required": ["measurement"]`

10033 `}`

10034

10035 `example: /`

10036 `{`

10037 `"rt": ["oic.r.sensor.radiation.uv"],`

10038 `"id": "unique_example_id",`

10039 `"measurement": 3.5`

10040 }
10041

10042 6.53.5 Property Definition

10043 Table 111 UV Radiation Property Definitions

Property name	Value type	Mandatory	Access mode	Description
measurement	number	yes	Read Only	The measured UV Index

10044 6.53.6 CRUDN behaviour

10045 Table 112 UV Radiation CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/UVRadiationResURI		get			

10046 6.54 Water Sensor

10047 6.54.1 Introduction

10048 This resource describes whether water has been sensed or not. The value is a boolean. A value
10049 of 'true' means that water has been sensed. A value of 'false' means that water not been sensed.

10050 6.54.2 Example URI

10051 /WaterResURI

10052 6.54.3 Resource Type

10053 The resource type (rt) is defined as: oic.r.sensor.water.

10054 6.54.4 RAML Definition

10055 `##RAML 0.8`

10056 `title: OICWaterSensor`

10057 `version: v1.1.0-20160519`

10058 `traits:`

10059 `- interface :`

10060 `queryParams:`

10061 `if:`

10062 `enum: ["oic.if.s", "oic.if.baseline"]`

10063

10064 `/WaterResURI:`

10065 `description: |`

10066 `This resource describes whether water has been sensed or not.`

10067 `The value is a boolean.`

10068 `A value of 'true' means that water has been sensed.`

10069 `A value of 'false' means that water not been sensed.`

10070

10071 `is : ['interface']`

10072 `get:`

10073 `responses :`

10074 `200:`

10075 `body:`

10076 `application/json:`

10077 `schema: /`

10078 `{`

10079 `"id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.water.json#",`

10080 `"$schema": "http://json-schema.org/draft-04/schema#",`

10081 `"description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All`

10082 `rights reserved.",`

10083 `"title": "Water Sensor",`

10084 `"definitions": {`

```

10085         "oic.r.sensor.water": {
10086             "allof": [
10087                 {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
10088             ]
10089         },
10090     },
10091     "type": "object",
10092     "allof": [
10093         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
10094         {"$ref": "#/definitions/oic.r.sensor.water"}
10095     ],
10096     "required": ["value"]
10097 }
10098
10099     example: /
10100     {
10101         "rt":      ["oic.r.sensor.water"],
10102         "id":      "unique_example_id",
10103         "value":   true
10104     }
10105

```

6.54.5 Property Definition

Table 113 Water Sensor Property Definitions

Property name	Value type	Mandatory	Access mode	Description
value	boolean	yes	Read Only	True = Sensed, False = Not Sensed.

6.54.6 CRUDN behaviour

Table 114 Water Sensor CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/WaterResURI		get			

6.55 Acceleration Sensor

6.55.1 Introduction

This resource provides a measure of proper acceleration (g force) as opposed to co-ordinate acceleration (which is dependent on the co-ordinate system and the observer). The value is a float which describes the acceleration experienced by the object in "g".

6.55.2 Example URI

/AccelerationResURI

6.55.3 Resource Type

The resource type (rt) is defined as: oic.r.sensor.acceleration.

6.55.4 RAML Definition

```

10120 #%RAML 0.8
10121 title: OICAcceleration
10122 version: v1.1.0-20160519
10123 traits:
10124   - interface :
10125       queryParameters:
10126           if:
10127               enum: ["oic.if.s", "oic.if.baseline"]
10128
10129 /AccelerationResURI:

```

```

10130     description: |
10131         This resource provides a measure of proper acceleration (g force) as opposed to co-ordinate
10132 acceleration
10133         (which is dependent on the co-ordinate system and the observer).
10134         The value is a float which describes the acceleration experienced by the object in "g".
10135
10136     is : ['interface']
10137
10138     get:
10139         responses :
10140             200:
10141                 body:
10142                     application/json:
10143                         schema: /
10144                             {
10145                                 "id":
10146 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.acceleration.json#",
10147                                 "$schema": "http://json-schema.org/draft-04/schema#",
10148                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
10149                                 "title": "Acceleration Sensor",
10150                                 "definitions": {
10151                                     "oic.r.sensor.acceleration": {
10152                                         "properties": {
10153                                             "acceleration": {
10154                                                 "type": "number",
10155                                                 "readOnly": true,
10156                                                 "description": "sensed acceleration experienced in 'g'."
10157                                             }
10158                                         }
10159                                     }
10160                                 },
10161                                 "type": "object",
10162                                 "allof": [
10163                                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
10164                                     {"$ref": "#/definitions/oic.r.sensor.acceleration"}
10165                                 ],
10166                                 "required": ["acceleration"]
10167                             }
10168
10169                         example: /
10170                             {
10171                                 "rt":          ["oic.r.sensor.acceleration"],
10172                                 "id":          "unique_example_id",
10173                                 "acceleration": 0.5
10174                             }
10175

```

6.55.5 Property Definition

Table 115 Acceleration Sensor Property Definitions

Property name	Value type	Mandatory	Access mode	Description
acceleration	number	yes	Read Only	sensed acceleration experienced in 'g'.

6.55.6 CRUDN behaviour

Table 116 Acceleration Sensor CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/AccelerationResURI		get			

10180 **6.56 Movement**

10181 **6.56.1 Introduction**

10182 This resource specifies linear movement. The movementSettings is an array of strings containing
10183 possible movement values (e.g. spin, stop, left, right). The movement is the currently selected
10184 movement value. The movementModifier is a modifier to the movement value (e.g. "spin", "90")

10185 **6.56.2 Example URI**

10186 /MovementResURI

10187 **6.56.3 Resource Type**

10188 The resource type (rt) is defined as: oic.r.movement.linear.

10189 **6.56.4 RAML Definition**

```
10190 #%RAML 0.8
10191 title: OICAcceleration
10192 version: v1.1.0-20160519
10193 traits:
10194   - interface :
10195       queryParameters:
10196         if:
10197           enum: ["oic.if.s", "oic.if.baseline"]
10198
10199 /MovementResURI:
10200   description: |
10201     This resource specifies linear movement.
10202     The movementSettings is an array of strings containing possible movement values (e.g
10203     spin, stop, left, right).
10204     The movement is the currently selected movement value.
10205     The movementModifier is a modifier to the movement value (e.g
10206     "spin", "90")
10207
10208   is : ['interface']
10209   get:
10210     responses :
10211       200:
10212         body:
10213           application/json:
10214             schema: /
10215               {
10216                 "id":
10217 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.movement.linear.json#",
10218                 "$schema": "http://json-schema.org/draft-04/schema#",
10219                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
10220 rights reserved.",
10221                 "title": "Linear Movement",
10222                 "definitions": {
10223                   "oic.r.movement.linear": {
10224                     "type": "object",
10225                     "properties": {
10226                       "movementSettings": {
10227                         "type": "array",
10228                         "readOnly": true,
10229                         "description": "array of possible movement values",
10230                         "items": {
10231                           "type": "string"
10232                         }
10233                       },
10234                       "movement": {
10235                         "type": "string",
10236                         "description": "Current movement value"
```



```

10237         },
10238         "movementModifier": {
10239             "type": "string",
10240             "description": "Modifier to the movement value (e.g. spin-90, left-20),
10241 units are device dependent"
10242         }
10243     }
10244 }
10245 },
10246 "type": "object",
10247 "allOf": [
10248     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
10249     {"$ref": "#/definitions/oic.r.movement.linear"}
10250 ],
10251 "required": ["movementSettings", "movement"]
10252 }
10253
10254 example: /
10255 {
10256     "rt": ["oic.r.movement.linear"],
10257     "id": "unique_example_id",
10258     "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
10259     "movement": "rotate",
10260     "movementModifier": "90"
10261 }
10262
10263 post:
10264     description: |
10265         Sets the current device movement
10266
10267     body:
10268         application/json:
10269             schema: /
10270             {
10271                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.movement.linear.json#",
10272                 "$schema": "http://json-schema.org/draft-04/schema#",
10273                 "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
10274 reserved.",
10275                 "title": "Linear Movement",
10276                 "definitions": {
10277                     "oic.r.movement.linear": {
10278                         "type": "object",
10279                         "properties": {
10280                             "movementSettings": {
10281                                 "type": "array",
10282                                 "readOnly": true,
10283                                 "description": "array of possible movement values",
10284                                 "items": {
10285                                     "type": "string"
10286                                 }
10287                             },
10288                             "movement": {
10289                                 "type": "string",
10290                                 "description": "Current movement value"
10291                             },
10292                             "movementModifier": {
10293                                 "type": "string",
10294                                 "description": "Modifier to the movement value (e.g. spin-90, left-20), units
10295 are device dependent"
10296                             }
10297                         }
10298                     }
10299                 },
10300                 "type": "object",
10301                 "allOf": [
10302                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
10303                     {"$ref": "#/definitions/oic.r.movement.linear"}

```

```

10304     ],
10305     "required": ["movementSettings", "movement"]
10306   }
10307
10308   example: /
10309     {
10310       "id":          "unique_example_id",
10311       "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
10312       "movement": "stop"
10313     }
10314
10315   responses :
10316     200:
10317       body:
10318         application/json:
10319           schema: /
10320             {
10321               "id":
10322 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.movement.linear.json#",
10323               "$schema": "http://json-schema.org/draft-04/schema#",
10324               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
10325 rights reserved.",
10326               "title": "Linear Movement",
10327               "definitions": {
10328                 "oic.r.movement.linear": {
10329                   "type": "object",
10330                   "properties": {
10331                     "movementSettings": {
10332                       "type": "array",
10333                       "readOnly": true,
10334                       "description": "array of possible movement values",
10335                       "items": {
10336                         "type": "string"
10337                       }
10338                     },
10339                     "movement": {
10340                       "type": "string",
10341                       "description": "Current movement value"
10342                     },
10343                     "movementModifier": {
10344                       "type": "string",
10345                       "description": "Modifier to the movement value (e.g. spin-90, left-20),
10346 units are device dependent"
10347                     }
10348                   }
10349                 },
10350               },
10351               "type": "object",
10352               "allOf": [
10353                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
10354                 {"$ref": "#/definitions/oic.r.movement.linear"}
10355               ],
10356               "required": ["movementSettings", "movement"]
10357             }
10358
10359   example: /
10360     {
10361       "id":          "unique_example_id",
10362       "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
10363       "movement": "stop"
10364     }
10365

```

10366 **6.56.5 Property Definition**

10367 **Table 117 Movement Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
movementSettings	array: see schema	yes	Read Only	array of possible movement values
movementModifier	string			Modifier to the movement value (e.g. spin-90, left-20), units are device dependent
movement	string	yes		Current movement value

10368 **6.56.6 CRUDN behaviour**

10369 **Table 118 Movement CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/MovementResURI		get	post		

10370 **6.57 Sleep Sensor**

10371 **6.57.1 Introduction**

10372 This resource describes whether human sleep has been sensed or not. The value is a boolean. A
 10373 value of 'true' means that sleep has been sensed. A value of 'false' means that sleep not been
 10374 sensed.

10375 **6.57.2 Example URI**

10376 /SleepSensorResURI

10377 **6.57.3 Resource Type**

10378 The resource type (rt) is defined as: oic.r.sensor.sleep.

10379 **6.57.4 RAML Definition**

```

10380 #%RAML 0.8
10381 title: OICSleepSensor
10382 version: v1.1.0-20160519
10383 traits:
10384   - interface :
10385     queryParameters:
10386       if:
10387         enum: ["oic.if.s", "oic.if.baseline"]
10388
10389 /SleepSensorResURI:
10390   description: |
10391     This resource describes whether human sleep has been sensed or not.
10392     The value is a boolean.
10393     A value of 'true' means that sleep has been sensed.
10394     A value of 'false' means that sleep not been sensed.
10395
10396   is : ['interface']
10397   get:
10398     responses :
10399     200:
  
```

```

10400     body:
10401         application/json:
10402             schema: /
10403                 {
10404                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.sleep.json#",
10405                     "$schema": "http://json-schema.org/draft-04/schema#",
10406                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
10407 rights reserved.",
10408                     "title": "Sleep Sensor",
10409                     "definitions": {
10410                         "oic.r.sensor.sleep": {
10411                             "allOf": [
10412                                 {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
10413                             ]
10414                         }
10415                     },
10416                     "type": "object",
10417                     "allOf": [
10418                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
10419                         {"$ref": "#/definitions/oic.r.sensor.sleep"}
10420                     ],
10421                     "required": ["value"]
10422                 }
10423
10424             example: /
10425                 {
10426                     "rt":      ["oic.r.sensor.sleep"],
10427                     "id":      "unique_example_id",
10428                     "value":   true
10429                 }
10430

```

6.57.5 Property Definition

Table 119 Sleep Sensor Property Definitions

Property name	Value type	Mandatory	Access mode	Description
value	boolean	yes	Read Only	True = Sensed, False = Not Sensed.

6.57.6 CRUDN behaviour

Table 120 Sleep Sensor CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/SleepSensorResURI		get			

6.58 Smoke Sensor

6.58.1 Introduction

This resource describes whether smoke has been sensed or not. The value is a boolean. A value of 'true' means that smoke has been sensed. A value of 'false' means that smoke not been sensed.

6.58.2 Example URI

/SmokeSensorResURI

6.58.3 Resource Type

The resource type (rt) is defined as: oic.r.sensor.smoke.

6.58.4 RAML Definition

```

10444 #%RAML 0.8
10445 title: OICSmokeSensor
10446 version: v1.1.0-20160519

```

```

10447 traits:
10448   - interface :
10449     queryParameters:
10450       if:
10451         enum: ["oic.if.s", "oic.if.baseline"]
10452
10453 /SmokeSensorResURI:
10454   description: |
10455     This resource describes whether smoke has been sensed or not.
10456     The value is a boolean.
10457     A value of 'true' means that smoke has been sensed.
10458     A value of 'false' means that smoke not been sensed.
10459
10460   is : ['interface']
10461   get:
10462     responses :
10463       200:
10464         body:
10465           application/json:
10466             schema: /
10467               {
10468                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.smoke.json#",
10469                 "$schema": "http://json-schema.org/draft-04/schema#",
10470                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
10471 rights reserved.",
10472                 "title": "Smoke Sensor",
10473                 "definitions": {
10474                   "oic.r.sensor.smoke": {
10475                     "allOf": [
10476                       {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
10477                     ]
10478                   }
10479                 },
10480                 "type": "object",
10481                 "allOf": [
10482                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
10483                   {"$ref": "#/definitions/oic.r.sensor.smoke"}
10484                 ],
10485                 "required": ["value"]
10486               }
10487
10488             example: /
10489               {
10490                 "rt": ["oic.r.sensor.smoke"],
10491                 "id": "unique_example_id",
10492                 "value": true
10493               }
10494

```

6.58.5 Property Definition

Table 121 Smoke Sensor Property Definitions

Property name	Value type	Mandatory	Access mode	Description
value	boolean	yes	Read Only	True = Sensed, False = Not Sensed.

6.58.6 CRUDN behaviour

Table 122 Smoke Sensor CRUDN operations

Resource	Create	Read	Update	Delete	Notify
----------	--------	------	--------	--------	--------

/SmokeSensorResURI		get			
--------------------	--	-----	--	--	--

10499 **6.59 Three Axis Sensor**

10500 **6.59.1 Introduction**

10501 This resource provides a representation of the measurement from a three-axis sensor. The
 10502 orientation is an array of numbers representing x-plane, y-plane and z-plane values. The unit of
 10503 measurement for each pane is 'g'.

10504 **6.59.2 Example URI**

10505 /ThreeAxisResURI

10506 **6.59.3 Resource Type**

10507 The resource type (rt) is defined as: oic.r.sensor.threeaxis.

10508 **6.59.4 RAML Definition**

10509 *##RAML 0.8*

10510 *title: OICThreeAxis*

10511 *version: v1.1.0-20160519*

10512 *traits:*

10513 *- interface :*

10514 *queryParameters:*

10515 *if:*

10516 *enum: ["oic.if.s", "oic.if.baseline"]*

10517

10518 */ThreeAxisResURI:*

10519 *description: |*

10520 *This resource provides a representation of the measurement from a three-axis sensor.*

10521 *The orientation is an array of numbers representing x-plane, y-plane and z-plane values.*

10522 *The unit of measurement for each pane is 'g'.*

10523

10524 *is : ['interface']*

10525 *get:*

10526 *responses :*

10527 *200:*

10528 *body:*

10529 *application/json:*

10530 *schema: |*

10531 *{*

10532 *"id":*

10533 *"http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.threeaxis.json#",*

10534 *"\$schema": "http://json-schema.org/draft-04/schema#",*

10535 *"description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All*

10536 *rights reserved.",*

10537 *"title": "Three Axis Sensor",*

10538 *"definitions": {*

10539 *"oic.r.sensor.threeaxis": {*

10540 *"properties": {*

10541 *"orientation": {*

10542 *"type": "array",*

10543 *"readOnly": true,*

10544 *"description": "Array containing x-plane, y-plane and z-plane orientation*

10545 *in 'g'.",*

10546 *"minItems": 3,*

10547 *"maxItems": 3,*

10548 *"items": {*

10549 *"type": "number"*

10550 *}*

10551 *}*

10552 *}*

10553 *}*

```

10554     },
10555     "type": "object",
10556     "allOf": [
10557       { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
10558       { "$ref": "#/definitions/oic.r.sensor.threeaxis" }
10559     ],
10560     "required": ["orientation"]
10561   }
10562
10563   example: /
10564   {
10565     "rt":          ["oic.r.sensor.threeaxis"],
10566     "id":          "unique_example_id",
10567     "orientation": [0.7, 1.1, -0.2]
10568   }
10569

```

6.59.5 Property Definition

Table 123 Three Axis Sensor Property Definitions

Property name	Value type	Mandatory	Access mode	Description
orientation	array: see schema	yes	Read Only	Array containing x-plane, y-plane and z-plane orientation in 'g'.

6.59.6 CRUDN behaviour

Table 124 Three Axis Sensor CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/ThreeAxisResURI		get			

6.60 Altimeter

6.60.1 Introduction

This resource describes the properties associated with altimeter. Altimeter is a height of the position (metres).

6.60.2 Example URI

/AltimeterResURI

6.60.3 Resource Type

The resource type (rt) is defined as: oic.r.altimeter.

6.60.4 RAML Definition

```

10583 #%RAML 0.8
10584 title: OICAltimeter
10585 version: v1.1.0-20160519
10586 traits:
10587   - interface :
10588     queryParameters:
10589       if:
10590         enum: ["oic.if.s", "oic.if.baseline"]
10591
10592 /AltimeterResURI:
10593   description: |
10594     This resource describes the properties associated with altimeter.
10595     Altimeter is a height of the position (metres).
10596
10597   is : ['interface']

```

```

10598  get:
10599      description: |
10600          Retrieves the current the height of the position (metres).
10601
10602  responses :
10603      200:
10604          body:
10605              application/json:
10606                  schema: /
10607                      {
10608                          "id": "http://openinterconnect.org/schemas/oic.r.altimeter#",
10609                          "$schema": "http://json-schema.org/draft-04/schema#",
10610                          "description": "Copyright (c) 2016, 2017 Open Interconnect Consortium, Inc. All
10611 rights reserved.",
10612                          "title": "Altimeter",
10613                          "definitions": {
10614                              "oic.r.altimeter": {
10615                                  "type": "object",
10616                                  "properties": {
10617                                      "alt": {
10618                                          "type": "number",
10619                                          "minimum": 0,
10620                                          "readOnly": true,
10621                                          "description": "The current height of the position (metres)"
10622                                      }
10623                                  }
10624                              }
10625                          },
10626                          "type": "object",
10627                          "allOf": [
10628                              {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
10629                              {"$ref": "#/definitions/oic.r.altimeter"}
10630                          ],
10631                          "required": ["alt"]
10632                      }
10633
10634                  example: /
10635                      {
10636                          "rt": ["oic.r.altimeter"],
10637                          "id": "unique_example_id",
10638                          "alt": 1500.0
10639                      }
10640

```

6.60.5 Property Definition

Table 125 Altimeter Property Definitions

Property name	Value type	Mandatory	Access mode	Description
alt	number	yes	Read Only	The current height of the position (metres)

6.60.6 CRUDN behaviour

Table 126 Altimeter CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/AltimeterResURI		get			

10645 **6.61 Clock**

10646 **6.61.1 Introduction**

10647 This resource describes the properties associated with clock and time. Clock is a time information.
 10648 Datetime is using ISO 8601 datetime format (e.g: "2007-04-05T14:30Z") (Time+Date+Timezone)
 10649 Countdown is the desired total seconds for countdown.

10650 **6.61.2 Example URI**

10651 /ClockResURI

10652 **6.61.3 Resource Type**

10653 The resource type (rt) is defined as: oic.r.clock.

10654 **6.61.4 RAML Definition**

10655 `##RAML 0.8`

10656 `title: OICClock`

10657 `version: v1.1.0-20160519`

10658 `traits:`

10659 `- interface :`

10660 `queryParameters:`

10661 `if:`

10662 `enum: ["oic.if.a", "oic.if.baseline"]`

10663

10664 `/ClockResURI:`

10665 `description: |`

10666 `This resource describes the properties associated with clock and time.`

10667 `Clock is a time information.`

10668 `Datetime is using ISO 8601 datetime format (e.g: "2007-04-05T14:30Z") (Time+Date+Timezone)`

10669 `Countdown is the desired total seconds for countdown.`

10670

10671 `is : ['interface']`

10672 `get:`

10673 `description: |`

10674 `Retrieves the current datetime data.`

10675

10676 `responses :`

10677 `200:`

10678 `body:`

10679 `application/json:`

10680 `schema: /`

10681 `{`

10682 `"id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.clock.json#",`

10683 `"$schema": "http://json-schema.org/draft-04/schema#",`

10684 `"description": "(c) 2016, 2017 Open Connectivity Foundation, Inc. All rights`

10685 `reserved.",`

10686 `"title": "Clock",`

10687 `"definitions": {`

10688 `"oic.r.clock": {`

10689 `"type": "object",`

10690 `"properties": {`

10691 `"datetime": {`

10692 `"type": "string",`

10693 `"description": "Using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z,`

10694 `2007-04-05T14:30+09:00)"`

10695 `},`

10696 `"countdown": {`

10697 `"type": "number",`

10698 `"minimum": 0,`

10699 `"description": "Desired total seconds for countdown"`

10700 `}`

```

10701         }
10702     },
10703 },
10704 "type": "object",
10705 "allOf": [
10706     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
10707     {"$ref": "#/definitions/oic.r.clock"}
10708 ],
10709 "required": ["datetime"]
10710 }
10711
10712 example: /
10713 {
10714     "rt":          ["oic.r.clock"],
10715     "id":          "unique_example_id",
10716     "datetime":   "2015-11-05T14:30Z",
10717     "countdown": 0.0
10718 }
10719
10720 post:
10721     description: |
10722         Sets the desired datetime.
10723
10724     body:
10725         application/json:
10726             schema: /
10727                 {
10728                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.clock.json#",
10729                     "$schema": "http://json-schema.org/draft-04/schema#",
10730                     "description": "(c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
10731 reserved.",
10732                     "title": "Clock",
10733                     "definitions": {
10734                         "oic.r.clock": {
10735                             "type": "object",
10736                             "properties": {
10737                                 "datetime": {
10738                                     "type": "string",
10739                                     "description": "Using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z, 2007-
10740 04-05T14:30+09:00)"
10741                                 },
10742                                 "countdown": {
10743                                     "type": "number",
10744                                     "minimum": 0,
10745                                     "description": "Desired total seconds for countdown"
10746                                 }
10747                             }
10748                         }
10749                     },
10750                     "type": "object",
10751                     "allOf": [
10752                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
10753                         {"$ref": "#/definitions/oic.r.clock"}
10754                     ],
10755                     "required": ["datetime"]
10756                 }
10757
10758             example: /
10759                 {
10760                     "id":          "unique_example_id",
10761                     "datetime":   "2015-11-05T14:30Z",
10762                     "countdown": 0.0
10763                 }
10764
10765     responses :

```

```

10766     200:
10767         description: |
10768             Indicates that the datetime value was successfully changed.
10769             The new datetime value is provided in the response.
10770
10771         body:
10772             application/json:
10773                 schema: /
10774                     {
10775                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.clock.json#",
10776                         "$schema": "http://json-schema.org/draft-04/schema#",
10777                         "description": "(c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
10778 reserved.",
10779                         "title": "Clock",
10780                         "definitions": {
10781                             "oic.r.clock": {
10782                                 "type": "object",
10783                                 "properties": {
10784                                     "datetime": {
10785                                         "type": "string",
10786                                         "description": "Using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z,
10787 2007-04-05T14:30+09:00)"
10788                                     },
10789                                     "countdown": {
10790                                         "type": "number",
10791                                         "minimum": 0,
10792                                         "description": "Desired total seconds for countdown"
10793                                     }
10794                                 }
10795                             }
10796                         },
10797                         "type": "object",
10798                         "allOf": [
10799                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
10800                             {"$ref": "#/definitions/oic.r.clock"}
10801                         ],
10802                         "required": ["datetime"]
10803                     }
10804
10805                 example: /
10806                     {
10807                         "id": "unique_example_id",
10808                         "datetime": "2015-11-05T14:30Z",
10809                         "countdown": 0.0
10810                     }
10811
10812     403:
10813         description: |
10814             Indicates that OIC client sent an invalid property value to the server.
10815             The server responds with the required input representation.
10816
10817         body:
10818             application/json:
10819                 schema: /
10820                     {
10821                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.clock.json#",
10822                         "$schema": "http://json-schema.org/draft-04/schema#",
10823                         "description": "(c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
10824 reserved.",
10825                         "title": "Clock",
10826                         "definitions": {
10827                             "oic.r.clock": {
10828                                 "type": "object",
10829                                 "properties": {
10830                                     "datetime": {

```

```

10831         "type": "string",
10832         "description": "Using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z,
10833 2007-04-05T14:30+09:00)"
10834     },
10835     "countdown": {
10836         "type": "number",
10837         "minimum": 0,
10838         "description": "Desired total seconds for countdown"
10839     }
10840 }
10841 }
10842 },
10843 "type": "object",
10844 "allOf": [
10845     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
10846     {"$ref": "#/definitions/oic.r.clock"}
10847 ],
10848 "required": ["datetime"]
10849 }
10850
10851 example: /
10852 {
10853     "id": "unique_example_id",
10854     "datetime": "2015-11-05T14:30Z",
10855     "countdown": 0.0
10856 }
10857

```

6.61.5 Property Definition

Table 127 Clock Property Definitions

Property name	Value type	Mandatory	Access mode	Description
countdown	number			Desired total seconds for countdown
datetime	string	yes		Using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z, 2007-04-05T14:30+09:00)

6.61.6 CRUDN behaviour

Table 128 Clock CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/ClockResURI		get	post		

6.62 Geolocation

6.62.1 Introduction

This resource describes the properties associated with the current geolocation coordinate. Geolocation is a geolocation coordinate data. Latitude is a device's current Latitude coordinate (degrees). Longitude is a device's current Longitude coordinate (degrees). Altitude is a device's current Altitude position (metres). Accuracy is the accuracy level of the latitude and longitude coordinates (metres). altitudeAccuracy is the accuracy level of the altitude coordinates (metres). heading is a direction of travel of device (degree). speed is a device's current velocity (metres per second).

6.62.2 Example URI

/GeolocationResURI

10873 **6.62.3 Resource Type**

10874 The resource type (rt) is defined as: oic.r.sensor.geolocation.

10875 **6.62.4 RAML Definition**

```
10876 #%RAML 0.8
10877 title: OICGeolocation
10878 version: v1.1.0-20160519
10879 traits:
10880   - interface :
10881       queryParameters:
10882           if:
10883               enum: ["oic.if.s", "oic.if.baseline"]
10884
10885 /GeolocationResURI:
10886   description: |
10887     This resource describes the properties associated with the current geolocation coordinate.
10888     Geolocation is a geolocation coordinate data.
10889     Latitude is a device's current Latitude coordinate (degrees).
10890     Longitude is a device's current Longitude coordinate (degrees).
10891     Altitude is a device's current Altitude position (metres).
10892     Accuracy is the accuracy level of the latitude and longitude coordinates (metres).
10893     altitudeAccuracy is the accuracy level of the altitude coordinates (metres).
10894     heading is a direction of travel of device (degree).
10895     speed is a device's current velocity (metres per second).
10896
10897   is : ['interface']
10898   get:
10899       description: |
10900         Retrieves the current geolocation coordinates.
10901
10902   responses :
10903       200:
10904           body:
10905               application/json:
10906                   schema: /
10907                       {
10908                           "id": "http://openinterconnect.org/schemas/oic.r.sensor.geolocation#",
10909                           "$schema": "http://json-schema.org/draft-04/schema#",
10910                           "description": "Copyright (c) 2016, 2017 Open Interconnect Consortium, Inc. All
10911 rights reserved.",
10912                           "title": "Geolocation",
10913                           "definitions": {
10914                               "oic.r.sensor.geolocation": {
10915                                   "type": "object",
10916                                   "allOf": [
10917                                       { "$ref": "oic.r.altimeter.json#/definitions/oic.r.altimeter" },
10918                                       { "properties": {
10919                                           "latitude": {
10920                                               "type": "number",
10921                                               "readOnly": true,
10922                                               "description": "Device's Current Latitude coordinate (degrees)"
10923                                           },
10924                                           "longitude": {
10925                                               "type": "number",
10926                                               "readOnly": true,
10927                                               "description": "Device's Current Longitude coordinate (degrees)"
10928                                           },
10929                                           "accuracy": {
10930                                               "type": "number",
10931                                               "minimum": 0,
10932                                               "readOnly": true,
10933                                               "description": "The accuracy level of the latitude and longitude
```

```

10934 coordinates (metres)"
10935     },
10936     "altitudeAccuracy": {
10937         "type": "number",
10938         "minimum": 0,
10939         "readOnly": true,
10940         "description": "The accuracy level of the altitude coordinates (metres)"
10941     },
10942     "heading": {
10943         "type": "number",
10944         "minimum": 0,
10945         "maximum": 360,
10946         "readOnly": true,
10947         "description": "Direction of travel of device (degree)"
10948     },
10949     "speed": {
10950         "type": "number",
10951         "minimum": 0,
10952         "readOnly": true,
10953         "description": "Device's current velocity (metres per second)"
10954     }
10955 }
10956 }
10957 ]
10958 }
10959 },
10960 "type": "object",
10961 "allOf": [
10962     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
10963     {"$ref": "#/definitions/oic.r.sensor.geolocation"}
10964 ],
10965 "required": ["latitude", "longitude", "alt"]
10966 }
10967
10968 example: /
10969 {
10970     "rt": ["oic.r.sensor.geolocation"],
10971     "id": "unique_example_id",
10972     "latitude": 55.070859,
10973     "longitude": -3.60512,
10974     "alt": 12.07,
10975     "accuracy": 65.0,
10976     "altitudeAccuracy": 0.0,
10977     "heading": 90.0,
10978     "speed": 0.0
10979 }
10980

```

6.62.5 Property Definition

Table 129 Geolocation Property Definitions

Property name	Value type	Mandatory	Access mode	Description
longitude	number	yes	Read Only	Device's Current Longitude coordinate (degrees)
latitude	number	yes	Read Only	Device's Current Latitude coordinate (degrees)
altitudeAccuracy	number		Read Only	The accuracy level of the altitude coordinates (metres)

speed	number		Read Only	Device's current velocity (metres per second)
heading	number		Read Only	Direction of travel of device (degree)
accuracy	number		Read Only	The accuracy level of the latitude and longitude coordinates (metres)

10983 **6.62.6 CRUDN behaviour**

10984 **Table 130 Geolocation CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/GeolocationResURI		get			

10985 **6.63 Height**

10986 **6.63.1 Introduction**

10987 This resource describes the properties associated with height of an object's physical size. The unit
 10988 is a single value that is one of m, cm, ft or in. If the unit Property is missing the default is meters
 10989 [m]. The unit Property is a read-only value that is provided by the server. When range (from
 10990 oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.

10991 **6.63.2 Example URI**

10992 /HeightResURI

10993 **6.63.3 Resource Type**

10994 The resource type (rt) is defined as: oic.r.height.

10995 **6.63.4 RAML Definition**

```

10996 #%RAML 0.8
10997 title: OICHeight
10998 version: v1.1.0-20160519
10999 traits:
11000 - interface :
11001     queryParameters:
11002         if:
11003             enum: ["oic.if.a", "oic.if.baseline"]
11004
11005 /HeightResURI:
11006     description: |
11007         This resource describes the properties associated with height of an object's physical size.
11008         The unit is a single value that is one of m, cm, ft or in.
11009         If the unit Property is missing the default is meters [m].
11010         The unit Property is a read-only value that is provided by the server.
11011         When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.
11012
11013     is : ['interface']
11014     get:
11015         description: |
11016             Retrieves height of an object.
11017
11018     responses :
```

```

11019     200:
11020         body:
11021             application/json:
11022                 schema: /
11023                     {
11024                         "id": "http://openinterconnect.org/schemas/oic.r.height.json#",
11025                         "$schema": "http://json-schema.org/draft-04/schema#",
11026                         "description": "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
11027 reserved.",
11028                         "title": "Height",
11029                         "definitions": {
11030                             "oic.r.height": {
11031                                 "type": "object",
11032                                 "properties": {
11033                                     "height": {
11034                                         "type": "number",
11035                                         "minimum": 0,
11036                                         "description": "Height of an object"
11037                                     },
11038                                     "units": {
11039                                         "type": "string",
11040                                         "readOnly": true,
11041                                         "enum": ["m", "cm", "ft", "in"],
11042                                         "description": "Height unit"
11043                                     }
11044                                 }
11045                             }
11046                         },
11047                         "type": "object",
11048                         "allOf": [
11049                             {"$ref": "oic.core.json#/definitions/oic.core"},
11050                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
11051                             {"$ref": "#/definitions/oic.r.height"}
11052                         ],
11053                         "required": ["height"]
11054                     }
11055
11056                 example: /
11057                     {
11058                         "rt": ["oic.r.height"],
11059                         "id": "unique_example_id",
11060                         "height": 1.8,
11061                         "units": "m"
11062                     }
11063
11064         post:
11065             description: |
11066                 Sets the Height.
11067
11068             body:
11069                 application/json:
11070                     schema: /
11071                         {
11072                             "id": "http://openinterconnect.org/schemas/oic.r.height.json#",
11073                             "$schema": "http://json-schema.org/draft-04/schema#",
11074                             "description": "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
11075 reserved.",
11076                             "title": "Height",
11077                             "definitions": {
11078                                 "oic.r.height": {
11079                                     "type": "object",
11080                                     "properties": {
11081                                         "height": {
11082                                             "type": "number",
11083                                             "minimum": 0,

```



```

11084         "description": "Height of an object"
11085     },
11086     "units": {
11087         "type": "string",
11088         "readOnly": true,
11089         "enum": ["m", "cm", "ft", "in"],
11090         "description": "Height unit"
11091     }
11092 }
11093 }
11094 },
11095 "type": "object",
11096 "allOf": [
11097     {"$ref": "oic.core.json#/definitions/oic.core"},
11098     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
11099     {"$ref": "#/definitions/oic.r.height"}
11100 ],
11101 "required": ["height"]
11102 }
11103
11104 example: /
11105 {
11106     "id": "unique_example_id",
11107     "height": 1.8,
11108     "units": "m"
11109 }
11110
11111 responses :
11112 200:
11113     description: |
11114         Indicates that the height was successfully changed.
11115         The new height is provided in the response.
11116
11117     body:
11118         application/json:
11119             schema: /
11120                 {
11121                     "id": "http://openinterconnect.org/schemas/oic.r.height.json#",
11122                     "$schema": "http://json-schema.org/draft-04/schema#",
11123                     "description": "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
11124 reserved.",
11125                     "title": "Height",
11126                     "definitions": {
11127                         "oic.r.height": {
11128                             "type": "object",
11129                             "properties": {
11130                                 "height": {
11131                                     "type": "number",
11132                                     "minimum": 0,
11133                                     "description": "Height of an object"
11134                                 },
11135                                 "units": {
11136                                     "type": "string",
11137                                     "readOnly": true,
11138                                     "enum": ["m", "cm", "ft", "in"],
11139                                     "description": "Height unit"
11140                                 }
11141                             }
11142                         }
11143                     },
11144                     "type": "object",
11145                     "allOf": [
11146                         {"$ref": "oic.core.json#/definitions/oic.core"},
11147                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
11148                         {"$ref": "#/definitions/oic.r.height"}
11149                     ],
11150                     "required": ["height"]

```

```

11151     }
11152
11153     example: /
11154     {
11155         "id":      "unique_example_id",
11156         "height": 1.8,
11157         "units":  "m"
11158     }
11159
11160     403:
11161     description: |
11162         Indicates that OCF client sent an invalid property value to the server.
11163         The server responds with the current resource representation.
11164
11165     body:
11166     application/json:
11167     schema: /
11168     {
11169         "id": "http://openinterconnect.org/schemas/oic.r.height.json#",
11170         "$schema": "http://json-schema.org/draft-04/schema#",
11171         "description": "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
11172 reserved.",
11173         "title": "Height",
11174         "definitions": {
11175             "oic.r.height": {
11176                 "type": "object",
11177                 "properties": {
11178                     "height": {
11179                         "type": "number",
11180                         "minimum": 0,
11181                         "description": "Height of an object"
11182                     },
11183                     "units": {
11184                         "type": "string",
11185                         "readOnly": true,
11186                         "enum": ["m", "cm", "ft", "in"],
11187                         "description": "Height unit"
11188                     }
11189                 }
11190             }
11191         },
11192         "type": "object",
11193         "allOf": [
11194             {"$ref": "oic.core.json#/definitions/oic.core"},
11195             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
11196             {"$ref": "#/definitions/oic.r.height"}
11197         ],
11198         "required": ["height"]
11199     }
11200
11201     example: /
11202     {
11203         "id":      "unique_example_id",
11204         "height": 1.8,
11205         "units":  "m"
11206     }
11207

```

6.63.5 Property Definition

Table 131 Height Property Definitions

Property name	Value type	Mandatory	Access mode	Description
units	string		Read Only	Height unit

height	number	yes		Height of an object
--------	--------	-----	--	---------------------

11210 **6.63.6 CRUDN behaviour**

11211 **Table 132 Height CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/HeightResURI		get	post		

11212 **6.64 Weight**

11213 **6.64.1 Introduction**

11214 This resource describes the properties associated with weight of an object. The unit is a single
 11215 value that is one of kg, g, lb or oz. If the unit Property is missing the default is kilograms [kg]. The
 11216 unit Property is a read-only value that is provided by the server. When range (from
 11217 oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.

11218 **6.64.2 Example URI**

11219 /WeightResURI

11220 **6.64.3 Resource Type**

11221 The resource type (rt) is defined as: oic.r.weight.

11222 **6.64.4 RAML Definition**

```

11223 #%RAML 0.8
11224 title: OICWeight
11225 version: v1.1.0-20160519
11226 traits:
11227   - interface :
11228       queryParameters:
11229         if:
11230           enum: ["oic.if.s", "oic.if.baseline"]
11231
11232 /WeightResURI:
11233   description: |
11234     This resource describes the properties associated with weight of an object.
11235     The unit is a single value that is one of kg, g, lb or oz.
11236     If the unit Property is missing the default is kilograms [kg].
11237     The unit Property is a read-only value that is provided by the server.
11238     When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.
11239
11240   is : ['interface']
11241   get:
11242     description: |
11243       Retrieves weight of an object.
11244
11245   responses :
11246     200:
11247       body:
11248         application/json:
11249           schema: /
11250             {
11251               "id": "http://openinterconnect.org/schemas/oic.r.weight.json#",
11252               "$schema": "http://json-schema.org/draft-04/schema#",
11253               "description": "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
11254 reserved.",
11255               "title": "Weight",
11256               "definitions": {
  
```

```

11257     "oic.r.weight": {
11258         "type": "object",
11259         "properties": {
11260             "weight": {
11261                 "type": "number",
11262                 "minimum": 0,
11263                 "readOnly": true,
11264                 "description": "Weight of an object"
11265             },
11266             "units": {
11267                 "type": "string",
11268                 "readOnly": true,
11269                 "enum": ["kg", "g", "lb", "oz"],
11270                 "description": "Weight unit"
11271             }
11272         }
11273     },
11274     "type": "object",
11275     "allOf": [
11276         {"$ref": "oic.core.json#/definitions/oic.core"},
11277         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
11278         {"$ref": "#/definitions/oic.r.weight"}
11279     ],
11280     "required": ["weight", "units"]
11281 }
11282
11283
11284 example: /
11285 {
11286     "rt": ["oic.r.weight"],
11287     "id": "unique_example_id",
11288     "weight": 80.0,
11289     "units": "kg"
11290 }
11291

```

6.64.5 Property Definition

Table 133 Weight Property Definitions

Property name	Value type	Mandatory	Access mode	Description
units	string	yes	Read Only	Weight unit
weight	number	yes	Read Only	Weight of an object

6.64.6 CRUDN behaviour

Table 134 Weight CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/WeightResURI		get			

6.65 Air Quality

6.65.1 Introduction

This resource describes a qualitative or measured contaminant that can be used to infer Air Quality. Measured is the actual sensed value with units per contaminant type as described below. Qualitative is a representative value within the range provided where the minimum value is minimum contamination and maximum value is maximum contamination for the specific contaminant. The valueType indicates a qualitative or measured reading within the contaminantvalue Property. contaminantvalue contains the actual measured or qualitative level. range contains the allowed range for the value that is being reported (from oic.r.baseresource). If valueType is 'Measured' then the units for the contaminant types are as follows: Methanal (also known as Formaldehyde): CH₂O (ug/m³), Carbon Dioxide: CO₂ (ppm), Carbon Monoxide: CO (ppm), Particulate Matter

11307 (less than 2.5 microns in diameter): PM2.5 (ug/m³), Particulate Matter (less than 10 microns in
11308 diameter): PM10 (ug/m³), Volatile Organic Compounds: VOC (ug/m³)

11309 6.65.2 Example URI

11310 /AirQualityResURI

11311 6.65.3 Resource Type

11312 The resource type (rt) is defined as: oic.r.airquality.

11313 6.65.4 RAML Definition

```
11314 #%RAML 0.8
11315 title: OICAirQuality
11316 version: v1.1.0-20160519
11317 traits:
11318   - interface :
11319     queryParameters:
11320       if:
11321         enum: ["oic.if.s", "oic.if.baseline"]
11322
11323 /AirQualityResURI:
11324   description: |
11325     This resource describes a qualitative or measured contaminant that can be used to infer Air
11326     Quality.
11327     Measured is the actual sensed value with units per contaminant type as described below.
11328     Qualitative is a representative value within the range provided where the minium value is
11329     minimum contamination and maximum value is maximum contamination for the specific contaminant.
11330     The valueType indicates a qualitative or measured reading within the contaminantvalue Property.
11331     contaminantvalue contains the actual measured or qualitative level.
11332     range contains the allowed range for the value that is being reported (from
11333     oic.r.baseresource).
11334     If valueType is 'Measured' then the units for the contaminant types are as follows:
11335     Methanal (also known as Formaldehyde): CH2O (ug/m3),
11336     Carbon Dioxide: CO2 (ppm),
11337     Carbon Monoxide: CO (ppm),
11338     Particulate Matter (less than 2.5 microns in diameter): PM2.5 (ug/m3),
11339     Particulate Matter (less than 10 microns in diameter): PM10 (ug/m3),
11340     Volatile Organic Compounds: VOC (ug/m3)
11341
11342   is : ['interface']
11343   get:
11344     description: |
11345       Retrieves the current air quality.
11346
11347   responses :
11348     200:
11349       body:
11350         application/json:
11351           schema: /
11352             {
11353               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airquality.json#",
11354               "$schema": "http://json-schema.org/draft-04/schema#",
11355               "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
11356               reserved.",
11357               "title": "Air Quality",
11358               "definitions": {
11359                 "oic.r.airquality": {
11360                   "type": "object",
11361                   "properties": {
11362                     "contaminantvalue": {
11363                       "type": "integer",
11364                       "readOnly": true,
```

```

11365         "description": "The measured or qualitative value for the contaminant."
11366     },
11367     "contaminanttype": {
11368         "type": "string",
11369         "enum":
11370     ["CH2O", "CO2", "CO", "PM2.5", "PM10", "VOC", "Smoke", "Odor", "AirPollution"],
11371         "description": "The contaminant being measured.",
11372         "readOnly": true
11373     },
11374     "valuetype": {
11375         "type": "string",
11376         "enum": ["Qualitative", "Measured"],
11377         "description": "Indicates whether the provided value is qualitative or
11378 measured.",
11379         "readOnly": true
11380     }
11381 }
11382 }
11383 },
11384 "type": "object",
11385 "allOf": [
11386     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
11387     {"$ref": "#/definitions/oic.r.airquality"}
11388 ],
11389 "required": ["contaminantvalue", "contaminanttype", "valuetype", "range"]
11390 }
11391
11392 example: /
11393 {
11394     "rt":          ["oic.r.airquality"],
11395     "id":          "unique_example_id",
11396     "contaminanttype": "CO",
11397     "valuetype": "Measured",
11398     "contaminantvalue": 10,
11399     "range": [0,500]
11400 }
11401

```

6.65.5 Property Definition

Table 135 Air Quality Property Definitions

Property name	Value type	Mandatory	Access mode	Description
valuetype	string	yes	Read Only	Indicates whether the provided value is qualitative or measured.
contaminantvalue	integer	yes	Read Only	The measured or qualitative value for the contaminant.
contaminanttype	string	yes	Read Only	The contaminant being measured.

6.65.6 CRUDN behaviour

Table 136 Air Quality CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/AirQualityResURI		get			

11406 **6.66 AirQualityBaselineResURI**

11407 **6.66.1 Introduction**

11408 **6.66.2 Example URI**

11409 **6.66.3 Resource Type**

11410 **6.66.4 RAML Definition**

```

11411 #%RAML 0.8
11412 title: OICAirQuality
11413 version: v1.1.0-20160519
11414 traits:
11415   - interface-ll :
11416     queryParameters:
11417       if:
11418         enum: ["oic.if.ll"]
11419   - interface-baseline :
11420     queryParameters:
11421       if:
11422         enum: ["oic.if.baseline"]
11423   - interface-all :
11424     queryParameters:
11425       if:
11426         enum: ["oic.if.ll", "oic.if.baseline"]

```

11427
11428 **6.66.5 Property Definition**

Table 137 AirQualityBaselineResURI Property Definitions

Property name	Value type	Mandatory	Access mode	Description
links	array: see schema			A set of simple or individual OIC Links.
rt (links)	array: see schema	yes		Resource Type of the Resource
di (links)	string			The Device ID formatted according to IETF RFC 4122.
title (links)	string			A title for the link relation. Can be used by the UI to provide a context.
eps (links)	array: see schema			the Endpoint information of the target Resource
ins (links)	integer			The instance identifier for this web link in an array of web links - used in collections
p (links)	object: see schema			Specifies the framework

				policies on the Resource referenced by the target URI
href (links)	string	yes		This is the target URI, it can be specified as a Relative Reference or fully-qualified URI.
rel (links)	multiple types: see schema			The relation of the target URI referenced by the link to the context URI
type (links)	array: see schema			A hint at the representation of the resource referenced by the target URI. This represents the media types that are used for both accepting and emitting.
anchor (links)	string			This is used to override the context URI e.g. override the URI of the containing collection.
if (links)	array: see schema	yes		The interface set supported by this resource

11430 **6.66.6 CRUDN behaviour**

11431 **Table 138 AirQualityBaselineResURI CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
----------	--------	------	--------	--------	--------

11432 **6.66.7 Referenced JSON schemas**

11433 **6.66.7.1 oic.collection-schema.json**

```

11434 {
11435   "$schema": "http://json-schema.org/draft-04/schema#",
11436   "description" : "Copyright (c) 2016,2018 Open Connectivity Foundation, Inc. All rights
11437 reserved.",
11438   "id": "http://www.openconnectivity.org/ocf-apis/core/schemas/oic.collection-schema.json#",
11439   "title": "Collection",
11440   "definitions": {
11441     "oic.oic-link": {
11442       "type": "object",
11443       "properties": {
11444         "href": {
11445           "type": "string",
11446           "maxLength": 256,
11447           "description": "This is the target URI, it can be specified as a Relative Reference or
11448 fully-qualified URI.",
11449           "format": "uri"

```



```

11450     },
11451     "rel": {
11452         "oneOf": [
11453             {
11454                 "type": "array",
11455                 "items": {
11456                     "type": "string",
11457                     "maxLength": 64
11458                 },
11459                 "minItems": 1,
11460                 "default": ["hosts"]
11461             },
11462             {
11463                 "type": "string",
11464                 "maxLength": 64,
11465                 "default": "hosts"
11466             }
11467         ],
11468         "description": "The relation of the target URI referenced by the link to the context URI"
11469     },
11470     "rt": {
11471         "type": "array",
11472         "items": {
11473             "type": "string",
11474             "maxLength": 64
11475         },
11476         "minItems": 1,
11477         "description": "Resource Type of the Resource"
11478     },
11479     "if": {
11480         "type": "array",
11481         "items": {
11482             "type": "string",
11483             "enum": ["oic.if.baseline", "oic.if.ll", "oic.if.b", "oic.if.rw", "oic.if.r",
11484 "oic.if.a", "oic.if.s"]
11485         },
11486         "minItems": 1,
11487         "description": "The interface set supported by this resource"
11488     },
11489     "di": {
11490         "description": "The Device ID formatted according to IETF RFC 4122.",
11491         "type": "string",
11492         "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
11493 9]{12}$"
11494     },
11495     "p": {
11496         "description": "Specifies the framework policies on the Resource referenced by the target
11497 URI",
11498         "type": "object",
11499         "properties": {
11500             "bm": {
11501                 "description": "Specifies the framework policies on the Resource referenced by the
11502 target URI for e.g. observable and discoverable",
11503                 "type": "integer"
11504             }
11505         },
11506         "required": ["bm"]
11507     },
11508     "title": {
11509         "type": "string",
11510         "maxLength": 64,
11511         "description": "A title for the link relation. Can be used by the UI to provide a
11512 context."
11513     },
11514     "anchor": {
11515         "type": "string",
11516         "maxLength": 256,
11517         "description": "This is used to override the context URI e.g. override the URI of the
11518 containing collection.",
11519         "format": "uri"
11520     },

```

```

11521         "ins": {
11522             "type": "integer",
11523             "description": "The instance identifier for this web link in an array of web links - used
11524 in collections"
11525         },
11526         "type": {
11527             "type": "array",
11528             "description": "A hint at the representation of the resource referenced by the target
11529 URI. This represents the media types that are used for both accepting and emitting.",
11530             "items": {
11531                 "type": "string",
11532                 "maxLength": 64
11533             },
11534             "minItems": 1,
11535             "default": "application/cbor"
11536         },
11537         "eps": {
11538             "type": "array",
11539             "description": "the Endpoint information of the target Resource",
11540             "items": {
11541                 "type": "object",
11542                 "properties": {
11543                     "ep": {
11544                         "type": "string",
11545                         "format": "uri",
11546                         "description": "Transport Protocol Suite + Endpoint Locator"
11547                     },
11548                     "pri": {
11549                         "type": "integer",
11550                         "minimum": 1,
11551                         "description": "The priority among multiple Endpoints"
11552                     }
11553                 }
11554             }
11555         },
11556     ],
11557     "required": [ "href", "rt", "if" ]
11558 },
11559     "oic.collection.links.arrayoflinks": {
11560         "properties": {
11561             "links": {
11562                 "description": "A set of simple or individual OIC Links.",
11563                 "type": "array",
11564                 "items": {
11565                     "type": "object",
11566                     "properties": {
11567                         "href": {
11568                             "type": "string",
11569                             "maxLength": 256,
11570                             "description": "This is the target URI, it can be specified as a Relative Reference
11571 or fully-qualified URI.",
11572                             "format": "uri"
11573                         },
11574                         "rel": {
11575                             "oneOf": [
11576                                 {
11577                                     "type": "array",
11578                                     "items": {
11579                                         "type": "string",
11580                                         "maxLength": 64
11581                                     },
11582                                     "minItems": 1,
11583                                     "default": ["hosts"]
11584                                 },
11585                                 {
11586                                     "type": "string",
11587                                     "maxLength": 64,
11588                                     "default": "hosts"
11589                                 }
11590                             ]
11591                         },
11592                         "description": "The relation of the target URI referenced by the link to the

```

```

11592 context URI"
11593     },
11594     "rt": {
11595         "type": "array",
11596         "items": {
11597             "type": "string",
11598             "maxLength": 64
11599         },
11600         "minItems": 1,
11601         "description": "Resource Type of the Resource"
11602     },
11603     "if": {
11604         "type": "array",
11605         "items": {
11606             "type": "string",
11607             "enum": ["oic.if.baseline", "oic.if.ll", "oic.if.b", "oic.if.rw", "oic.if.r",
11608 "oic.if.a", "oic.if.s" ]
11609         },
11610         "minItems": 1,
11611         "description": "The interface set supported by this resource"
11612     },
11613     "di": {
11614         "description": "The Device ID formatted according to IETF RFC 4122.",
11615         "type": "string",
11616         "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
11617 9]{12}$"
11618     },
11619     "p": {
11620         "description": "Specifies the framework policies on the Resource referenced by the
11621 target URI",
11622         "type": "object",
11623         "properties": {
11624             "bm": {
11625                 "description": "Specifies the framework policies on the Resource referenced by
11626 the target URI for e.g. observable and discoverable",
11627                 "type": "integer"
11628             }
11629         },
11630         "required": ["bm"]
11631     },
11632     "title": {
11633         "type": "string",
11634         "maxLength": 64,
11635         "description": "A title for the link relation. Can be used by the UI to provide a
11636 context."
11637     },
11638     "anchor": {
11639         "type": "string",
11640         "maxLength": 256,
11641         "description": "This is used to override the context URI e.g. override the URI of
11642 the containing collection.",
11643         "format": "uri"
11644     },
11645     "ins": {
11646         "type": "integer",
11647         "description": "The instance identifier for this web link in an array of web links
11648 - used in collections"
11649     },
11650     "type": {
11651         "type": "array",
11652         "description": "A hint at the representation of the resource referenced by the
11653 target URI. This represents the media types that are used for both accepting and emitting.",
11654         "items": {
11655             "type": "string",
11656             "maxLength": 64
11657         },
11658         "minItems": 1,
11659         "default": "application/cbor"
11660     },
11661     "eps": {
11662         "type": "array",

```

```

11663         "description": "the Endpoint information of the target Resource",
11664         "items": {
11665             "type": "object",
11666             "properties": {
11667                 "ep": {
11668                     "type": "string",
11669                     "format": "uri",
11670                     "description": "Transport Protocol Suite + Endpoint Locator"
11671                 },
11672                 "pri": {
11673                     "type": "integer",
11674                     "minimum": 1,
11675                     "description": "The priority among multiple Endpoints"
11676                 }
11677             }
11678         },
11679     },
11680     "required": [ "href", "rt", "if" ]
11681 },
11682 },
11683 },
11684 },
11685 },
11686     "oic.core": {
11687         "type": "object",
11688         "properties": {
11689             "rt": {
11690                 "type": "array",
11691                 "items": {
11692                     "type": "string",
11693                     "maxLength": 64
11694                 },
11695                 "minItems": 1,
11696                 "readOnly": true,
11697                 "description": "Resource Type of the Resource"
11698             }
11699         }
11700     },
11701     "uuid": {
11702         "description": "Format pattern according to IETF RFC 4122.",
11703         "type": "string",
11704         "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{12}$"
11705     },
11706     "oic.collection.links": {
11707         "properties": {
11708             "links": {
11709                 "description": "A set of simple or individual OIC Links.",
11710                 "type": "array",
11711                 "items": {
11712                     "$ref": "#/definitions/oic.oic-link"
11713                 }
11714             }
11715         }
11716     },
11717     "oic.collection.properties": {
11718         "type": "object",
11719         "description": "A collection is a set of links along with additional properties to describe
11720 the collection itself",
11721         "properties": {
11722             "rts": {
11723                 "$ref": "#/definitions/oic.core/properties/rt",
11724                 "description": "The list of allowable resource types (for Target and anchors)
11725 in links included in the collection"
11726             }
11727         }
11728     },
11729 },
11730 "type": "object",
11731 "allOf": [
11732     {"$ref": "oic.core-schema.json#/definitions/oic.core"},
11733     {"$ref": "#/definitions/oic.collection.properties"},

```

```
11734     {"$ref": "#/definitions/oic.collection.links"}
11735   ]
11736 }
11737
```

11738 6.67 Consumable

11739 6.67.1 Introduction

11740 This resource specifies a thing that can be consumed such as filter material, printer toner etc The
11741 type is an enumeration defining the thing being consumed as defined by the Smart Home Device
11742 Specification The remaining is an integer capturing the percentatge remaining life The
11743 orderpercentage is an integer capturing the percentage life at which replacement or replenishment
11744 is recommended by the manufacturer The url is a string containing a URL at which further
11745 information may be obtained with respect to the consumable

11746 6.67.2 Example URI

11747 /ConsumableResURI

11748 6.67.3 Resource Type

11749 The resource type (rt) is defined as: oic.r.consumable.

11750 6.67.4 RAML Definition

```
11751 #%RAML 0.8
11752 title: OICConsumables
11753 version: OCF-v1.0.0-20160620
11754 traits:
11755   - interface :
11756     queryParameters:
11757       if:
11758         enum: ["oic.if.s", "oic.if.baseline"]
11759
11760 /ConsumableResURI:
11761   description: |
11762     This resource specifies a thing that can be consumed such as filter material, printer toner etc
11763     The type is an enumeration defining the thing being consumed as defined by the Smart Home
11764     Device Specification
11765     The remaining is an integer capturing the percentatge remaining life
11766     The orderpercentage is an integer capturing the percentage life at which replacement or
11767     replenishment is recommended by the manufacturer
11768     The url is a string containing a URL at which further information may be obtained with respect
11769     to the consumable
11770
11771   is : ['interface']
11772   get:
11773     responses :
11774       200:
11775         body:
11776           application/json:
11777             schema: /
11778               {
11779                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.consumable#",
11780                 "$schema": "http://json-schema.org/draft-04/schema#",
11781                 "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
11782 reserved.",
11783                 "title": "Consumable",
11784                 "definitions": {
11785                   "oic.r.consumable": {
11786                     "type": "object",
11787                     "properties": {
11788                       "typeofconsumable": {
11789                         "type": "string",
```

```

11790         "description": "Thing that is being consumed.",
11791         "readOnly": true
11792     },
11793     "remaining": {
11794         "type": "integer",
11795         "description": "Percentage remaining lifespan.",
11796         "readOnly": true,
11797         "minimum": 0,
11798         "maximum": 100
11799     },
11800     "orderpercentage": {
11801         "type": "integer",
11802         "description": "Percentage at which re-ordering is recommended by the
11803 manufacturer",
11804         "readOnly": true,
11805         "minimum": 0,
11806         "maximum": 100
11807     },
11808     "url": {
11809         "type": "string",
11810         "format": "uri",
11811         "description": "URL at which additional ordering information may be
11812 found.",
11813         "readOnly": true
11814     }
11815 }
11816 }
11817 },
11818 "type": "object",
11819 "allOf": [
11820     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
11821     {"$ref": "#/definitions/oic.r.consumable"}
11822 ],
11823 "required": ["typeofconsumable", "remaining"]
11824 }
11825
11826 example: /
11827 {
11828     "rt":             ["oic.r.consumable"],
11829     "id":             "unique_example_id",
11830     "typeofconsumable": "tonerBlack",
11831     "remaining":      20,
11832     "orderpercentage": 10,
11833     "url":            "http://myreorderURL"
11834 }
11835

```

6.67.5 Property Definition

Table 139 Consumable Property Definitions

Property name	Value type	Mandatory	Access mode	Description
url	string		Read Only	URL at which additional ordering information may be found.
typeofconsumable	string	yes	Read Only	Thing that is being consumed.
remaining	integer	yes	Read Only	Percentage remaining lifespan.
orderpercentage	integer		Read Only	Percentage at which re-ordering is

				recommended by the manufacturer
--	--	--	--	---------------------------------

11838 **6.67.6 CRUDN behaviour**

11839 **Table 140 Consumable CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/ConsumableResURI		get			

11840 **6.68 ConsumablesBaselineResURI**

11841 **6.68.1 Introduction**

11842 **6.68.2 Example URI**

11843 **6.68.3 Resource Type**

11844 **6.68.4 RAML Definition**

11845 `##RAML 0.8`

11846 `title: OICConsumables`

11847 `version: OCF-v1.0.0-20160620`

11848 `traits:`

11849 `- interface-ll :`

11850 `queryParameters:`

11851 `if:`

11852 `enum: ["oic.if.ll"]`

11853 `- interface-baseline :`

11854 `queryParameters:`

11855 `if:`

11856 `enum: ["oic.if.baseline"]`

11857 `- interface-all :`

11858 `queryParameters:`

11859 `if:`

11860 `enum: ["oic.if.ll", "oic.if.baseline"]`

11861

11862 **6.68.5 Property Definition**

11863 **Table 141 ConsumablesBaselineResURI Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
links	array: see schema			A set of simple or individual OIC Links.
rt (links)	array: see schema	yes		Resource Type of the Resource
di (links)	string			The Device ID formatted according to IETF RFC 4122.
title (links)	string			A title for the link relation. Can be used by the UI to provide a context.
eps (links)	array: see schema			the Endpoint information of the target Resource

ins (links)	integer			The instance identifier for this web link in an array of web links - used in collections
p (links)	object: see schema			Specifies the framework policies on the Resource referenced by the target URI
href (links)	string	yes		This is the target URI, it can be specified as a Relative Reference or fully-qualified URI.
rel (links)	multiple types: see schema			The relation of the target URI referenced by the link to the context URI
type (links)	array: see schema			A hint at the representation of the resource referenced by the target URI. This represents the media types that are used for both accepting and emitting.
anchor (links)	string			This is used to override the context URI e.g. override the URI of the containing collection.
if (links)	array: see schema	yes		The interface set supported by this resource

11864 **6.68.6 CRUDN behaviour**

11865 **Table 142 ConsumablesBaselineResURI CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
----------	--------	------	--------	--------	--------

11866 **6.68.7 Referenced JSON schemas**

11867 **6.68.7.1 oic.collection-schema.json**

```

11868 {
11869   "$schema": "http://json-schema.org/draft-04/schema#",
11870   "description": "Copyright (c) 2016,2018 Open Connectivity Foundation, Inc. All rights
11871 reserved.",
11872   "id": "http://www.openconnectivity.org/ocf-apis/core/schemas/oic.collection-schema.json#",
11873   "title": "Collection",

```



```

11874     "definitions": {
11875         "oic.oic-link": {
11876             "type": "object",
11877             "properties": {
11878                 "href": {
11879                     "type": "string",
11880                     "maxLength": 256,
11881                     "description": "This is the target URI, it can be specified as a Relative Reference or
11882 fully-qualified URI.",
11883                     "format": "uri"
11884                 },
11885                 "rel": {
11886                     "oneOf": [
11887                         {
11888                             "type": "array",
11889                             "items": {
11890                                 "type": "string",
11891                                 "maxLength": 64
11892                             },
11893                             "minItems": 1,
11894                             "default": ["hosts"]
11895                         },
11896                         {
11897                             "type": "string",
11898                             "maxLength": 64,
11899                             "default": "hosts"
11900                         }
11901                     ],
11902                     "description": "The relation of the target URI referenced by the link to the context URI"
11903                 },
11904                 "rt": {
11905                     "type": "array",
11906                     "items": {
11907                         "type": "string",
11908                         "maxLength": 64
11909                     },
11910                     "minItems": 1,
11911                     "description": "Resource Type of the Resource"
11912                 },
11913                 "if": {
11914                     "type": "array",
11915                     "items": {
11916                         "type": "string",
11917                         "enum": ["oic.if.baseline", "oic.if.ll", "oic.if.b", "oic.if.rw", "oic.if.r",
11918 "oic.if.a", "oic.if.s" ]
11919                     },
11920                     "minItems": 1,
11921                     "description": "The interface set supported by this resource"
11922                 },
11923                 "di": {
11924                     "description": "The Device ID formatted according to IETF RFC 4122.",
11925                     "type": "string",
11926                     "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
11927 9]{12}$"
11928                 },
11929                 "p": {
11930                     "description": "Specifies the framework policies on the Resource referenced by the target
11931 URI",
11932                     "type": "object",
11933                     "properties": {
11934                         "bm": {
11935                             "description": "Specifies the framework policies on the Resource referenced by the
11936 target URI for e.g. observable and discoverable",
11937                             "type": "integer"
11938                         }
11939                     },
11940                     "required": ["bm"]
11941                 },
11942                 "title": {
11943                     "type": "string",
11944                     "maxLength": 64,

```

```

11945         "description": "A title for the link relation. Can be used by the UI to provide a
11946 context.",
11947     },
11948     "anchor": {
11949         "type": "string",
11950         "maxLength": 256,
11951         "description": "This is used to override the context URI e.g. override the URI of the
11952 containing collection.",
11953         "format": "uri"
11954     },
11955     "ins": {
11956         "type": "integer",
11957         "description": "The instance identifier for this web link in an array of web links - used
11958 in collections"
11959     },
11960     "type": {
11961         "type": "array",
11962         "description": "A hint at the representation of the resource referenced by the target
11963 URI. This represents the media types that are used for both accepting and emitting.",
11964         "items": {
11965             "type": "string",
11966             "maxLength": 64
11967         },
11968         "minItems": 1,
11969         "default": "application/cbor"
11970     },
11971     "eps": {
11972         "type": "array",
11973         "description": "the Endpoint information of the target Resource",
11974         "items": {
11975             "type": "object",
11976             "properties": {
11977                 "ep": {
11978                     "type": "string",
11979                     "format": "uri",
11980                     "description": "Transport Protocol Suite + Endpoint Locator"
11981                 },
11982                 "pri": {
11983                     "type": "integer",
11984                     "minimum": 1,
11985                     "description": "The priority among multiple Endpoints"
11986                 }
11987             }
11988         }
11989     },
11990 },
11991 "required": [ "href", "rt", "if" ]
11992 },
11993 "oic.collection.links.arrayoflinks": {
11994     "properties": {
11995         "links": {
11996             "description": "A set of simple or individual OIC Links.",
11997             "type": "array",
11998             "items": {
11999                 "type": "object",
12000                 "properties": {
12001                     "href": {
12002                         "type": "string",
12003                         "maxLength": 256,
12004                         "description": "This is the target URI, it can be specified as a Relative Reference
12005 or fully-qualified URI.",
12006                         "format": "uri"
12007                     },
12008                     "rel": {
12009                         "oneOf": [
12010                             {
12011                                 "type": "array",
12012                                 "items": {
12013                                     "type": "string",
12014                                     "maxLength": 64
12015                                 }

```

```

12016         "minItems": 1,
12017         "default": ["hosts"]
12018     },
12019     {
12020         "type": "string",
12021         "maxLength": 64,
12022         "default": "hosts"
12023     }
12024 ],
12025     "description": "The relation of the target URI referenced by the link to the
context URI"
12026 },
12027     "rt": {
12028         "type": "array",
12029         "items": {
12030             "type": "string",
12031             "maxLength": 64
12032         },
12033     },
12034     "minItems": 1,
12035     "description": "Resource Type of the Resource"
12036 },
12037     "if": {
12038         "type": "array",
12039         "items": {
12040             "type": "string",
12041             "enum": ["oic.if.baseline", "oic.if.ll", "oic.if.b", "oic.if.rw", "oic.if.r",
12042 "oic.if.a", "oic.if.s" ]
12043         },
12044         "minItems": 1,
12045         "description": "The interface set supported by this resource"
12046     },
12047     "di": {
12048         "description": "The Device ID formatted according to IETF RFC 4122.",
12049         "type": "string",
12050         "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
12051 9]{12}$"
12052     },
12053     "p": {
12054         "description": "Specifies the framework policies on the Resource referenced by the
target URI",
12055         "type": "object",
12056         "properties": {
12057             "bm": {
12058                 "description": "Specifies the framework policies on the Resource referenced by
the target URI for e.g. observable and discoverable",
12059                 "type": "integer"
12060             }
12061         },
12062     },
12063     "required": ["bm"]
12064 },
12065     "title": {
12066         "type": "string",
12067         "maxLength": 64,
12068         "description": "A title for the link relation. Can be used by the UI to provide a
context."
12069     },
12070 },
12071     "anchor": {
12072         "type": "string",
12073         "maxLength": 256,
12074         "description": "This is used to override the context URI e.g. override the URI of
the containing collection.",
12075         "format": "uri"
12076     },
12077 },
12078     "ins": {
12079         "type": "integer",
12080         "description": "The instance identifier for this web link in an array of web links
- used in collections"
12081     },
12082 },
12083     "type": {
12084         "type": "array",
12085         "description": "A hint at the representation of the resource referenced by the
12086

```

```

12087 target URI. This represents the media types that are used for both accepting and emitting.",
12088     "items" : {
12089         "type": "string",
12090         "maxLength": 64
12091     },
12092     "minItems": 1,
12093     "default": "application/cbor"
12094 },
12095     "eps": {
12096         "type": "array",
12097         "description": "the Endpoint information of the target Resource",
12098         "items": {
12099             "type": "object",
12100             "properties": {
12101                 "ep": {
12102                     "type": "string",
12103                     "format": "uri",
12104                     "description": "Transport Protocol Suite + Endpoint Locator"
12105                 },
12106                 "pri": {
12107                     "type": "integer",
12108                     "minimum": 1,
12109                     "description": "The priority among multiple Endpoints"
12110                 }
12111             }
12112         }
12113     },
12114     "required": [ "href", "rt", "if" ]
12115 },
12116     "oic.core": {
12117         "type": "object",
12118         "properties": {
12119             "rt": {
12120                 "type": "array",
12121                 "items": {
12122                     "type": "string",
12123                     "maxLength": 64
12124                 },
12125                 "minItems": 1,
12126                 "readOnly": true,
12127                 "description": "Resource Type of the Resource"
12128             }
12129         }
12130     },
12131     "uuid": {
12132         "description": "Format pattern according to IETF RFC 4122.",
12133         "type": "string",
12134         "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{12}$"
12135     },
12136     "oic.collection.links": {
12137         "properties": {
12138             "links": {
12139                 "description": "A set of simple or individual OIC Links.",
12140                 "type": "array",
12141                 "items": {
12142                     "$ref": "#/definitions/oic.oic-link"
12143                 }
12144             }
12145         }
12146     },
12147     "oic.collection.properties": {
12148         "type": "object",
12149         "description": "A collection is a set of links along with additional properties to describe
12150 the collection itself",
12151         "properties": {
12152             "rts": {
12153                 "$ref": "#/definitions/oic.core/properties/rt",

```

```

12158         "description": "The list of allowable resource types (for Target and anchors)
12159 in links included in the collection"
12160     }
12161 }
12162 }
12163 },
12164 "type": "object",
12165 "allOf": [
12166   {"$ref": "oic.core-schema.json#/definitions/oic.core"},
12167   {"$ref": "#/definitions/oic.collection.properties"},
12168   {"$ref": "#/definitions/oic.collection.links"}
12169 ]
12170 }
12171

```

12172 **6.69 Delay Defrost**

12173 **6.69.1 Introduction**

12174 This resource describes the delay defrost function as defined by the US Energy Star Specifications.
 12175 See Energy Star Refrigerator Requirements Version 5 Section 4)G
 12176 (<https://www.energystar.gov/sites/default/files/specs//private/ENERGY%20STAR%20Final%20Version%205.0%20Residential%20Refrigerators%20and%20Freezers%20Program%20Requirement%20s.pdf>)
 12177 The status is a boolean indicating whether the function is on, if off then defrost is scheduled
 12178 as part of normal device operation. startTime, from oir.r.time.period (mandatory) is an ISO8601
 12179 encoded start time for the interval in which defrost shall not occur. stopTime, from oic.r.time.period
 12180 is an ISO8601 encoded stop time for the interval in which defrost shall not occur. interval, from
 12181 oic.r.time.period with additional range restrictions is the time in minutes of the period that starts at
 12182 starttime (if not present the default is 240). stopTime and interval are mutually exclusive; they
 12183 cannot both be present in a Resource instance
 12184

12185 **6.69.2 Example URI**

12186 /DelayDefrostResURI

12187 **6.69.3 Resource Type**

12188 The resource type (rt) is defined as: oic.r.delaydefrost.

12189 **6.69.4 RAML Definition**

```

12190 #%RAML 0.8
12191 title: OICDelayDefrost
12192 version: OCF_v1.0.0-2016____
12193 traits:
12194   - interface :
12195     queryParameters:
12196       if:
12197         enum: ["oic.if.a", "oic.if.baseline"]
12198
12199 /DelayDefrostResURI:
12200   description: |
12201     This resource describes the delay defrost function as defined by the US Energy Star
12202 Specifications.
12203     See Energy Star Refrigerator Requirements Version 5 Section 4)G
12204
12205 (https://www.energystar.gov/sites/default/files/specs//private/ENERGY%20STAR%20Final%20Version%205.0%20Residential%20Refrigerators%20and%20Freezers%20Program%20Requirements.pdf)
12206 The status is a boolean indicating whether the function is on, if off then defrost is scheduled
12207 as part of normal device operation.
12208   startTime, from oir.r.time.period (mandatory) is an ISO8601 encoded start time for the interval
12209 in which defrost shall not occur.
12210   stopTime, from oic.r.time.period is an ISO8601 encoded stop time for the interval in which
12211 defrost shall not occur.
12212   interval, from oic.r.time.period with additional range restrictions is the time in minutes of
12213 the period that starts at starttime (if not present the default is 240).
12214   stopTime and interval are mutually exclusive; they cannot both be present in a Resource
12215

```

```

12216 instance
12217
12218 is : ['interface']
12219 get:
12220 description: |
12221     Retrieves the current Delay Defrost function status
12222
12223 responses :
12224     200:
12225         body:
12226             application/json:
12227                 schema: /
12228                     {
12229                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.delaydefrost.json#",
12230                         "$schema": "http://json-schema.org/draft-04/schema#",
12231                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
12232 rights reserved.",
12233                         "title": "Delay Defrost",
12234                         "definitions": {
12235                             "oic.r.delaydefrost": {
12236                                 "type": "object",
12237                                 "allOf": [
12238                                     {
12239                                         "$ref": "oic.r.time.period.json#/definitions/oic.r.time.period"
12240                                     },
12241                                     {
12242                                         "properties": {
12243                                             "interval": {
12244                                                 "type": "integer",
12245                                                 "description": "Defrost interval as defined by Energy Star",
12246                                                 "minimum": 1,
12247                                                 "maximum": 1440,
12248                                                 "default": 240
12249                                             },
12250                                             "status": {
12251                                                 "type": "boolean",
12252                                                 "description": "Indicates whether any supported delay defrost function
12253 is active"
12254                                             }
12255                                         },
12256                                         "required": ["status"]
12257                                     }
12258                                 ]
12259                             }
12260                         },
12261                         "type": "object",
12262                         "allOf": [
12263                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
12264                             {"$ref": "#/definitions/oic.r.delaydefrost"}
12265                         ]
12266                     }
12267
12268                 example: /
12269                     {
12270                         "rt": ["oic.r.delaydefrost"],
12271                         "id": "unique_example_id",
12272                         "startTime": "06:00Z",
12273                         "status": false
12274                     }
12275
12276 post:
12277 description: |
12278     Activates the desired Delay Defrost functions
12279

```

```

12280     body:
12281     application/json:
12282         schema: /
12283         {
12284             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.delaydefrost.json#",
12285             "$schema": "http://json-schema.org/draft-04/schema#",
12286             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
12287 reserved.",
12288             "title": "Delay Defrost",
12289             "definitions": {
12290                 "oic.r.delaydefrost": {
12291                     "type": "object",
12292                     "allOf": [
12293                         {
12294                             "$ref": "oic.r.time.period.json#/definitions/oic.r.time.period"
12295                         },
12296                         {
12297                             "properties": {
12298                                 "interval": {
12299                                     "type": "integer",
12300                                     "description": "Defrost interval as defined by Energy Star",
12301                                     "minimum": 1,
12302                                     "maximum": 1440,
12303                                     "default": 240
12304                                 },
12305                                 "status": {
12306                                     "type": "boolean",
12307                                     "description": "Indicates whether any supported delay defrost function is
12308 active"
12309                                 }
12310                             },
12311                             "required": ["status"]
12312                         }
12313                     ]
12314                 }
12315             },
12316             "type": "object",
12317             "allOf": [
12318                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
12319                 {"$ref": "#/definitions/oic.r.delaydefrost"}
12320             ]
12321         }
12322
12323     example: /
12324     {
12325         "id": "unique_example_id",
12326         "status": true,
12327         "startTime": "06:00Z",
12328         "interval": 180
12329     }
12330
12331     responses :
12332     200:
12333         description: |
12334             Indicates that the DelayDefrost function was changed.
12335             The new representation may be provided in the response.
12336
12337     body:
12338     application/json:
12339         schema: /
12340         {
12341             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.delaydefrost.json#",
12342             "$schema": "http://json-schema.org/draft-04/schema#",
12343             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
12344 rights reserved.",

```

```

12345     "title": "Delay Defrost",
12346     "definitions": {
12347       "oic.r.delaydefrost": {
12348         "type": "object",
12349         "allOf": [
12350           {
12351             "$ref": "oic.r.time.period.json#/definitions/oic.r.time.period"
12352           },
12353           {
12354             "properties": {
12355               "interval": {
12356                 "type": "integer",
12357                 "description": "Defrost interval as defined by Energy Star",
12358                 "minimum": 1,
12359                 "maximum": 1440,
12360                 "default": 240
12361               },
12362               "status": {
12363                 "type": "boolean",
12364                 "description": "Indicates whether any supported delay defrost function
12365 is active"
12366               }
12367             },
12368             "required": ["status"]
12369           }
12370         ]
12371       }
12372     },
12373     "type": "object",
12374     "allOf": [
12375       {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
12376       {"$ref": "#/definitions/oic.r.delaydefrost"}
12377     ]
12378   }
12379

```

```

12380   example: /
12381     {
12382       "id": "unique_example_id",
12383       "status": true,
12384       "startTime": "06:00Z",
12385       "interval": 180
12386     }
12387

```

```

12388   403:
12389     description: |
12390       Indicates the update to the time properties was rejected.
12391     Reasons for rejection:
12392       invalid time entry
12393       The current unchanged representation may be provided in the response.
12394

```

```

12395   body:
12396     application/json:
12397       schema: /
12398         {
12399           "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.delaydefrost.json#",
12400           "$schema": "http://json-schema.org/draft-04/schema#",
12401           "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
12402 rights reserved.",
12403           "title": "Delay Defrost",
12404           "definitions": {
12405             "oic.r.delaydefrost": {
12406               "type": "object",
12407               "allOf": [
12408                 {
12409                   "$ref": "oic.r.time.period.json#/definitions/oic.r.time.period"
12410                 },
12411                 {

```



```

12412         "properties": {
12413             "interval": {
12414                 "type": "integer",
12415                 "description": "Defrost interval as defined by Energy Star",
12416                 "minimum": 1,
12417                 "maximum": 1440,
12418                 "default": 240
12419             },
12420             "status": {
12421                 "type": "boolean",
12422                 "description": "Indicates whether any supported delay defrost function
12423 is active"
12424             }
12425         },
12426         "required": ["status"]
12427     }
12428 ]
12429 }
12430 },
12431 "type": "object",
12432 "allOf": [
12433     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
12434     {"$ref": "#/definitions/oic.r.delaydefrost"}
12435 ]
12436 }
12437
12438 example: /
12439 {
12440     "id":         "unique_example_id",
12441     "status":     true,
12442     "startTime": "06:00Z",
12443     "interval":  180
12444 }
12445

```

6.69.5 Property Definition

Table 143 Delay Defrost Property Definitions

Property name	Value type	Mandatory	Access mode	Description
status	boolean	yes		Indicates whether any supported delay defrost function is active
interval	integer			Defrost interval as defined by Energy Star
stopTime	string			Stop time for the time period, if present interval cannot be present
startTime	string	yes		Start time for the time period
interval	integer			Time interval in minutes after the startTime, if present stopTime cannot be present

12448 **6.69.6 CRUDN behaviour**

12449 **Table 144 Delay Defrost CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/DelayDefrostResURI		get	post		

12450 **6.69.7 Referenced JSON schemas**

12451 **6.69.7.1 oic.r.time.period.json**

```

12452 {
12453   "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.time.period.json#",
12454   "$schema": "http://json-schema.org/draft-04/schema#",
12455   "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
12456 reserved.",
12457   "title": "Time Period",
12458   "definitions": {
12459     "oic.r.time.period": {
12460       "type": "object",
12461       "properties": {
12462         "startTime": {
12463           "type": "string",
12464           "description": "Start time for the time period"
12465         },
12466         "stopTime": {
12467           "type": "string",
12468           "description": "Stop time for the time period, if present interval cannot be present"
12469         },
12470         "interval": {
12471           "type": "integer",
12472           "description": "Time interval in minutes after the startTime, if present stopTime cannot
12473 be present"
12474         }
12475       },
12476       "required": ["startTime"]
12477     }
12478   },
12479   "type": "object",
12480   "allOf": [
12481     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
12482     {"$ref": "#/definitions/oic.r.time.period"}
12483   ]
12484 }
12485

```

12486 **6.70 Eco Mode**

12487 **6.70.1 Introduction**

12488 This resource specifies the supported and currently active Eco Mode of a Device The Resource
12489 uses the existing schema for Mode (oic.r.mode) with a restriction that the population of
12490 supportedmodes and modes Properties is restricted to the set of values given below:
12491 "disabled","enabled","notsupported" The adminforced Property indicates that the value has been
12492 set by another party (e.g. via some offboard Smart Energy interaction)

12493 **6.70.2 Example URI**

12494 /EcomodeResURI

12495 **6.70.3 Resource Type**

12496 The resource type (rt) is defined as: oic.r.ecomode.

12497 **6.70.4 RAML Definition**

```

12498 #%RAML 0.8
12499 title: OICEcomode
12500 version: OCF-v1.0.0-20160620
12501 traits:
12502   - interface :

```

```

12503     queryParameters:
12504         if:
12505             enum: ["oic.if.a", "oic.if.baseline"]
12506
12507 /EcomodeResURI:
12508     description: |
12509         This resource specifies the supported and currently active Eco Mode of a Device
12510         The Resource uses the existing schema for Mode (oic.r.mode) with a restriction that the
12511         population of supportedmodes and modes Properties is restricted to the set of values given below:
12512         "disabled","enabled","notsupported"
12513         The adminforced Property indicates that the value has been set by another party (e.g
12514         via some offboard Smart Energy interaction)
12515
12516     is : ['interface']
12517     get:
12518         responses :
12519             200:
12520                 body:
12521                     application/json:
12522                         schema: /
12523                             {
12524                                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.ecomode#",
12525                                 "$schema": "http://json-schema.org/draft-04/schema#",
12526                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
12527                                 rights reserved.",
12528                                 "title": "Eco Mode",
12529                                 "definitions": {
12530                                     "oic.r.ecomode": {
12531                                         "type": "object",
12532                                         "allOf": [
12533                                             {
12534                                                 "$ref": "oic.r.mode.json#/definitions/oic.r.mode"
12535                                             },
12536                                             {
12537                                                 "properties": {
12538                                                     "adminforced": {
12539                                                         "type": "boolean",
12540                                                         "readOnly": true,
12541                                                         "description": "Indicator that the current mode of operation has
12542                                                         been forced by admin action."
12543                                                     }
12544                                                 }
12545                                             }
12546                                         ]
12547                                     }
12548                                 },
12549                                 "type": "object",
12550                                 "allOf": [
12551                                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
12552                                     {"$ref": "#/definitions/oic.r.ecomode"}
12553                                 ],
12554                                 "required": ["supportedModes","modes"]
12555                             }
12556
12557                         example: /
12558                             {
12559                                 "rt":             ["oic.r.ecomode"],
12560                                 "id":             "unique_example_id",
12561                                 "supportedModes": ["disabled","enabled"],
12562                                 "modes":         ["disabled"],
12563                                 "adminforced":    false
12564                             }
12565
12566     post:

```

```

12567     body:
12568     application/json:
12569         schema: /
12570             {
12571                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.ecomode-Update#",
12572                 "$schema": "http://json-schema.org/draft-04/schema#",
12573                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
12574 reserved.",
12575                 "title": "Eco Mode",
12576                 "definitions": {
12577                     "oic.r.ecomode": {
12578                         "type": "object",
12579                         "allOf": [
12580                             {
12581                                 "$ref": "oic.r.mode-update.json#/definitions/oic.r.mode"
12582                             }
12583                         ]
12584                     }
12585                 },
12586                 "type": "object",
12587                 "allOf": [
12588                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
12589                     {"$ref": "#/definitions/oic.r.ecomode"}
12590                 ],
12591                 "required": ["modes"]
12592             }
12593
12594     example: /
12595         {
12596             "id": "unique_example_id",
12597             "modes": ["enabled"]
12598         }
12599
12600     responses :
12601     200:
12602     body:
12603     application/json:
12604         schema: /
12605             {
12606                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.ecomode-Update#",
12607                 "$schema": "http://json-schema.org/draft-04/schema#",
12608                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
12609 rights reserved.",
12610                 "title": "Eco Mode",
12611                 "definitions": {
12612                     "oic.r.ecomode": {
12613                         "type": "object",
12614                         "allOf": [
12615                             {
12616                                 "$ref": "oic.r.mode-update.json#/definitions/oic.r.mode"
12617                             }
12618                         ]
12619                     }
12620                 },
12621                 "type": "object",
12622                 "allOf": [
12623                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
12624                     {"$ref": "#/definitions/oic.r.ecomode"}
12625                 ],
12626                 "required": ["modes"]
12627             }
12628
12629     example: /
12630         {
12631             "id": "unique_example_id",

```

```

12632         "modes": ["enabled"]
12633     }
12634

```

6.70.5 Property Definition

Table 145 Eco Mode Property Definitions

Property name	Value type	Mandatory	Access mode	Description
adminforced	boolean		Read Only	Indicator that the current mode of operation has been forced by admin action.
supportedModes	array: see schema	yes	Read Only	Array of possible modes the device supports.
modes	array: see schema	yes		Array of the currently active mode(s)

6.70.6 CRUDN behaviour

Table 146 Eco Mode CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/EcomodeResURI		get	post		

6.70.7 Referenced JSON schemas

6.70.7.1 oic.r.mode.json

```

12641 {
12642   "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mode.json#",
12643   "$schema": "http://json-schema.org/draft-04/schema#",
12644   "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
12645 reserved.",
12646   "title": "Mode",
12647   "definitions": {
12648     "oic.r.mode": {
12649       "type": "object",
12650       "properties": {
12651         "supportedModes": {
12652           "type": "array",
12653           "readOnly": true,
12654           "description": "Array of possible modes the device supports.",
12655           "items": {
12656             "type": "string"
12657           }
12658         },
12659         "modes": {
12660           "type": "array",
12661           "description": "Array of the currently active mode(s)",
12662           "items": {
12663             "type": "string"
12664           }
12665         }
12666       }
12667     }
12668   },
12669   "type": "object",
12670   "allOf": [
12671     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
12672     {"$ref": "#/definitions/oic.r.mode"}
12673   ],
12674   "required": ["supportedModes", "modes"]
12675 }
12676

```

12677 **6.71 Heating Zone**

12678 **6.71.1 Introduction**

12679 This Resource provides information about the status of a heating zone of a Cook-Top. It describes
12680 the case of a Cook-Top whose zones can be activated dynamically (i.e. the device implements pot
12681 recognition). maxheatinglevel defines the max level for the heating zone heatinglevel is the current
12682 heating level of the zone For each element the value range is from 0 (indication that the zone is
12683 not heating) to maxheatinglevel,

12684 **6.71.2 Example URI**

12685 /HeatingZoneResURI

12686 **6.71.3 Resource Type**

12687 The resource type (rt) is defined as: oic.r.heatingzone.

12688 **6.71.4 RAML Definition**

12689 `##RAML 0.8`

12690 `title: OICHeatingZone`

12691 `version: OCF1.0-20160722`

12692 `traits:`

12693 `- interface :`

12694 `queryParameters:`

12695 `if:`

12696 `enum: ["oic.if.s", "oic.if.baseline"]`

12697

12698 `/HeatingZoneResURI:`

12699 `description: |`

12700 `This Resource provides information about the status of a heating zone of a Cook-Top.`

12701 `It describes the case of a Cook-Top whose zones can be activated dynamically (i.e`

12702 `the device implements pot recognition).`

12703 `maxheatinglevel defines the max level for the heating zone`

12704 `heatinglevel is the current heating level of the zone`

12705 `For each element the value range is from 0 (indication that the zone is not heating) to`

12706 `maxheatinglevel,`

12707

12708 `is : ['interface']`

12709 `get:`

12710 `description: |`

12711 `Retrieves the current heating zone information.`

12712

12713 `responses :`

12714 `200:`

12715 `body:`

12716 `application/json:`

12717 `schema: |`

12718 `{`

12719 `"id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.heatingzone.json#",`

12720 `"$schema": "http://json-schema.org/draft-04/schema#",`

12721 `"description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights`

12722 `reserved.",`

12723 `"title": "Heating Zone",`

12724 `"definitions": {`

12725 `"oic.r.heatingzone": {`

12726 `"type": "object",`

12727 `"properties": {`

12728 `"maxheatinglevel": {`

12729 `"type": "integer",`

12730 `"readOnly": true,`

12731 `"description": "Maximum heating level for the zone indicated."`

```

12732     },
12733     "heatinglevel": {
12734       "type": "integer",
12735       "readOnly": true,
12736       "description": "Current heating level for the zone indicated."
12737     }
12738   }
12739 }
12740 },
12741 "type": "object",
12742 "allOf": [
12743   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
12744   {"$ref": "#/definitions/oic.r.heatingzone"}
12745 ],
12746 "required": ["maxheatinglevel", "heatinglevel"]
12747 }
12748
12749 example: /
12750 {
12751   "rt":          ["oic.r.heatingzone"],
12752   "id":          "unique_example_id",
12753   "maxheatinglevel": 6,
12754   "heatinglevel": 0
12755 }
12756

```

6.71.5 Property Definition

Table 147 Heating Zone Property Definitions

Property name	Value type	Mandatory	Access mode	Description
heatinglevel	integer	yes	Read Only	Current heating level for the zone indicated.
maxheatinglevel	integer	yes	Read Only	Maximum heating level for the zone indicated.

6.71.6 CRUDN behaviour

Table 148 Heating Zone CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/HeatingZoneResURI		get			

6.72 Heating Zone Collection

6.72.1 Introduction

This Resource provides information about the status of the heating zones of a Cook-Top. It describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the device implements pot recognition). The resource is a collection of instances of oic.r.heatingzone detailing the individual cooktop zones

6.72.2 Example URI

/HeatingZoneResURI

6.72.3 Resource Type

The resource type (rt) is defined as: oic.r.heatingzonecollection.

6.72.4 RAML Definition

`##RAML 0.8`

`title: OICHeatingZone`

`version: OCF1.0-20160722`

```

12775 traits:
12776   - interface-ll :
12777     queryParameters:
12778       if:
12779         enum: ["oic.if.ll"]
12780   - interface-baseline :
12781     queryParameters:
12782       if:
12783         enum: ["oic.if.baseline"]
12784   - interface-all :
12785     queryParameters:
12786       if:
12787         enum: ["oic.if.ll", "oic.if.baseline"]
12788
12789 /HeatingZoneResURI?if=oic.if.baseline:
12790   description: |
12791     This Resource provides information about the status of the heating zones of a Cook-Top.
12792     It describes the case of a Cook-Top whose zones can be activated dynamically (i.e
12793     the device implements pot recognition).
12794     The resource is a collection of instances of oic.r.heatingzone detailing the individual cooktop
12795     zones
12796
12797   is : ['interface-baseline']
12798   get:
12799     description: |
12800       Retrieves the current heating zone information.
12801
12802   responses :
12803     200:
12804       body:
12805         application/json:
12806           schema: /
12807             {
12808               "id":
12809 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.heatingzonecollection.json#",
12810               "$schema": "http://json-schema.org/draft-04/schema#",
12811               "description" : "Copyright (c) 2017,2018 Open Connectivity Foundation, Inc. All
12812 rights reserved.",
12813               "title": "Heating Zone Collection",
12814               "definitions": {
12815                 "oic.r.heatingzonecollection": {
12816                   "type": "object",
12817                   "properties": {
12818                     "rt": {
12819                       "type": "array",
12820                       "minItems": 2,
12821                       "maxItems": 2,
12822                       "uniqueItems": true,
12823                       "items": {
12824                         "type": "string",
12825                         "enum": ["oic.r.heatingzonecollection", "oic.wk.col"]
12826                       }
12827                     },
12828                     "rts": {
12829                       "type": "array",
12830                       "minItems": 1,
12831                       "maxItems": 2,
12832                       "uniqueItems": true,
12833                       "items": {
12834                         "anyOf": [
12835                           {
12836                             "type" : "string",

```



```

12837         "enum": ["oic.r.heatingzone", "oic.r.value.conditional"]
12838     },
12839     {
12840         "type": "string",
12841         "enum": ["oic.r.heatingzone"]
12842     }
12843 ]
12844 }
12845 }
12846 }
12847 }
12848 },
12849 "type": "object",
12850 "allOf": [
12851     {"$ref": "oic.core.json#/definitions/oic.core"},
12852     {"$ref": "oic.collection-schema.json#/definitions/oic.collection.properties"},
12853     {"$ref": "oic.collection-
12854 schema.json#/definitions/oic.collection.links.arrayoflinks"},
12855     {"$ref": "#/definitions/oic.r.heatingzonecollection"}
12856 ]
12857 }
12858
12859 example: /
12860 {
12861     "rt": ["oic.r.heatingzonecollection", "oic.wk.col"],
12862     "id": "unique_example_id",
12863     "links": [
12864         {"href": "/myZone1ResURI", "rt": ["oic.r.heatingzone"], "if":
12865 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
12866         {"href": "/myZone2ResURI", "rt": ["oic.r.heatingzone"], "if":
12867 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
12868         {"href": "/myZone3ResURI", "rt": ["oic.r.heatingzone"], "if":
12869 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
12870         {"href": "/myZone4ResURI", "rt": ["oic.r.heatingzone"], "if":
12871 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
12872     ]
12873 }
12874

```

6.72.5 Property Definition

Table 149 Heating Zone Collection Property Definitions

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema			
rts	array: see schema			
links	array: see schema			A set of simple or individual OIC Links.
rt (links)	array: see schema	yes		Resource Type of the Resource
di (links)	string			The Device ID formatted according to IETF RFC 4122.
title (links)	string			A title for the link relation. Can be used by the UI to provide a context.
eps (links)	array: see schema			the Endpoint information of

				the target Resource
ins (links)	integer			The instance identifier for this web link in an array of web links - used in collections
p (links)	object: see schema			Specifies the framework policies on the Resource referenced by the target URI
href (links)	string	yes		This is the target URI, it can be specified as a Relative Reference or fully-qualified URI.
rel (links)	multiple types: see schema			The relation of the target URI referenced by the link to the context URI
type (links)	array: see schema			A hint at the representation of the resource referenced by the target URI. This represents the media types that are used for both accepting and emitting.
anchor (links)	string			This is used to override the context URI e.g. override the URI of the containing collection.
if (links)	array: see schema	yes		The interface set supported by this resource

12877 **6.72.6 CRUDN behaviour**

12878 **Table 150 Heating Zone Collection CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/HeatingZoneResURI		get			

12879 **6.72.7 Referenced JSON schemas**

12880 **6.72.7.1 oic.collection-schema.json**

```
12881 {
12882   "$schema": "http://json-schema.org/draft-04/schema#",
```

```

12883     "description" : "Copyright (c) 2016,2018 Open Connectivity Foundation, Inc. All rights
12884 reserved.",
12885     "id": "http://www.openconnectivity.org/ocf-apis/core/schemas/oic.collection-schema.json#",
12886     "title": "Collection",
12887     "definitions": {
12888       "oic.oic-link": {
12889         "type": "object",
12890         "properties": {
12891           "href": {
12892             "type": "string",
12893             "maxLength": 256,
12894             "description": "This is the target URI, it can be specified as a Relative Reference or
12895 fully-qualified URI.",
12896             "format": "uri"
12897           },
12898           "rel": {
12899             "oneOf": [
12900               {
12901                 "type": "array",
12902                 "items": {
12903                   "type": "string",
12904                   "maxLength": 64
12905                 },
12906                 "minItems": 1,
12907                 "default": ["hosts"]
12908               },
12909               {
12910                 "type": "string",
12911                 "maxLength": 64,
12912                 "default": "hosts"
12913               }
12914             ],
12915             "description": "The relation of the target URI referenced by the link to the context URI"
12916           },
12917           "rt": {
12918             "type": "array",
12919             "items": {
12920               "type": "string",
12921               "maxLength": 64
12922             },
12923             "minItems": 1,
12924             "description": "Resource Type of the Resource"
12925           },
12926           "if": {
12927             "type": "array",
12928             "items": {
12929               "type": "string",
12930               "enum": ["oic.if.baseline", "oic.if.ll", "oic.if.b", "oic.if.rw", "oic.if.r",
12931 "oic.if.a", "oic.if.s" ]
12932             },
12933             "minItems": 1,
12934             "description": "The interface set supported by this resource"
12935           },
12936           "di": {
12937             "description": "The Device ID formatted according to IETF RFC 4122.",
12938             "type": "string",
12939             "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
12940 9]{12}$"
12941           },
12942           "p": {
12943             "description": "Specifies the framework policies on the Resource referenced by the target
12944 URI",
12945             "type": "object",
12946             "properties": {
12947               "bm": {
12948                 "description": "Specifies the framework policies on the Resource referenced by the
12949 target URI for e.g. observable and discoverable",
12950                 "type": "integer"
12951               }
12952             },
12953             "required" : ["bm"]

```

```

12954     },
12955     "title": {
12956         "type": "string",
12957         "maxLength": 64,
12958         "description": "A title for the link relation. Can be used by the UI to provide a
12959 context."
12960     },
12961     "anchor": {
12962         "type": "string",
12963         "maxLength": 256,
12964         "description": "This is used to override the context URI e.g. override the URI of the
12965 containing collection.",
12966         "format": "uri"
12967     },
12968     "ins": {
12969         "type": "integer",
12970         "description": "The instance identifier for this web link in an array of web links - used
12971 in collections"
12972     },
12973     "type": {
12974         "type": "array",
12975         "description": "A hint at the representation of the resource referenced by the target
12976 URI. This represents the media types that are used for both accepting and emitting.",
12977         "items": {
12978             "type": "string",
12979             "maxLength": 64
12980         },
12981         "minItems": 1,
12982         "default": "application/cbor"
12983     },
12984     "eps": {
12985         "type": "array",
12986         "description": "the Endpoint information of the target Resource",
12987         "items": {
12988             "type": "object",
12989             "properties": {
12990                 "ep": {
12991                     "type": "string",
12992                     "format": "uri",
12993                     "description": "Transport Protocol Suite + Endpoint Locator"
12994                 },
12995                 "pri": {
12996                     "type": "integer",
12997                     "minimum": 1,
12998                     "description": "The priority among multiple Endpoints"
12999                 }
13000             }
13001         }
13002     },
13003     },
13004     "required": [ "href", "rt", "if" ]
13005 },
13006 "oic.collection.links.arrayoflinks": {
13007     "properties": {
13008         "links": {
13009             "description": "A set of simple or individual OIC Links.",
13010             "type": "array",
13011             "items": {
13012                 "type": "object",
13013                 "properties": {
13014                     "href": {
13015                         "type": "string",
13016                         "maxLength": 256,
13017                         "description": "This is the target URI, it can be specified as a Relative Reference
13018 or fully-qualified URI.",
13019                         "format": "uri"
13020                     },
13021                     "rel": {
13022                         "oneOf": [
13023                             {
13024

```

```

13025         "items": {
13026             "type": "string",
13027             "maxLength": 64
13028         },
13029         "minItems": 1,
13030         "default": ["hosts"]
13031     },
13032     {
13033         "type": "string",
13034         "maxLength": 64,
13035         "default": "hosts"
13036     }
13037 ],
13038 "description": "The relation of the target URI referenced by the link to the
13039 context URI"
13040 },
13041 "rt": {
13042     "type": "array",
13043     "items": {
13044         "type": "string",
13045         "maxLength": 64
13046     },
13047     "minItems": 1,
13048     "description": "Resource Type of the Resource"
13049 },
13050 "if": {
13051     "type": "array",
13052     "items": {
13053         "type": "string",
13054         "enum": ["oic.if.baseline", "oic.if.ll", "oic.if.b", "oic.if.rw", "oic.if.r",
13055 "oic.if.a", "oic.if.s" ]
13056     },
13057     "minItems": 1,
13058     "description": "The interface set supported by this resource"
13059 },
13060 "di": {
13061     "description": "The Device ID formatted according to IETF RFC 4122.",
13062     "type": "string",
13063     "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
13064 9]{12}$"
13065 },
13066 "p": {
13067     "description": "Specifies the framework policies on the Resource referenced by the
13068 target URI",
13069     "type": "object",
13070     "properties": {
13071         "bm": {
13072             "description": "Specifies the framework policies on the Resource referenced by
13073 the target URI for e.g. observable and discoverable",
13074             "type": "integer"
13075         }
13076     },
13077     "required": ["bm"]
13078 },
13079 "title": {
13080     "type": "string",
13081     "maxLength": 64,
13082     "description": "A title for the link relation. Can be used by the UI to provide a
13083 context."
13084 },
13085 "anchor": {
13086     "type": "string",
13087     "maxLength": 256,
13088     "description": "This is used to override the context URI e.g. override the URI of
13089 the containing collection.",
13090     "format": "uri"
13091 },
13092 "ins": {
13093     "type": "integer",
13094     "description": "The instance identifier for this web link in an array of web links
13095 - used in collections"

```

```

13096     },
13097     "type": {
13098         "type": "array",
13099         "description": "A hint at the representation of the resource referenced by the
13100 target URI. This represents the media types that are used for both accepting and emitting.",
13101         "items": {
13102             "type": "string",
13103             "maxLength": 64
13104         },
13105         "minItems": 1,
13106         "default": "application/cbor"
13107     },
13108     "eps": {
13109         "type": "array",
13110         "description": "the Endpoint information of the target Resource",
13111         "items": {
13112             "type": "object",
13113             "properties": {
13114                 "ep": {
13115                     "type": "string",
13116                     "format": "uri",
13117                     "description": "Transport Protocol Suite + Endpoint Locator"
13118                 },
13119                 "pri": {
13120                     "type": "integer",
13121                     "minimum": 1,
13122                     "description": "The priority among multiple Endpoints"
13123                 }
13124             }
13125         }
13126     },
13127     "required": [ "href", "rt", "if" ]
13128 }
13129 }
13130 }
13131 },
13132 },
13133 "oic.core": {
13134     "type": "object",
13135     "properties": {
13136         "rt": {
13137             "type": "array",
13138             "items": {
13139                 "type": "string",
13140                 "maxLength": 64
13141             },
13142             "minItems": 1,
13143             "readOnly": true,
13144             "description": "Resource Type of the Resource"
13145         }
13146     }
13147 },
13148 "uuid": {
13149     "description": "Format pattern according to IETF RFC 4122.",
13150     "type": "string",
13151     "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{12}$"
13152 },
13153     "oic.collection.links": {
13154         "properties": {
13155             "links": {
13156                 "description": "A set of simple or individual OIC Links.",
13157                 "type": "array",
13158                 "items": {
13159                     "$ref": "#/definitions/oic.oic-link"
13160                 }
13161             }
13162         }
13163     },
13164 "oic.collection.properties": {
13165     "type": "object",
13166     "description": "A collection is a set of links along with additional properties to describe

```

```

13167 the collection itself",
13168     "properties": {
13169         "rts": {
13170             "$ref": "#/definitions/oic.core/properties/rt",
13171             "description": "The list of allowable resource types (for Target and anchors)
13172 in links included in the collection"
13173         }
13174     }
13175 },
13176 },
13177 "type": "object",
13178 "allOf": [
13179     {"$ref": "oic.core-schema.json#/definitions/oic.core"},
13180     {"$ref": "#/definitions/oic.collection.properties"},
13181     {"$ref": "#/definitions/oic.collection.links"}
13182 ]
13183 }
13184

```

13185 **6.73 Selectable Levels**

13186 **6.73.1 Introduction**

13187 This Resource provides a set of device defined 'levels' that can be selected for an operation. For
13188 example where a humidifier has a discrete set that model different humidity levels that can be set.
13189 availablelevels is an array of the levels that can be selected, these can be a number or an integer.
13190 targetlevel is the level that has currently been selected and is written to in order to select a new
13191 level. When retrieved the targetlevel provides the actual value that has been selected.

13192 **6.73.2 Example URI**

13193 /SelectableLevelsResURI

13194 **6.73.3 Resource Type**

13195 The resource type (rt) is defined as: oic.r.selectablelevels.

13196 **6.73.4 RAML Definition**

```

13197 #%RAML 0.8
13198 title: OICSelectableLevels
13199 version: v1.1.0-20160519
13200 traits:
13201   - interface :
13202       queryParameters:
13203         if:
13204             enum: ["oic.if.a", "oic.if.baseline"]
13205
13206 /SelectableLevelsResURI:
13207     description: |
13208         This Resource provides a set of device defined 'levels' that can be selected for an operation.
13209         For example where a humidifier has a discrete set that model different humidity levels that can
13210 be set.
13211         availablelevels is an array of the levels that can be selected, these can be a number or an
13212 integer.
13213         targetlevel is the level that has currently been selected and is written to in order to select
13214 a new level.
13215         When retrieved the targetlevel provides the actual value that has been selected.
13216
13217     is : ['interface']
13218     get:
13219         description: |
13220             Retrieves the current selectable levels.
13221
13222     responses :

```

```

13223     200:
13224     body:
13225         application/json:
13226         schema: /
13227             {
13228                 "id":
13229 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.selectablelevels.json#",
13230                 "$schema": "http://json-schema.org/draft-04/schema#",
13231                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
13232 rights reserved.",
13233                 "title": "SelectableLevels",
13234                 "definitions": {
13235                     "oic.r.selectablelevels": {
13236                         "type": "object",
13237                         "properties": {
13238                             "availablelevels": {
13239                                 "type": "array",
13240                                 "description": "Set of levels from which one can be selected",
13241                                 "readOnly": true,
13242                                 "items": {
13243                                     "anyOf": [
13244                                         {"type": "integer"},
13245                                         {"type": "number"}
13246                                     ]
13247                                 }
13248                             },
13249                             "targetlevel": {
13250                                 "anyOf": [
13251                                     {"type": "integer"},
13252                                     {"type": "number"}
13253                                 ],
13254                                 "description": "The target level from the available selectable set"
13255                             }
13256                         }
13257                     },
13258                 },
13259                 "type": "object",
13260                 "allOf": [
13261                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
13262                     {"$ref": "#/definitions/oic.r.selectablelevels"}
13263                 ],
13264                 "required": ["availablelevels","targetlevel"]
13265             }
13266
13267         example: /
13268             {
13269                 "rt": ["oic.r.selectablelevels"],
13270                 "id": "unique_example_id",
13271                 "availablelevels": [0,2,4,6,8],
13272                 "targetlevel": 2
13273             }
13274
13275     post:
13276         description: |
13277             Sets the current level from the set that is selectable
13278
13279     body:
13280         application/json:
13281         schema: /
13282             {
13283                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.selectablelevels.json#",
13284                 "$schema": "http://json-schema.org/draft-04/schema#",
13285                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
13286 reserved.",
13287                 "title": "SelectableLevels",

```



```

13288     "definitions": {
13289         "oic.r.selectablelevels": {
13290             "type": "object",
13291             "properties": {
13292                 "targetlevel": {
13293                     "type": ["integer", "number"],
13294                     "description": "The target level from the available selectable set"
13295                 }
13296             }
13297         },
13298     },
13299     "type": "object",
13300     "allOf": [
13301         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
13302         {"$ref": "#/definitions/oic.r.selectablelevels"}
13303     ],
13304     "required": ["targetlevel"]
13305 }
13306
13307 example: /
13308 {
13309     "targetlevel": 4
13310 }
13311
13312 responses :
13313 200:
13314     body:
13315     application/json:
13316         schema: /
13317             {
13318                 "id":
13319 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.selectablelevels.json#",
13320                 "$schema": "http://json-schema.org/draft-04/schema#",
13321                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
13322 rights reserved.",
13323                 "title": "SelectableLevels",
13324                 "definitions": {
13325                     "oic.r.selectablelevels": {
13326                         "type": "object",
13327                         "properties": {
13328                             "targetlevel": {
13329                                 "type": ["integer", "number"],
13330                                 "description": "The target level from the available selectable set"
13331                             }
13332                         }
13333                     }
13334                 },
13335                 "type": "object",
13336                 "allOf": [
13337                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
13338                     {"$ref": "#/definitions/oic.r.selectablelevels"}
13339                 ],
13340                 "required": ["targetlevel"]
13341             }
13342
13343 example: /
13344 {
13345     "targetlevel": 4
13346 }
13347
13348 403:
13349     description: |
13350         Generated by a Server when an attempt is made to update to a targetlevel that is not in
13351 the set of availablelevels
13352

```

```

13353     body:
13354         application/json:
13355             schema: /
13356                 {
13357                     "id":
13358 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.selectablelevels.json#",
13359                     "$schema": "http://json-schema.org/draft-04/schema#",
13360                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
13361 rights reserved.",
13362                     "title": "SelectableLevels",
13363                     "definitions": {
13364                         "oic.r.selectablelevels": {
13365                             "type": "object",
13366                             "properties": {
13367                                 "availablelevels": {
13368                                     "type": "array",
13369                                     "description": "Set of levels from which one can be selected",
13370                                     "readOnly": true,
13371                                     "items": {
13372                                         "anyOf": [
13373                                             {"type": "integer"},
13374                                             {"type": "number"}
13375                                         ]
13376                                     }
13377                                 },
13378                                 "targetlevel": {
13379                                     "anyOf": [
13380                                         {"type": "integer"},
13381                                         {"type": "number"}
13382                                     ],
13383                                     "description": "The target level from the available selectable set"
13384                                 }
13385                             }
13386                         }
13387                     },
13388                     "type": "object",
13389                     "allOf": [
13390                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
13391                         {"$ref": "#/definitions/oic.r.selectablelevels"}
13392                     ],
13393                     "required": ["availablelevels", "targetlevel"]
13394                 }
13395
13396             example: /
13397                 {
13398                     "id": "unique_example_id",
13399                     "availablelevels": [0,2,4,6,8],
13400                     "targetlevel": 2
13401                 }
13402

```

6.73.5 Property Definition

Table 151 Selectable Levels Property Definitions

Property name	Value type	Mandatory	Access mode	Description
targetlevel	multiple types: see schema	yes		The target level from the available selectable set
availablelevels	array: see schema	yes	Read Only	Set of levels from which one can be selected

13405 **6.73.6 CRUDN behaviour**

13406 **Table 152 Selectable Levels CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/SelectableLevelsResURI		get	post		

13407
13408

13409 **6.74 Value Conditional**

13410 **6.74.1 Introduction**

13411 This resource specifies conditions that can be applied to an observed value in any Resource.
 13412 These conditions are applied by the server exposing the Resource to any generated notifications
 13413 because of subscriptions to the Resource. A unicast RETRIEVE to the Resource will receive the
 13414 most recent value; which may not be the most recent notified value. A server exposes this
 13415 Resource in association with the Resource conveying the observed value. This is done by means
 13416 of a new Resource instance with an RT of ["oic.r.<thing being observed>", "oic.r.value.conditional"],
 13417 e.g ["oic.r.temperature", "oic.r.value.conditional"]. Please see Section 5.7.1 of the published OCF
 13418 Resource Type Specification for more details. The threshold is the amount by which the thing being
 13419 observed must change before a notification is sent. The minnotifyperiod is the minimum time in ms
 13420 (milliseconds) that must elapse before a notification is sent. If the maxnotifyperiod (time in ms
 13421 (milliseconds)) elapses then a notification must be sent. The maxnotifyperiod timer resets each
 13422 time a notification is sent. A value of '0' for any of threshold, minnotifyperiod or maxnotifyperiod
 13423 means that the capability is supported but not active.

13424 **6.74.2 Example URI**

13425 /ValueConditionalResURI

13426 **6.74.3 Resource Type**

13427 The resource type (rt) is defined as: oic.r.value.conditional.

13428 **6.74.4 RAML Definition**

```

13429 #%RAML 0.8
13430 title: OICValueConditional
13431 version: v1.1.0-20161031
13432 traits:
13433   - interface :
13434     queryParameters:
13435       if:
13436         enum: ["oic.if.rw", "oic.if.baseline"]
13437
13438 /ValueConditionalResURI:
13439   description: |
13440     This resource specifies conditions that can be applied to an observed value in any Resource.
13441     These conditions are applied by the server exposing the Resource to any generated notifications
13442     because of subscriptions to the Resource.
13443     A unicast RETRIEVE to the Resource will receive the most recent value; which may not be the
13444     most recent notified value.
13445     A server exposes this Resource in association with the Resource conveying the observed value.
13446     This is done by means of a new Resource instance with an RT of ["oic.r.<thing being observed>",
13447     "oic.r.value.conditional"], e.g ["oic.r.temperature", "oic.r.value.conditional"]
13448     Please see Section 5.7.1 of the published OCF Resource Type Specification for more details.
13449     The threshold is the amount by which the thing being observed must change before a notification
13450     is sent.
13451     The minnotifyperiod is the minimum time in ms (milliseconds) that must elapse before a
13452     notification is sent.
13453     If the maxnotifyperiod (time in ms (milliseconds)) elapses then a notification must be sent.
13454     The maxnotifyperiod timer resets each time a notification is sent.
13455     A value of '0' for any of threshold, minnotifyperiod or maxnotifyperiod means that the
  
```

```

13456 capability is supported but not active.
13457
13458   is : ['interface']
13459   get:
13460     responses :
13461       200:
13462         body:
13463           application/json:
13464             schema: /
13465               {
13466                 "id":
13467 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.value.conditional.json#",
13468                 "$schema": "http://json-schema.org/draft-04/schema#",
13469                 "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
13470 reserved.",
13471                 "title": "Value Conditional",
13472                 "definitions": {
13473                   "oic.r.value.conditional": {
13474                     "type": "object",
13475                     "anyOf": [
13476                       {"required": ["threshold"]},
13477                       {"required": ["minnotifyperiod"]},
13478                       {"required": ["maxnotifyperiod"]}
13479                     ],
13480                     "properties": {
13481                       "threshold": {
13482                         "type": "number",
13483                         "minimum": 0,
13484                         "description": "Amount by which the measured value must change before a
13485 notification is sent."
13486                       },
13487                       "minnotifyperiod": {
13488                         "type": "integer",
13489                         "minimum": 0,
13490                         "description": "Minimum elapsed time in ms before a notification is sent."
13491                       },
13492                       "maxnotifyperiod": {
13493                         "type": "integer",
13494                         "minimum": 0,
13495                         "description": "Maximum elapsed time in ms before a notification must be
13496 sent."
13497                       }
13498                     }
13499                   }
13500                 },
13501                 "type": "object",
13502                 "allOf": [
13503                   {"$ref": "oic.core.json#/definitions/oic.core"},
13504                   {"$ref": "#/definitions/oic.r.value.conditional"}
13505                 ]
13506             }
13507
13508           example: /
13509             {
13510               "rt":          ["oic.r.value.conditional"],
13511               "id":          "unique_example_id",
13512               "threshold":   2,
13513               "minnotifyperiod": 2000,
13514               "maxnotifyperiod": 5000
13515             }
13516
13517   post:
13518     description: |
13519     body:
13520     application/json:

```

```

13521     schema: valueconditional
13522     example: |
13523     {
13524         "threshold":      2,
13525         "minnotifyperiod": 1500
13526     }
13527
13528     responses :
13529         200:
13530             body:
13531                 application/json:
13532                     schema: /
13533                         {
13534                             "id":
13535 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.value.conditional.json#",
13536                             "$schema": "http://json-schema.org/draft-04/schema#",
13537                             "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
13538 reserved.",
13539                             "title": "Value Conditional",
13540                             "definitions": {
13541                                 "oic.r.value.conditional": {
13542                                     "type": "object",
13543                                     "anyOf": [
13544                                         {"required": ["threshold"]},
13545                                         {"required": ["minnotifyperiod"]},
13546                                         {"required": ["maxnotifyperiod"]}
13547                                     ],
13548                                     "properties": {
13549                                         "threshold": {
13550                                             "type": "number",
13551                                             "minimum": 0,
13552                                             "description": "Amount by which the measured value must change before a
13553 notification is sent."
13554                                         },
13555                                         "minnotifyperiod": {
13556                                             "type": "integer",
13557                                             "minimum": 0,
13558                                             "description": "Minimum elapsed time in ms before a notification is sent."
13559                                         },
13560                                         "maxnotifyperiod": {
13561                                             "type": "integer",
13562                                             "minimum": 0,
13563                                             "description": "Maximum elapsed time in ms before a notification must be
13564 sent."
13565                                         }
13566                                     }
13567                                 }
13568                             },
13569                             "type": "object",
13570                             "allOf": [
13571                                 {"$ref": "oic.core.json#/definitions/oic.core"},
13572                                 {"$ref": "#/definitions/oic.r.value.conditional"}
13573                             ]
13574                         }
13575
13576     example: /
13577         {
13578             "threshold":      2,
13579             "minnotifyperiod": 1500
13580         }
13581

```

6.74.5 Property Definition

Table 153 Value Conditional Property Definitions

Property name	Value type	Mandatory	Access mode	Description
---------------	------------	-----------	-------------	-------------

threshold	number	yes		Amount by which the measured value must change before a notification is sent.
maxnotifyperiod	integer	yes		Maximum elapsed time in ms before a notification must be sent.
minnotifyperiod	integer	yes		Minimum elapsed time in ms before a notification is sent.

13584 **6.74.6 CRUDN behaviour**

13585 **Table 154 Value Conditional CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/ValueConditionalResURI		get	post		

13586 **6.75 Colour Space Coordinates**

13587 **6.75.1 Introduction**

13588 This resource describes the colour using colour space co-ordinates. csc is the colour space
 13589 coordinates in CIE colour space. The first item in the array is the X coordinate. The second item
 13590 in the array is the Y coordinate. If precision (from oic.r.baseresource) is provided it applies to
 13591 both the X and Y coordinates.

13592 **6.75.2 Example URI**

13593 /example/ColourSpaceCoordinatesResURI

13594 **6.75.3 Resource Type**

13595 The resource type (rt) is defined as: oic.r.colour.csc.

13596 **6.75.4 RAML Definition**

```

13597 #%RAML 0.8
13598 title: OCFColourCSC
13599 version: OCFv1.1.0-2017
13600 traits:
13601   - interface-a :
13602     queryParameters:
13603       if:
13604         enum: ["oic.if.a"]
13605   - interface-all :
13606     queryParameters:
13607       if:
13608         enum: ["oic.if.a", "oic.if.baseline"]
13609
13610 /example/ColourSpaceCoordinatesResURI:
13611   description: |
13612     This resource describes the colour using colour space co-ordinates.
13613     csc is the colour space coordinates in CIE colour space.
13614     The first item in the array is the X coordinate.
13615     The second item in the array is the Y coordinate.
  
```

```

13616         If precision (from oic.r.baseresource) is provided it applies to both the X and Y
13617 coordinates.
13618
13619     get:
13620         description: |
13621             Provides the colour using colour space coordinates.
13622
13623     is : ['interface-all']
13624     responses :
13625         200:
13626             body:
13627                 application/json:
13628                     schema: /
13629                         {
13630                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.csc.json#",
13631                             "$schema": "http://json-schema.org/draft-04/schema#",
13632                             "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
13633 reserved.",
13634                             "title": "Colour Space Coordinates",
13635                             "definitions": {
13636                                 "oic.r.colour.csc": {
13637                                     "type": "object",
13638                                     "properties": {
13639                                         "csc": {
13640                                             "type": "array",
13641                                             "description": "X and Y coordinates of the colour in CIE colour space",
13642                                             "minItems": 2,
13643                                             "maxItems": 2,
13644                                             "items": {
13645                                                 "type": "number",
13646                                                 "minimum": 0,
13647                                                 "maximum": 1
13648                                             }
13649                                         }
13650                                     }
13651                                 },
13652                             "type": "object",
13653                             "allOf": [
13654                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
13655                                 {"$ref": "#/definitions/oic.r.colour.csc"}
13656                             ],
13657                             "required": [ "csc" ]
13658                         }
13659
13660                     example: /
13661                         {
13662                             "rt":          ["oic.r.colour.csc"],
13663                             "id":          "unique_example_id",
13664                             "csc":        [0.41,0.51]
13665                         }
13666
13667
13668
13669     post:
13670         description: |
13671             Sets current colour space coordinates
13672
13673     is : ['interface-a']
13674     body:
13675         application/json:
13676             schema: /

```

```

13677     {
13678         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.csc.json#",
13679         "$schema": "http://json-schema.org/draft-04/schema#",
13680         "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
13681 reserved.",
13682         "title": "Colour Space Coordinates",
13683         "definitions": {
13684             "oic.r.colour.csc": {
13685                 "type": "object",
13686                 "properties": {
13687                     "csc": {
13688                         "type": "array",
13689                         "description": "X and Y coordinates of the colour in CIE colour space",
13690                         "minItems": 2,
13691                         "maxItems": 2,
13692                         "items": {
13693                             "type": "number",
13694                             "minimum": 0,
13695                             "maximum": 1
13696                         }
13697                     }
13698                 }
13699             }
13700         },
13701         "type": "object",
13702         "allOf": [
13703             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
13704             {"$ref": "#/definitions/oic.r.colour.csc"}
13705         ],
13706         "required": [ "csc" ]
13707     }
13708 }
13709
13710 example: /
13711 {
13712     "id":          "unique_example_id",
13713     "csc":         [0.40,0.70]
13714 }
13715
13716 responses :
13717 200:
13718   body:
13719     application/json:
13720       schema: /
13721         {
13722             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.csc.json#",
13723             "$schema": "http://json-schema.org/draft-04/schema#",
13724             "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
13725 reserved.",
13726             "title": "Colour Space Coordinates",
13727             "definitions": {
13728                 "oic.r.colour.csc": {
13729                     "type": "object",
13730                     "properties": {
13731                         "csc": {
13732                             "type": "array",
13733                             "description": "X and Y coordinates of the colour in CIE colour space",
13734                             "minItems": 2,
13735                             "maxItems": 2,
13736                             "items": {
13737                                 "type": "number",
13738                                 "minimum": 0,
13739                                 "maximum": 1
13740                             }
13741                         }
13742                     }
13743                 }
13744             }
13745         }

```



```

13744     },
13745     "type": "object",
13746     "allOf": [
13747       { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
13748       { "$ref": "#/definitions/oic.r.colour.csc" }
13749     ],
13750     "required": [ "csc" ]
13751   }
13752 }
13753
13754   example: /
13755     {
13756       "id":           "unique_example_id",
13757       "csc":         [0.40,0.70]
13758     }
13759

```

6.75.5 Property Definition

Table 155 Colour Space Coordinates Property Definitions

Property name	Value type	Mandatory	Access mode	Description
csc	array: see schema	yes		X and Y coordinates of the colour in CIE colour space

6.75.6 CRUDN behaviour

Table 156 Colour Space Coordinates CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/example/ColourSpaceCoordinatesResURI		get	post		

6.76 Colour Temperature

6.76.1 Introduction

This resource describes the colour using colour temperature conventions. ct is the Mired colour temperature. The equivalent value in Kelvin is obtained by $\text{Colour Temp(K)} = 1,000,000/\text{Colour Temp(Mired)}$

6.76.2 Example URI

/example/ColourTemperatureResURI

6.76.3 Resource Type

The resource type (rt) is defined as: oic.r.colour.colourtemperature.

6.76.4 RAML Definition

```

13774 #%RAML 0.8
13775 title: OCFColourTemperature
13776 version: OCFv1.0-2017
13777 traits:
13778   - interface-a :
13779     queryParameters:
13780       if:
13781         enum: ["oic.if.a"]
13782   - interface-all :
13783     queryParameters:
13784       if:
13785         enum: ["oic.if.a", "oic.if.baseline"]

```

```

13787 /example/ColourTemperatureResURI:
13788   description: |
13789     This resource describes the colour using colour temperature conventions.
13790     ct is the Mired colour temperature.
13791     The equivalent value in Kelvin is obtained by Colour Temp(K) = 1,000,000/Colour Temp(Mired)
13792
13793   get:
13794     description: |
13795       Provides the colour using colour temperature conventions.
13796
13797     is : ['interface-all']
13798     responses :
13799       200:
13800         body:
13801           application/json:
13802             schema: /
13803               {
13804                 "id":
13805 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.colourtemperature.json#",
13806                 "$schema": "http://json-schema.org/draft-04/schema#",
13807                 "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
13808 reserved.",
13809                 "title": "Colour Temperature",
13810                 "definitions": {
13811                   "oic.r.colour.colourtemperature": {
13812                     "type": "object",
13813                     "properties": {
13814                       "ct": {
13815                         "type": "integer",
13816                         "description": "Mired colour temperature",
13817                         "minimum": 0
13818                       }
13819                     }
13820                   }
13821                 },
13822                 "type": "object",
13823                 "allOf": [
13824                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
13825                   {"$ref": "#/definitions/oic.r.colour.colourtemperature"}
13826                 ],
13827                 "required": [ "ct" ]
13828               }
13829
13830           example: /
13831             {
13832               "rt":      ["oic.r.colour.colourtemperature"],
13833               "id":      "unique_example_id",
13834               "ct":      457
13835             }
13836
13837   post:
13838     description: |
13839       Sets current colour temperature value
13840
13841     is : ['interface-a']
13842     body:
13843       application/json:
13844         schema: /
13845           {
13846             "id":
13847 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.colourtemperature.json#",
13848             "$schema": "http://json-schema.org/draft-04/schema#",

```

```

13849         "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
13850 reserved.",
13851         "title": "Colour Temperature",
13852         "definitions": {
13853             "oic.r.colour.colourtemperature": {
13854                 "type": "object",
13855                 "properties": {
13856                     "ct": {
13857                         "type": "integer",
13858                         "description": "Mired colour temperature",
13859                         "minimum": 0
13860                     }
13861                 }
13862             },
13863         },
13864         "type": "object",
13865         "allOf": [
13866             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
13867             { "$ref": "#/definitions/oic.r.colour.colourtemperature" }
13868         ],
13869         "required": [ "ct" ]
13870     }
13871
13872     example: /
13873     {
13874         "id":          "unique_example_id",
13875         "ct":          457
13876     }
13877
13878     responses :
13879     200:
13880         body:
13881             application/json:
13882                 schema: /
13883                 {
13884                     "id":
13885 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.colourtemperature.json#",
13886                     "$schema": "http://json-schema.org/draft-04/schema#",
13887                     "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
13888 reserved.",
13889                     "title": "Colour Temperature",
13890                     "definitions": {
13891                         "oic.r.colour.colourtemperature": {
13892                             "type": "object",
13893                             "properties": {
13894                                 "ct": {
13895                                     "type": "integer",
13896                                     "description": "Mired colour temperature",
13897                                     "minimum": 0
13898                                 }
13899                             }
13900                         }
13901                     },
13902                     "type": "object",
13903                     "allOf": [
13904                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
13905                         { "$ref": "#/definitions/oic.r.colour.colourtemperature" }
13906                     ],
13907                     "required": [ "ct" ]
13908                 }
13909
13910     example: /
13911     {
13912         "id":          "unique_example_id",
13913         "ct":          467

```

13914 }
13915

13916 6.76.5 Property Definition

13917 **Table 157 Colour Temperature Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
ct	integer	yes		Mired colour temperature

13918 6.76.6 CRUDN behaviour

13919 **Table 158 Colour Temperature CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/example/ColourTemperatureResURI		get	post		

13920 6.77 Colour Hue and Saturation

13921 6.77.1 Introduction

13922 This resource describes the colour using hue-saturation conventions. hue is the hue angle, it is a
13923 number value as defined by the CIECAM02 model definition (see reference [CIE CIE159:2004]).
13924 A Device that does not support fractional hue angles can provide integer values. If precision (from
13925 oic.r.baseresource) is provided it applies to the hue angle. saturation is an integer value as defined
13926 by the CIECAM02 model definition (see reference [CIE CIE159:2004]). saturation can be
13927 converted to a percentage by saturation/maximumsaturation X 100; where maximumsaturation is
13928 32767 if the Property itself is not present. maximumsaturation is the upper bound on the saturation
13929 supported by the Device. If not present the maximum value for saturation is 32767.

13930 6.77.2 Example URI

13931 /example/ColourHueSaturationResURI

13932 6.77.3 Resource Type

13933 The resource type (rt) is defined as: oic.r.colour.hs.

13934 6.77.4 RAML Definition

13935 `##RAML 0.8`

13936 `title: OCFColourHueSaturation`

13937 `version: v1.0-2017`

13938 `traits:`

13939 `- interface-a :`
13940 `queryParameters:`

13941 `if:`
13942 `enum: ["oic.if.a"]`

13943 `- interface-all :`
13944 `queryParameters:`

13945 `if:`
13946 `enum: ["oic.if.a", "oic.if.baseline"]`

13947
13948 `/example/ColourHueSaturationResURI:`

13949 `description: |`

13950 `This resource describes the colour using hue-saturation conventions.`
13951 `hue is the hue angle, it is a number value as defined by the CIECAM02 model definition (see`
13952 `reference [CIE CIE159:2004]).`

13953 `A Device that does not support fractional hue angles can provide integer values.`

13954 `If precision (from oic.r.baseresource) is provided it applies to the hue angle.`

13955 `saturation is an integer value as defined by the CIECAM02 model definition (see reference [CIE`
13956 `CIE159:2004]).`

13957 `saturation can be converted to a percentage by saturation/maximumsaturation X 100; where`
13958 `maximumsaturation is 32767 if the Property itself is not present.`

```

13959     maximumsaturation is the upper bound on the saturation supported by the Device.
13960     If not present the maximum value for saturation is 32767.
13961
13962     get:
13963         description: |
13964             Provides the colour using hue and saturation conventions.
13965
13966     is : ['interface-all']
13967     responses :
13968         200:
13969             body:
13970                 application/json:
13971                     schema: /
13972                         {
13973                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.hs.json#",
13974                             "$schema": "http://json-schema.org/draft-04/schema#",
13975                             "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
13976 reserved.",
13977                             "title": "Colour Hue and Saturation",
13978                             "definitions": {
13979                                 "oic.r.colour.hs": {
13980                                     "type": "object",
13981                                     "properties": {
13982                                         "hue": {
13983                                             "type": "number",
13984                                             "description": "Hue angle as defined by the CIECAM02 model definition",
13985                                             "minimum": 0.0,
13986                                             "maximum": 360.0
13987                                         },
13988                                         "saturation": {
13989                                             "type": "integer",
13990                                             "description": "Saturation as defined by the CIECAM02 model definition",
13991                                             "minimum": 0,
13992                                             "maximum": 32767
13993                                         },
13994                                         "maximumsaturation": {
13995                                             "type": "integer",
13996                                             "description": "Maximum supported value of Saturation for this Device",
13997                                             "readOnly": true,
13998                                             "minimum": 0,
13999                                             "maximum": 32767
14000                                         }
14001                                     }
14002                                 },
14003                             "type": "object",
14004                             "allOf": [
14005                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
14006                                 {"$ref": "#/definitions/oic.r.colour.hs"}
14007                             ],
14008                             "required": [ "hue", "saturation" ]
14009                         }
14010
14011                     example: /
14012                         {
14013                             "rt":          ["oic.r.colour.hs"],
14014                             "id":          "unique_example_id",
14015                             "hue":         300.0,
14016                             "saturation":  212,
14017                             "maximumsaturation": 1000
14018                         }
14019
14020
14021
14022     post:

```

```

14023     description: |
14024         Sets current colour hue and saturation values.
14025         At least one of hue or saturation shall be provided in the payload.
14026
14027     is : ['interface-a']
14028     body:
14029         application/json:
14030         schema: /
14031             {
14032                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.hs.json#",
14033                 "$schema": "http://json-schema.org/draft-04/schema#",
14034                 "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
14035 reserved.",
14036                 "title": "Colour Hue and Saturation",
14037                 "definitions": {
14038                     "oic.r.colour.hs": {
14039                         "type": "object",
14040                         "properties": {
14041                             "hue": {
14042                                 "type": "number",
14043                                 "description": "Hue angle as defined by the CIECAM02 model definition",
14044                                 "minimum": 0.0,
14045                                 "maximum": 360.0
14046                             },
14047                             "saturation": {
14048                                 "type": "integer",
14049                                 "description": "Saturation as defined by the CIECAM02 model definition",
14050                                 "minimum": 0,
14051                                 "maximum": 32767
14052                             },
14053                             "maximumsaturation": {
14054                                 "type": "integer",
14055                                 "description": "Maximum supported value of Saturation for this Device",
14056                                 "readOnly": true,
14057                                 "minimum": 0,
14058                                 "maximum": 32767
14059                             }
14060                         }
14061                     }
14062                 },
14063                 "type": "object",
14064                 "allOf": [
14065                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
14066                     {"$ref": "#/definitions/oic.r.colour.hs"}
14067                 ],
14068                 "required": [ "hue", "saturation" ]
14069             }
14070         }
14071
14072     example: /
14073         {
14074             "id":          "unique_example_id",
14075             "hue":         300.0,
14076             "saturation": 212
14077         }
14078
14079     responses :
14080         200:
14081             body:
14082                 application/json:
14083                 schema: /
14084                     {
14085                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.hs.json#",
14086                         "$schema": "http://json-schema.org/draft-04/schema#",
14087                         "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights

```

```

14088 reserved.",
14089 "title": "Colour Hue and Saturation",
14090 "definitions": {
14091   "oic.r.colour.hs": {
14092     "type": "object",
14093     "properties": {
14094       "hue": {
14095         "type": "number",
14096         "description": "Hue angle as defined by the CIECAM02 model definition",
14097         "minimum": 0.0,
14098         "maximum": 360.0
14099       },
14100       "saturation": {
14101         "type": "integer",
14102         "description": "Saturation as defined by the CIECAM02 model definition",
14103         "minimum": 0,
14104         "maximum": 32767
14105       },
14106       "maximumsaturation": {
14107         "type": "integer",
14108         "description": "Maximum supported value of Saturation for this Device",
14109         "readOnly": true,
14110         "minimum": 0,
14111         "maximum": 32767
14112       }
14113     }
14114   },
14115 },
14116 "type": "object",
14117 "allOf": [
14118   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
14119   {"$ref": "#/definitions/oic.r.colour.hs"}
14120 ],
14121 "required": [ "hue", "saturation" ]
14122 }
14123
14124
14125 example: /
14126 {
14127   "id":          "unique_example_id",
14128   "hue":         300.0,
14129   "saturation":  212
14130 }
14131

```

6.77.5 Property Definition

Table 159 Colour Hue and Saturation Property Definitions

Property name	Value type	Mandatory	Access mode	Description
hue	number	yes		Hue angle as defined by the CIECAM02 model definition
saturation	integer	yes		Saturation as defined by the CIECAM02 model definition
maximumsaturation	integer		Read Only	Maximum supported value of Saturation for this Device

14134 **6.77.6 CRUDN behaviour**

14135 **Table 160 Colour Hue and Saturation CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/example/ColourHueSaturationResURI		get	post		

14136 **6.78 Battery Material**

14137 **6.78.1 Introduction**

14138 This resource describes the battery material represented as an enumerated set of strings.

14139 **6.78.2 Example URI**

14140 /BatteryMaterialResURI

14141 **6.78.3 Resource Type**

14142 The resource type (rt) is defined as: oic.r.batterymaterial.

14143 **6.78.4 RAML Definition**

14144 `##RAML 0.8`

14145 `title: BatteryMaterial`

14146 `version: v1.1.0-20170815`

14147 `traits:`

14148 `- interface :`

14149 `queryParameters:`

14150 `if:`

14151 `enum: ["oic.if.s", "oic.if.baseline"]`

14152

14153 `/BatteryMaterialResURI:`

14154 `description: |`

14155 `This resource describes the battery material represented as an enumerated set of strings.`

14156

14157 `is : ['interface']`

14158 `get:`

14159 `description: |`

14160 `Retrieves the battery material.`

14161

14162 `responses :`

14163 `200:`

14164 `body:`

14165 `application/json:`

14166 `schema: /`

14167 `{`

14168 `"id":`

14169 `"http://openinterconnect.org/iotdatamodels/schemas/oic.r.batterymaterial.json#",`

14170 `"$schema": "http://json-schema.org/draft-04/schema#",`

14171 `"description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights`

14172 `reserved.",`

14173 `"title": "BatteryMaterial",`

14174 `"definitions": {`

14175 `"oic.r.batterymaterial": {`

14176 `"type": "object",`

14177 `"properties": {`

14178 `"material" : {`

14179 `"type" : "string",`

14180 `"enum": [`

14181 `"Alkaline",`

14182 `"Aluminium Air",`

14183 `"Aluminium Ion",`

14184 `"Atomic Betavoltaics",`

14185 "Atomic Optoelectric Nuclear",
14186 "Atomic Nuclear",
14187 "Bunsen Cell",
14188 "Chromic Acid Cell",
14189 "Poggendorff Cell",
14190 "Clark Cell",
14191 "Daniell Cell",
14192 "Dry Cell",
14193 "Earth",
14194 "Flow",
14195 "Flow Vanadium Redox",
14196 "Flow Zinc Bromine",
14197 "Flow Zinc Cerium",
14198 "Frog",
14199 "Fuel",
14200 "Galvanic Cell",
14201 "Glass",
14202 "Grove Cell",
14203 "Lead Acid",
14204 "Lead Acid Deep Cycle",
14205 "Lead Acid VRLA",
14206 "Lead Acid AGM",
14207 "Lead Acid Gel",
14208 "Leclanche Cell",
14209 "Lemon Potato",
14210 "Lithium",
14211 "Lithium Air",
14212 "Lithium Ion",
14213 "Lithium Ion Cobalt Oxide (ICR)",
14214 "Lithium Ion Manganese Oxide (IMR)",
14215 "Lithium Ion Polymer",
14216 "Lithium Iron Phosphate",
14217 "Lithium Sulfur",
14218 "Lithium Titanate",
14219 "Lithium Ion Thin Film",
14220 "Magnesium",
14221 "Magnesium Ion",
14222 "Mercury",
14223 "Molten Salt",
14224 "Nickel Cadmium",
14225 "Nickel Cadmium Vented Cell",
14226 "Nickel Hydrogen",
14227 "Nickel Iron",
14228 "Nickel Metal Hydride",
14229 "Nickel Metal Hydride Low Self-Discharge",
14230 "Nickel Oxyhydroxide",
14231 "Nickel Oxyride",
14232 "Nickel Zinc",
14233 "Organic Radical",
14234 "Paper",
14235 "Polymer Based",
14236 "Polysulfide Bromide",
14237 "Potassium Ion",
14238 "Pulvermachers Chain",
14239 "Silicon Air",
14240 "Silver Calcium",
14241 "Silver Oxide",
14242 "Silver Zinc",
14243 "Sodium Ion",
14244 "Sodium Sulfur",
14245 "Solid State",
14246 "Sugar",
14247 "Super Iron",
14248 "UltraBattery",
14249 "Voltaic Pile",
14250 "Voltaic Pile Penny",
14251 "Voltaic Pile Trough",
14252 "Water Activated",
14253 "Weston Cell",
14254 "Zinc Air",
14255 "Zinc Carbon",

```

14256         "Zinc Chloride",
14257         "Zinc Ion",
14258         "Unknown"
14259     ],
14260     "description": "Battery construction material (type).",
14261     "readOnly": true
14262     }
14263   }
14264 }
14265 },
14266 "type": "object",
14267 "allOf": [
14268   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
14269   {"$ref": "#/definitions/oic.r.batterymaterial"}
14270 ],
14271 "required": [ "material" ]
14272 }
14273
14274 example: /
14275 {
14276   "rt": ["oic.r.batterymaterial"],
14277   "id": "unique_example_id",
14278   "material": "Alkaline"
14279 }
14280

```

6.78.5 Property Definition

Table 161 Battery Material Property Definitions

Property name	Value type	Mandatory	Access mode	Description
material	string	yes	Read Only	Battery construction material (type).

6.78.6 CRUDN behaviour

Table 162 Battery Material CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/BatteryMaterialResURI		get			

6.79 Brewing

6.79.1 Introduction

This resource describes the attributes associated with brewing. This resource is used for configuration only. Operation is handled independently of this resource. The amount requested is in ml. The strength of a brewed drink is an integer, the range of which may be enforced by the presence of a strengthrange Property.

6.79.2 Example URI

/BrewingResURI

6.79.3 Resource Type

The resource type (rt) is defined as: oic.r.brewing.

6.79.4 RAML Definition

```

14296 #%RAML 0.8
14297 title: Brewing
14298 version: v1.1.0-20170815
14299 traits:
14300   - interface :
14301     queryParameters:
14302     if:

```

```

14303         enum: ["oic.if.rw", "oic.if.baseline"]
14304
14305 /BrewingResURI:
14306     description: |
14307         This resource describes the attributes associated with brewing
14308         This resource is used for configuration only
14309         Operation is handled independently of this resource
14310         The amount requested is in ml
14311         The strength of a brewed drink is an integer, the range of which may be enforced by the
14312         presence of a strengthrange Property.
14313
14314     is : ['interface']
14315     get:
14316         description: |
14317             Retrieves the state of brewing.
14318
14319     responses :
14320         200:
14321             body:
14322                 application/json:
14323                     schema: /
14324                         {
14325                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.brewing.json#",
14326                             "$schema": "http://json-schema.org/draft-04/schema#",
14327                             "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
14328 reserved.",
14329                             "title": "Brewing",
14330                             "definitions": {
14331                                 "oic.r.brewing": {
14332                                     "type": "object",
14333                                     "properties": {
14334                                         "amountrequested" : {
14335                                             "type": "integer",
14336                                             "description": "The amount requested in ml."
14337                                         },
14338                                         "strength" : {
14339                                             "type": "integer",
14340                                             "description": "The strength of a brewed drink."
14341                                         },
14342                                         "strengthrange": {
14343                                             "type": "array",
14344                                             "minItems": 2,
14345                                             "maxItems": 2,
14346                                             "readOnly": true,
14347                                             "items": {
14348                                                 "type": "integer"
14349                                             }
14350                                         }
14351                                     }
14352                                 },
14353                             "type": "object",
14354                             "allOf": [
14355                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
14356                                 {"$ref": "#/definitions/oic.r.brewing"}
14357                             ],
14358                             "required": [ "amountrequested" ]
14359                         }
14360
14361     example: /
14362         {
14363             "rt": ["oic.r.brewing"],
14364             "id": "unique_example_id",
14365             "amountrequested": 120,
14366

```

```

14367         "strength": 8,
14368         "strengthrange": [1,10]
14369     }
14370
14371     post:
14372         description: |
14373             Sets the brewing values
14374
14375         body:
14376             application/json:
14377                 schema: /
14378                     {
14379                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.brewing.json#",
14380                         "$schema": "http://json-schema.org/draft-04/schema#",
14381                         "description": "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
14382 reserved.",
14383                         "title": "Brewing",
14384                         "definitions": {
14385                             "oic.r.brewing": {
14386                                 "type": "object",
14387                                 "properties": {
14388                                     "amountrequested" : {
14389                                         "type": "integer",
14390                                         "description": "The amount requested in ml."
14391                                     },
14392                                     "strength" : {
14393                                         "type": "integer",
14394                                         "description": "The strength of a brewed drink."
14395                                     },
14396                                     "strengthrange": {
14397                                         "type": "array",
14398                                         "minItems": 2,
14399                                         "maxItems": 2,
14400                                         "readOnly": true,
14401                                         "items": {
14402                                             "type": "integer"
14403                                         }
14404                                     }
14405                                 }
14406                             }
14407                         },
14408                         "type": "object",
14409                         "allOf": [
14410                             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
14411                             { "$ref": "#/definitions/oic.r.brewing" }
14412                         ],
14413                         "required": [ "amountrequested" ]
14414                     }
14415
14416                 example: /
14417                     {
14418                         "id": "unique_example_id",
14419                         "amountrequested": 120,
14420                         "strength": 8
14421                     }
14422

```

```

14423     responses :
14424         200:

```

6.79.5 Property Definition

Table 163 Brewing Property Definitions

Property name	Value type	Mandatory	Access mode	Description
---------------	------------	-----------	-------------	-------------

amountrequested	integer	yes		The amount requested in ml.
strength	integer			The strength of a brewed drink.
strengthrange	array: schema	see	Read Only	

14427 **6.79.6 CRUDN behaviour**

14428 **Table 164 Brewing CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/BrewingResURI		get	post		

14429 **6.80 Energy**

14430 **6.80.1 Introduction**

14431 This resource describes the attributes associated with electrical energy. This can be used for either
 14432 rated (read-only), desired (read-write) or measured (read-only) energy. The voltage is in Volts (V),
 14433 current in Amps (A), and frequency in Hertz (Hz).

14434 **6.80.2 Example URI**

14435 /EnergyResURI

14436 **6.80.3 Resource Type**

14437 The resource type (rt) is defined as: oic.r.energy.electrical.

14438 **6.80.4 RAML Definition**

14439 `##RAML 0.8`

14440 `title: Energy`

14441 `version: v1.1.0-20170815`

14442 `traits:`

14443 `- interface-update :`
 14444 `queryParameters:`

14445 `if:`
 14446 `enum: ["oic.if.rw", "oic.if.baseline"]`

14447 `- interface-all :`
 14448 `queryParameters:`

14449 `if:`
 14450 `enum: ["oic.if.r", "oic.if.rw", "oic.if.s", "oic.if.baseline"]`

14451
 14452 `/EnergyResURI:`

14453 `description: |`
 14454 `This resource describes the attributes associated with electrical energy`
 14455 `This can be used for either rated (read-only), desired (read-write) or measured (read-only)`
 14456 `energy`
 14457 `The voltage is in Volts (V), current in Amps (A), and frequency in Hertz (Hz).`

14459 `get:`
 14460 `description: |`
 14461 `Retrieves the current energy.`

14463 `is : ['interface-all']`

14464 `responses :`

14465 `200:`
 14466 `body:`
 14467 `application/json:`
 14468 `schema: |`

```

14469     {
14470     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.json#",
14471     "$schema": "http://json-schema.org/draft-04/schema#",
14472     "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
14473 reserved.",
14474     "title": "Electrical Energy",
14475     "definitions": {
14476     "oic.r.energy.electrical": {
14477     "type": "object",
14478     "properties": {
14479     "voltage" : {
14480     "type": "number",
14481     "readOnly": true,
14482     "description": "The electric voltage in Volts (V).",
14483     },
14484     "desiredvoltage" : {
14485     "type": "number",
14486     "description": "The desired electric voltage in Volts (V).",
14487     },
14488     "current" : {
14489     "type": "number",
14490     "readOnly": true,
14491     "description": "The electric current in Amps (A).",
14492     },
14493     "desiredcurrent" : {
14494     "type": "number",
14495     "description": "The desired electric current in Amps (A).",
14496     },
14497     "frequency" : {
14498     "type": "number",
14499     "readOnly": true,
14500     "description": "The electric frequency in Hertz (Hz).",
14501     },
14502     "desiredfrequency" : {
14503     "type": "number",
14504     "description": "The desired electric frequency in Hertz (Hz).",
14505     }
14506     }
14507     },
14508     "type": "object",
14509     "allOf": [
14510     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
14511     {"$ref": "#/definitions/oic.r.energy.electrical"}
14512     ],
14513     "required": [ "voltage", "current", "frequency" ]
14514     }
14515     }
14516
14517     example: /
14518     {
14519     "rt":      ["oic.r.energy.electrical"],
14520     "id":      "unique_example_id",
14521     "voltage": 120.0,
14522     "current": 5.0,
14523     "frequency": 60.0
14524     }
14525
14526     post:
14527     description: |
14528     Sets the desired energy values
14529
14530     is : ['interface-update']
14531     body:
14532     application/json:
14533     schema: /
14534     {
14535     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy-Update.json#",

```

```

14536     "$schema": "http://json-schema.org/draft-04/schema#",
14537     "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
14538 reserved.",
14539     "title": "Electrical Energy",
14540     "definitions": {
14541       "oic.r.energy.electrical": {
14542         "type": "object",
14543         "anyOf": [
14544           {"required": ["desiredvoltage"]},
14545           {"required": ["desiredcurrent"]},
14546           {"required": ["desiredfrequency"]}
14547         ],
14548         "properties": {
14549           "desiredvoltage" : {
14550             "type": "number",
14551             "description": "The desired electric voltage in Volts (V).",
14552           },
14553           "desiredcurrent" : {
14554             "type": "number",
14555             "description": "The desired electric current in Amps (A).",
14556           },
14557           "desiredfrequency" : {
14558             "type": "number",
14559             "description": "The desired electric frequency in Hertz (Hz).",
14560           }
14561         }
14562       }
14563     },
14564     "type": "object",
14565     "allOf": [
14566       {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
14567       {"$ref": "#/definitions/oic.r.energy.electrical"}
14568     ]
14569   }
14570
14571   example: /
14572   {
14573     "id": "unique_example_id",
14574     "desiredvoltage": 130.0,
14575     "desiredcurrent": 6.0
14576   }
14577

```

```

14578   responses :
14579     200:

```

6.80.5 Property Definition

Table 165 Energy Property Definitions

Property name	Value type	Mandatory	Access mode	Description
desiredcurrent	number			The desired electric current in Amps (A).
current	number	yes	Read Only	The electric current in Amps (A).
frequency	number	yes	Read Only	The electric frequency in Hertz (Hz).
voltage	number	yes	Read Only	The electric voltage in Volts (V).
desiredfrequency	number			The desired electric

				frequency in Hertz (Hz).
desiredvoltage	number			The desired electric voltage in Volts (V).

14582 **6.80.6 CRUDN behaviour**

14583 **Table 166 Energy CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/EnergyResURI		get	post		

14584 **6.81 Energy Generation**

14585 **6.81.1 Introduction**

14586 This resource describes the attributes associated with energy generation energygenerated is a
 14587 number that provides the energy generated in Watt-hour(Wh).

14588 **6.81.2 Example URI**

14589 /EnergyGenerationResURI

14590 **6.81.3 Resource Type**

14591 The resource type (rt) is defined as: oic.r.energy.generation.

14592 **6.81.4 RAML Definition**

14593 `##RAML 0.8`

14594 `title: EnergyGeneration`
 14595 `version: v1.1.0-20170815`

14596 `traits:`
 14597 `- interface :`
 14598 `queryParameters:`
 14599 `if:`
 14600 `enum: ["oic.if.s", "oic.if.baseline"]`

14601
 14602 `/EnergyGenerationResURI:`

14603 `description: |`
 14604 `This resource describes the attributes associated with energy generation`
 14605 `energygenerated is a number that provides the energy generated in Watt-hour(Wh).`
 14606

14607 `is : ['interface']`

14608 `get:`
 14609 `description: |`
 14610 `Retrieves the current energy generation.`
 14611

14612 `responses :`
 14613 `200:`
 14614 `body:`
 14615 `application/json:`
 14616 `schema: /`

14617 `{`
 14618 `"id":`
 14619 `"http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.generation.json",`
 14620 `"$schema": "http://json-schema.org/draft-04/schema#",`
 14621 `"description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights`
 14622 `reserved.",`
 14623 `"title": "EnergyGeneration",`
 14624 `"definitions": {`
 14625 `"oic.r.energy.generation": {`


```

14626         "type": "object",
14627         "properties": {
14628             "energygenerated" : {
14629                 "type": "number",
14630                 "description": "The energy generated in Watt-hour(Wh).",
14631                 "readOnly": true
14632             }
14633         }
14634     },
14635     "type": "object",
14636     "allOf": [
14637         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
14638         { "$ref": "#/definitions/oic.r.energy.generation" }
14639     ],
14640     "required": [ "energygenerated" ]
14641 }
14642
14643
14644     example: /
14645     {
14646         "rt":      ["oic.r.energy.generation"],
14647         "id":      "unique_example_id",
14648         "energygenerated": 3000.00
14649     }
14650

```

6.81.5 Property Definition

Table 167 Energy Generation Property Definitions

Property name	Value type	Mandatory	Access mode	Description
energygenerated	number	yes	Read Only	The energy generated in Watt-hour(Wh).

6.81.6 CRUDN behaviour

Table 168 Energy Generation CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/EnergyGenerationResURI		get			

6.82 Foaming

6.82.1 Introduction

This resource describes the attributes associated with foaming. The foam strength of the liquid is represented as an integer. The foam strength is an integer, the range of which may be enforced by the presence of a range Property defined in the baseresource.

6.82.2 Example URI

/FoamingResURI

6.82.3 Resource Type

The resource type (rt) is defined as: oic.r.foaming.

6.82.4 RAML Definition

```

14665 #%RAML 0.8
14666 title: Foaming
14667 version: v1.1.0-20170815
14668 traits:
14669   - interface :
14670       queryParameters:
14671         if:
14672           enum: ["oic.if.rw", "oic.if.baseline"]

```

```

14673
14674 /FoamingResURI:
14675     description: |
14676         This resource describes the attributes associated with foaming
14677         The foam strength of the liquid is represented as an integer.
14678         The foam strength is an integer, the range of which may be enforced by the presence of a range
14679         Property defined in the baseresource.
14680
14681     is : ['interface']
14682     get:
14683         description: |
14684             Retrieves the state of foaming.
14685
14686     responses :
14687         200:
14688             body:
14689                 application/json:
14690                     schema: /
14691                         {
14692                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.foaming.json#",
14693                             "$schema": "http://json-schema.org/draft-04/schema#",
14694                             "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
14695 reserved.",
14696                             "title": "Foaming",
14697                             "definitions": {
14698                                 "oic.r.foaming": {
14699                                     "type": "object",
14700                                     "properties": {
14701                                         "foamstrength" : {
14702                                             "type": "integer",
14703                                             "description": "The desired foaminess of the liquid."
14704                                         }
14705                                     }
14706                                 }
14707                             },
14708                             "type": "object",
14709                             "allOf": [
14710                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
14711                                 {"$ref": "#/definitions/oic.r.foaming"}
14712                             ],
14713                             "required": [ "foamstrength" ]
14714                         }
14715
14716                     example: /
14717                         {
14718                             "rt":      ["oic.r.foaming"],
14719                             "id":      "unique_example_id",
14720                             "foamstrength": 50,
14721                             "range": [0,100]
14722                         }
14723
14724     post:
14725         description: |
14726             Sets foaming value
14727
14728         body:
14729             application/json:
14730                 schema: /
14731                     {
14732                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.foaming.json#",
14733                         "$schema": "http://json-schema.org/draft-04/schema#",

```

```

14734         "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
14735 reserved.",
14736         "title": "Foaming",
14737         "definitions": {
14738             "oic.r.foaming": {
14739                 "type": "object",
14740                 "properties": {
14741                     "foamstrength" : {
14742                         "type": "integer",
14743                         "description": "The desired foaminess of the liquid."
14744                     }
14745                 }
14746             },
14747         },
14748         "type": "object",
14749         "allOf": [
14750             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
14751             { "$ref": "#/definitions/oic.r.foaming" }
14752         ],
14753         "required": [ "foamstrength" ]
14754     }
14755
14756     example: /
14757     {
14758         "id":          "unique_example_id",
14759         "foamstrength": 50
14760     }
14761
14762     responses :
14763     200:
14764         body:
14765             application/json:
14766                 schema: /
14767                 {
14768                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.foaming.json#",
14769                     "$schema": "http://json-schema.org/draft-04/schema#",
14770                     "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
14771 reserved.",
14772                     "title": "Foaming",
14773                     "definitions": {
14774                         "oic.r.foaming": {
14775                             "type": "object",
14776                             "properties": {
14777                                 "foamstrength" : {
14778                                     "type": "integer",
14779                                     "description": "The desired foaminess of the liquid."
14780                                 }
14781                             }
14782                         },
14783                     },
14784                     "type": "object",
14785                     "allOf": [
14786                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
14787                         { "$ref": "#/definitions/oic.r.foaming" }
14788                     ],
14789                     "required": [ "foamstrength" ]
14790                 }
14791
14792     example: /
14793     {
14794         "id":          "unique_example_id",
14795         "foamstrength": 50
14796     }
14797

```

14798 **6.82.5 Property Definition**

14799 **Table 169 Foaming Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
foamstrength	integer	yes		The desired foaminess of the liquid.

14800 **6.82.6 CRUDN behaviour**

14801 **Table 170 Foaming CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/FoamingResURI		get	post		

14802 **6.83 Grinder**

14803 **6.83.1 Introduction**

14804 This resource describes the attributes associated with a grinder. The coarseness of the grounds
 14805 is an integer. The higher the value, the less coarse. remaining is a percentage that represents the
 14806 unground material left.

14807 **6.83.2 Example URI**

14808 /GrinderResURI

14809 **6.83.3 Resource Type**

14810 The resource type (rt) is defined as: oic.r.grinder.

14811 **6.83.4 RAML Definition**

```

14812 #%RAML 0.8
14813 title: Grinder
14814 version: v1.1.0-20170815
14815 traits:
14816   - interface :
14817     queryParameters:
14818       if:
14819         enum: ["oic.if.rw", "oic.if.baseline"]
14820
14821 /GrinderResURI:
14822   description: |
14823     This resource describes the attributes associated with a grinder
14824     The coarseness of the grounds is an integer
14825     The higher the value, the less coarse
14826     remaining is a percentage that represents the unground material left.
14827
14828   is : ['interface']
14829   get:
14830     description: |
14831       Retrieves the state of a grinder.
14832
14833   responses :
14834     200:
14835       body:
14836         application/json:
14837           schema: /
14838             {
14839               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.grinder.json#",
  
```

```

14840     "$schema": "http://json-schema.org/draft-04/schema#",
14841     "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
14842 reserved.",
14843     "title": "Grinder",
14844     "definitions": {
14845         "oic.r.grinder": {
14846             "type": "object",
14847             "properties": {
14848                 "coarseness" : {
14849                     "type": "integer",
14850                     "description": "The desired coarseness when grinding."
14851                 },
14852                 "remaining" : {
14853                     "type": "integer",
14854                     "description": "The percentage of unground material left.",
14855                     "readOnly": true,
14856                     "minimum": 0,
14857                     "maximum": 100
14858                 }
14859             }
14860         },
14861     },
14862     "type": "object",
14863     "allOf": [
14864         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
14865         {"$ref": "#/definitions/oic.r.grinder"}
14866     ],
14867     "required": ["coarseness"]
14868 }
14869
14870     example: /
14871     {
14872         "rt":      ["oic.r.grinder"],
14873         "id":      "unique_example_id",
14874         "coarseness": 10,
14875         "remaining": 50
14876     }
14877
14878     post:
14879         description: |
14880             Sets grinding values
14881
14882         body:
14883             application/json:
14884                 schema: /
14885                 {
14886                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.grinder-Update.json#",
14887                     "$schema": "http://json-schema.org/draft-04/schema#",
14888                     "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
14889 reserved.",
14890                     "title": "Grinder",
14891                     "definitions": {
14892                         "oic.r.grinder": {
14893                             "type": "object",
14894                             "properties": {
14895                                 "coarseness" : {
14896                                     "type": "integer",
14897                                     "description": "The desired coarseness when grinding."
14898                                 }
14899                             }
14900                         }
14901                     },
14902                     "type": "object",
14903                     "allOf": [
14904                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
14905                         {"$ref": "#/definitions/oic.r.grinder"}
14906                     ],

```

```

14907         "required": [ "coarseness" ]
14908     }
14909
14910     example: /
14911     {
14912         "id":          "unique_example_id",
14913         "coarseness": 10
14914     }
14915
14916     responses :
14917     200:
14918         body:
14919         application/json:
14920             schema: /
14921             {
14922                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.grinder-
14923 Update.json#",
14924                 "$schema": "http://json-schema.org/draft-04/schema#",
14925                 "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
14926 reserved.",
14927                 "title": "Grinder",
14928                 "definitions": {
14929                     "oic.r.grinder": {
14930                         "type": "object",
14931                         "properties": {
14932                             "coarseness" : {
14933                                 "type": "integer",
14934                                 "description": "The desired coarseness when grinding."
14935                             }
14936                         }
14937                     }
14938                 },
14939                 "type": "object",
14940                 "allOf": [
14941                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
14942                     {"$ref": "#/definitions/oic.r.grinder"}
14943                 ],
14944                 "required": [ "coarseness" ]
14945             }
14946
14947     example: /
14948     {
14949         "id":          "unique_example_id",
14950         "coarseness": 10
14951     }
14952

```

6.83.5 Property Definition

Table 171 Grinder Property Definitions

Property name	Value type	Mandatory	Access mode	Description
coarseness	integer	yes		The desired coarseness when grinding.
remaining	integer		Read Only	The percentage of unground material left.

6.83.6 CRUDN behaviour

Table 172 Grinder CRUDN operations

Resource	Create	Read	Update	Delete	Notify
----------	--------	------	--------	--------	--------

/GrinderResURI		get	post		
----------------	--	-----	------	--	--

14957 **6.84 Liquid Level**

14958 **6.84.1 Introduction**

14959 This resource describes the attributes associated with liquid level. The current level and desired
 14960 level are defined in terms of a percentage. The behaviour of when the currentlevel and desiredlevel
 14961 are not equal is determined by the device manufacturer.

14962 **6.84.2 Example URI**

14963 /LiquidLevelResURI

14964 **6.84.3 Resource Type**

14965 The resource type (rt) is defined as: oic.r.liquid.level.

14966 **6.84.4 RAML Definition**

14967 `##RAML 0.8`

14968 `title: OCFLiquidLevel`

14969 `version: v1.1.0-20160519`

14970 `traits:`

14971 `- interface :`

14972 `queryParameters:`

14973 `if:`

14974 `enum: ["oic.if.rw", "oic.if.r", "oic.if.baseline"]`

14975

14976 `/LiquidLevelResURI:`

14977 `description: |`

14978 `This resource describes the attributes associated with liquid level`

14979 `The current level and desired level are defined in terms of a percentage`

14980 `The behaviour of when the currentlevel and desiredlevel are not equal is determined by the`
 14981 `device manufacturer.`

14982

14983 `is : ['interface']`

14984 `get:`

14985 `description: |`

14986 `Retrieves the state of liquid level.`

14987

14988 `responses :`

14989 `200:`

14990 `body:`

14991 `application/json:`

14992 `schema: |`

14993 `{`
 14994 `"id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.liquid.level.json#",`
 14995 `"$schema": "http://json-schema.org/draft-04/schema#",`
 14996 `"description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights`
 14997 `reserved.",`

14998 `"title": "Liquid Level",`

14999 `"definitions": {`

15000 `"oic.r.liquid.level": {`

15001 `"type": "object",`

15002 `"properties": {`

15003 `"currentlevel" : {`

15004 `"type": "integer",`

15005 `"description": "The current level of the liquid in percentage.",`

15006 `"readOnly": true,`

15007 `"minimum": 0,`

15008 `"maximum": 100`

15009 `},`

15010 `"desiredlevel" : {`

```

15011         "type": "integer",
15012         "description": "The desired level of the liquid in percentage.",
15013         "minimum": 0,
15014         "maximum": 100
15015     }
15016 }
15017 }
15018 },
15019 "type": "object",
15020 "allOf": [
15021     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
15022     {"$ref": "#/definitions/oic.r.liquid.level"}
15023 ],
15024 "required": [ "currentlevel" ]
15025 }
15026
15027 example: /
15028 {
15029     "rt":      ["oic.r.liquid.level"],
15030     "id":      "unique_example_id",
15031     "currentlevel": 60,
15032     "desiredlevel": 80
15033 }
15034
15035 post:
15036     description: |
15037         Sets liquid level values
15038
15039     body:
15040         application/json:
15041             schema: /
15042                 {
15043                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.liquid.level-
15044 Update.json#",
15045                     "$schema": "http://json-schema.org/draft-04/schema#",
15046                     "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
15047 reserved.",
15048                     "title": "Liquid Level",
15049                     "definitions": {
15050                         "oic.r.liquid.level": {
15051                             "type": "object",
15052                             "properties": {
15053                                 "desiredlevel" : {
15054                                     "type": "integer",
15055                                     "description": "The desired level of the liquid in percentage.",
15056                                     "minimum": 0,
15057                                     "maximum": 100
15058                                 }
15059                             }
15060                         }
15061                     },
15062                     "type": "object",
15063                     "allOf": [
15064                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
15065                         {"$ref": "#/definitions/oic.r.liquid.level"}
15066                     ],
15067                     "required": [ "desiredlevel" ]
15068                 }
15069
15070             example: /
15071                 {
15072                     "id":      "unique_example_id",
15073                     "desiredlevel": 80
15074                 }
15075

```



```

15076     responses :
15077         200:
15078             body:
15079                 application/json:
15080                     schema: /
15081                         {
15082                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.liquid.level-
15083 Update.json#",
15084                             "$schema": "http://json-schema.org/draft-04/schema#",
15085                             "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
15086 reserved.",
15087                             "title": "Liquid Level",
15088                             "definitions": {
15089                                 "oic.r.liquid.level": {
15090                                     "type": "object",
15091                                     "properties": {
15092                                         "desiredlevel" : {
15093                                             "type": "integer",
15094                                             "description": "The desired level of the liquid in percentage.",
15095                                             "minimum": 0,
15096                                             "maximum": 100
15097                                         }
15098                                     }
15099                                 },
15100                             },
15101                             "type": "object",
15102                             "allOf": [
15103                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
15104                                 { "$ref": "#/definitions/oic.r.liquid.level" }
15105                             ],
15106                             "required": [ "desiredlevel" ]
15107                         }
15108
15109                     example: /
15110                         {
15111                             "id": "unique_example_id",
15112                             "desiredlevel": 80
15113                         }
15114

```

6.84.5 Property Definition

Table 173 Liquid Level Property Definitions

Property name	Value type	Mandatory	Access mode	Description
currentlevel	integer	yes	Read Only	The current level of the liquid in percentage.
desiredlevel	integer			The desired level of the liquid in percentage.

6.84.6 CRUDN behaviour

Table 174 Liquid Level CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/LiquidLevelResURI		get	post		

15119 6.85 Vehicle Connector

15120 6.85.1 Introduction

15121 This resource describes the attributes associated with an electric vehicle charging connector. The
15122 connected state is a boolean indicating the status of the connector (False = disconnected, True =
15123 connected). The rated charging capacity and rated discharging capacity are in Amps (A).

15124 6.85.2 Example URI

15125 /VehicleConnectorResURI

15126 6.85.3 Resource Type

15127 The resource type (rt) is defined as: oic.r.vehicle.connector.

15128 6.85.4 RAML Definition

15129 `##RAML 0.8`

15130 `title: VehicleConnector`

15131 `version: v1.1.0-20170815`

15132 `traits:`

15133 `- interface :`

15134 `queryParameters:`

15135 `if:`

15136 `enum: ["oic.if.s", "oic.if.baseline"]`

15137

15138 `/VehicleConnectorResURI:`

15139 `description: |`

15140 `This resource describes the attributes associated with an electric vehicle charging connector`

15141 `The connected state is a boolean indicating the status of the connector (False = disconnected,`

15142 `True = connected)`

15143 `The rated charging capacity and rated discharging capacity are in Amps (A).`

15144

15145 `is : ['interface']`

15146 `get:`

15147 `description: |`

15148 `Retrieves the state of the vehicle connector.`

15149

15150 `responses :`

15151 `200:`

15152 `body:`

15153 `application/json:`

15154 `schema: |`

15155 `{`

15156 `"id":`

15157 `"http://openinterconnect.org/iotdatamodels/schemas/oic.r.vehicle.connector.json#",`

15158 `"$schema": "http://json-schema.org/draft-04/schema#",`

15159 `"description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights`

15160 `reserved.",`

15161 `"title": "VehicleConnector",`

15162 `"definitions": {`

15163 `"oic.r.vehicle.connector": {`

15164 `"type": "object",`

15165 `"properties": {`

15166 `"connected" : {`

15167 `"type": "boolean",`

15168 `"description": "The connection state.",`

15169 `"readOnly": true`

15170 `},`

15171 `"ratedchargingcapacity" : {`

15172 `"type": "number",`

15173 `"description": "The rated charging capacity in Amps (A).",`

15174 `"readOnly": true`

```

15175         },
15176         "rateddischargingcapacity" : {
15177             "type": "number",
15178             "description": "The rated discharging capacity in Amps (A).",
15179             "readOnly": true
15180         }
15181     }
15182 }
15183 },
15184 "type": "object",
15185 "allof": [
15186     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
15187     {"$ref": "#/definitions/oic.r.vehicle.connector"}
15188 ],
15189 "required": [ "connected" ]
15190 }
15191

```

```

15192 example: /
15193 {
15194     "rt": ["oic.r.vehicle.connector"],
15195     "id": "unique_example_id",
15196     "connected": true,
15197     "ratedchargingcapacity": 20.0,
15198     "rateddischargingcapacity": 5.0
15199 }
15200

```

15201 **6.85.5 Property Definition**

15202 **Table 175 Vehicle Connector Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
connected	boolean	yes	Read Only	The connection state.
ratedchargingcapacity	number		Read Only	The rated charging capacity in Amps (A).
rateddischargingcapacity	number		Read Only	The rated discharging capacity in Amps (A).

15203 **6.85.6 CRUDN behaviour**

15204 **Table 176 Vehicle Connector CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/VehicleConnectorResURI		get			

15206 **6.86 Time Stamp**

15207 **6.86.1 Introduction**

15208 This resource describes the properties associated with a timestamp. TimeStamp is a string that
15209 captures the timestamp using the RFC3339 datetime format (e.g: 2007-04-05T14:30Z)
15210 (Time+Date+Timezone)

15211 **6.86.2 Example URI**

15212 /TimeStampResURI

15213 **6.86.3 Resource Type**

15214 The resource type (rt) is defined as: oic.r.time.stamp.

```

15215 6.86.4 RAML Definition
15216 #%RAML 0.8
15217 title: TimeStamp
15218 version: v1.1.0-20170830
15219 traits:
15220   - interface :
15221     queryParameters:
15222       if:
15223         enum: ["oic.if.s", "oic.if.r", "oic.if.baseline"]
15224
15225 /TimeStampResURI:
15226   description: |
15227     This resource describes the properties associated with a timestamp.
15228     TimeStamp is a string that captures the timestamp using the RFC3339 datetime format (e.g: 2007-
15229     04-05T14:30Z) (Time+Date+Timezone)
15230
15231   is : ['interface']
15232   get:
15233     description: |
15234       Retrieves the current timestamp data.
15235
15236   responses :
15237     200:
15238       body:
15239         application/json:
15240           schema: /
15241             {
15242               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.time.stamp.json#",
15243               "$schema": "http://json-schema.org/draft-04/schema#",
15244               "description" : "Copyright (c) 2017, 2018 Open Connectivity Foundation, Inc. All
15245 rights reserved.",
15246               "title": "Observed Time",
15247               "definitions": {
15248                 "oic.r.time.stamp": {
15249                   "type": "object",
15250                   "properties": {
15251                     "timestamp": {
15252                       "type": "string",
15253                       "format": "date-time",
15254                       "description": "An RFC3339 formatted time indicating when the data
15255 was observed (e.g.: 2016-02-15T09:19Z, 1996-12-19T16:39:57-08:00)",
15256                       "readOnly": true
15257                     }
15258                   }
15259                 },
15260               },
15261               "type": "object",
15262               "allOf": [
15263                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
15264                 {"$ref": "#/definitions/oic.r.time.stamp"}
15265               ],
15266               "required": ["timestamp"]
15267             }
15268
15269   example: /
15270     {
15271       "rt":          ["oic.r.time.stamp"],
15272       "id":          "unique_example_id",
15273       "timestamp":  "2015-11-05T14:30Z"
15274     }
15275

```

15276 **6.86.5 Property Definition**

15277 **Table 177 Time Stamp Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
timestamp	string	yes	Read Only	An RFC3339 formatted time indicating when the data was observed (e.g.: 2016-02-15T09:19Z, 1996-12-19T16:39:57-08:00)

15278 **6.86.6 CRUDN behaviour**

15279 **Table 178 Time Stamp CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/TimeStampResURI		get			

15280 **6.87 3D Printer**

15281 **6.87.1 Introduction**

15282 This resource describes the attributes associated with 3D Printer. The type of 3D printing
 15283 technology is specified by an enumerated string value. The maximum sizes in mm are included for
 15284 the x, y, and z dimensions. A designation of whether the device is capable of WAN connectivity is
 15285 represented in a boolean. The memory capacity is captured in MB. The print

15286 **6.87.2 Example URI**

15287 /3DPrinterResURI

15288 **6.87.3 Resource Type**

15289 The resource type (rt) is defined as: oic.r.printer.3d.

15290 **6.87.4 RAML Definition**

```

15291 #%RAML 0.8
15292 title: 3DPrinter
15293 version: v1.1.0-20180115
15294 traits:
15295   - interface :
15296       queryParameters:
15297         if:
15298           enum: ["oic.if.r", "oic.if.baseline"]
15299
15300 /3DPrinterResURI:
15301   description: |
15302     This resource describes the attributes associated with 3D Printer
15303     The type of 3D printing technology is specified by an enumerated string value
15304     The maximum sizes in mm are included for the x, y, and z dimensions
15305     A designation of whether the device is capable of WAN connectivity is represented in a boolean
15306     The memory capacity is captured in MB.
15307     The print
15308
15309   is : ['interface']
15310   get:
15311     description: |
  
```

```

15312         Retrieves the current 3D Printer attributes.
15313
15314     responses :
15315         200:
15316             body:
15317                 application/json:
15318                     schema: /
15319                         {
15320                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.3dprinter.json#",
15321                             "$schema": "http://json-schema.org/draft-04/schema#",
15322                             "description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
15323 reserved.",
15324                             "title": "3D Printer",
15325                             "definitions": {
15326                                 "oic.r.printer.3d": {
15327                                     "type": "object",
15328                                     "properties": {
15329                                         "3dprinttype" : {
15330                                             "enum": [
15331                                                 "Fused Filament Fabrication",
15332                                                 "Fused Deposition Modeling",
15333                                                 "Digital Light Processing",
15334                                                 "Powder Bed & inkjet head 3D Printing",
15335                                                 "Photopolymer Jetting Technology",
15336                                                 "Laminated Object Manufacturing",
15337                                                 "Stereolithography Apparatus",
15338                                                 "Selective Laser Sintering",
15339                                                 "Unknown"
15340                                             ],
15341                                             "type": "string",
15342                                             "description": "The type of 3D printing technology.",
15343                                             "readOnly": true
15344                                         },
15345                                         "printsizeX" : {
15346                                             "type": "number",
15347                                             "description": "This represents the maximum size of printing object in the
15348 direction of X-axis. The unit is mm.",
15349                                             "readOnly": true
15350                                         },
15351                                         "printsizeY" : {
15352                                             "type": "number",
15353                                             "description": "This represents the maximum size of printing object in the
15354 direction of Y-axis. The unit is mm.",
15355                                             "readOnly": true
15356                                         },
15357                                         "printsizeZ" : {
15358                                             "type": "number",
15359                                             "description": "This represents the maximum size of printing object in the
15360 direction of Z-axis. The unit is mm.",
15361                                             "readOnly": true
15362                                         },
15363                                         "wanconnected" : {
15364                                             "type": "boolean",
15365                                             "description": "This value indicates the connectivity capability of the 3D
15366 printer. If the value is false, the printer does not have network facility to Wide Area Network
15367 such as internet and GSM. If the value is true, the printer has network connectivity",
15368                                             "readOnly": true
15369                                         },
15370                                         "memorysize" : {
15371                                             "type": "number",
15372                                             "description": "This value represents the total memory size of the printer.
15373 The unit is MB(Mega Bytes)",
15374                                             "readOnly": true
15375                                         }
15376                                     }
15377                                 },
15378                             "type": "object",

```

```

15380     "allOf": [
15381         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
15382         { "$ref": "#/definitions/oic.r.printer.3d" }
15383     ],
15384     "required": [ "3dprinttype", "printsizex", "printsizex", "printsizex",
15385 "wanconnected", "memorysize" ]
15386 }
15387

```

```

15388     example: /
15389     {
15390         "rt"           : ["oic.r.printer.3d"],
15391         "id"           : "unique_example_id",
15392         "3dprinttype" : "Digital Light Processing",
15393         "printsizex"  : 300.00,
15394         "printsizex"  : 200.50,
15395         "printsizex"  : 250.75,
15396         "wanconnected" : false,
15397         "memorysize"  : 120.5
15398     }
15399

```

15400 6.87.5 Property Definition

15401 **Table 179 3D Printer Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
memorysize	number	yes	Read Only	This value represents the total memory size of the printer. The unit is MB(Mega Bytes)
3dprinttype	string	yes	Read Only	The type of 3D printing technology.
wanconnected	boolean	yes	Read Only	This value indicates the connectivity capability of the 3D printer. If the value is false, the printer does not have network facility to Wide Area Network such as internet and GSM. If the value is true, the printer has network connectivity
printsizex	number	yes	Read Only	This represents the maximum size of printing object in the direction of X-axis. The unit is mm.

printsizey	number	yes	Read Only	This represents the maximum size of printing object in the direction of Y-axis. The unit is mm.
printsizez	number	yes	Read Only	This represents the maximum size of printing object in the direction of Z-axis. The unit is mm.

15402 **6.87.6 CRUDN behaviour**

15403 **Table 180 3D Printer CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/3DPrinterResURI		get			

15404 **6.88 Blood Pressure**

15405 **6.88.1 Introduction**

15406 This resource describes the properties associated with a person's Blood Pressure. The unit is a
 15407 single value that is one of mmHg or kPa. If the unit Property is missing the default is a millimeter
 15408 of mercury [mmHg]. The BloodPressure and unit Properties are read-only values that are provided
 15409 by the server. When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.

15410 **6.88.2 Example URI**

15411 /BloodPressureResURI

15412 **6.88.3 Resource Type**

15413 The resource type (rt) is defined as: oic.r.blood.pressure.

15414 **6.88.4 RAML Definition**

```

15415 #%RAML 0.8
15416 title: OICBloodPressure
15417 version: v1.1.0-20160519
15418 traits:
15419   - interface :
15420     queryParameters:
15421       if:
15422         enum: ["oic.if.s", "oic.if.baseline"]
15423
15424 /BloodPressureResURI:
15425   description: |
15426     This resource describes the properties associated with a person's Blood Pressure.
15427     The unit is a single value that is one of mmHg or kPa.
15428     If the unit Property is missing the default is a millimeter of mercury [mmHg].
15429     The BloodPressure and unit Properties are read-only values that are provided by the server.
15430     When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.
15431
15432   is : ['interface']
15433   get:
15434     description: |
  
```



```

15435     Retrieves blood pressure of an object.
15436
15437     responses :
15438         200:
15439             body:
15440                 application/json:
15441                     schema: /
15442                         {
15443                             "id":
15444 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.blood.pressure.json#",
15445 "$schema": "http://json-schema.org/draft-04/schema#",
15446 "description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
15447 reserved.",
15448 "title": "Blood Pressure",
15449 "definitions": {
15450     "oic.r.blood.pressure": {
15451         "type": "object",
15452         "properties": {
15453             "systolic": {
15454                 "type": "number",
15455                 "minimum": 0,
15456                 "readOnly": true,
15457                 "description": "Systolic blood pressure"
15458             },
15459             "diastolic": {
15460                 "type": "number",
15461                 "minimum": 0,
15462                 "readOnly": true,
15463                 "description": "Diastolic blood pressure"
15464             },
15465             "map": {
15466                 "type": "number",
15467                 "minimum": 0,
15468                 "readOnly": true,
15469                 "description": "Mean Arterial Pressure (MAP)"
15470             },
15471             "units": {
15472                 "type": "string",
15473                 "readOnly": true,
15474                 "enum": ["mmHg", "kPa"],
15475                 "description": "Blood pressure unit"
15476             }
15477         }
15478     },
15479     },
15480     "type": "object",
15481     "allOf": [
15482         {"$ref": "oic.core.json#/definitions/oic.core"},
15483         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
15484         {"$ref": "#/definitions/oic.r.blood.pressure"}
15485     ],
15486     "required": ["systolic", "diastolic"]
15487 }
15488
15489     example: /
15490         {
15491             "rt": ["oic.r.blood.pressure"],
15492             "id": "unique_example_id",
15493             "systolic": 110,
15494             "diastolic": 85,
15495             "units": "mmHg"
15496         }
15497

```

15498 **6.88.5 Property Definition**

15499 **Table 181 Blood Pressure Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
units	string		Read Only	Blood pressure unit
map	number		Read Only	Mean Arterial Pressure (MAP)
systolic	number	yes	Read Only	Systolic blood pressure
diastolic	number	yes	Read Only	Diastolic blood pressure

15500 **6.88.6 CRUDN behaviour**

15501 **Table 182 Blood Pressure CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/BloodPressureResURI		get			

15502 **6.89 Blood Pressure Monitor Atomic Measurement Baseline Representation**

15503 **6.89.1 Introduction**

15504 This resource describes the properties associated with Blood Pressure Monitor. The resource is
 15505 an atomic measurement of blood pressure (oic.r.blood.pressure), pulse rate (oic.r.pulserate),
 15506 observed time (oic.r.time.stamp), and user ID (oic.r.userid).

15507 **6.89.2 Example URI**

15508 /BloodPressureMonitorAMResURI

15509 **6.89.3 Resource Type**

15510 The resource type (rt) is defined as: oic.r.bloodpressuremonitor-am.

15511 **6.89.4 RAML Definition**

```

15512 #%RAML 0.8
15513 title: OICBloodPressureMonitorAM
15514 version: v1.1.0-20160519
15515 traits:
15516   - interface-ll :
15517     queryParameters:
15518       if:
15519         enum: ["oic.if.ll"]
15520   - interface-b :
15521     queryParameters:
15522       if:
15523         enum: ["oic.if.b"]
15524   - interface-baseline :
15525     queryParameters:
15526       if:
15527         enum: ["oic.if.baseline"]
15528   - interface-all :
15529     queryParameters:
15530       if:
15531         enum: ["oic.if.b", "oic.if.ll", "oic.if.baseline"]
  
```

15532
 15533 /BloodPressureMonitorAMResURI?if=oic.if.baseline:

15534 `description: |`

```

15535     This resource describes the properties associated with Blood Pressure Monitor.
15536     The resource is an atomic measurement of blood pressure (oic.r.blood.pressure), pulse rate
15537     (oic.r.pulserate), observed time (oic.r.time.stamp), and user ID (oic.r.userid).
15538
15539     is : ['interface-baseline']
15540
15541     get:
15542         description: |
15543             Retrieves the current blood pressure.
15544
15545     responses :
15546         200:
15547             body:
15548                 application/json:
15549                     schema: /
15550                         {
15551                             "id":
15552                             "http://openinterconnect.org/iotdatamodels/schemas/oic.r.bloodpressuremonitor-am.json#",
15553                             "$schema": "http://json-schema.org/draft-04/schema#",
15554                             "description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
15555                             reserved.",
15556                             "title": "Blood Pressure Monitor Atomic Measurement",
15557                             "definitions": {
15558                                 "oic.r.bloodpressuremonitor-am": {
15559                                     "type": "object",
15560                                     "properties": {
15561                                         "rt": {
15562                                             "type": "array",
15563                                             "minItems": 2,
15564                                             "maxItems": 2,
15565                                             "uniqueItems": true,
15566                                             "items": {
15567                                                 "enum": ["oic.r.bloodpressuremonitor-am", "oic.wk.atomicmeasurement"]
15568                                             }
15569                                         },
15570                                         "rts": {
15571                                             "type": "array",
15572                                             "minItems": 1,
15573                                             "uniqueItems": true,
15574                                             "items": {
15575                                                 "enum": ["oic.r.blood.pressure", "oic.r.pulserate", "oic.r.userid",
15576                                                 "oic.r.time.stamp"]
15577                                             },
15578                                             "description": "This contains all possible resource types for this atomic
15579                                             measurement."
15580                                         },
15581                                         "rts-m": {
15582                                             "type": "array",
15583                                             "minItems": 1,
15584                                             "maxItems": 1,
15585                                             "uniqueItems": true,
15586                                             "items": {
15587                                                 "enum": ["oic.r.blood.pressure"]
15588                                             },
15589                                             "description": "This contains all mandatory resource types for this
15590                                             atomic measurement."
15591                                         }
15592                                     }
15593                                 },
15594                                 "type": "object",
15595                                 "allOf": [
15596                                     {"$ref": "oic.core.json#/definitions/oic.core"},
15597                                     {"$ref": "oic.collection-schema.json#/definitions/oic.collection.properties"},
15598                                     {"$ref": "oic.collection-
15599                                     schema.json#/definitions/oic.collection.links.arrayoflinks"},
15600                                     {"$ref": "#/definitions/oic.r.bloodpressuremonitor-am"}
15601                                 ],

```

```

15602         "required": ["rts-m"]
15603     }
15604
15605     example: /
15606     {
15607         "rt": ["oic.r.bloodpressuremonitor-am", "oic.wk.atomicmeasurement"],
15608         "if": ["oic.if.b", "oic.if.ll", "oic.if.baseline"],
15609         "rts-m": ["oic.r.blood.pressure"],
15610         "rts": ["oic.r.blood.pressure", "oic.r.pulserate"],
15611         "links": [
15612             {
15613                 "href": "/myBloodPressureResURI",
15614                 "rt": ["oic.r.blood.pressure"],
15615                 "if": ["oic.if.s", "oic.if.baseline"]
15616             },
15617             {
15618                 "href": "/myPulseRateResURI",
15619                 "rt": ["oic.r.pulserate"],
15620                 "if": ["oic.if.s", "oic.if.baseline"]
15621             }
15622         ]
15623     }
15624

```

6.89.5 Property Definition

Table 183 Blood Pressure Monitor Atomic Measurement Baseline Representation Property Definitions

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema			
rts-m	array: see schema	yes		This contains all mandatory resource types for this atomic measurement.
rts	array: see schema			This contains all possible resource types for this atomic measurement.

6.89.6 CRUDN behaviour

Table 184 Blood Pressure Monitor Atomic Measurement Baseline Representation CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/BloodPressureMonitorAMResURI		get			

6.90 BMI

6.90.1 Introduction

This resource describes the properties associated with a person's Body Mass Index (BMI). The unit, which is the default unit, is kg/m². The bmi and unit Properties are read-only values that are provided by the server. When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.

6.90.2 Example URI

/BMIResURI

15639 6.90.3 Resource Type

15640 The resource type (rt) is defined as: oic.r.bmi.

15641 6.90.4 RAML Definition

15642 `##RAML 0.8`

15643 `title: OICBMI`

15644 `version: v1.1.0-20160519`

15645 `traits:`

15646 `- interface :`

15647 `queryParameters:`

15648 `if:`

15649 `enum: ["oic.if.s", "oic.if.baseline"]`

15650

15651 `/BMIResURI:`

15652 `description: |`

15653 `This resource describes the properties associated with a person's Body Mass Index (BMI).`

15654 `The unit, which is the default unit, is kg/m^2.`

15655 `The bmi and unit Properties are read-only values that are provided by the server.`

15656 `When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.`

15657

15658 `is : ['interface']`

15659 `get:`

15660 `description: |`

15661 `Retrieves BMI of an object.`

15662

15663 `responses :`

15664 `200:`

15665 `body:`

15666 `application/json:`

15667 `schema: /`

15668 `{`

15669 `"id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.bmi.json#",`

15670 `"$schema": "http://json-schema.org/draft-04/schema#",`

15671 `"description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights`

15672 `reserved.",`

15673 `"title": "Body Mass Index (BMI)",`

15674 `"definitions": {`

15675 `"oic.r.bmi": {`

15676 `"type": "object",`

15677 `"properties": {`

15678 `"bmi": {`

15679 `"type": "number",`

15680 `"minimum": 0,`

15681 `"readOnly": true,`

15682 `"description": "Body Mass Index (BMI) in kg/m^2"`

15683 `}`

15684 `}`

15685 `}`

15686 `},`

15687 `"type": "object",`

15688 `"allOf": [`

15689 `{"$ref": "oic.core.json#/definitions/oic.core"},`

15690 `{"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},`

15691 `{"$ref": "#/definitions/oic.r.bmi"}`

15692 `],`

15693 `"required": ["bmi"]`

15694 `}`

15695

15696 `example: /`

```

15697     {
15698         "rt":      ["oic.r.bmi"],
15699         "id":      "unique_example_id",
15700         "bmi":     20
15701     }
15702

```

15703 6.90.5 Property Definition

15704 **Table 185 BMI Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
bmi	number	yes	Read Only	Body Mass Index (BMI) in kg/m ²

15705 6.90.6 CRUDN behaviour

15706 **Table 186 BMI CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/BMIResURI		get			

15707 6.91 Body Fat

15708 6.91.1 Introduction

15709 This resource describes the properties associated with a person's Body fat. The unit is a single
15710 value that is one of kg, lb or %. If the unit Property is missing the default is kilograms [kg]. The
15711 bodyfat and unit Properties are read-only values that are provided by the server. When range (from
15712 oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.

15713 6.91.2 Example URI

15714 /BodyFatResURI

15715 6.91.3 Resource Type

15716 The resource type (rt) is defined as: oic.r.body.fat.

15717 6.91.4 RAML Definition

```

15718 #%RAML 0.8
15719 title: OICBodyFat
15720 version: v1.1.0-20160519
15721 traits:
15722   - interface :
15723       queryParams:
15724         if:
15725           enum: ["oic.if.s", "oic.if.baseline"]
15726
15727 /BodyFatResURI:
15728   description: |
15729     This resource describes the properties associated with a person's Body fat.
15730     The unit is a single value that is one of kg, lb or %.
15731     If the unit Property is missing the default is kilograms [kg].
15732     The bodyfat and unit Properties are read-only values that are provided by the server.
15733     When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.
15734
15735   is : ['interface']
15736   get:
15737     description: |
15738       Retrieves Body fat of an object.
15739
15740   responses :
15741     200:

```

```

15742     body:
15743         application/json:
15744             schema: /
15745                 {
15746                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.body.fat.json#",
15747                     "$schema": "http://json-schema.org/draft-04/schema#",
15748                     "description": "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
15749 reserved.",
15750                     "title": "Body Fat",
15751                     "definitions": {
15752                         "oic.r.body.fat": {
15753                             "type": "object",
15754                             "properties": {
15755                                 "bodyfat": {
15756                                     "type": "number",
15757                                     "minimum": 0,
15758                                     "readOnly": true,
15759                                     "description": "Body fat."
15760                                 },
15761                                 "units": {
15762                                     "type": "string",
15763                                     "readOnly": true,
15764                                     "enum": ["kg", "lb", "%"],
15765                                     "description": "Body fat units"
15766                                 }
15767                             }
15768                         }
15769                     },
15770                     "type": "object",
15771                     "allOf": [
15772                         {"$ref": "oic.core.json#/definitions/oic.core"},
15773                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
15774                         {"$ref": "#/definitions/oic.r.body.fat"}
15775                     ],
15776                     "required": ["bodyfat"]
15777                 }
15778
15779             example: /
15780                 {
15781                     "rt": ["oic.r.body.fat"],
15782                     "id": "unique_example_id",
15783                     "bodyfat": 20,
15784                     "units": "kg"
15785                 }
15786

```

6.91.5 Property Definition

Table 187 Body Fat Property Definitions

Property name	Value type	Mandatory	Access mode	Description
units	string		Read Only	Body fat units
bodyfat	number	yes	Read Only	Body fat.

6.91.6 CRUDN behaviour

Table 188 Body Fat CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/BodyFatResURI		get			

6.92 Body Fat Free Mass

6.92.1 Introduction

This resource describes the properties associated with a person's Body fat free mass. The unit is a single value that is one of kg, lb or %. If the unit Property is missing the default is kilograms [kg].

15795 The ffm and unit Properties are read-only values that are provided by the server. When range (from
15796 oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.

15797 **6.92.2 Example URI**

15798 /BodyFatFreeMassResURI

15799 **6.92.3 Resource Type**

15800 The resource type (rt) is defined as: oic.r.body.ffm.

15801 **6.92.4 RAML Definition**

```
15802 #%RAML 0.8
15803 title: OICBodyFatFreeMass
15804 version: v1.1.0-20160519
15805 traits:
15806   - interface :
15807     queryParameters:
15808       if:
15809         enum: ["oic.if.s", "oic.if.baseline"]
15810
15811 /BodyFatFreeMassResURI:
15812   description: |
15813     This resource describes the properties associated with a person's Body fat free mass.
15814     The unit is a single value that is one of kg, lb or %.
15815     If the unit Property is missing the default is kilograms [kg].
15816     The ffm and unit Properties are read-only values that are provided by the server.
15817     When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.
15818
15819   is : ['interface']
15820   get:
15821     description: |
15822       Retrieves Body fat free mass of an object.
15823
15824   responses :
15825     200:
15826       body:
15827         application/json:
15828           schema: /
15829             {
15830               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.body.ffm.json#",
15831               "$schema": "http://json-schema.org/draft-04/schema#",
15832               "description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
15833 reserved.",
15834               "title": "Body Fat Free Mass",
15835               "definitions": {
15836                 "oic.r.body.ffm": {
15837                   "type": "object",
15838                   "properties": {
15839                     "ffm": {
15840                       "type": "number",
15841                       "minimum": 0,
15842                       "readOnly": true,
15843                       "description": "Body fat free mass."
15844                     },
15845                     "units": {
15846                       "type": "string",
15847                       "readOnly": true,
15848                       "enum": ["kg", "lb", "%"],
15849                       "description": "Body fat free mass units"
15850                     }
15851                   }
15852                 }
15853             }
```



```

15853     },
15854     "type": "object",
15855     "allOf": [
15856       { "$ref": "oic.core.json#/definitions/oic.core" },
15857       { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
15858       { "$ref": "#/definitions/oic.r.body.ffm" }
15859     ],
15860     "required": ["ffm"]
15861   }
15862
15863   example: /
15864     {
15865       "rt":      ["oic.r.body.ffm"],
15866       "id":      "unique_example_id",
15867       "ffm":     40,
15868       "units":   "kg"
15869     }
15870

```

6.92.5 Property Definition

Table 189 Body Fat Free Mass Property Definitions

Property name	Value type	Mandatory	Access mode	Description
units	string		Read Only	Body fat free mass units
ffm	number	yes	Read Only	Body fat free mass.

6.92.6 CRUDN behaviour

Table 190 Body Fat Free Mass CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/BodyFatFreeMassResURI		get			

6.93 Body Location

6.93.1 Introduction

This resource describes the properties associated with Body location of a person. The bloc Property is a read-only value that is provided by the server.

6.93.2 Example URI

/BodyLocationResURI

6.93.3 Resource Type

The resource type (rt) is defined as: oic.r.body.location.

6.93.4 RAML Definition

```

15884 #%RAML 0.8
15885 title: OICBodyLocation
15886 version: v1.1.0-20160519
15887 traits:
15888   - interface :
15889     queryParameters:
15890       if:
15891         enum: ["oic.if.s", "oic.if.baseline"]
15892
15893 /BodyLocationResURI:
15894   description: |

```

```

15895     This resource describes the properties associated with Body location of a person.
15896     The bloc Property is a read-only value that is provided by the server.
15897
15898     is : ['interface']
15899     get:
15900         description: |
15901             Retrieves Body location of a person.
15902
15903     responses :
15904         200:
15905             body:
15906                 application/json:
15907                 schema: /
15908                     {
15909                         "id":
15910 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.body.location.json#",
15911                         "$schema": "http://json-schema.org/draft-04/schema#",
15912                         "description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
15913 reserved.",
15914                         "title": "Body Location",
15915                         "definitions": {
15916                             "oic.r.body.location": {
15917                                 "type": "object",
15918                                 "properties": {
15919                                     "bloc": {
15920                                         "type": "string",
15921                                         "enum": ["axillary", "body", "ear", "finger", "gitract", "mouth", "rectum",
15922 "toe", "tympanum"],
15923                                         "readOnly": true,
15924                                         "description": "A list of all potential body locations"
15925                                     }
15926                                 }
15927                             },
15928                         },
15929                         "type": "object",
15930                         "allOf": [
15931                             {"$ref": "oic.core.json#/definitions/oic.core"},
15932                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
15933                             {"$ref": "#/definitions/oic.r.body.location"}
15934                         ]
15935                     }
15936
15937     example: /
15938         {
15939             "rt":      ["oic.r.body.location"],
15940             "id":      "unique_example_id",
15941             "bloc":    "axillary"
15942         }
15943

```

6.93.5 Property Definition

Table 191 Body Location Property Definitions

Property name	Value type	Mandatory	Access mode	Description
bloc	string		Read Only	A list of all potential body locations

6.93.6 CRUDN behaviour

Table 192 Body Location CRUDN operations

Resource	Create	Read	Update	Delete	Notify
----------	--------	------	--------	--------	--------

/BodyLocationResURI		get			
---------------------	--	-----	--	--	--

15948 **6.94 Body Location Temperature**

15949 **6.94.1 Introduction**

15950 This resource describes the properties associated with Body location for temperature
 15951 measurement of a person. The bloc Property is a read-only value that is provided by the server.

15952 **6.94.2 Example URI**

15953 /BodyLocationTemperatureResURI

15954 **6.94.3 Resource Type**

15955 The resource type (rt) is defined as: oic.r.body.location.temperature.

15956 **6.94.4 RAML Definition**

15957 `##RAML 0.8`

15958 `title: OICBodyLocationTemperature`

15959 `version: v1.1.0-20160519`

15960 `traits:`

15961 `- interface :`

15962 `queryParameters:`

15963 `if:`

15964 `enum: ["oic.if.s", "oic.if.baseline"]`

15965

15966 `/BodyLocationTemperatureResURI:`

15967 `description: |`

15968 `This resource describes the properties associated with Body location for temperature`
 15969 `measurement of a person.`

15970 `The bloc Property is a read-only value that is provided by the server.`

15971

15972 `is : ['interface']`

15973 `get:`

15974 `description: |`

15975 `Retrieves Body location for temperature measurement of a person.`

15976

15977 `responses :`

15978 `200:`

15979 `body:`

15980 `application/json:`

15981 `schema: |`

15982 `{`

15983 `"id":`

15984 `"http://openinterconnect.org/iotdatamodels/schemas/oic.r.body.location.temperature.json#",`

15985 `"$schema": "http://json-schema.org/draft-04/schema#",`

15986 `"description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights`

15987 `reserved.",`

15988 `"title": "Body location for temperature",`

15989 `"definitions": {`

15990 `"oic.r.body.location.temperature": {`

15991 `"type": "object",`

15992 `"properties": {`

15993 `"bloc": {`

15994 `"type": "string",`

15995 `"enum": ["axillary", "body", "ear", "finger", "gitract", "mouth", "rectum",`

15996 `"toe", "tympanum"],`

15997 `"readOnly": true,`

15998 `"description": "A list specific to temperature site"`

15999 `}`

16000 `}`

16001 `}`

```

16002     },
16003     "type": "object",
16004     "allOf": [
16005       { "$ref": "oic.core.json#/definitions/oic.core" },
16006       { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
16007       { "$ref": "oic.r.body.location.json#/definitions/oic.r.body.location" },
16008       { "$ref": "#/definitions/oic.r.body.location.temperature" }
16009     ],
16010     "required": ["bloc"]
16011   }
16012
16013   example: /
16014   {
16015     "rt":      ["oic.r.body.location.temperature"],
16016     "id":      "unique_example_id",
16017     "bloc":    "ear"
16018   }
16019

```

6.94.5 Property Definition

Table 193 Body Location Temperature Property Definitions

Property name	Value type	Mandatory	Access mode	Description
bloc	string	yes	Read Only	A list specific to temperature site

6.94.6 CRUDN behaviour

Table 194 Body Location Temperature CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/BodyLocationTemperatureResURI		get			

6.95 Body Scale Atomic Measurement Baseline Representation

6.95.1 Introduction

This resource describes the properties associated with Body Scale. The resource is an atomic measurement of Weight (oic.r.weight), Body Mass Index (BMI) (oic.r.bmi), Height (oic.r.height), Body Fat (oic.r.body.fat), Body Water (oic.r.body.water), Body Soft Lean Mass (oic.r.body.slm), Body Fat Free Mass (oic.r.body.ffm), Observed time (oic.r.time.stamp), and User ID (oic.r.userid).

6.95.2 Example URI

/BodyScaleAMResURI

6.95.3 Resource Type

The resource type (rt) is defined as: oic.r.bodyscale-am.

6.95.4 RAML Definition

```

16035 #%RAML 0.8
16036 title: OICBodyScaleAM
16037 version: v1.1.0-20160519
16038 traits:
16039   - interface-ll :
16040     queryParameters:
16041       if:
16042         enum: ["oic.if.ll"]
16043   - interface-b :
16044     queryParameters:
16045       if:
16046         enum: ["oic.if.b"]
16047   - interface-baseline :
16048     queryParameters:

```

```

16049         if:
16050             enum: ["oic.if.baseline"]
16051     - interface-all :
16052         queryParameters:
16053             if:
16054                 enum: ["oic.if.b", "oic.if.ll", "oic.if.baseline"]
16055
16056 /BodyScaleAMResURI?if=oic.if.baseline:
16057     description: |
16058         This resource describes the properties associated with Body Scale.
16059         The resource is an atomic measurement of Weight (oic.r.weight), Body Mass Index (BMI)
16060 (oic.r.bmi), Height (oic.r.height), Body Fat (oic.r.body.fat), Body Water (oic.r.body.water), Body
16061 Soft Lean Mass (oic.r.body.slm), Body Fat Free Mass (oic.r.body.ffm), Observed time
16062 (oic.r.time.stamp), and User ID (oic.r.userid).
16063
16064     is : ['interface-baseline']
16065     get:
16066         description: |
16067             Retrieves the current weight.
16068
16069         responses :
16070             200:
16071                 body:
16072                     application/json:
16073                         schema: /
16074                             {
16075                                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.bodyscale-am.json#",
16076                                 "$schema": "http://json-schema.org/draft-04/schema#",
16077                                 "description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
16078 reserved.",
16079                                 "title": "Body Scale Atomic Measurement",
16080                                 "definitions": {
16081                                     "oic.r.bodyscale-am": {
16082                                         "type": "object",
16083                                         "properties": {
16084                                             "rt": {
16085                                                 "type": "array",
16086                                                 "minItems": 2,
16087                                                 "maxItems": 2,
16088                                                 "uniqueItems": true,
16089                                                 "items": {
16090                                                     "enum": ["oic.r.bodyscale-am", "oic.wk.atomicmeasurement"]
16091                                                 }
16092                                             },
16093                                             "rts": {
16094                                                 "type": "array",
16095                                                 "minItems": 1,
16096                                                 "uniqueItems": true,
16097                                                 "items": {
16098                                                     "enum": ["oic.r.weight", "oic.r.bmi", "oic.r.height", "oic.r.body.fat",
16099 "oic.r.body.water", "oic.r.body.slm", "oic.r.body.ffm", "oic.r.time.stamp", "oic.r.userid"]
16100                                                 },
16101                                                 "description": "This contains all possible resource types for this atomic
16102 measurement."
16103                                             },
16104                                             "rts-m": {
16105                                                 "type": "array",
16106                                                 "minItems": 1,
16107                                                 "maxItems": 1,
16108                                                 "uniqueItems": true,
16109                                                 "items": {
16110                                                     "enum": ["oic.r.weight"]
16111                                                 },
16112                                                 "description": "This contains all mandatory resource types for this

```

```

16113 atomic measurement."
16114     }
16115     }
16116   },
16117   "type": "object",
16118   "allof": [
16119     {"$ref": "oic.core.json#/definitions/oic.core"},
16120     {"$ref": "oic.collection-schema.json#/definitions/oic.collection.properties"},
16121     {"$ref": "oic.collection-
16122 schema.json#/definitions/oic.collection.links.arrayoflinks"},
16123     {"$ref": "#/definitions/oic.r.bodyscale-am"}
16124   ],
16125   "required": ["rts-m"]
16126 }
16127
16128
16129 example: /
16130 {
16131   "rt": ["oic.r.bodyscale-am", "oic.wk.atomicmeasurement"],
16132   "if": ["oic.if.b", "oic.if.ll", "oic.if.baseline"],
16133   "rts": ["oic.r.weight", "oic.r.bmi"],
16134   "rts-m": ["oic.r.weight"],
16135   "links": [
16136     {
16137       "href": "/myWeightResURI",
16138       "rt": ["oic.r.weight"],
16139       "if": ["oic.if.s", "oic.if.baseline"]
16140     },
16141     {
16142       "href": "/myBMIResURI",
16143       "rt": ["oic.r.bmi"],
16144       "if": ["oic.if.s", "oic.if.baseline"]
16145     }
16146   ]
16147 }
16148

```

6.95.5 Property Definition

Table 195 Body Scale Atomic Measurement Baseline Representation Property Definitions

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema			
rts-m	array: see schema	yes		This contains all mandatory resource types for this atomic measurement.
rts	array: see schema			This contains all possible resource types for this atomic measurement.

6.95.6 CRUDN behaviour

Table 196 Body Scale Atomic Measurement Baseline Representation CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/BodyScaleAMResURI		get			

16153 **6.96 BodySoftLeanMass**

16154 **6.96.1 Introduction**

16155 This resource describes the properties associated with a person's Body soft lean mass. The unit
16156 is a single value that is one of kg, lb or %. If the unit Property is missing the default is kilograms
16157 [kg]. The slm and unit Properties are read-only values that are provided by the server. When range
16158 (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.

16159 **6.96.2 Example URI**

16160 /BodySoftLeanMassResURI

16161 **6.96.3 Resource Type**

16162 The resource type (rt) is defined as: oic.r.body.slm.

16163 **6.96.4 RAML Definition**

16164 `##RAML 0.8`

16165 `title: OICBodySoftLeanMass`

16166 `version: v1.1.0-20160519`

16167 `traits:`

16168 `- interface :`

16169 `queryParameters:`

16170 `if:`

16171 `enum: ["oic.if.s", "oic.if.baseline"]`

16172

16173 `/BodySoftLeanMassResURI:`

16174 `description: |`

16175 `This resource describes the properties associated with a person's Body soft lean mass.`

16176 `The unit is a single value that is one of kg, lb or %.`

16177 `If the unit Property is missing the default is kilograms [kg].`

16178 `The slm and unit Properties are read-only values that are provided by the server.`

16179 `When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.`

16180

16181 `is : ['interface']`

16182 `get:`

16183 `description: |`

16184 `Retrieves Body soft lean mass of an object.`

16185

16186 `responses :`

16187 `200:`

16188 `body:`

16189 `application/json:`

16190 `schema: |`

16191 `{`

16192 `"id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.body.slm.json#",`

16193 `"$schema": "http://json-schema.org/draft-04/schema#",`

16194 `"description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights`

16195 `reserved.",`

16196 `"title": "Body Soft Lean Mass",`

16197 `"definitions": {`

16198 `"oic.r.body.slm": {`

16199 `"type": "object",`

16200 `"properties": {`

16201 `"slm": {`

16202 `"type": "number",`

16203 `"minimum": 0,`

16204 `"readOnly": true,`

16205 `"description": "Body soft lean mass."`

16206 `},`

16207 `"units": {`

16208 `"type": "string",`

```

16209         "readOnly": true,
16210         "enum": ["kg", "lb", "%"],
16211         "description": "Body soft lean mass units"
16212     }
16213 }
16214 }
16215 },
16216 "type": "object",
16217 "allOf": [
16218     {"$ref": "oic.core.json#/definitions/oic.core"},
16219     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
16220     {"$ref": "#/definitions/oic.r.body.slm"}
16221 ],
16222 "required": ["slm"]
16223 }
16224
16225 example: /
16226 {
16227     "rt":         ["oic.r.body.slm"],
16228     "id":         "unique_example_id",
16229     "slm":        20,
16230     "units":      "kg"
16231 }
16232

```

6.96.5 Property Definition

Table 197 BodySoftLeanMass Property Definitions

Property name	Value type	Mandatory	Access mode	Description
units	string		Read Only	Body soft lean mass units
slm	number	yes	Read Only	Body soft lean mass.

6.96.6 CRUDN behaviour

Table 198 BodySoftLeanMass CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/BodySoftLeanMassResURI		get			

6.97 Body Thermometer Atomic Measurement Baseline Representation

6.97.1 Introduction

This resource describes the properties associated with body thermometer. The resource is an atomic measurement of temperature (oic.r.temperature), body location for temperature (oic.r.body.location.temperature), observed time (oic.r.time.stamp), and user ID (oic.r.userid).

6.97.2 Example URI

/BodyThermometerAMResURI

6.97.3 Resource Type

The resource type (rt) is defined as: oic.r.bodythermometer-am.

6.97.4 RAML Definition

```

16247 #%RAML 0.8
16248 title: OICBodyThermometerAM
16249 version: v1.1.0-20160519
16250 traits:
16251   - interface-11 :
16252     queryParameters:
16253       if:
16254         enum: ["oic.if.11"]

```



```

16255 - interface-b :
16256     queryParameters:
16257         if:
16258             enum: ["oic.if.b"]
16259 - interface-baseline :
16260     queryParameters:
16261         if:
16262             enum: ["oic.if.baseline"]
16263 - interface-all :
16264     queryParameters:
16265         if:
16266             enum: ["oic.if.b", "oic.if.ll", "oic.if.baseline"]
16267
16268 /BodyThermometerAMResURI?if=oic.if.baseline:
16269     description: |
16270         This resource describes the properties associated with body thermometer.
16271         The resource is an atomic measurement of temperature (oic.r.temperature), body location for
16272         temperature (oic.r.body.location.temperature), observed time (oic.r.time.stamp), and user ID
16273         (oic.r.userid).
16274
16275     is : ['interface-baseline']
16276     get:
16277         description: |
16278             Retrieves the current body temperature.
16279
16280     responses :
16281         200:
16282             body:
16283                 application/json:
16284                     schema: /
16285                         {
16286                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.bodythermometer-
16287         am.json#",
16288                             "$schema": "http://json-schema.org/draft-04/schema#",
16289                             "description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
16290         reserved.",
16291                             "title": "Body Thermometer Atomic Measurement",
16292                             "definitions": {
16293                                 "oic.r.bodythermometer-am": {
16294                                     "type": "object",
16295                                     "properties": {
16296                                         "rt": {
16297                                             "type": "array",
16298                                             "minItems": 2,
16299                                             "maxItems": 2,
16300                                             "uniqueItems": true,
16301                                             "items": {
16302                                                 "enum": ["oic.r.bodythermometer-am", "oic.wk.atomicmeasurement"]
16303                                             }
16304                                         },
16305                                         "rts": {
16306                                             "type": "array",
16307                                             "minItems": 1,
16308                                             "uniqueItems": true,
16309                                             "items": {
16310                                                 "enum": ["oic.r.temperature", "oic.r.body.location.temperature",
16311         "oic.r.time.observed", "oic.r.userid"]
16312                                             },
16313                                         "description": "This contains all possible resource types for this atomic
16314         measurement."
16315                                     },
16316                                     "rts-m": {

```

```

16317         "type": "array",
16318         "minItems": 1,
16319         "maxItems": 1,
16320         "uniqueItems": true,
16321         "items": {
16322             "enum": ["oic.r.temperature"]
16323         },
16324         "description": "This contains all mandatory resource types for this
16325 atomic measurement."
16326     }
16327 }
16328 }
16329 },
16330 "type": "object",
16331 "allOf": [
16332     {"$ref": "oic.core.json#/definitions/oic.core"},
16333     {"$ref": "oic.collection-schema.json#/definitions/oic.collection.properties"},
16334     {"$ref": "oic.collection-
16335 schema.json#/definitions/oic.collection.links.arrayoflinks"},
16336     {"$ref": "#/definitions/oic.r.bodythermometer-am"}
16337 ],
16338 "required": ["rts-m"]
16339 }
16340
16341 example: /
16342 {
16343     "rt": ["oic.r.bodythermometer-am", "oic.wk.atomicmeasurement"],
16344     "if": ["oic.if.b", "oic.if.ll", "oic.if.baseline"],
16345     "rts": ["oic.r.temperature", "oic.r.body.location.temperature"],
16346     "rts-m": ["oic.r.temperature"],
16347     "links": [
16348         {
16349             "href": "/myTemperatureResURI",
16350             "rt": ["oic.r.temperature"],
16351             "if": ["oic.if.s", "oic.if.baseline"]
16352         },
16353         {
16354             "href": "/myBodyLocationForTemperatureResURI",
16355             "rt": ["oic.r.body.location.temperature"],
16356             "if": ["oic.if.s", "oic.if.baseline"]
16357         }
16358     ]
16359 }
16360

```

6.97.5 Property Definition

Table 199 Body Thermometer Atomic Measurement Baseline Representation Property Definitions

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema			
rts-m	array: see schema	yes		This contains all mandatory resource types for this atomic measurement.
rts	array: see schema			This contains all possible resource types for this atomic measurement.

16364 **6.97.6 CRUDN behaviour**

16365 **Table 200 Body Thermometer Atomic Measurement Baseline Representation CRUDN**
 16366 **operations**

Resource	Create	Read	Update	Delete	Notify
/BodyThermometerAMResURI		get			

16367 **6.98 Body Water**

16368 **6.98.1 Introduction**

16369 This resource describes the properties associated with a person's Body water. The unit is a single
 16370 value that is one of kg or lb. If the unit Property is missing the default is kilograms [kg]. The bwater
 16371 and unit Properties are read-only values that are provided by the server. When range (from
 16372 oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.

16373 **6.98.2 Example URI**

16374 /BodyWaterResURI

16375 **6.98.3 Resource Type**

16376 The resource type (rt) is defined as: oic.r.body.water.

16377 **6.98.4 RAML Definition**

```

16378 #%RAML 0.8
16379 title: OICBodyWater
16380 version: v1.1.0-20160519
16381 traits:
16382   - interface :
16383     queryParameters:
16384       if:
16385         enum: ["oic.if.s", "oic.if.baseline"]
16386
16387 /BodyWaterResURI:
16388   description: |
16389     This resource describes the properties associated with a person's Body water.
16390     The unit is a single value that is one of kg or lb.
16391     If the unit Property is missing the default is kilograms [kg].
16392     The bwater and unit Properties are read-only values that are provided by the server.
16393     When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.
16394
16395   is : ['interface']
16396
16397   get:
16398     description: |
16399       Retrieves Body water of an object.
16400
16401   responses :
16402     200:
16403       body:
16404         application/json:
16405           schema: /
16406             {
16407               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.body.water.json#",
16408               "$schema": "http://json-schema.org/draft-04/schema#",
16409               "description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
16410 reserved.",
16411               "title": "Body Water",
16412               "definitions": {
16413                 "oic.r.body.water": {
16414                   "type": "object",
  
```

```

16414         "properties": {
16415             "bwater": {
16416                 "type": "number",
16417                 "minimum": 0,
16418                 "readOnly": true,
16419                 "description": "Body water."
16420             },
16421             "units": {
16422                 "type": "string",
16423                 "readOnly": true,
16424                 "enum": ["kg", "lb"],
16425                 "description": "Body water unit"
16426             }
16427         }
16428     },
16429     },
16430     "type": "object",
16431     "allOf": [
16432         {"$ref": "oic.core.json#/definitions/oic.core"},
16433         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
16434         {"$ref": "#/definitions/oic.r.body.water"}
16435     ],
16436     "required": ["bwater"]
16437 }
16438
16439     example: /
16440     {
16441         "rt":         ["oic.r.body.water"],
16442         "id":         "unique_example_id",
16443         "bwater":    20,
16444         "units":     "kg"
16445     }
16446

```

6.98.5 Property Definition

Table 201 Body Water Property Definitions

Property name	Value type	Mandatory	Access mode	Description
units	string		Read Only	Body water unit
bwater	number	yes	Read Only	Body water.

6.98.6 CRUDN behaviour

Table 202 Body Water CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/BodyWaterResURI		get			

6.99 Glucose

6.99.1 Introduction

This resource describes the properties associated with a person's Glucose level. The unit is a single value that is one of mg/dL, mmol/L. If the unit Property is missing the default is milligrams per decilitre [mg/dL]. The glucose and unit Properties are read-only values that are provided by the server. When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.

6.99.2 Example URI

/GlucoseResURI

6.99.3 Resource Type

The resource type (rt) is defined as: oic.r.glucose.

6.99.4 RAML Definition

##RAML 0.8

```

16463 title: OICGlucose
16464 version: v1.1.0-20160519
16465 traits:
16466   - interface :
16467     queryParameters:
16468       if:
16469         enum: ["oic.if.s", "oic.if.baseline"]
16470
16471 /GlucoseResURI:
16472   description: |
16473     This resource describes the properties associated with a person's Glucose level.
16474     The unit is a single value that is one of mg/dL, mmol/L.
16475     If the unit Property is missing the default is milligrams per decilitre [mg/dL].
16476     The glucose and unit Properties are read-only values that are provided by the server.
16477     When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.
16478
16479   is : ['interface']
16480   get:
16481     description: |
16482       Retrieves glucose level of a person.
16483
16484   responses :
16485     200:
16486       body:
16487         application/json:
16488           schema: /
16489             {
16490               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.glucose.json#",
16491               "$schema": "http://json-schema.org/draft-04/schema#",
16492               "description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
16493 reserved.",
16494               "title": "Glucose",
16495               "definitions": {
16496                 "oic.r.glucose": {
16497                   "type": "object",
16498                   "properties": {
16499                     "glucose": {
16500                       "type": "number",
16501                       "minimum": 0,
16502                       "readOnly": true,
16503                       "description": "A measurement of glucose concentration in the blood"
16504                     },
16505                     "units": {
16506                       "type": "string",
16507                       "readOnly": true,
16508                       "enum": ["mg/dL", "mmol/L"],
16509                       "description": "Glucose unit"
16510                     }
16511                   }
16512                 }
16513             },
16514             "type": "object",
16515             "allOf": [
16516               {"$ref": "oic.core.json#/definitions/oic.core"},
16517               {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
16518               {"$ref": "#/definitions/oic.r.glucose"}
16519             ],
16520             "required": ["glucose"]
16521           }
16522
16523   example: /

```

```

16524     {
16525         "rt":      ["oic.r.glucose"],
16526         "id":      "unique_example_id",
16527         "glucose": 90,
16528         "units":   "mg/dL"
16529     }
16530

```

6.99.5 Property Definition

Table 203 Glucose Property Definitions

Property name	Value type	Mandatory	Access mode	Description
units	string		Read Only	Glucose unit
glucose	number	yes	Read Only	A measurement of glucose concentration in the blood

6.99.6 CRUDN behaviour

Table 204 Glucose CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/GlucoseResURI		get			

6.100 Context Carbohydrates for Glucose Meter

6.100.1 Introduction

This resource describes the properties associated with a context carbohydrates. The carb property has a default unit of grams[g]. The carb and meal properties are read-only values that are provided by the server. When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.

6.100.2 Example URI

/GlucoseCarbResURI

6.100.3 Resource Type

The resource type (rt) is defined as: oic.r.glucose.carb.

6.100.4 RAML Definition

```

16545 #%RAML 0.8
16546 title: OICGlucoseCarb
16547 version: v1.1.0-20160519
16548 traits:
16549   - interface :
16550       queryParameters:
16551           if:
16552               enum: ["oic.if.s", "oic.if.baseline"]
16553
16554 /GlucoseCarbResURI:
16555     description: |
16556       This resource describes the properties associated with a context carbohydrates.
16557       The carb property has a default unit of grams[g].
16558       The carb and meal properties are read-only values that are provided by the server.
16559       When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.
16560
16561     is : ['interface']
16562     get:
16563         description: |
16564           Retrieves Context Carbohydrates for Glucose Meter.
16565

```

```

16566     responses :
16567         200:
16568             body:
16569                 application/json:
16570                 schema: /
16571                     {
16572                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.glucose.carb.json#",
16573                         "$schema": "http://json-schema.org/draft-04/schema#",
16574                         "description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
16575 reserved.",
16576                         "title": "Context Carbohydrates for Glucose Meter",
16577                         "definitions": {
16578                             "oic.r.glucose.carb": {
16579                                 "type": "object",
16580                                 "properties": {
16581                                     "carb": {
16582                                         "type": "number",
16583                                         "readOnly": true,
16584                                         "description": "The amount of carbohydrates undertaken in grams"
16585                                     },
16586                                     "meal": {
16587                                         "type": "string",
16588                                         "readOnly": true,
16589                                         "enum": ["breakfast", "lunch", "dinner", "snack", "drink", "supper",
16590 "brunch", "undetermined", "other", "no_entry", "no_ingestion"],
16591                                         "description": "Recorded time of carbohydrates intake"
16592                                     }
16593                                 }
16594                             }
16595                         },
16596                         "type": "object",
16597                         "allOf": [
16598                             {"$ref": "oic.core.json#/definitions/oic.core"},
16599                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
16600                             {"$ref": "#/definitions/oic.r.glucose.carb"}
16601                         ],
16602                         "required": ["carb", "meal"]
16603                     }
16604
16605                 example: /
16606                     {
16607                         "rt":         ["oic.r.glucose.carb"],
16608                         "id":         "unique_example_id",
16609                         "carb":       100,
16610                         "meal":       "breakfast"
16611                     }
16612

```

6.100.5 Property Definition

Table 205 Context Carbohydrates for Glucose Meter Property Definitions

Property name	Value type	Mandatory	Access mode	Description
carb	number	yes	Read Only	The amount of carbohydrates undertaken in grams
meal	string	yes	Read Only	Recorded time of carbohydrates intake

16615 **6.100.6 CRUDN behaviour**

16616 **Table 206 Context Carbohydrates for Glucose Meter CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/GlucoseCarbResURI		get			

16617 **6.101 Exercise for Glucose Meter**

16618 **6.101.1 Introduction**

16619 This resource describes the properties associated with glucose exercise. The exercise property
16620 has a default unit of percentage[%]. The exercise property is a read-only value that is provided by
16621 the server.

16622 **6.101.2 Example URI**

16623 /ExerciseResURI

16624 **6.101.3 Resource Type**

16625 The resource type (rt) is defined as: oic.r.glucose.exercise.

16626 **6.101.4 RAML Definition**

16627 `##RAML 0.8`

16628 `title: OICGlucoseExercise`

16629 `version: v1.1.0-20160519`

16630 `traits:`

16631 `- interface :`

16632 `queryParameters:`

16633 `if:`

16634 `enum: ["oic.if.s", "oic.if.baseline"]`

16635

16636 `/ExerciseResURI:`

16637 `description: |`

16638 `This resource describes the properties associated with glucose exercise.`

16639 `The exercise property has a default unit of percentage[%].`

16640 `The exercise property is a read-only value that is provided by the server.`

16641

16642 `is : ['interface']`

16643 `get:`

16644 `description: |`

16645 `Retrieves the level of exercise undertaken in percentage.`

16646

16647 `responses :`

16648 `200:`

16649 `body:`

16650 `application/json:`

16651 `schema: |`

16652 `{`

16653 `"id":`

16654 `"http://openinterconnect.org/iotdatamodels/schemas/oic.r.glucose.exercise.json#",`

16655 `"$schema": "http://json-schema.org/draft-04/schema#",`

16656 `"description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights`
16657 `reserved.",`

16658 `"title": "Exercise",`

16659 `"definitions": {`

16660 `"oic.r.glucose.exercise": {`

16661 `"type": "object",`

16662 `"properties": {`

16663 `"exercise": {`

16664 `"type": "number",`


```

16665         "readOnly": true,
16666         "minimum": 0,
16667         "maximum": 100,
16668         "description": "The level of exercise undertaken in percentage"
16669     }
16670 }
16671 }
16672 },
16673 "type": "object",
16674 "allOf": [
16675   {"$ref": "oic.core.json#/definitions/oic.core"},
16676   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
16677   {"$ref": "#/definitions/oic.r.glucose.exercise"}
16678 ],
16679 "required": ["exercise"]
16680 }
16681
16682 example: /
16683 {
16684   "rt":      ["oic.r.glucose.exercise"],
16685   "id":      "unique_example_id",
16686   "exercise": 30
16687 }
16688

```

6.101.5 Property Definition

Table 207 Exercise for Glucose Meter Property Definitions

Property name	Value type	Mandatory	Access mode	Description
exercise	number	yes	Read Only	The level of exercise undertaken in percentage

6.101.6 CRUDN behaviour

Table 208 Exercise for Glucose Meter CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/ExerciseResURI		get			

6.102 Hemoglobin Bound to Glucose A1c Form (HbA1c) for Glucose Meter

6.102.1 Introduction

This resource describes the properties associated with a person's Hba1c level. The unit is a single value that is percentage [%]. The hba1c Property is a read-only value that is provided by the server.

6.102.2 Example URI

/GlucoseHbA1cResURI

6.102.3 Resource Type

The resource type (rt) is defined as: oic.r.glucose.hba1c.

6.102.4 RAML Definition

```

16702 #%RAML 0.8
16703 title: OICGlucoseHbA1c
16704 version: v1.1.0-20160519
16705 traits:
16706   - interface :
16707     queryParameters:
16708       if:
16709         enum: ["oic.if.s", "oic.if.baseline"]

```

```

16710
16711 /GlucoseHbA1cResURI:
16712   description: |
16713     This resource describes the properties associated with a person's HbA1c level.
16714     The unit is a single value that is percentage [%].
16715     The hba1c Property is a read-only value that is provided by the server.
16716
16717   is : ['interface']
16718   get:
16719     description: |
16720       Retrieves Hemoglobin Bound to Glucose A1c Form (HbA1c) for Glucose Meter.
16721
16722     responses :
16723       200:
16724         body:
16725           application/json:
16726             schema: /
16727               {
16728                 "id":
16729 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.glucose.hba1c.json#",
16730                 "$schema": "http://json-schema.org/draft-04/schema#",
16731                 "description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
16732 reserved.",
16733                 "title": "Hemoglobin Bound to Glucose A1c Form (HbA1c) for Glucose Meter",
16734                 "definitions": {
16735                   "oic.r.glucose.hba1c": {
16736                     "type": "object",
16737                     "properties": {
16738                       "hba1c": {
16739                         "type": "number",
16740                         "readOnly": true,
16741                         "minimum": 0,
16742                         "maximum": 100,
16743                         "description": "Current HbA1c measurement in percentage"
16744                       }
16745                     }
16746                   }
16747                 },
16748                 "type": "object",
16749                 "allOf": [
16750                   {"$ref": "oic.core.json#/definitions/oic.core"},
16751                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
16752                   {"$ref": "#/definitions/oic.r.glucose.hba1c"}
16753                 ],
16754                 "required": ["hba1c"]
16755               }
16756
16757           example: /
16758             {
16759               "rt":      ["oic.r.glucose.hba1c"],
16760               "id":      "unique_example_id",
16761               "hba1c":    5
16762             }
16763

```

6.102.5 Property Definition

Table 209 Hemoglobin Bound to Glucose A1c Form (HbA1c) for Glucose Meter Property Definitions

Property name	Value type	Mandatory	Access mode	Description
---------------	------------	-----------	-------------	-------------

hba1c	number	yes	Read Only	Current HbA1c measurement in percentage
-------	--------	-----	-----------	---

16767 **6.102.6 CRUDN behaviour**

16768 **Table 210 Hemoglobin Bound to Glucose A1c Form (HbA1c) for Glucose Meter CRUDN**
 16769 **operations**

Resource	Create	Read	Update	Delete	Notify
/GlucoseHbA1cResURI		get			

16770 **6.103 Context Health for Glucose Meter**

16771 **6.103.1 Introduction**

16772 This resource describes the properties associated with context health. The health Property is a
 16773 read-only value that is provided by the server where minor and major are related to the general
 16774 health or the level of illness of the person; menses refers to the female menstrual cycle; stress
 16775 refers to physiological or psychological stress.

16776 **6.103.2 Example URI**

16777 /GlucoseHealthResURI

16778 **6.103.3 Resource Type**

16779 The resource type (rt) is defined as: oic.r.glucose.health.

16780 **6.103.4 RAML Definition**

16781 `##RAML 0.8`

16782 `title: OICGlucoseHealth`
 16783 `version: v1.1.0-20160519`

16784 `traits:`
 16785 `- interface :`
 16786 `queryParameters:`
 16787 `if:`
 16788 `enum: ["oic.if.s", "oic.if.baseline"]`

16789 `/GlucoseHealthResURI:`

16791 `description: |`
 16792 `This resource describes the properties associated with context health.`
 16793 `The health Property is a read-only value that is provided by the server where`
 16794 `minor and major are related to the general health or the level of illness of the person;`
 16795 `menses refers to the female menstrual cycle;`
 16796 `stress refers to physiological or psychological stress.`

16798 `is : ['interface']`

16799 `get:`

16800 `description: |`
 16801 `Retrieves Context Health for Glucose Meter.`

16803 `responses :`

16804 `200:`

16805 `body:`
 16806 `application/json:`

16807 `schema: /`

16808 `{`
 16809 `"id":`

16810 `"http://openinterconnect.org/iotdatamodels/schemas/oic.r.glucose.health.json#",`
 16811 `"$schema": "http://json-schema.org/draft-04/schema#",`

```

16812         "description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
16813 reserved.",
16814         "title": "Context Health for Glucose Meter",
16815         "definitions": {
16816             "oic.r.glucose.health": {
16817                 "type": "object",
16818                 "properties": {
16819                     "health": {
16820                         "type": "string",
16821                         "readOnly": true,
16822                         "enum": ["minor", "major", "menses", "stress", "none"],
16823                         "description": "The various levels of health a person feels when taking a
16824 glucose."
16825                     }
16826                 }
16827             },
16828         },
16829         "type": "object",
16830         "allOf": [
16831             {"$ref": "oic.core.json#/definitions/oic.core"},
16832             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
16833             {"$ref": "#/definitions/oic.r.glucose.health"}
16834         ],
16835         "required": ["health"]
16836     }
16837
16838     example: /
16839     {
16840         "rt":         ["oic.r.glucose.health"],
16841         "id":         "unique_example_id",
16842         "health":    "major"
16843     }
16844

```

6.103.5 Property Definition

Table 211 Context Health for Glucose Meter Property Definitions

Property name	Value type	Mandatory	Access mode	Description
health	string	yes	Read Only	The various levels of health a person feels when taking a glucose.

6.103.6 CRUDN behaviour

Table 212 Context Health for Glucose Meter CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/GlucoseHealthResURI		get			

6.104 Context Meal for Glucose Meter

6.104.1 Introduction

This resource describes the properties associated with context meal. Preprandial means pre-meal. Postprandial means post-meal. Fasting means the effect of long-term absence of food intake (overnight). The meal Property is a read-only value that is provided by the server.

6.104.2 Example URI

/GlucoseMealResURI

6.104.3 Resource Type

The resource type (rt) is defined as: oic.r.glucose.meal.

```

16858 6.104.4 RAML Definition
16859 #%RAML 0.8
16860 title: OICGlucoseMeal
16861 version: v1.1.0-20160519
16862 traits:
16863   - interface :
16864     queryParameters:
16865       if:
16866         enum: ["oic.if.s", "oic.if.baseline"]
16867
16868 /GlucoseMealResURI:
16869   description: |
16870     This resource describes the properties associated with context meal.
16871     Preprandial means pre-meal.
16872     Postprandial means post-meal.
16873     Fasting means the effect of long-term absence of food intake (overnight).
16874     The meal Property is a read-only value that is provided by the server.
16875
16876   is : ['interface']
16877   get:
16878     description: |
16879       Retrieves Context Meal for Glucose Meter.
16880
16881   responses :
16882     200:
16883       body:
16884         application/json:
16885           schema: /
16886             {
16887               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.glucose.meal.json#",
16888               "$schema": "http://json-schema.org/draft-04/schema#",
16889               "description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
16890 reserved.",
16891               "title": "Context Meal for Glucose Meter",
16892               "definitions": {
16893                 "oic.r.glucose.meal": {
16894                   "type": "object",
16895                   "properties": {
16896                     "meal": {
16897                       "type": "string",
16898                       "readOnly": true,
16899                       "enum": ["preprandial", "postprandial", "fasting", "bedtime", "casual"],
16900                       "description": "Time of day when the measurement is taken."
16901                     }
16902                   }
16903                 },
16904               },
16905               "type": "object",
16906               "allOf": [
16907                 {"$ref": "oic.core.json#/definitions/oic.core"},
16908                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
16909                 {"$ref": "#/definitions/oic.r.glucose.meal"}
16910               ],
16911               "required": ["meal"]
16912             }
16913
16914   example: /
16915     {
16916       "rt":      ["oic.r.glucose.meal"],
16917       "id":      "unique_example_id",
16918       "meal":    "preprandial"
16919     }

```

16919 }
16920

6.104.5 Property Definition

Table 213 Context Meal for Glucose Meter Property Definitions

Property name	Value type	Mandatory	Access mode	Description
meal	string	yes	Read Only	Time of day when the measurement is taken.

6.104.6 CRUDN behaviour

Table 214 Context Meal for Glucose Meter CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/GlucoseMealResURI		get			

6.105 Context Medication for Glucose Meter

6.105.1 Introduction

This resource describes the properties associated with context medication. The unit is a single value that is one of mg and mL. The medication property has a default unit of milligrams[mg]. The medication, unit and regimen Properties are read-only values that are provided by the server. When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.

6.105.2 Example URI

/GlucoseMedicationResURI

6.105.3 Resource Type

The resource type (rt) is defined as: oic.r.glucose.medication.

6.105.4 RAML Definition

```
16936 #%RAML 0.8
16937 title: OICGlucoseMedication
16938 version: v1.1.0-20160519
16939 traits:
16940   - interface :
16941       queryParameters:
16942         if:
16943           enum: ["oic.if.s", "oic.if.baseline"]
16944
16945 /GlucoseMedicationResURI:
16946   description: |
16947     This resource describes the properties associated with context medication.
16948     The unit is a single value that is one of mg and mL.
16949     The medication property has a default unit of milligrams[mg].
16950     The medication, unit and regimen Properties are read-only values that are provided by the
16951     server.
16952     When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.
16953
16954   is : ['interface']
16955   get:
16956     description: |
16957       Retrieves Context Medication for Glucose Meter.
16958
16959   responses :
16960     200:
```

```

16961     body:
16962     application/json:
16963         schema: /
16964             {
16965                 "id":
16966 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.glucose.medication.json#",
16967                 "$schema": "http://json-schema.org/draft-04/schema#",
16968                 "description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
16969 reserved.",
16970                 "title": "Context Medication for Glucose Meter",
16971                 "definitions": {
16972                     "oic.r.glucose.medication": {
16973                         "type": "object",
16974                         "properties": {
16975                             "medication": {
16976                                 "type": "number",
16977                                 "readOnly": true,
16978                                 "description": "The level of medication undertaken"
16979                             },
16980                             "units": {
16981                                 "type": "string",
16982                                 "readOnly": true,
16983                                 "enum": ["mg", "mL"],
16984                                 "description": "Current exercise movement type measurement"
16985                             },
16986                             "regimen": {
16987                                 "type": "string",
16988                                 "readOnly": true,
16989                                 "enum": ["rapidacting", "shortacting", "intermediateacting", "longacting",
16990 "premix"],
16991                                 "description": "Medication regimen"
16992                             }
16993                         }
16994                     },
16995                 "type": "object",
16996                 "allOf": [
16997                     {"$ref": "oic.core.json#/definitions/oic.core"},
16998                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
16999                     {"$ref": "#/definitions/oic.r.glucose.medication"}
17000                 ],
17001                 "required": ["medication"]
17002             }
17003         }
17004     }
17005     example: /
17006         {
17007             "rt":         ["oic.r.glucose.medication"],
17008             "id":         "unique_example_id",
17009             "medication": 100,
17010             "units":      "mg",
17011             "regimen":    "rapidacting"
17012         }
17013     }

```

6.105.5 Property Definition

Table 215 Context Medication for Glucose Meter Property Definitions

Property name	Value type	Mandatory	Access mode	Description
units	string		Read Only	Current exercise movement type measurement
regimen	string		Read Only	Medication regimen

medication	number	yes	Read Only	The level of medication undertaken
------------	--------	-----	-----------	------------------------------------

17016 **6.105.6 CRUDN behaviour**

17017 **Table 216 Context Medication for Glucose Meter CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/GlucoseMedicationResURI		get			

17018 **6.106 Glucose Meter Atomic Measurement**

17019 **6.106.1 Introduction**

17020 This resource describes the properties associated with glucose meter. The resource is an atomic
 17021 measurement of glucose (oic.r.glucose), context carbohydrates (oic.r.glucose.carb), context
 17022 exercise (oic.r.glucose.exercise), Hemoglobin Bound to Glucose A1c Form (HbA1c)
 17023 (oic.r.glucose.hba1c), context health (oic.r.glucose.health), context meal (oic.r.glucose.meal),
 17024 context medication (oic.r.glucose.medication), context sample location
 17025 (oic.r.glucose.samplelocation), context tester (oic.r.glucose.tester), observed time
 17026 (oic.r.time.stamp), and user ID (oic.r.userid).

17027 **6.106.2 Example URI**

17028 /GlucoseMeterAMResURI

17029 **6.106.3 Resource Type**

17030 The resource type (rt) is defined as: oic.r.glucosemeter-am.

17031 **6.106.4 RAML Definition**

```

17032 #%RAML 0.8
17033 title: OICGlucoseMeterAM
17034 version: v1.1.0-20160519
17035 traits:
17036   - interface-ll :
17037     queryParameters:
17038       if:
17039         enum: ["oic.if.ll"]
17040   - interface-b :
17041     queryParameters:
17042       if:
17043         enum: ["oic.if.b"]
17044   - interface-baseline :
17045     queryParameters:
17046       if:
17047         enum: ["oic.if.baseline"]
17048   - interface-all :
17049     queryParameters:
17050       if:
17051         enum: ["oic.if.b", "oic.if.ll", "oic.if.baseline"]
17052
17053 /GlucoseMeterAMResURI?if=oic.if.baseline:
17054   description: |
17055     This resource describes the properties associated with glucose meter.
17056     The resource is an atomic measurement of glucose (oic.r.glucose), context carbohydrates
17057     (oic.r.glucose.carb), context exercise (oic.r.glucose.exercise), Hemoglobin Bound to Glucose A1c
17058     Form (HbA1c) (oic.r.glucose.hba1c), context health (oic.r.glucose.health), context meal
17059     (oic.r.glucose.meal), context medication (oic.r.glucose.medication), context sample location
17060     (oic.r.glucose.samplelocation), context tester (oic.r.glucose.tester), observed time
  
```



```

17061 (oic.r.time.stamp), and user ID (oic.r.userid).
17062
17063 is : ['interface-baseline']
17064 get:
17065     description: |
17066     Retrieves the current glucose.
17067
17068     responses :
17069         200:
17070             body:
17071                 application/json:
17072                     schema: /
17073                         {
17074                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.glucosemeter-
17075 am.json#",
17076                             "$schema": "http://json-schema.org/draft-04/schema#",
17077                             "description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
17078 reserved.",
17079                             "title": "Glucose Meter Atomic Measurement",
17080                             "definitions": {
17081                                 "oic.r.glucosemeter-am": {
17082                                     "type": "object",
17083                                     "properties": {
17084                                         "rt": {
17085                                             "type": "array",
17086                                             "minItems": 2,
17087                                             "maxItems": 2,
17088                                             "uniqueItems": true,
17089                                             "items": {
17090                                                 "enum": ["oic.r.glucosemeter-am", "oic.wk.atomicmeasurement"]
17091                                             }
17092                                         },
17093                                         "rts": {
17094                                             "type": "array",
17095                                             "minItems": 1,
17096                                             "uniqueItems": true,
17097                                             "items": {
17098                                                 "enum": ["oic.r.glucose", "oic.r.glucose.carb",
17099 "oic.r.glucose.exercise", "oic.r.glucose.hbabc", "oic.r.glucose.health", "oic.r.glucose.meal",
17100 "oic.r.glucose.medication", "oic.r.glucose.samplelocation", "oic.r.glucose.test",
17101 "oic.r.time.observed", "oic.r.userid"]
17102                                             },
17103                                             "description": "This contains all possible resource types for this atomic
17104 measurement."
17105                                         },
17106                                         "rts-m": {
17107                                             "type": "array",
17108                                             "minItems": 1,
17109                                             "maxItems": 1,
17110                                             "uniqueItems": true,
17111                                             "items": {
17112                                                 "enum": ["oic.r.glucose"]
17113                                             },
17114                                             "description": "This contains all mandatory resource types for this
17115 atomic measurement."
17116                                         }
17117                                     }
17118                                 },
17119                             "type": "object",
17120                             "allOf": [
17121                                 {"$ref": "oic.core.json#/definitions/oic.core"},
17122                                 {"$ref": "oic.collection-schema.json#/definitions/oic.collection.properties"},
17123                                 {"$ref": "oic.collection-
17124 schema.json#/definitions/oic.collection.links.arrayoflinks"},
17125                                 {"$ref": "#/definitions/oic.r.glucosemeter-am"}
17126                             ],
17127

```

```

17128         "required": ["rts-m"]
17129     }
17130
17131     example: /
17132     {
17133         "rt": ["oic.r.glucosemeter-am", "oic.wk.atomicmeasurement"],
17134         "if": ["oic.if.b", "oic.if.ll", "oic.if.baseline"],
17135         "rts": ["oic.r.glucose", "oic.r.glucose.hbabc"],
17136         "rts-m": ["oic.r.glucose"],
17137         "links": [
17138             {
17139                 "href": "/myGlucoseResURI",
17140                 "rt": ["oic.r.glucose"],
17141                 "if": ["oic.if.s", "oic.if.baseline"]
17142             },
17143             {
17144                 "href": "/myHbAlcResURI",
17145                 "rt": ["oic.r.glucose.hbabc"],
17146                 "if": ["oic.if.s", "oic.if.baseline"]
17147             }
17148         ]
17149     }
17150

```

6.106.5 Property Definition

Table 217 Glucose Meter Atomic Measurement Baseline Representation Property Definitions

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema			
rts-m	array: see schema	yes		This contains all mandatory resource types for this atomic measurement.
rts	array: see schema			This contains all possible resource types for this atomic measurement.

6.106.6 CRUDN behaviour

Table 218 Glucose Meter Atomic Measurement Baseline Representation CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/GlucoseMeterAMResURI		get			

6.107 Context Sample Location for Glucose Meter

6.107.1 Introduction

This resource describes the properties associated with context Sample Location. AST means Alternative Site Test specifying that the location of test performed was from an alternative site on the body. The samplelocation Property is a read-only value that is provided by the server.

6.107.2 Example URI

/GlucoseSampleLocationResURI

6.107.3 Resource Type

The resource type (rt) is defined as: oic.r.glucose.samplelocation.

```

17165 6.107.4 RAML Definition
17166 #%RAML 0.8
17167 title: OICGlucoseSampleLocation
17168 version: v1.1.0-20160519
17169 traits:
17170   - interface :
17171     queryParameters:
17172       if:
17173         enum: ["oic.if.s", "oic.if.baseline"]
17174
17175 /GlucoseSampleLocationResURI:
17176   description: |
17177     This resource describes the properties associated with context Sample Location.
17178     AST means Alternative Site Test specifying that the location of test performed was from an
17179     alternative site on the body.
17180     The samplelocation Property is a read-only value that is provided by the server.
17181
17182   is : ['interface']
17183   get:
17184     description: |
17185       Retrieves Context Sample Location for Glucose Meter.
17186
17187   responses :
17188     200:
17189       body:
17190         application/json:
17191           schema: /
17192             {
17193               "id":
17194 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.glucose.samplelocation.json",
17195               "$schema": "http://json-schema.org/draft-04/schema#",
17196               "description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
17197 reserved.",
17198               "title": "Context Sample Location for Glucose Meter",
17199               "definitions": {
17200                 "oic.r.glucose.samplelocation": {
17201                   "type": "object",
17202                   "properties": {
17203                     "samplelocation": {
17204                       "type": "string",
17205                       "readOnly": true,
17206                       "enum": ["finger", "ast", "earlobe", "ctrlsolution"],
17207                       "description": "The possible blood locations where the blood sample may be
17208 taken."
17209                     }
17210                   }
17211                 }
17212             },
17213             "type": "object",
17214             "allOf": [
17215               {"$ref": "oic.core.json#/definitions/oic.core"},
17216               {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
17217               {"$ref": "#/definitions/oic.r.glucose.samplelocation"}
17218             ],
17219             "required": ["samplelocation"]
17220           }
17221
17222   example: /
17223     {
17224       "rt": ["oic.r.glucose.samplelocation"],
17225       "id": "unique_example_id",

```

```

17226     "samplelocation": "finger"
17227   }
17228

```

6.107.5 Property Definition

Table 219 Context Sample Location for Glucose Meter Property Definitions

Property name	Value type	Mandatory	Access mode	Description
samplelocation	string	yes	Read Only	The possible blood locations where the blood sample may be taken.

6.107.6 CRUDN behaviour

Table 220 Context Sample Location for Glucose Meter CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/GlucoseSampleLocationResURI		get			

6.108 Context Tester for Glucose Meter

6.108.1 Introduction

This resource describes the properties associated with context Tester. The tester Property is a read-only value that is provided by the server where especially hcp stands for HealthCare Professional.

6.108.2 Example URI

/GlucoseTesterResURI

6.108.3 Resource Type

The resource type (rt) is defined as: oic.r.glucose.Tester.

6.108.4 RAML Definition

```

17243 #RAML 0.8

```

```

17244 title: OICGlucoseTester
17245 version: v1.1.0-20160519

```

```

17246 traits:

```

```

17247   - interface :
17248     queryParameters:

```

```

17249       if:
17250         enum: ["oic.if.s", "oic.if.baseline"]

```

```

17252 /GlucoseTesterResURI:

```

```

17253   description: |
17254     This resource describes the properties associated with context Tester.
17255     The tester Property is a read-only value that is provided by the server where especially
17256     hcp stands for HealthCare Professional.

```

```

17258   is : ['interface']

```

```

17259   get:

```

```

17260     description: |
17261       Retrieves Context Tester for Glucose Meter.

```

```

17263   responses :

```

```

17264     200:

```

```

17265       body:

```

```

17266     application/json:
17267         schema: /
17268             {
17269                 "id":
17270 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.glucose.tester.json#",
17271                 "$schema": "http://json-schema.org/draft-04/schema#",
17272                 "description": "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
17273 reserved.",
17274                 "title": "Context Tester for Glucose Meter",
17275                 "definitions": {
17276                     "oic.r.glucose.tester": {
17277                         "type": "object",
17278                         "properties": {
17279                             "tester": {
17280                                 "type": "string",
17281                                 "readOnly": true,
17282                                 "enum": ["self", "hcp", "lab"],
17283                                 "description": "The possible cases of testers who may perform the blood
17284 sugar measurement."
17285                             }
17286                         }
17287                     },
17288                 },
17289                 "type": "object",
17290                 "allOf": [
17291                     {"$ref": "oic.core.json#/definitions/oic.core"},
17292                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
17293                     {"$ref": "#/definitions/oic.r.glucose.tester"}
17294                 ],
17295                 "required": ["tester"]
17296             }
17297
17298     example: /
17299         {
17300             "rt":         ["oic.r.glucose.Tester"],
17301             "id":         "unique_example_id",
17302             "tester":     "self"
17303         }
17304

```

6.108.5 Property Definition

Table 221 Context Tester for Glucose Meter Property Definitions

Property name	Value type	Mandatory	Access mode	Description
tester	string	yes	Read Only	The possible cases of testers who may perform the blood sugar measurement.

6.108.6 CRUDN behaviour

Table 222 Context Tester for Glucose Meter CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/GlucoseTesterResURI		get			

6.109 Optical RFID Station

6.109.1 Introduction

The process represents the stage of the product in the product line which has an optical RFID tag on its body. Event is represented by a Boolean value set to "True" and "False" alarming the issue when additional action is requested for the tagged product. Actionrequest represent necessary

17314 actions like the isolation of the product, to send the product back to other specific line to modify or
17315 fix the issue.

17316 **6.109.2 Example URI**

17317 /ORFIDStationResURI

17318 **6.109.3 Resource Type**

17319 The resource type (rt) is defined as: oic.r.orfid.station.

17320 **6.109.4 RAML Definition**

```
17321 #%RAML 0.8
17322 title: OpticalRFIDSmartfactory Station
17323 version: Version 2018-01-30
17324 traits:
17325   - interface :
17326     queryParameters:
17327       if:
17328         enum: ["oic.if.rw", "oic.if.baseline"]
17329
17330 /ORFIDStationResURI:
17331   description: |
17332     The process represents the stage of the product in the product line which has an optical RFID
17333     tag on its body.
17334     Event is represented by a Boolean value set to "True" and "False" alarming the issue when
17335     additional action is requested for the tagged product.
17336     Actionrequest represent necessary actions like the isolation of the product, to send the
17337     product back to other specific line to modify or fix the issue.
17338
17339   is : ['interface']
17340   get:
17341     description: |
17342       Retrieves the station information from optical augmented RFID reader in smart factory
17343       environment.
17344
17345     responses :
17346       200:
17347         body:
17348           application/json:
17349             schema: /
17350               {
17351                 "$schema": "http://json-schema.org/draft-04/schema#",
17352                 "description": "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
17353 reserved.",
17354                 "properties": {
17355                   "actionrequest": {
17356                     "description": "the action request identifier",
17357                     "type": "integer"
17358                   },
17359                   "event": {
17360                     "description": "when True, the action request should be applied to the product
17361 identified by the tagid",
17362                     "type": "boolean"
17363                   },
17364                   "id": {
17365                     "description": "Instance ID of this specific resource",
17366                     "maxLength": 64,
17367                     "readOnly": true,
17368                     "type": "string"
17369                   },
17370                   "if": {
17371                     "description": "The interface set supported by this resource",
```

```

17372         "items": {
17373             "enum": [
17374                 "oic.if.baseline",
17375                 "oic.if.ll",
17376                 "oic.if.b",
17377                 "oic.if.lb",
17378                 "oic.if.rw",
17379                 "oic.if.r",
17380                 "oic.if.a",
17381                 "oic.if.s"
17382             ],
17383             "type": "string"
17384         },
17385         "minItems": 1,
17386         "readOnly": true,
17387         "type": "array"
17388     },
17389     "n": {
17390         "description": "Friendly name of the resource",
17391         "maxLength": 64,
17392         "readOnly": true,
17393         "type": "string"
17394     },
17395     "precision": {
17396         "description": "Accuracy granularity of the exposed value",
17397         "readOnly": true,
17398         "type": "number"
17399     },
17400     "process": {
17401         "description": "the process step that is being performed at this station",
17402         "readOnly": true,
17403         "type": "integer"
17404     },
17405     "range": {
17406         "description": "The valid range for the value Property",
17407         "items": {
17408             "anyOf": [
17409                 {
17410                     "type": "number"
17411                 },
17412                 {
17413                     "type": "integer"
17414                 }
17415             ]
17416         },
17417         "maxItems": 2,
17418         "minItems": 2,
17419         "readOnly": true,
17420         "type": "array"
17421     },
17422     "rt": {
17423         "description": "Resource Type",
17424         "items": {
17425             "maxLength": 64,
17426             "type": "string"
17427         },
17428         "minItems": 1,
17429         "readOnly": true,
17430         "type": "array"
17431     },
17432     "step": {
17433         "anyOf": [
17434             {
17435                 "type": "integer"
17436             },
17437             {
17438                 "type": "number"
17439             }
17440         ],
17441         "description": "Step value across the defined range",
17442         "readOnly": true

```

```

17443     },
17444     "value": {
17445       "anyOf": [
17446         {
17447           "type": "array"
17448         },
17449         {
17450           "type": "string"
17451         },
17452         {
17453           "type": "boolean"
17454         },
17455         {
17456           "type": "integer"
17457         },
17458         {
17459           "type": "number"
17460         },
17461         {
17462           "type": "object"
17463         }
17464       ],
17465       "description": "The value sensed or actuated by this Resource"
17466     },
17467   },
17468   "required": [
17469     "event",
17470     "actionrequest"
17471   ],
17472   "title": "ORFID (auto merged)",
17473   "type": "object"
17474 }
17475
17476 example: /
17477 {
17478   "rt":           ["oic.r.orfid.station"],
17479   "id":           "unique_example_id",
17480   "process":     17,
17481   "event":       true,
17482   "actionrequest": 2
17483 }
17484
17485 post:
17486   description: |
17487     Sets necessary action in accordance with Tag Information
17488
17489   body:
17490     application/json:
17491       schema: /
17492         {
17493           "$schema": "http://json-schema.org/draft-04/schema#",
17494           "description": "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
17495 reserved.",
17496           "properties": {
17497             "actionrequest": {
17498               "description": "the action request identifier",
17499               "type": "integer"
17500             },
17501             "event": {
17502               "description": "when True, the action request should be applied to the product
17503 identified by the tagid",
17504               "type": "boolean"
17505             },
17506             "id": {
17507               "description": "Instance ID of this specific resource",
17508               "maxLength": 64,
17509               "readOnly": true,

```



```

17510     "type": "string"
17511   },
17512   "if": {
17513     "description": "The interface set supported by this resource",
17514     "items": {
17515       "enum": [
17516         "oic.if.baseline",
17517         "oic.if.ll",
17518         "oic.if.b",
17519         "oic.if.lb",
17520         "oic.if.rw",
17521         "oic.if.r",
17522         "oic.if.a",
17523         "oic.if.s"
17524       ],
17525       "type": "string"
17526     },
17527     "minItems": 1,
17528     "readOnly": true,
17529     "type": "array"
17530   },
17531   "n": {
17532     "description": "Friendly name of the resource",
17533     "maxLength": 64,
17534     "readOnly": true,
17535     "type": "string"
17536   },
17537   "precision": {
17538     "description": "Accuracy granularity of the exposed value",
17539     "readOnly": true,
17540     "type": "number"
17541   },
17542   "process": {
17543     "description": "the process step that is being performed at this station",
17544     "readOnly": true,
17545     "type": "integer"
17546   },
17547   "range": {
17548     "description": "The valid range for the value Property",
17549     "items": {
17550       "anyOf": [
17551         {
17552           "type": "number"
17553         },
17554         {
17555           "type": "integer"
17556         }
17557       ]
17558     },
17559     "maxItems": 2,
17560     "minItems": 2,
17561     "readOnly": true,
17562     "type": "array"
17563   },
17564   "rt": {
17565     "description": "Resource Type",
17566     "items": {
17567       "maxLength": 64,
17568       "type": "string"
17569     },
17570     "minItems": 1,
17571     "readOnly": true,
17572     "type": "array"
17573   },
17574   "step": {
17575     "anyOf": [
17576       {
17577         "type": "integer"
17578       },
17579       {
17580         "type": "number"

```

```

17581         }
17582     ],
17583     "description": "Step value across the defined range",
17584     "readOnly": true
17585 },
17586 "value": {
17587     "anyOf": [
17588         {
17589             "type": "array"
17590         },
17591         {
17592             "type": "string"
17593         },
17594         {
17595             "type": "boolean"
17596         },
17597         {
17598             "type": "integer"
17599         },
17600         {
17601             "type": "number"
17602         },
17603         {
17604             "type": "object"
17605         }
17606     ],
17607     "description": "The value sensed or actuated by this Resource"
17608 }
17609 },
17610 "required": [
17611     "event",
17612     "actionrequest"
17613 ],
17614 "title": "ORFID (auto merged)",
17615 "type": "object"
17616 }
17617
17618 example: /
17619 {
17620     "event":             false,
17621     "actionrequest":    0
17622 }
17623
17624 responses :
17625 200:
17626   body:
17627     application/json:
17628     schema: /
17629     {
17630         "$schema": "http://json-schema.org/draft-04/schema#",
17631         "description": "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
17632 reserved.",
17633         "properties": {
17634             "actionrequest": {
17635                 "description": "the action request identifier",
17636                 "type": "integer"
17637             },
17638             "event": {
17639                 "description": "when True, the action request should be applied to the product
17640 identified by the tagid",
17641                 "type": "boolean"
17642             },
17643             "id": {
17644                 "description": "Instance ID of this specific resource",
17645                 "maxLength": 64,
17646                 "readOnly": true,
17647                 "type": "string"

```

```

17648 },
17649 "if": {
17650   "description": "The interface set supported by this resource",
17651   "items": {
17652     "enum": [
17653       "oic.if.baseline",
17654       "oic.if.ll",
17655       "oic.if.b",
17656       "oic.if.lb",
17657       "oic.if.rw",
17658       "oic.if.r",
17659       "oic.if.a",
17660       "oic.if.s"
17661     ],
17662     "type": "string"
17663   },
17664   "minItems": 1,
17665   "readOnly": true,
17666   "type": "array"
17667 },
17668 "n": {
17669   "description": "Friendly name of the resource",
17670   "maxLength": 64,
17671   "readOnly": true,
17672   "type": "string"
17673 },
17674 "precision": {
17675   "description": "Accuracy granularity of the exposed value",
17676   "readOnly": true,
17677   "type": "number"
17678 },
17679 "process": {
17680   "description": "the process step that is being performed at this station",
17681   "readOnly": true,
17682   "type": "integer"
17683 },
17684 "range": {
17685   "description": "The valid range for the value Property",
17686   "items": {
17687     "anyOf": [
17688       {
17689         "type": "number"
17690       },
17691       {
17692         "type": "integer"
17693       }
17694     ]
17695   },
17696   "maxItems": 2,
17697   "minItems": 2,
17698   "readOnly": true,
17699   "type": "array"
17700 },
17701 "rt": {
17702   "description": "Resource Type",
17703   "items": {
17704     "maxLength": 64,
17705     "type": "string"
17706   },
17707   "minItems": 1,
17708   "readOnly": true,
17709   "type": "array"
17710 },
17711 "step": {
17712   "anyOf": [
17713     {
17714       "type": "integer"
17715     },
17716     {
17717       "type": "number"
17718     }

```

```

17719         ],
17720         "description": "Step value across the defined range",
17721         "readOnly": true
17722     },
17723     "value": {
17724         "anyOf": [
17725             {
17726                 "type": "array"
17727             },
17728             {
17729                 "type": "string"
17730             },
17731             {
17732                 "type": "boolean"
17733             },
17734             {
17735                 "type": "integer"
17736             },
17737             {
17738                 "type": "number"
17739             },
17740             {
17741                 "type": "object"
17742             }
17743         ],
17744         "description": "The value sensed or actuated by this Resource"
17745     }
17746 },
17747 "required": [
17748     "event",
17749     "actionrequest"
17750 ],
17751 "title": "ORFID (auto merged)",
17752 "type": "object"
17753 }
17754
17755 example: /
17756 {
17757     "event":                false,
17758     "actionrequest":       0
17759 }
17760

```

6.109.5 Property Definition

Table 223 Optical RFID Station Property Definitions

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema		Read Only	Resource Type
step	multiple types: see schema		Read Only	Step value across the defined range
process	integer		Read Only	the process step that is being performed at this station
precision	number		Read Only	Accuracy granularity of the exposed value
value	multiple types: see schema			The value sensed or actuated by this Resource

n	string		Read Only	Friendly name of the resource
actionrequest	integer			the action request identifier
range	array: see schema		Read Only	The valid range for the value Property
id	string		Read Only	Instance ID of this specific resource
event	boolean			when True, the action request should be applied to the product identified by the tagid
if	array: see schema		Read Only	The interface set supported by this resource

17763 **6.109.6 CRUDN behaviour**

17764 **Table 224 Optical RFID Station CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/ORFIDStationResURI		get	post		

17765

17766 **6.110 Optical RFID Tag**

17767 **6.110.1 Introduction**

17768 The tagid is an integer showing the currently read optical augmented RFID tag's identity
17769 information.

17770 **6.110.2 Example URI**

17771 /ORFIDTagResURI

17772 **6.110.3 Resource Type**

17773 The resource type (rt) is defined as: oic.r.orfid.tag.

17774 **6.110.4 RAML Definition**

17775 `##RAML 0.8`

17776 `title: OpticalRFIDSmartfactory tag`

17777 `version: Version 2018-01-30`

17778 `traits:`

17779 `- interface :`

17780 `queryParameters:`

17781 `if:`

17782 `enum: ["oic.if.r", "oic.if.baseline"]`

17783

17784 `/ORFIDTagResURI:`

17785 `description: |`

17786 `The tagid is an integer showing the currently read optical augmented RFID tag's identity`
17787 `information.`

17788

17789 `is : ['interface']`

17790 `get:`

```

17791     description: |
17792         Retrieves the tag information from optical augmented RFID reader in smart factory
17793 environment.
17794
17795     responses :
17796         200:
17797             body:
17798                 application/json:
17799                     schema: /
17800                         {
17801                             "$schema": "http://json-schema.org/draft-04/schema#",
17802                             "description": "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
17803 reserved.",
17804                             "properties": {
17805                                 "id": {
17806                                     "description": "Instance ID of this specific resource",
17807                                     "maxLength": 64,
17808                                     "readOnly": true,
17809                                     "type": "string"
17810                                 },
17811                                 "if": {
17812                                     "description": "The interface set supported by this resource",
17813                                     "items": {
17814                                         "enum": [
17815                                             "oic.if.baseline",
17816                                             "oic.if.ll",
17817                                             "oic.if.b",
17818                                             "oic.if.lb",
17819                                             "oic.if.rw",
17820                                             "oic.if.r",
17821                                             "oic.if.a",
17822                                             "oic.if.s"
17823                                         ],
17824                                         "type": "string"
17825                                     },
17826                                     "minItems": 1,
17827                                     "readOnly": true,
17828                                     "type": "array"
17829                                 },
17830                                 "n": {
17831                                     "description": "Friendly name of the resource",
17832                                     "maxLength": 64,
17833                                     "readOnly": true,
17834                                     "type": "string"
17835                                 },
17836                                 "precision": {
17837                                     "description": "Accuracy granularity of the exposed value",
17838                                     "readOnly": true,
17839                                     "type": "number"
17840                                 },
17841                                 "range": {
17842                                     "description": "The valid range for the value Property",
17843                                     "items": {
17844                                         "anyOf": [
17845                                             {
17846                                                 "type": "number"
17847                                             },
17848                                             {
17849                                                 "type": "integer"
17850                                             }
17851                                         ]
17852                                     },
17853                                     "maxItems": 2,
17854                                     "minItems": 2,
17855                                     "readOnly": true,
17856                                     "type": "array"
17857                                 },
17858                                 "reading": {

```

```

17859         "description": "true, the tagid is read e.g. being valid. false, the tagid is
17860 invalid",
17861         "readOnly": true,
17862         "type": "boolean"
17863     },
17864     "rt": {
17865         "description": "Resource Type",
17866         "items": {
17867             "maxLength": 64,
17868             "type": "string"
17869         },
17870         "minItems": 1,
17871         "readOnly": true,
17872         "type": "array"
17873     },
17874     "step": {
17875         "anyOf": [
17876             {
17877                 "type": "integer"
17878             },
17879             {
17880                 "type": "number"
17881             }
17882         ],
17883         "description": "Step value across the defined range",
17884         "readOnly": true
17885     },
17886     "tagid": {
17887         "description": "the tag read by the reader",
17888         "readOnly": true,
17889         "type": "integer"
17890     },
17891     "value": {
17892         "anyOf": [
17893             {
17894                 "type": "array"
17895             },
17896             {
17897                 "type": "string"
17898             },
17899             {
17900                 "type": "boolean"
17901             },
17902             {
17903                 "type": "integer"
17904             },
17905             {
17906                 "type": "number"
17907             },
17908             {
17909                 "type": "object"
17910             }
17911         ],
17912         "description": "The value sensed or actuated by this Resource"
17913     }
17914 },
17915 "required": [
17916     "tagid",
17917     "reading"
17918 ],
17919 "title": "ORFID (auto merged)",
17920 "type": "object"
17921 }
17922
17923 example: /
17924 {
17925     "rt": ["oic.r.orfid.tag"],
17926     "id": "unique_example_id",
17927     "tagid": 10965742,
17928     "reading" : true

```

17929 }
 17930

17931 **6.110.5 Property Definition**

17932 **Table 225 Optical RFID Tag Property Definitions**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema		Read Only	Resource Type
tagid	integer		Read Only	the tag read by the reader
precision	number		Read Only	Accuracy granularity of the exposed value
value	multiple types: see schema			The value sensed or actuated by this Resource
n	string		Read Only	Friendly name of the resource
range	array: see schema		Read Only	The valid range for the value Property
step	multiple types: see schema		Read Only	Step value across the defined range
reading	boolean		Read Only	true, the tagid is read e.g. being valid. false, the tagid is invalid
id	string		Read Only	Instance ID of this specific resource
if	array: see schema		Read Only	The interface set supported by this resource

17933 **6.110.6 CRUDN behaviour**

17934 **Table 226 Optical RFID Tag CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/ORFIDTagResURI		get			

17935 **6.111 Power Source**

17936 **6.111.1 Introduction**

17937 This resource list the available power sources for the device. The list is read only and is informative
 17938 only. If there is more than 1 power sources active, use multiple resources to indicate the active
 17939 power sources.

17940 **6.111.2 Example URI**

17941 /PowerResourcesExampleResourceURI

17942 **6.111.3 Resource Type**

17943 The resource type (rt) is defined as: oic.r.powersource.


```

17944 6.111.4 RAML Definition
17945 ##RAML 0.8
17946 title: PowerSources
17947 version: 0.1
17948 traits:
17949   - interface :
17950     queryParameters:
17951       if:
17952         enum: ["oic.if.r", "oic.if.baseline"]
17953
17954 /PowerResourcesExampleResourceURI:
17955   description: |
17956     This resource list the available power sources for the device.
17957     The list is read only and is informative only.
17958     If there is more than 1 power sources active, use multiple resources
17959     to indicate the active power sources.
17960
17961   is : ['interface']
17962   get:
17963     description: |
17964       Retrieves the list of available power sources.
17965       if the power source is unknown use the value "unknown".
17966
17967   responses :
17968     200:
17969       body:
17970         application/json:
17971           schema: /
17972             {
17973               "id": "http://openinterconnect.org/schemas/powerSource#",
17974               "$schema": "http://json-schema.org/draft-04/schema#",
17975               "description" : "Copyright (c) 2016-2017 Open Connectivity Foundation, Inc. All
17976 rights reserved.",
17977               "title": "schema for powersource",
17978               "definitions": {
17979                 "oic.r.powerSource": {
17980                   "type" : "object",
17981                   "properties": {
17982                     "powerSources": {
17983                       "type": "array",
17984                       "items" : {
17985                         "type": "string",
17986                         "enum" : [
17987                           "unknown",
17988                           "DC power",
17989                           "Internal Battery",
17990                           "External Battery",
17991                           "Power over Ethernet",
17992                           "USB",
17993                           "AC (Mains) Power",
17994                           "Solar"],
17995                         "uniqueItems": true,
17996                         "minItems": 1
17997                       }
17998                     }
17999                 }
18000             },
18001           },
18002           "type": "object",
18003           "allOf": [
18004             {"$ref": "oic.core.json#/definitions/oic.core"},
18005             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"}],

```

```

18006         {"$ref": "#/definitions/oic.r.powerSource"}
18007     },
18008     "required": ["powerSources"]
18009 }
18010
18011     example: /
18012     {
18013         "rt":          ["oic.r.powersource"],
18014         "id":          "unique_example_id",
18015         "powerSources": ["DC power",
18016             "Internal Battery",
18017             "External Battery",
18018             "Power over Ethernet",
18019             "USB",
18020             "AC (Mains) Power",
18021             "Solar"]
18022     }
18023

```

6.111.5 Property Definition

Table 227 PowerSource Property Definitions

Property name	Value type	Mandatory	Access mode	Description
powerSources	array: see schema	yes		

6.111.6 CRUDN behaviour

Table 228 PowerSource CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/PowerResourcesExampleResourceURI		get			

6.112 Print Queue

6.112.1 Introduction

This resource describes the items in a Printer Queue. The URI and status are read only items that cannot be changed through this resource.

6.112.2 Example URI

/PrintQueueResURI

6.112.3 Resource Type

The resource type (rt) is defined as: oic.r.printer.queue.

6.112.4 RAML Definition

```

18037 #%RAML 0.8
18038 title: PrintQueue
18039 version: v1.1.0-20180115
18040 traits:
18041   - interface :
18042     queryParameters:
18043       if:
18044         enum: ["oic.if.r", "oic.if.baseline"]
18045
18046 /PrintQueueResURI:
18047   description: |
18048     This resource describes the items in a Printer Queue
18049     The URI and status are read only items that cannot be changed through this resource.
18050
18051   is : ['interface']

```

```

18052  get:
18053      description: |
18054          Retrieves the current Print Queue.
18055
18056  responses :
18057      200:
18058          body:
18059              application/json:
18060                  schema: /
18061                      {
18062                          "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.printqueue.json#",
18063                          "$schema": "http://json-schema.org/draft-04/schema#",
18064                          "description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
18065 reserved.",
18066                          "title": "Print Queue",
18067                          "definitions": {
18068                              "oic.r.print.queueitem": {
18069                                  "type": "object",
18070                                  "properties": {
18071                                      "uri" : {
18072                                          "type": "string",
18073                                          "format": "uri",
18074                                          "maxLength": 256,
18075                                          "description": "The URI of the queue item.",
18076                                          "readOnly": true
18077                                      },
18078                                      "status" : {
18079                                          "type": "string",
18080                                          "enum": [
18081                                              "Printing",
18082                                              "Pending",
18083                                              "Paused",
18084                                              "Error",
18085                                              "Unknown"
18086                                          ],
18087                                          "description": "The status of the queue item.",
18088                                          "readOnly": true
18089                                      }
18090                                  },
18091                                  "required": [ "uri", "status" ]
18092                              },
18093                              "oic.r.printer.queue": {
18094                                  "type": "object",
18095                                  "properties": {
18096                                      "queue" : {
18097                                          "type": "array",
18098                                          "description": "The array of queue items for the printer.",
18099                                          "items" : {
18100                                              "$ref": "#/definitions/oic.r.print.queueitem"
18101                                          },
18102                                          "readOnly": true
18103                                      }
18104                                  }
18105                              },
18106                          "type": "object",
18107                          "allOf": [
18108                              { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
18109                              { "$ref": "#/definitions/oic.r.printer.queue" }
18110                          ],
18111                          "required": [ "queue" ]
18112                      }
18113
18114
18115      example: /
18116          {
18117              "rt"    : ["oic.r.printer.queue"],
18118              "id"    : "unique_example_id",

```

```

18119     "queue" :
18120     [
18121     {
18122         "uri" : "10.10.10.10/3dprinter/queueitem/1",
18123         "status" : "Printing"
18124     },
18125     {
18126         "uri" : "10.10.10.10/3dprinter/queueitem/2",
18127         "status" : "Pending"
18128     }
18129     ]
18130 }
18131

```

6.112.5 Property Definition

Table 229 Print Queue Property Definitions

Property name	Value type	Mandatory	Access mode	Description
queue	array: see schema	yes	Read Only	The array of queue items for the printer.

6.112.6 CRUDN behaviour

Table 230 Print Queue CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/PrintQueueResURI		get			

6.113 Pulse Rate

6.113.1 Introduction

This resource describes the properties associated with a person's pulse rate. The unit, which is the default unit, is bpm. The PulseRate and unit Properties are read-only values that are provided by the server. When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.

6.113.2 Example URI

/PulseRateResURI

6.113.3 Resource Type

The resource type (rt) is defined as: oic.r.pulserate.

6.113.4 RAML Definition

```

18146 #%RAML 0.8
18147 title: OICPulseRate
18148 version: v1.1.0-20160519
18149 traits:
18150   - interface :
18151       queryParameters:
18152         if:
18153           enum: ["oic.if.s", "oic.if.baseline"]
18154
18155 /PulseRateResURI:
18156   description: |
18157     This resource describes the properties associated with a person's pulse rate.
18158     The unit, which is the default unit, is bpm.
18159     The PulseRate and unit Properties are read-only values that are provided by the server.
18160     When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.
18161
18162   is : ['interface']
18163   get:

```

```

18164     description: |
18165         Retrieves pulse rate of an object.
18166
18167     responses :
18168         200:
18169             body:
18170                 application/json:
18171                     schema: /
18172                         {
18173                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.pulserate.json#",
18174                             "$schema": "http://json-schema.org/draft-04/schema#",
18175                             "description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
18176 reserved.",
18177                             "title": "Pulse Rate",
18178                             "definitions": {
18179                                 "oic.r.pulserate": {
18180                                     "type": "object",
18181                                     "properties": {
18182                                         "pulserate": {
18183                                             "type": "integer",
18184                                             "minimum": 0,
18185                                             "readOnly": true,
18186                                             "description": "Pulse rate in bpm."
18187                                         }
18188                                     }
18189                                 }
18190                             },
18191                             "type": "object",
18192                             "allOf": [
18193                                 {"$ref": "oic.core.json#/definitions/oic.core"},
18194                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
18195                                 {"$ref": "#/definitions/oic.r.pulserate"}
18196                             ],
18197                             "required": ["pulserate"]
18198                         }
18199
18200                     example: /
18201                         {
18202                             "rt": ["oic.r.pulserate"],
18203                             "id": "unique_example_id",
18204                             "pulserate": 80
18205                         }
18206

```

6.113.5 Property Definition

Table 231 Pulse Rate Property Definitions

Property name	Value type	Mandatory	Access mode	Description
pulserate	integer	yes	Read Only	Pulse rate in bpm.

6.113.6 CRUDN behaviour

Table 232 Pulse Rate CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/PulseRateResURI		get			

6.114 Sensor Properties

6.114.1 Introduction

This resource describes the properties which guide the reporting of a state change of a Sensor. The silenttime represents the period after which a state change report was sent where the Sensor state change is not reported. The sensitivity represents the level at which the sensor detects a

18216 state change. These values are completely dependent on the type of Sensor and the manufacturer
18217 capability, so no range restrictions are used. The range from the baseresource is only applied to
18218 the sensitivity.

18219 **6.114.2 Example URI**

18220 /SensorPropsResURI

18221 **6.114.3 Resource Type**

18222 The resource type (rt) is defined as: oic.r.sensor.props.

18223 **6.114.4 RAML Definition**

18224 `##RAML 0.8`

18225 `title: OICSensorProps`

18226 `version: v1.1.0-20180115`

18227 `traits:`

18228 `- interface :`

18229 `queryParameters:`

18230 `if:`

18231 `enum: ["oic.if.rw", "oic.if.baseline"]`

18232

18233 `/SensorPropsResURI:`

18234 `description: |`

18235 `This resource describes the properties which guide the reporting of a state change of a Sensor.`

18236 `The silenttime represents the period after which a state change report was sent where the`

18237 `Sensor state change is not reported.`

18238 `The sensitivity represents the level at which the sensor detects a state change.`

18239 `These values are completely dependent on the type of Sensor and the manufacturer capability, so`

18240 `no range restrictions are used.`

18241 `The range from the baseresource is only applied to the sensitivity.`

18242

18243 `is : ['interface']`

18244 `get:`

18245 `description: |`

18246 `Gets current Sensor Property values`

18247

18248 `responses :`

18249 `200:`

18250 `body:`

18251 `application/json:`

18252 `schema: |`

18253 `{`

18254 `"id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.props.json#",`

18255 `"$schema": "http://json-schema.org/draft-04/schema#",`

18256 `"description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights`

18257 `reserved.",`

18258 `"title": "Sensor Properties",`

18259 `"definitions": {`

18260 `"oic.r.sensor.props": {`

18261 `"type": "object",`

18262 `"properties": {`

18263 `"silenttime" : {`

18264 `"type": "integer",`

18265 `"description": "The time in seconds from the previous report that the`

18266 `Sensor restrains from sending a state change. This is used to avoid repeated state change reports."`

18267 `},`

18268 `"sensitivity": {`

18269 `"type": "number",`

18270 `"description": "The level of the detection accuracy of the Sensor. This is`

18271 `used to control the level at which the Sensor detects a state change. Range should be specified per`

18272 `manufacturer device capabilities."`

18273 `}`

```

18274         }
18275     },
18276 },
18277 "type": "object",
18278 "allOf": [
18279     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
18280     {"$ref": "#/definitions/oic.r.sensor.props"}
18281 ],
18282 "required": ["silenttime", "sensitivity" ]
18283 }
18284
18285 example: /
18286 {
18287     "rt":      ["oic.r.sensor.props"],
18288     "id":      "unique_example_id",
18289     "silenttime": 10,
18290     "sensitivity": 20.5,
18291     "range" : [ 0, 100 ]
18292 }
18293
18294 post:
18295     description: |
18296         Sets Sensor Property values
18297
18298     body:
18299         application/json:
18300             schema: /
18301                 {
18302                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.props.json#",
18303                     "$schema": "http://json-schema.org/draft-04/schema#",
18304                     "description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
18305 reserved.",
18306                     "title": "Sensor Properties",
18307                     "definitions": {
18308                         "oic.r.sensor.props": {
18309                             "type": "object",
18310                             "properties": {
18311                                 "silenttime" : {
18312                                     "type": "integer",
18313                                     "description": "The time in seconds from the previous report that the Sensor
18314 restrains from sending a state change. This is used to avoid repeated state change reports."
18315                                 },
18316                                 "sensitivity": {
18317                                     "type": "number",
18318                                     "description": "The level of the detection accuracy of the Sensor. This is used
18319 to control the level at which the Senor detects a state change. Range should be specified per
18320 manufacturer device capabilities."
18321                                 }
18322                             }
18323                         }
18324                     },
18325                     "type": "object",
18326                     "allOf": [
18327                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
18328                         {"$ref": "#/definitions/oic.r.sensor.props"}
18329                     ],
18330                     "required": ["silenttime", "sensitivity" ]
18331                 }
18332
18333             example: /
18334                 {
18335                     "id":      "unique_example_id",
18336                     "silenttime": 20,
18337                     "sensitivity": 10.75
18338                 }
18339

```

```

18340     responses :
18341         200:
18342             body:
18343                 application/json:
18344                     schema: /
18345                         {
18346                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.props.json#",
18347                             "$schema": "http://json-schema.org/draft-04/schema#",
18348                             "description" : "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
18349 reserved.",
18350                             "title": "Sensor Properties",
18351                             "definitions": {
18352                                 "oic.r.sensor.props": {
18353                                     "type": "object",
18354                                     "properties": {
18355                                         "silenttime" : {
18356                                             "type": "integer",
18357                                             "description": "The time in seconds from the previous report that the
18358 Sensor restrains from sending a state change. This is used to avoid repeated state change reports."
18359                                         },
18360                                         "sensitivity": {
18361                                             "type": "number",
18362                                             "description": "The level of the detection accuracy of the Sensor. This is
18363 used to control the level at which the Senor detects a state change. Range should be specified per
18364 manufacturer device capabilities."
18365                                         }
18366                                     }
18367                                 },
18368                             },
18369                             "type": "object",
18370                             "allOf": [
18371                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
18372                                 { "$ref": "#/definitions/oic.r.sensor.props" }
18373                             ],
18374                             "required": ["silenttime", "sensitivity" ]
18375                         }
18376
18377                     example: /
18378                         {
18379                             "id": "unique_example_id",
18380                             "silenttime": 20,
18381                             "sensitivity": 10.75
18382                         }
18383

```

6.114.5 Property Definition

Table 233 Sensor Properties Property Definitions

Property name	Value type	Mandatory	Access mode	Description
silenttime	integer	yes		The time in seconds from the previous report that the Sensor restrains from sending a state change. This is used to avoid repeated state change reports.
sensitivity	number	yes		The level of the detection accuracy of the Sensor. This is

				used to control the level at which the Senor detects a state change. Range should be specified per manufacturer device capabilities.
--	--	--	--	--

18386 **6.114.6 CRUDN behaviour**

18387 **Table 234 Sensor Properties CRUDN operations**

Resource	Create	Read	Update	Delete	Notify
/SensorPropsResURI		get	post		

18388 **6.115 User ID**

18389 **6.115.1 Introduction**

18390 This resource describes the properties associated with user ID of an OCF client. The userid
 18391 Property is a single value whose type is one of string, number or integer. The userid Property is a
 18392 read-only value that is provided by the server.

18393 **6.115.2 Example URI**

18394 /UserIDResURI

18395 **6.115.3 Resource Type**

18396 The resource type (rt) is defined as: oic.r.userid.

18397 **6.115.4 RAML Definition**

```

18398 #%RAML 0.8
18399 title: OICUserID
18400 version: v1.1.0-20160519
18401 traits:
18402   - interface :
18403     queryParameters:
18404       if:
18405         enum: ["oic.if.s", "oic.if.baseline"]
18406
18407 /UserIDResURI:
18408   description: |
18409     This resource describes the properties associated with user ID of an OCF client.
18410     The userid Property is a single value whose type is one of string, number or integer.
18411     The userid Property is a read-only value that is provided by the server.
18412
18413   is : ['interface']
18414   get:
18415     description: |
18416       Retrieves User ID of an object.
18417
18418   responses :
18419     200:
18420       body:
18421         application/json:
18422           schema: /

```

```

18423     {
18424         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.userid.json#",
18425         "$schema": "http://json-schema.org/draft-04/schema#",
18426         "description": "Copyright (c) 2018 Open Connectivity Foundation, Inc. All rights
18427 reserved.",
18428         "title": "User ID",
18429         "definitions": {
18430             "oic.r.userid": {
18431                 "type": "object",
18432                 "properties": {
18433                     "userid": {
18434                         "type": "string",
18435                         "readOnly": true,
18436                         "description": "ID of a patient/user of healthcare devices"
18437                     }
18438                 }
18439             },
18440         },
18441         "type": "object",
18442         "allOf": [
18443             {"$ref": "oic.core.json#/definitions/oic.core"},
18444             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
18445             {"$ref": "#/definitions/oic.r.userid"}
18446         ],
18447         "required": ["userid"]
18448     }
18449
18450     example: /
18451     {
18452         "rt": ["oic.r.userid"],
18453         "id": "unique_example_id",
18454         "userid": "USER1"
18455     }
18456

```

6.115.5 Property Definition

Table 235 User ID Property Definitions

Property name	Value type	Mandatory	Access mode	Description
userid	string	yes	Read Only	ID of a patient/user of healthcare devices

6.115.6 CRUDN behaviour

Table 236 User ID CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/UserIDResURI		get			

18461

Annex A Base Resource Schema

18462 A.1 Base Resource Schema

18463 A.1.1 Introduction

18464 This is the base resource schema on which all other resources defined in this specification build.
18465 value is the sensed or actuated value of the Resource. precision is the accuracy granularity of the
18466 value. range is the range over which value is valid. step is the step function over the defined range
18467 if applicable (e.g. always step by '2').

18468 A.1.2 Example URI

18469 /BaseResourceSchemaResURI

18470 A.1.3 Resource Type

18471 The resource type (rt) is defined as: oic.baseresource.

18472 A.1.4 RAML Definition

```

18473 #%RAML 0.8
18474 title: OICBaseResourceSchema
18475 version: v1.1.0-20160519
18476 traits:
18477   - interface-a :
18478     queryParameters:
18479       if:
18480         enum: ["oic.if.a"]
18481   - interface-baseline :
18482     queryParameters:
18483       if:
18484         enum: ["oic.if.baseline"]
18485
18486 /BaseResourceSchemaResURI:
18487   description: |
18488     This is the base resource schema on which all other resources defined in this specification
18489     build.
18490     value is the sensed or actuated value of the Resource.
18491     precision is the accuracy granularity of the value.
18492     range is the range over which value is valid.
18493     step is the step function over the defined range if applicable (e.g
18494     always step by '2').
18495
18496   get:
18497     description: |
18498       retrieves the state of the resource.
18499
18500   is : ['interface-baseline']
18501   responses :
18502     200:
18503       body:
18504         application/json:
18505           schema: /
18506             {
18507               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.baseResource.json#",
18508               "$schema": "http://json-schema.org/draft-04/schema#",
18509               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
18510 rights reserved.",
18511               "title": "Base Resource",
18512               "definitions": {

```

```

18513     "oic.r.baseresource": {
18514         "allOf": [
18515             {
18516                 "$ref": "oic.core.json#/definitions/oic.core"
18517             },
18518             {
18519                 "type": "object",
18520                 "properties": {
18521                     "value": {
18522                         "anyOf": [
18523                             {"type": "array"},
18524                             {"type": "string"},
18525                             {"type": "boolean"},
18526                             {"type": "integer"},
18527                             {"type": "number"},
18528                             {"type": "object"}
18529                         ],
18530                         "description": "The value sensed or actuated by this Resource"
18531                     },
18532                     "precision": {
18533                         "type": "number",
18534                         "readOnly": true,
18535                         "description": "Accuracy granularity of the exposed value"
18536                     },
18537                     "range": {
18538                         "type": "array",
18539                         "description": "The valid range for the value Property",
18540                         "readOnly": true,
18541                         "minItems": 2,
18542                         "maxItems": 2,
18543                         "items": {
18544                             "anyOf": [
18545                                 {"type": "number"},
18546                                 {"type": "integer"}
18547                             ]
18548                         }
18549                     },
18550                     "step": {
18551                         "description": "Step value across the defined range",
18552                         "readOnly": true,
18553                         "anyOf": [
18554                             {"type": "integer"},
18555                             {"type": "number"}
18556                         ]
18557                     }
18558                 }
18559             }
18560         ]
18561     },
18562     "type": "object",
18563     "allOf": [
18564         {"$ref": "#/definitions/oic.r.baseresource"}
18565     ]
18566 }
18567
18568

```

```

18569 example: /
18570 {
18571     "rt" :           ["oic.baseresource"],
18572     "if":           ["oic.if.baseline"],
18573     "id":           "unique_example_id",
18574     "value":        10.5,
18575     "precision":    0.5,
18576     "range":        [0.0,100.0]
18577 }
18578

```

```

18579 post:
18580     description: |

```

```

18581         sets the read-write resource properties
18582
18583     is : ['interface-a']
18584     body:
18585         application/json:
18586             schema: /
18587                 {
18588                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.baseResource.json#",
18589                     "$schema": "http://json-schema.org/draft-04/schema#",
18590                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
18591 reserved.",
18592                     "title": "Base Resource",
18593                     "definitions": {
18594                         "oic.r.baseresource": {
18595                             "allOf": [
18596                                 {
18597                                     "$ref": "oic.core.json#/definitions/oic.core"
18598                                 },
18599                                 {
18600                                     "type": "object",
18601                                     "properties": {
18602                                         "value": {
18603                                             "anyOf": [
18604                                                 {"type": "array"},
18605                                                 {"type": "string"},
18606                                                 {"type": "boolean"},
18607                                                 {"type": "integer"},
18608                                                 {"type": "number"},
18609                                                 {"type": "object"}
18610                                             ],
18611                                             "description": "The value sensed or actuated by this Resource"
18612                                         },
18613                                         "precision": {
18614                                             "type": "number",
18615                                             "readOnly": true,
18616                                             "description": "Accuracy granularity of the exposed value"
18617                                         },
18618                                         "range": {
18619                                             "type": "array",
18620                                             "description": "The valid range for the value Property",
18621                                             "readOnly": true,
18622                                             "minItems": 2,
18623                                             "maxItems": 2,
18624                                             "items": {
18625                                                 "anyOf": [
18626                                                     {"type": "number"},
18627                                                     {"type": "integer"}
18628                                                 ]
18629                                             }
18630                                         },
18631                                         "step": {
18632                                             "description": "Step value across the defined range",
18633                                             "readOnly": true,
18634                                             "anyOf": [
18635                                                 {"type": "integer"},
18636                                                 {"type": "number"}
18637                                             ]
18638                                         }
18639                                     }
18640                                 }
18641                             ]
18642                         }
18643                     },
18644                     "type": "object",
18645                     "allOf": [
18646                         {"$ref": "#/definitions/oic.r.baseresource"}
18647                     ]
18648                 }
18649

```

```

18650     example: /
18651         {
18652             "value": 20.5
18653         }
18654
18655     responses :
18656         200:
18657             body:
18658                 application/json:
18659                     schema: /
18660                         {
18661                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.baseResource.json#",
18662                             "$schema": "http://json-schema.org/draft-04/schema#",
18663                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
18664 rights reserved.",
18665                             "title": "Base Resource",
18666                             "definitions": {
18667                                 "oic.r.baseresource": {
18668                                     "allOf": [
18669                                         {
18670                                             "$ref": "oic.core.json#/definitions/oic.core"
18671                                         },
18672                                         {
18673                                             "type": "object",
18674                                             "properties": {
18675                                                 "value": {
18676                                                     "anyOf": [
18677                                                         {"type": "array"},
18678                                                         {"type": "string"},
18679                                                         {"type": "boolean"},
18680                                                         {"type": "integer"},
18681                                                         {"type": "number"},
18682                                                         {"type": "object"}
18683                                                     ],
18684                                                     "description": "The value sensed or actuated by this Resource"
18685                                                 },
18686                                                 "precision": {
18687                                                     "type": "number",
18688                                                     "readOnly": true,
18689                                                     "description": "Accuracy granularity of the exposed value"
18690                                                 },
18691                                                 "range": {
18692                                                     "type": "array",
18693                                                     "description": "The valid range for the value Property",
18694                                                     "readOnly": true,
18695                                                     "minItems": 2,
18696                                                     "maxItems": 2,
18697                                                     "items": {
18698                                                         "anyOf": [
18699                                                             {"type": "number"},
18700                                                             {"type": "integer"}
18701                                                         ]
18702                                                     }
18703                                                 },
18704                                                 "step": {
18705                                                     "description": "Step value across the defined range",
18706                                                     "readOnly": true,
18707                                                     "anyOf": [
18708                                                         {"type": "integer"},
18709                                                         {"type": "number"}
18710                                                     ]
18711                                                 }
18712                                             }
18713                                         }
18714                                     ]
18715                                 }
18716                             },
18717                             "type": "object",

```

```

18718         "allOf": [
18719             { "$ref": "#/definitions/oic.r.baseresource" }
18720         ]
18721     }
18722
18723     example: /
18724         {
18725             "value": 20.5
18726         }
18727

```

A.1.5 Property Definition

Table 237 Base Resource Schema Property Definitions

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema		Read Only	Step value across the defined range
range	array: see schema		Read Only	The valid range for the value Property
precision	number		Read Only	Accuracy granularity of the exposed value
value	multiple types: see schema			The value sensed or actuated by this Resource
rt	array: see schema		Read Only	Resource Type
n	string		Read Only	Friendly name of the resource
id	string		Read Only	Instance ID of this specific resource
if	array: see schema		Read Only	The interface set supported by this resource

A.1.6 CRUDN behaviour

Table 238 Base Resource Schema CRUDN operations

Resource	Create	Read	Update	Delete	Notify
/BaseResourceSchemaResURI		get	post		

A.1.7 Referenced JSON schemas

A.1.8 oic.core.json

```

18734 {
18735     "id": "https://www.openconnectivity.org/ocf-apis/core/schemas/oic.core-schema.json#",
18736     "$schema": "http://json-schema.org/draft-04/schema#",
18737     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
18738 reserved.",
18739     "title": "Core",
18740     "definitions": {
18741         "oic.core": {
18742             "type": "object",
18743             "properties": {
18744                 "rt": {
18745                     "type": "array",
18746                     "items": {

```

```

18747         "type" : "string",
18748         "maxLength": 64
18749     },
18750     "minItems" : 1,
18751     "readOnly": true,
18752     "description": "Resource Type"
18753 },
18754 "if": {
18755     "type": "array",
18756     "items": {
18757         "type" : "string",
18758         "enum" : ["oic.if.baseline", "oic.if.ll", "oic.if.b", "oic.if.lb", "oic.if.rw",
18759 "oic.if.r", "oic.if.a", "oic.if.s" ]
18760     },
18761     "minItems": 1,
18762     "readOnly": true,
18763     "description": "The interface set supported by this resource"
18764 },
18765 "n": {
18766     "type": "string",
18767     "maxLength": 64,
18768     "readOnly": true,
18769     "description": "Friendly name of the resource"
18770 },
18771 "id": {
18772     "type": "string",
18773     "maxLength": 64,
18774     "readOnly": true,
18775     "description": "Instance ID of this specific resource"
18776 }
18777 }
18778 }
18779 },
18780 "type": "object",
18781 "allof": [
18782     { "$ref": "#/definitions/oic.core" }
18783 ]
18784 }
18785

```


18786

Annex B Swagger 2.0

18787 B.1 3D Printer

18788 B.1.1 Introduction

18789 This resource describes the attributes associated with 3D Printer. The type of 3D printing
 18790 technology is specified by an enumerated string value. The maximum sizes in mm are included
 18791 for the x, y, and z dimensions. A designation of whether the device is capable of WAN
 18792 connectivity is represented in a boolean. The memory capacity is captured in MB.
 18793

18794 B.1.2 Example URI

18795 /3DPrinterResURI

18796 B.1.3 Resource Type

18797 The resource type (rt) is defined as: ['oic.r.printer.3d'].

18798 B.1.4 Swagger2.0 Definition

```

18799 {
18800   "swagger": "2.0",
18801   "info": {
18802     "title": "3D Printer",
18803     "version": "v1.1.0-20180115",
18804     "license": {
18805       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
18806       "x-description": "Redistribution and use in source and binary forms, with or without
18807 modification, are permitted provided that the following conditions are met:\n      1.
18808 Redistributions of source code must retain the above copyright notice, this list of conditions and
18809 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
18810 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
18811 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
18812 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
18813 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
18814 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
18815 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
18816 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
18817 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND
18818 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
18819 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
18820 OF SUCH DAMAGE.\n"
18821     }
18822   },
18823   "schemes": ["http"],
18824   "consumes": ["application/json"],
18825   "produces": ["application/json"],
18826   "paths": {
18827     "/3DPrinterResURI" : {
18828       "get": {
18829         "description": "This resource describes the attributes associated with 3D Printer. The type
18830 of 3D printing technology is specified by an enumerated string value. The maximum sizes in mm are
18831 included for the x, y, and z dimensions. A designation of whether the device is capable of WAN
18832 connectivity is represented in a boolean. The memory capacity is captured in MB.\n\nThe
18833 print\nRetrieves the current 3D Printer attributes.\n",
18834         "parameters": [
18835           { "$ref": "#/parameters/interface" }
18836         ],
18837         "responses": {
18838           "200": {
18839             "description": "",
18840             "x-example":
18841               {
18842                 "rt" : ["oic.r.printer.3d"],
18843                 "id" : "unique_example_id",
18844                 "3dprinttype" : "Digital Light Processing",
18845                 "printsizex" : 300.00,
18846                 "printsizex" : 200.50,

```

```

18847         "printsized" : 250.75,
18848         "wanconnected" : false,
18849         "memorysize" : 120.5
18850     }
18851     ,
18852     "schema": { "$ref": "#/definitions/3DPrinter" }
18853 }
18854 }
18855 }
18856 }
18857 },
18858 "parameters": {
18859     "interface" : {
18860         "in" : "query",
18861         "name" : "if",
18862         "type" : "string",
18863         "enum" : ["oic.if.r", "oic.if.baseline"]
18864     }
18865 },
18866 "definitions": {
18867     "3DPrinter" : {
18868         "properties": {
18869             "rt" :
18870                 {
18871                     "description": "Resource Type",
18872                     "items": {
18873                         "maxLength": 64,
18874                         "type": "string"
18875                     },
18876                     "minItems": 1,
18877                     "readOnly": true,
18878                     "type": "array"
18879                 },
18880
18881             "printsized" :
18882                 {
18883                     "description": "This represents the maximum size of printing object in the direction of
18884 Y-axis. The unit is mm.",
18885                     "readOnly": true,
18886                     "type": "number"
18887                 },
18888
18889             "memorysize" :
18890                 {
18891                     "description": "This value represents the total memory size of the printer. The unit is
18892 MB(Mega Bytes)",
18893                     "readOnly": true,
18894                     "type": "number"
18895                 },
18896
18897             "precision" :
18898                 {
18899                     "description": "Accuracy granularity of the exposed value",
18900                     "readOnly": true,
18901                     "type": "number"
18902                 },
18903
18904             "value" :
18905                 {
18906                     "anyOf": [
18907                         {
18908                             "type": "array"
18909                         },
18910                         {
18911                             "type": "string"
18912                         },
18913                         {
18914                             "type": "boolean"
18915                         },
18916                         {
18917                             "type": "integer"

```

```

18918     },
18919     {
18920         "type": "number"
18921     },
18922     {
18923         "type": "object"
18924     }
18925 ],
18926 "description": "The value sensed or actuated by this Resource"
18927 },
18928
18929 "n" :
18930     {
18931         "description": "Friendly name of the resource",
18932         "maxLength": 64,
18933         "readOnly": true,
18934         "type": "string"
18935     },
18936
18937 "3dprinttype" :
18938     {
18939         "description": "The type of 3D printing technology.",
18940         "enum": [
18941             "Fused Filament Fabrication",
18942             "Fused Deposition Modeling",
18943             "Digital Light Processing",
18944             "Powder Bed & inkjet head 3D Printing",
18945             "Photopolymer Jetting Technology",
18946             "Laminated Object Manufacturing",
18947             "Stereolithography Apparatus",
18948             "Selective Laser Sintering",
18949             "Unknown"
18950         ],
18951         "readOnly": true,
18952         "type": "string"
18953     },
18954
18955 "range" :
18956     {
18957         "description": "The valid range for the value Property",
18958         "items": {
18959             "anyOf": [
18960                 {
18961                     "type": "number"
18962                 },
18963                 {
18964                     "type": "integer"
18965                 }
18966             ]
18967         },
18968         "maxItems": 2,
18969         "minItems": 2,
18970         "readOnly": true,
18971         "type": "array"
18972     },
18973
18974 "step" :
18975     {
18976         "anyOf": [
18977             {
18978                 "type": "integer"
18979             },
18980             {
18981                 "type": "number"
18982             }
18983         ],
18984         "description": "Step value across the defined range",
18985         "readOnly": true
18986     },
18987
18988 "wanconnected" :

```

```

18989     {
18990         "description": "This value indicates the connectivity capability of the 3D printer. If
18991 the value is false, the printer does not have network facility to Wide Area Network such as
18992 internet and GSM. If the value is true, the printer has network connectivity",
18993         "readOnly": true,
18994         "type": "boolean"
18995     },
18996     "printsizex" :
18997     {
18998         "description": "This represents the maximum size of printing object in the direction of
19000 X-axis. The unit is mm.",
19001         "readOnly": true,
19002         "type": "number"
19003     },
19004     "id" :
19005     {
19006         "description": "Instance ID of this specific resource",
19007         "maxLength": 64,
19008         "readOnly": true,
19009         "type": "string"
19010     },
19011     "printsizex" :
19012     {
19013         "description": "This represents the maximum size of printing object in the direction of
19014 Z-axis. The unit is mm.",
19015         "readOnly": true,
19016         "type": "number"
19017     },
19018     "if" :
19019     {
19020         "description": "The interface set supported by this resource",
19021         "items": {
19022             "enum": [
19023                 "oic.if.baseline",
19024                 "oic.if.ll",
19025                 "oic.if.b",
19026                 "oic.if.lb",
19027                 "oic.if.rw",
19028                 "oic.if.r",
19029                 "oic.if.a",
19030                 "oic.if.s"
19031             ],
19032             "type": "string"
19033         },
19034         "minItems": 1,
19035         "readOnly": true,
19036         "type": "array"
19037     }
19038     , "type" : "object"
19039     , "required": ["3dprinttype", "printsizex", "printsizex", "printsizex", "wanconnected",
19040 "memorysize"]
19041 }
19042 }
19043 }
19044 }
19045 }
19046 }
19047 }
19048 }
19049 }

```

19050 B.1.5 Property Definition

19051 **Table 239 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
3dprinttype	string	Yes	Read Only	

				The type of 3D printing technology.	
printsizeX	number	Yes	Read Only	This represents the maximum size of printing object in the direction of X-axis. The unit is mm.	
if	array: schema	see	No	Read Only	The interface set supported by this resource
precision	number	No	Read Only	Accuracy granularity of the exposed value	
wanconnected	boolean	Yes	Read Only	This value indicates the connectivity capability of the 3D printer. If the value is false, the printer does not have network facility to Wide Area Network such as internet and GSM. If the value is true, the printer has network connectivity	
n	string	No	Read Only	Friendly name of the resource	
printsizeZ	number	Yes	Read Only	This represents the maximum size of printing object in the direction of Z-axis. The unit is mm.	
printsizeY	number	Yes	Read Only	This represents the maximum size of printing object in the direction of Y-axis. The unit is mm.	

memorysize	number	Yes	Read Only	This value represents the total memory size of the printer. The unit is MB(Mega Bytes)
rt	array: see schema	No	Read Only	Resource Type
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
range	array: see schema	No	Read Only	The valid range for the value Property
id	string	No	Read Only	Instance ID of this specific resource
step	multiple types: see schema	No	Read Only	Step value across the defined range

19052 **B.1.6 CRUDN behaviour**

19053 **Table 240 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/3DPrinterResURI		get			observe

19054 **B.2 Acceleration Sensor**

19055 **B.2.1 Introduction**

19056 This resource provides a measure of proper acceleration (g force) as opposed to co-ordinate
 19057 acceleration (which is dependent on the co-ordinate system and the observer).

19058 The value is a float which describes the acceleration experienced by the object in "g".
 19059

19060 **B.2.2 Example URI**

19061 /AccelerationResURI

19062 **B.2.3 Resource Type**

19063 The resource type (rt) is defined as: ['oic.r.sensor.acceleration'].

19064 **B.2.4 Swagger2.0 Definition**

```

19065 {
19066   "swagger": "2.0",
19067   "info": {
19068     "title": "Acceleration Sensor",
19069     "version": "v1.1.0-20160519",
19070     "license": {
19071       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
19072       "x-description": "Redistribution and use in source and binary forms, with or without
19073 modification, are permitted provided that the following conditions are met:\n      1.
```

```

19074 Redistributions of source code must retain the above copyright notice, this list of conditions and
19075 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
19076 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
19077 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
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19084 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
19085 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
19086 OF SUCH DAMAGE.\n"
19087 }
19088 },
19089 "schemes": ["http"],
19090 "consumes": ["application/json"],
19091 "produces": ["application/json"],
19092 "paths": {
19093   "/AccelerationResURI" : {
19094     "get": {
19095       "description": "This resource provides a measure of proper acceleration (g force) as
19096 opposed to co-ordinate acceleration\n(which is dependent on the co-ordinate system and the
19097 observer).\nThe value is a float which describes the acceleration experienced by the object in
19098 \ "g\ ".\n",
19099       "parameters": [
19100         { "$ref": "#/parameters/interface" }
19101       ],
19102       "responses": {
19103         "200": {
19104           "description": "",
19105           "x-example":
19106             {
19107               "rt": ["oic.r.sensor.acceleration"],
19108               "id": "unique_example_id",
19109               "acceleration": 0.5
19110             }
19111           ,
19112           "schema": { "$ref": "#/definitions/acceleration" }
19113         }
19114       }
19115     }
19116   },
19117 },
19118 "parameters": {
19119   "interface" : {
19120     "in" : "query",
19121     "name" : "if",
19122     "type" : "string",
19123     "enum" : ["oic.if.s", "oic.if.baseline"]
19124   }
19125 },
19126 "definitions": {
19127   "acceleration" : {
19128     "properties": {
19129       "acceleration" :
19130         {
19131           "description": "sensed acceleration experienced in 'g'.",
19132           "readOnly": true,
19133           "type": "number"
19134         },
19135       "rt" :
19136         {
19137           "description": "Resource Type",
19138           "items": {
19139             "maxLength": 64,
19140             "type": "string"
19141           },
19142           "minItems": 1,
19143           "readOnly": true,

```

```

19145     "type": "array"
19146   },
19147
19148   "precision" :
19149     {
19150       "description": "Accuracy granularity of the exposed value",
19151       "readOnly": true,
19152       "type": "number"
19153     },
19154
19155   "value" :
19156     {
19157       "anyOf": [
19158         {
19159           "type": "array"
19160         },
19161         {
19162           "type": "string"
19163         },
19164         {
19165           "type": "boolean"
19166         },
19167         {
19168           "type": "integer"
19169         },
19170         {
19171           "type": "number"
19172         },
19173         {
19174           "type": "object"
19175         }
19176       ],
19177       "description": "The value sensed or actuated by this Resource"
19178     },
19179
19180   "n" :
19181     {
19182       "description": "Friendly name of the resource",
19183       "maxLength": 64,
19184       "readOnly": true,
19185       "type": "string"
19186     },
19187
19188   "range" :
19189     {
19190       "description": "The valid range for the value Property",
19191       "items": {
19192         "anyOf": [
19193           {
19194             "type": "number"
19195           },
19196           {
19197             "type": "integer"
19198           }
19199         ]
19200       },
19201       "maxItems": 2,
19202       "minItems": 2,
19203       "readOnly": true,
19204       "type": "array"
19205     },
19206
19207   "step" :
19208     {
19209       "anyOf": [
19210         {
19211           "type": "integer"
19212         },
19213         {
19214           "type": "number"
19215         }

```



```

19216     ],
19217     "description": "Step value across the defined range",
19218     "readOnly": true
19219   },
19220
19221   "id" :
19222     {
19223     "description": "Instance ID of this specific resource",
19224     "maxLength": 64,
19225     "readOnly": true,
19226     "type": "string"
19227   },
19228
19229   "if" :
19230     {
19231     "description": "The interface set supported by this resource",
19232     "items": {
19233       "enum": [
19234         "oic.if.baseline",
19235         "oic.if.ll",
19236         "oic.if.b",
19237         "oic.if.lb",
19238         "oic.if.rw",
19239         "oic.if.r",
19240         "oic.if.a",
19241         "oic.if.s"
19242       ],
19243       "type": "string"
19244     },
19245     "minItems": 1,
19246     "readOnly": true,
19247     "type": "array"
19248   }
19249
19250   },
19251   "type" : "object"
19252   , "required": ["acceleration"]
19253 }
19254 }
19255 }
19256

```

19257 B.2.5 Property Definition

19258 **Table 241 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
range	array: see schema	No	Read Only	The valid range for the value Property
acceleration	number	Yes	Read Only	sensed acceleration experienced in 'g'.
rt	array: see schema	No	Read Only	Resource Type
step	multiple types: see schema	No	Read Only	Step value across the defined range
id	string	No	Read Only	

				Instance ID of this specific resource
n	string	No	Read Only	Friendly name of the resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
if	array: see schema	No	Read Only	The interface set supported by this resource
precision	number	No	Read Only	Accuracy granularity of the exposed value

19259 **B.2.6 CRUDN behaviour**

19260 **Table 242 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/AccelerationResURI		get			observe

19261 **B.3 Activity Count**

19262 **B.3.1 Introduction**

19263 This resource specifies an activity count.

19264 The resource can be readonly (oic.if.s interface) in which instance it represents a count.

19265 The resource can be readwrite (oic.if.a interface) in which instance it represents a goal or target for a count.

19267 The count property is an integer representing either the current count or goal value.

19269 **B.3.2 Example URI**

19270 /ActivityCountResURI

19271 **B.3.3 Resource Type**

19272 The resource type (rt) is defined as: ['oic.r.sensor.activity.count'].

19273 **B.3.4 Swagger2.0 Definition**

```

19274 {
19275   "swagger": "2.0",
19276   "info": {
19277     "title": "Activity Count",
19278     "version": "v1.1.0-20160519",
19279     "license": {
19280       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
19281       "x-description": "Redistribution and use in source and binary forms, with or without
19282 modification, are permitted provided that the following conditions are met:\n
19283 1. Redistributions of source code must retain the above copyright notice, this list of conditions and
19284 the following disclaimer.\n
19285 2. Redistributions in binary form must reproduce the above
19286 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
19287 other materials provided with the distribution.\n\n
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19288 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
19289 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n
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19293 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
19294 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
19295 OF SUCH DAMAGE.\n"
19296     }
19297   },
19298   "schemes": ["http"],
19299   "consumes": ["application/json"],
19300   "produces": ["application/json"],
19301   "paths": {
19302     "/ActivityCountResURI" : {
19303       "get": {
19304         "description": "This resource specifies an activity count.\nThe resource can be readonly
19305 (oic.if.s interface) in which instance it represents a count.\nThe resource can be readwrite
19306 (oic.if.a interface) in which instance it represents a goal or target for a count.\nThe count
19307 property is an integer representing either the current count or goal value.\nRetrieves the current
19308 activity count.\n",
19309         "parameters": [
19310           { "$ref": "#/parameters/interface" }
19311         ],
19312         "responses": {
19313           "200": {
19314             "description": "",
19315             "x-example":
19316               {
19317                 "rt": ["oic.r.sensor.activity.count"],
19318                 "id": "unique_example_id",
19319                 "count": 2500
19320               }
19321             ,
19322             "schema": { "$ref": "#/definitions/Count" }
19323           }
19324         }
19325       },
19326       "post": {
19327         "description": "Sets the count target\n",
19328         "parameters": [
19329           { "$ref": "#/parameters/interface" },
19330           {
19331             "name": "body",
19332             "in": "body",
19333             "required": true,
19334             "schema": { "$ref": "#/definitions/Count" },
19335             "x-example":
19336               {
19337                 "id": "unique_example_id",
19338                 "count": 5000
19339               }
19340           }
19341         ],
19342         "responses": {
19343           "200": {
19344             "description": "",
19345             "x-example":
19346               {
19347                 "id": "unique_example_id",
19348                 "count": 5000
19349               }
19350             ,
19351             "schema": { "$ref": "#/definitions/Count" }
19352           }
19353         }
19354       }
19355     }
19356   },
19357   "parameters": {
19358     "interface" : {
19359       "in" : "query",
19360       "name" : "if",

```

```

19361         "type" : "string",
19362         "enum" : ["oic.if.s", "oic.if.a", "oic.if.baseline"]
19363     },
19364 },
19365 "definitions": {
19366     "Count" : {
19367         "properties": {
19368             "count" :
19369                 {
19370                     "description": "Current or Target count.",
19371                     "type": "integer"
19372                 },
19373
19374             "rt" :
19375                 {
19376                     "description": "Resource Type",
19377                     "items": {
19378                         "maxLength": 64,
19379                         "type": "string"
19380                     },
19381                     "minItems": 1,
19382                     "readOnly": true,
19383                     "type": "array"
19384                 },
19385
19386             "precision" :
19387                 {
19388                     "description": "Accuracy granularity of the exposed value",
19389                     "readOnly": true,
19390                     "type": "number"
19391                 },
19392
19393             "value" :
19394                 {
19395                     "anyOf": [
19396                         {
19397                             "type": "array"
19398                         },
19399                         {
19400                             "type": "string"
19401                         },
19402                         {
19403                             "type": "boolean"
19404                         },
19405                         {
19406                             "type": "integer"
19407                         },
19408                         {
19409                             "type": "number"
19410                         },
19411                         {
19412                             "type": "object"
19413                         }
19414                     ],
19415                     "description": "The value sensed or actuated by this Resource"
19416                 },
19417
19418             "n" :
19419                 {
19420                     "description": "Friendly name of the resource",
19421                     "maxLength": 64,
19422                     "readOnly": true,
19423                     "type": "string"
19424                 },
19425
19426             "range" :
19427                 {
19428                     "description": "The valid range for the value Property",
19429                     "items": {
19430                         "anyOf": [
19431

```

```

19432         "type": "number"
19433     },
19434     {
19435         "type": "integer"
19436     }
19437 ]
19438 },
19439 "maxItems": 2,
19440 "minItems": 2,
19441 "readOnly": true,
19442 "type": "array"
19443 },
19444
19445 "step" :
19446     {
19447     "anyOf": [
19448     {
19449         "type": "integer"
19450     },
19451     {
19452         "type": "number"
19453     }
19454     ],
19455     "description": "Step value across the defined range",
19456     "readOnly": true
19457 },
19458
19459 "id" :
19460     {
19461     "description": "Instance ID of this specific resource",
19462     "maxLength": 64,
19463     "readOnly": true,
19464     "type": "string"
19465     },
19466
19467 "if" :
19468     {
19469     "description": "The interface set supported by this resource",
19470     "items": {
19471     "enum": [
19472     "oic.if.baseline",
19473     "oic.if.ll",
19474     "oic.if.b",
19475     "oic.if.lb",
19476     "oic.if.rw",
19477     "oic.if.r",
19478     "oic.if.a",
19479     "oic.if.s"
19480     ],
19481     "type": "string"
19482     },
19483     "minItems": 1,
19484     "readOnly": true,
19485     "type": "array"
19486     }
19487
19488     }
19489     , "type" : "object"
19490     , "required": ["count"]
19491     }
19492     }
19493 }
19494

```

19495 B.3.5 Property Definition

19496 **Table 243 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
count	integer	Yes	Read Write	

				Current or Target count.
id	string	No	Read Only	Instance ID of this specific resource
range	array: see schema	No	Read Only	The valid range for the value Property
if	array: see schema	No	Read Only	The interface set supported by this resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
precision	number	No	Read Only	Accuracy granularity of the exposed value
rt	array: see schema	No	Read Only	Resource Type
n	string	No	Read Only	Friendly name of the resource

19497 **B.3.6 CRUDN behaviour**

19498 **Table 244 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/ActivityCountResURI		get	post		observe

19499 **B.4 Air Flow**

19500 **B.4.1 Introduction**

19501 This resource describes the properties associated with air flow.
19502 The supporteddirections is the set of valid values for the direction property for a particular
19503 instance of this resource type.
19504 The direction is the directionality of the air flow if applicable, if supporteddirections is also
19505 present it must be a value from that set.
19506 Direction values are dependent on the capabilities of the unit.
19507 The speed is an integer representing the current speed level for the unit.
19508 The range (from oic.r.baseresource) is an array of the min,max values for the speed level. If not
19509 present the range defaults to [0,100].
19510 automode is the status of the automode feature; Off means automode is not enabled, On means
19511 automode is active and the speed is automatically controlled by the device.
19512

19513 **B.4.2 Example URI**

19514 /AirFlowResURI

19515 **B.4.3 Resource Type**

19516 The resource type (rt) is defined as: ['oic.r.airflow'].

19517 **B.4.4 Swagger2.0 Definition**

```
19518 {
19519   "swagger": "2.0",
19520   "info": {
19521     "title": "Air Flow",
19522     "version": "v1.1.0-20160519",
19523     "license": {
19524       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
19525       "x-description": "Redistribution and use in source and binary forms, with or without
19526 modification, are permitted provided that the following conditions are met:\n      1.
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19528 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
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19530 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
19531 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
19532 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
19533 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
19534 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
19535 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
19536 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
19537 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
19538 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
19539 OF SUCH DAMAGE.\n"
19540     }
19541   },
19542   "schemes": ["http"],
19543   "consumes": ["application/json"],
19544   "produces": ["application/json"],
19545   "paths": {
19546     "/AirFlowResURI" : {
19547       "get": {
19548         "description": "This resource describes the properties associated with air flow.\nThe
19549 supporteddirections is the set of valid values for the direction property for a particular instance
19550 of this resource type.\nThe direction is the directionality of the air flow if applicable, if
19551 supporteddirections is also present it must be a value from that set.\nDirection values are
19552 dependent on the capabilities of the unit.\nThe speed is an integer representing the current speed
19553 level for the unit.\nThe range (from oic.r.baseresource) is an array of the min,max values for the
19554 speed level. If not present the range defaults to [0,100].\nautomode is the status of the automode
19555 feature; Off means automode is not enabled, On means automode is active and the speed is
19556 automatically controlled by the device.\nRetrieves the current air flow values.\n",
19557         "parameters": [
19558           { "$ref": "#/parameters/interface" }
19559         ],
19560         "responses": {
19561           "200": {
19562             "description": "",
19563             "x-example":
19564               {
19565                 "rt": ["oic.r.airflow"],
19566                 "id": "unique_example_id",
19567                 "supporteddirections": ["left","right","centre"],
19568                 "direction": "left",
19569                 "speed": 5,
19570                 "range": [1,7],
19571                 "automode": "Off"
19572               }
19573           },
19574           "schema": { "$ref": "#/definitions/AirFlow" }
19575         }
19576       }
19577     },
19578     "post": {
19579       "description": "Sets the current air flow values.\nOnly direction and speed may be set by
```

```

19580 an update operation.\n",
19581     "parameters": [
19582         { "$ref": "#/parameters/interface" },
19583         {
19584             "name": "body",
19585             "in": "body",
19586             "required": true,
19587             "schema": { "$ref": "#/definitions/AirFlow" },
19588             "x-example":
19589                 {
19590                     "id": "unique_example_id",
19591                     "direction": "right",
19592                     "speed": 3
19593                 }
19594         },
19595     ],
19596     "responses": {
19597         "200": {
19598             "description": "",
19599             "x-example":
19600                 {
19601                     "id": "unique_example_id",
19602                     "direction": "right",
19603                     "speed": 3
19604                 }
19605             ,
19606             "schema": { "$ref": "#/definitions/AirFlow" }
19607         },
19608         "403": {
19609             "description": "This response is generated by the OCF Server when the client
19610 sends:\n An update with an invalid property value for direction.\n An update with an out of range
19611 property value for speed.\nThe server may respond with the current resource representation.\n",
19612             "x-example":
19613                 {
19614                     "id": "unique_example_id",
19615                     "supporteddirections": ["left", "right", "centre"],
19616                     "direction": "right",
19617                     "speed": 3
19618                 }
19619             ,
19620             "schema": { "$ref": "#/definitions/AirFlow" }
19621         }
19622     }
19623 },
19624 },
19625 },
19626 "parameters": {
19627     "interface": {
19628         "in": "query",
19629         "name": "if",
19630         "type": "string",
19631         "enum": ["oic.if.a", "oic.if.baseline"]
19632     }
19633 },
19634 "definitions": {
19635     "AirFlow": {
19636         "properties": {
19637             "rt": {
19638                 {
19639                     "description": "Resource Type",
19640                     "items": {
19641                         "maxLength": 64,
19642                         "type": "string"
19643                     },
19644                     "minItems": 1,
19645                     "readOnly": true,
19646                     "type": "array"
19647                 },
19648             },
19649             "direction": {
19650                 {

```



```

19651         "description": "Directionality of the air flow",
19652         "type": "string"
19653     },
19654
19655     "automode" :
19656     {
19657         "description": "Status of the automode feature, if on speed is set by the device",
19658         "enum": [
19659             "On",
19660             "Off"
19661         ],
19662         "type": "string"
19663     },
19664
19665     "precision" :
19666     {
19667         "description": "Accuracy granularity of the exposed value",
19668         "readOnly": true,
19669         "type": "number"
19670     },
19671
19672     "value" :
19673     {
19674         "anyOf": [
19675             {
19676                 "type": "array"
19677             },
19678             {
19679                 "type": "string"
19680             },
19681             {
19682                 "type": "boolean"
19683             },
19684             {
19685                 "type": "integer"
19686             },
19687             {
19688                 "type": "number"
19689             },
19690             {
19691                 "type": "object"
19692             }
19693         ],
19694         "description": "The value sensed or actuated by this Resource"
19695     },
19696
19697     "n" :
19698     {
19699         "description": "Friendly name of the resource",
19700         "maxLength": 64,
19701         "readOnly": true,
19702         "type": "string"
19703     },
19704
19705     "range" :
19706     {
19707         "description": "The valid range for the value Property",
19708         "items": {
19709             "anyOf": [
19710                 {
19711                     "type": "number"
19712                 },
19713                 {
19714                     "type": "integer"
19715                 }
19716             ]
19717         },
19718         "maxItems": 2,
19719         "minItems": 2,
19720         "readOnly": true,
19721         "type": "array"

```

```

19722     },
19723
19724     "step" :
19725     {
19726         "anyOf": [
19727             {
19728                 "type": "integer"
19729             },
19730             {
19731                 "type": "number"
19732             }
19733         ],
19734         "description": "Step value across the defined range",
19735         "readOnly": true
19736     },
19737
19738     "supporteddirections" :
19739     {
19740         "description": "Array of possible direction settings for this instance of the Resource
Type",
19741         "items": {
19742             "minItems": 1,
19743             "type": "string",
19744             "uniqueItems": true
19745         },
19746         "readOnly": true,
19747         "type": "array"
19748     },
19749
19750     "speed" :
19751     {
19752         "description": "Current speed level",
19753         "type": "integer"
19754     },
19755
19756     "id" :
19757     {
19758         "description": "Instance ID of this specific resource",
19759         "maxLength": 64,
19760         "readOnly": true,
19761         "type": "string"
19762     },
19763
19764     "if" :
19765     {
19766         "description": "The interface set supported by this resource",
19767         "items": {
19768             "enum": [
19769                 "oic.if.baseline",
19770                 "oic.if.ll",
19771                 "oic.if.b",
19772                 "oic.if.lb",
19773                 "oic.if.rw",
19774                 "oic.if.r",
19775                 "oic.if.a",
19776                 "oic.if.s"
19777             ],
19778             "type": "string"
19779         },
19780         "minItems": 1,
19781         "readOnly": true,
19782         "type": "array"
19783     }
19784 },
19785
19786 },
19787 "type" : "object"
19788 , "required": ["speed"]
19789 }
19790 }
19791 }
19792

```

19793
19794

B.4.5 Property Definition

Table 245 The properties definitions of the resource AirFlowResURI

Property name	Value type	Mandatory	Access mode	Description
range	array: see schema	No	Read Only	The valid range for the value Property
direction	string	No	Read Write	Directionality of the air flow
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
speed	integer	Yes	Read Write	Current speed level
supporteddirections	array: see schema	No	Read Only	Array of possible direction settings for this instance of the Resource Type
n	string	No	Read Only	Friendly name of the resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
if	array: see schema	No	Read Only	The interface set supported by this resource
rt	array: see schema	No	Read Only	Resource Type
automode	string	No	Read Write	Status of the automode feature, if on speed is set by the device
id	string	No	Read Only	Instance ID of this specific resource
step	multiple types: see schema	No	Read Only	Step value across the defined range

19795 **B.4.6 CRUDN behaviour**

19796 **Table 246 The CRUDN operations of the resource AirFlowResURI**

Resource	Create	Read	Update	Delete	Notify
/AirFlowResURI		get	post		observe

19797 **B.5 Air Flow Control**

19798 **B.5.1 Introduction**

19799 This resource describes the attributes associated with control of air flow, for example as
 19800 modelled by a Thermostat (fan), Room A/C or other device.

19801 The resource is a composite resource being made up as a collection of:

- 19802 AirFlow Resource
- 19803 BinarySwitch Resource

19805 **B.5.2 Example URI**

19806 /AirFlowControlResURI

19807 **B.5.3 Resource Type**

19808 The resource type (rt) is defined as: ['oic.r.airflowcontrol'].

19809 **B.5.4 Swagger2.0 Definition**

```

19810 {
19811   "swagger": "2.0",
19812   "info": {
19813     "title": "Air Flow Control",
19814     "version": "v1.1.0-20160519",
19815     "license": {
19816       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
19817       "x-description": "Redistribution and use in source and binary forms, with or without
19818 modification, are permitted provided that the following conditions are met:\n      1.
19819 Redistributions of source code must retain the above copyright notice, this list of conditions and
19820 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
19821 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
19822 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
19823 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
19824 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
19825 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
19826 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
19827 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
19828 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND
19829 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
19830 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
19831 OF SUCH DAMAGE.\n"
19832     }
19833   },
19834   "schemes": ["http"],
19835   "consumes": ["application/json"],
19836   "produces": ["application/json"],
19837   "paths": {
19838     "/AirFlowControlResURI" : {
19839       "get": {
19840         "description": "This resource describes the attributes associated with control of air
19841 flow,\nfor example as modelled by a Thermostat (fan), Room A/C or other device.\nThe resource is a
19842 composite resource being made up as a collection of:\n AirFlow Resource\n BinarySwitch
19843 Resource\nRetrieves the current air flow control values.\n",
19844         "parameters": [
19845           {"$ref": "#/parameters/interface-all"}
19846         ],
19847         "responses": {
19848           "200": {
19849             "description": "",
19850             "x-example":

```

```

19851     {
19852         "rt": ["oic.r.airflowcontrol"],
19853         "id": "unique_example_id",
19854         "airFlowControl": [
19855             {
19856                 "href": "/BinarySwitchResURI",
19857                 "rel": "contains",
19858                 "rt": ["oic.r.switch.binary"],
19859                 "if": ["oic.if.a"],
19860                 "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
19861             },
19862             {
19863                 "href": "/AirFlowResURI",
19864                 "rel": "contains",
19865                 "rt": ["oic.r.airflow"],
19866                 "if": ["oic.if.a"],
19867                 "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
19868             }
19869         ]
19870     }
19871     ,
19872     "schema": { "$ref": "#/definitions/AirFlowControl" }
19873 }
19874 },
19875 ],
19876 "post": {
19877     "description": "Sets the current air flow control values using the batch interface\n",
19878     "parameters": [
19879         {"$ref": "#/parameters/interface-b"},
19880         {
19881             "name": "body",
19882             "in": "body",
19883             "required": true,
19884             "schema": { "$ref": "#/definitions/AirFlowControlBatch" },
19885             "x-example":
19886             {
19887                 "id": "unique_example_id",
19888                 "airFlowControl": [
19889                     {
19890                         "id": "unique_example_id",
19891                         "value": true
19892                     },
19893                     {
19894                         "id": "unique_example_id",
19895                         "direction": "right",
19896                         "speed": 3
19897                     }
19898                 ]
19899             }
19900         }
19901     ],
19902     "responses": {
19903         "200": {
19904             "description": "",
19905             "x-example":
19906             {
19907                 "id": "unique_example_id",
19908                 "airFlowControl": [
19909                     {
19910                         "id": "unique_example_id",
19911                         "value": true
19912                     },
19913                     {
19914                         "id": "unique_example_id",
19915                         "direction": "right",
19916                         "speed": 3
19917                     }
19918                 ]
19919             }
19920         }
19921     },
19922     "schema": { "$ref": "#/definitions/AirFlowControlBatch" }

```

```

19922     },
19923     "403": {
19924         "description" : "This response is generated by the OIC Server when the client
19925 sends:\n An update with an invalid property value for direction.\n An update with an out of range
19926 property value for speed.\nThe server responds with the current resource representation.\n",
19927         "x-example":
19928         {
19929             "id": "unique_example_id",
19930             "airFlowControl": [
19931                 {
19932                     "id": "unique_example_id",
19933                     "value": true
19934                 },
19935                 {
19936                     "id": "unique_example_id",
19937                     "direction": "right",
19938                     "speed": 3
19939                 }
19940             ]
19941         }
19942     },
19943     "schema": { "$ref": "#/definitions/AirFlowControlBatch" }
19944 }
19945 }
19946 }
19947 },
19948 "parameters": {
19949     "interface-b" : {
19950         "in" : "query",
19951         "name" : "if",
19952         "type" : "string",
19953         "enum" : ["oic.if.b"]
19954     },
19955     "interface-all" : {
19956         "in" : "query",
19957         "name" : "if",
19958         "type" : "string",
19959         "enum" : ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
19960     }
19961 },
19962 "definitions": {
19963     "AirFlowControl" : {
19964         "properties": {
19965             "rt" :
19966             {
19967                 "description": "Resource Type",
19968                 "items": {
19969                     "maxLength": 64,
19970                     "type": "string"
19971                 },
19972                 "minItems": 1,
19973                 "readOnly": true,
19974                 "type": "array"
19975             },
19976             "airFlowControl" :
19977             {
19978                 "items": {
19979                     "properties": {
19980                         "anchor": {
19981                             "description": "This is used to override the context URI e.g. override the URI of
19982 the containing collection",
19983                             "format": "uri",
19984                             "maxLength": 256,
19985                             "type": "string"
19986                         },
19987                         "di": {
19988                             "description": "An identifier formatted according to IETF RFC 4122.",
19989                             "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{12}$",
19990
19991
19992

```

```

19993         "type": "string"
19994     },
19995     "eps": {
19996         "description": "the Endpoint information of the target Resource",
19997         "items": {
19998             "properties": {
19999                 "ep": {
20000                     "description": "URI with Transport Protocol Suites + Endpoint Locator as
20001 specified in 10.2.1",
20002                     "format": "uri",
20003                     "type": "string"
20004                 },
20005                 "pri": {
20006                     "description": "The priority among multiple Endpoints as specified in
20007 10.2.3",
20008                     "minimum": 1,
20009                     "type": "integer"
20010                 }
20011             },
20012             "type": "object"
20013         },
20014         "type": "array"
20015     },
20016     "href": {
20017         "description": "This is the target URI, it can be specified as a Relative Reference
20018 or fully-qualified URI. Relative Reference should be used along with the di parameter to make it
20019 unique.",
20020         "format": "uri",
20021         "maxLength": 256,
20022         "type": "string"
20023     },
20024     "if": {
20025         "description": "The interface set supported by this resource",
20026         "items": {
20027             "enum": [
20028                 "oic.if.baseline",
20029                 "oic.if.ll",
20030                 "oic.if.b",
20031                 "oic.if.rw",
20032                 "oic.if.r",
20033                 "oic.if.a",
20034                 "oic.if.s"
20035             ],
20036             "type": "string"
20037         },
20038         "minItems": 1,
20039         "type": "array"
20040     },
20041     "ins": {
20042         "description": "The instance identifier for this web link in an array of web links
20043 - used in collections",
20044         "oneOf": [
20045             {
20046                 "description": "An ordinal number that is not repeated - must be unique in the
20047 collection context",
20048                 "type": "integer"
20049             },
20050             {
20051                 "description": "Any unique string including a URI",
20052                 "format": "uri",
20053                 "maxLength": 256,
20054                 "type": "string"
20055             },
20056             {
20057                 "description": "An identifier formatted according to IETF RFC 4122.",
20058                 "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-
20059 F0-9]{12}$",
20060                 "type": "string"
20061             }
20062         ]
20063     },

```

```

20064         "p": {
20065             "description": "Specifies the framework policies on the Resource referenced by the
20066 target URI",
20067             "properties": {
20068                 "bm": {
20069                     "description": "Specifies the framework policies on the Resource referenced by
20070 the target URI for e.g. observable and discoverable",
20071                     "type": "integer"
20072                 }
20073             },
20074             "required": [
20075                 "bm"
20076             ],
20077             "type": "object"
20078         },
20079         "rel": {
20080             "description": "The relation of the target URI referenced by the link to the
20081 context URI",
20082             "oneOf": [
20083                 {
20084                     "default": [
20085                         "hosts"
20086                     ],
20087                     "items": {
20088                         "maxLength": 64,
20089                         "type": "string"
20090                     },
20091                     "minItems": 1,
20092                     "type": "array"
20093                 },
20094                 {
20095                     "default": "hosts",
20096                     "maxLength": 64,
20097                     "type": "string"
20098                 }
20099             ]
20100         },
20101         "rt": {
20102             "description": "Resource Type",
20103             "items": {
20104                 "maxLength": 64,
20105                 "type": "string"
20106             },
20107             "minItems": 1,
20108             "type": "array"
20109         },
20110         "title": {
20111             "description": "A title for the link relation. Can be used by the UI to provide a
20112 context",
20113             "maxLength": 64,
20114             "type": "string"
20115         },
20116         "type": {
20117             "default": "application/cbor",
20118             "description": "A hint at the representation of the resource referenced by the
20119 target URI. This represents the media types that are used for both accepting and emitting",
20120             "items": {
20121                 "maxLength": 64,
20122                 "type": "string"
20123             },
20124             "minItems": 1,
20125             "type": "array"
20126         }
20127     },
20128     "required": [
20129         "href",
20130         "rt",
20131         "if"
20132     ],
20133     "type": "object"
20134 },

```



```

20135         "maxItems": 2,
20136         "minItems": 2,
20137         "type": "array"
20138     },
20139
20140     "precision" :
20141     {
20142         "description": "Accuracy granularity of the exposed value",
20143         "readOnly": true,
20144         "type": "number"
20145     },
20146
20147     "value" :
20148     {
20149         "anyOf": [
20150             {
20151                 "type": "array"
20152             },
20153             {
20154                 "type": "string"
20155             },
20156             {
20157                 "type": "boolean"
20158             },
20159             {
20160                 "type": "integer"
20161             },
20162             {
20163                 "type": "number"
20164             },
20165             {
20166                 "type": "object"
20167             }
20168         ],
20169         "description": "The value sensed or actuated by this Resource"
20170     },
20171
20172     "n" :
20173     {
20174         "description": "Friendly name of the resource",
20175         "maxLength": 64,
20176         "readOnly": true,
20177         "type": "string"
20178     },
20179
20180     "range" :
20181     {
20182         "description": "The valid range for the value Property",
20183         "items": {
20184             "anyOf": [
20185                 {
20186                     "type": "number"
20187                 },
20188                 {
20189                     "type": "integer"
20190                 }
20191             ]
20192         },
20193         "maxItems": 2,
20194         "minItems": 2,
20195         "readOnly": true,
20196         "type": "array"
20197     },
20198
20199     "step" :
20200     {
20201         "anyOf": [
20202             {
20203                 "type": "integer"
20204             },
20205             {

```

```

20206         "type": "number"
20207     }
20208 ],
20209     "description": "Step value across the defined range",
20210     "readOnly": true
20211 },
20212
20213 "id" :
20214     {
20215         "description": "Instance ID of this specific resource",
20216         "maxLength": 64,
20217         "readOnly": true,
20218         "type": "string"
20219     },
20220
20221 "if" :
20222     {
20223         "description": "The interface set supported by this resource",
20224         "items": {
20225             "enum": [
20226                 "oic.if.baseline",
20227                 "oic.if.ll",
20228                 "oic.if.b",
20229                 "oic.if.lb",
20230                 "oic.if.rw",
20231                 "oic.if.r",
20232                 "oic.if.a",
20233                 "oic.if.s"
20234             ],
20235             "type": "string"
20236         },
20237         "minItems": 1,
20238         "readOnly": true,
20239         "type": "array"
20240     }
20241 }
20242 },
20243 "type" : "object"
20244 , "required": ["airFlowControl"]
20245 }
20246 ,
20247 "AirFlowControlBatch" : {
20248     "properties": {
20249         "rt" :
20250             {
20251                 "description": "Resource Type",
20252                 "items": {
20253                     "maxLength": 64,
20254                     "type": "string"
20255                 },
20256                 "minItems": 1,
20257                 "readOnly": true,
20258                 "type": "array"
20259             },
20260
20261 "airFlowControl" :
20262     {
20263         "items": {
20264             "anyOf": [
20265                 {
20266                     "properties": {
20267                         "value": {
20268                             "description": "Status of the switch",
20269                             "type": "boolean"
20270                         }
20271                     },
20272                     "type": "object"
20273                 },
20274                 {
20275                     "properties": {
20276                         "automode": {

```

```

20277         "description": "Status of the automode feature, if on speed is set by the
20278 device",
20279         "enum": [
20280             "On",
20281             "Off"
20282         ],
20283         "type": "string"
20284     },
20285     "direction": {
20286         "description": "Directionality of the air flow",
20287         "type": "string"
20288     },
20289     "speed": {
20290         "description": "Current speed level",
20291         "type": "integer"
20292     },
20293     "supporteddirections": {
20294         "description": "Array of possible direction settings for this instance of the
Resource Type",
20295         "items": {
20296             "minItems": 1,
20297             "type": "string",
20298             "uniqueItems": true
20299         },
20300         "readOnly": true,
20301         "type": "array"
20302     },
20303     },
20304     "type": "object"
20305 }
20306 ]
20307 },
20308 "type": "array"
20309 },
20310 },
20311 "precision" :
20312 {
20313     "description": "Accuracy granularity of the exposed value",
20314     "readOnly": true,
20315     "type": "number"
20316 },
20317 },
20318 "value" :
20319 {
20320     "anyOf": [
20321         {
20322             "type": "array"
20323         },
20324         {
20325             "type": "string"
20326         },
20327         {
20328             "type": "boolean"
20329         },
20330         {
20331             "type": "integer"
20332         },
20333         {
20334             "type": "number"
20335         },
20336         {
20337             "type": "object"
20338         }
20339     ],
20340     "description": "The value sensed or actuated by this Resource"
20341 },
20342 },
20343 "n" :
20344 {
20345     "description": "Friendly name of the resource",
20346     "maxLength": 64,
20347

```

```

20348         "readOnly": true,
20349         "type": "string"
20350     },
20351
20352     "range" :
20353     {
20354         "description": "The valid range for the value Property",
20355         "items": {
20356             "anyOf": [
20357                 {
20358                     "type": "number"
20359                 },
20360                 {
20361                     "type": "integer"
20362                 }
20363             ]
20364         },
20365         "maxItems": 2,
20366         "minItems": 2,
20367         "readOnly": true,
20368         "type": "array"
20369     },
20370
20371     "step" :
20372     {
20373         "anyOf": [
20374             {
20375                 "type": "integer"
20376             },
20377             {
20378                 "type": "number"
20379             }
20380         ],
20381         "description": "Step value across the defined range",
20382         "readOnly": true
20383     },
20384
20385     "id" :
20386     {
20387         "description": "Instance ID of this specific resource",
20388         "maxLength": 64,
20389         "readOnly": true,
20390         "type": "string"
20391     },
20392
20393     "if" :
20394     {
20395         "description": "The interface set supported by this resource",
20396         "items": {
20397             "enum": [
20398                 "oic.if.baseline",
20399                 "oic.if.ll",
20400                 "oic.if.b",
20401                 "oic.if.lb",
20402                 "oic.if.rw",
20403                 "oic.if.r",
20404                 "oic.if.a",
20405                 "oic.if.s"
20406             ],
20407             "type": "string"
20408         },
20409         "minItems": 1,
20410         "readOnly": true,
20411         "type": "array"
20412     }
20413
20414     },
20415     "type" : "object"
20416     , "required": ["airFlowControl"]
20417 }
20418 }

```

20419 }
 20420

20421 **B.5.5 Property Definition**

20422 **Table 247 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
n	string	No	Read Only	Friendly name of the resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
step	multiple types: see schema	No	Read Only	Step value across the defined range
rt	array: see schema	No	Read Only	Resource Type
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
id	string	No	Read Only	Instance ID of this specific resource
if	array: see schema	No	Read Only	The interface set supported by this resource
range	array: see schema	No	Read Only	The valid range for the value Property
airFlowControl	array: see schema	Yes	Read Write	
n	string	No	Read Only	Friendly name of the resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
step	multiple types: see schema	No	Read Only	Step value across the defined range
rt	array: see schema	No	Read Only	Resource Type
value	multiple types: see schema	No	Read Write	The value sensed or

				actuated by this Resource
id	string	No	Read Only	Instance ID of this specific resource
if	array: see schema	No	Read Only	The interface set supported by this resource
range	array: see schema	No	Read Only	The valid range for the value Property
airFlowControl	array: see schema	Yes	Read Write	

20423 **B.5.6 CRUDN behaviour**

20424 **Table 248 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/AirFlowControlResURI		get	post		observe

20425 **B.6 Air Quality**

20426 **B.6.1 Introduction**

20427 This resource describes a qualitative or measured contaminant that can be used to infer Air
20428 Quality.

20429 Measured is the actual sensed value with units per contaminant type as described below:

20430 Qualitative is a representative value within the range provided where the minimum value is
20431 minimum contamination and maximum value is maximum contamination for the specific
20432 contaminant.

20433 The valueType indicates a qualitative or measured reading within the contaminantvalue Property.
20434 contaminantvalue contains the actual measured or qualitative level.

20435 range contains the allowed range for the value that is being reported (from oic.r.baseresource).

20436 If valueType is 'Measured' then the units for the contaminant types are as follows:

20437 Methanal (also known as Formaldehyde): CH₂O (ug/m³),

20438 Carbon Dioxide: CO₂ (ppm),

20439 Carbon Monoxide: CO (ppm),

20440 Particulate Matter (less than 2.5 microns in diameter): PM_{2.5} (ug/m³),

20441 Particulate Matter (less than 10 microns in diameter): PM₁₀ (ug/m³),

20442 Volatile Organic Compounds: VOC (ug/m³)

20443

20444 **B.6.2 Example URI**

20445 /AirQualityResURI

20446 **B.6.3 Resource Type**

20447 The resource type (rt) is defined as: ['oic.r.airquality'].

20448 **B.6.4 Swagger2.0 Definition**

```
20449 {
20450   "swagger": "2.0",
20451   "info": {
20452     "title": "Air Quality",
20453     "version": "v1.1.0-20160519",
20454     "license": {
```

```

20455     "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
20456     "x-description": "Redistribution and use in source and binary forms, with or without
20457 modification, are permitted provided that the following conditions are met:\n      1.
20458 Redistributions of source code must retain the above copyright notice, this list of conditions and
20459 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
20460 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
20461 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
20462 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
20463 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
20464 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
20465 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
20466 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
20467 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
20468 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
20469 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
20470 OF SUCH DAMAGE.\n"
20471   }
20472 },
20473   "schemes": ["http"],
20474   "consumes": ["application/json"],
20475   "produces": ["application/json"],
20476   "paths": {
20477     "/AirQualityResURI" : {
20478       "get": {
20479         "description": "This resource describes a qualitative or measured contaminant that can be
20480 used to infer Air Quality.\nMeasured is the actual sensed value with units per contaminant type as
20481 described below.\nQualitative is a representative value within the range provided where the minium
20482 value is minimum contamination and maximum value is maximum contamination for the specific
20483 contaminant.\nThe valueType indicates a qualitative or measured reading within the contaminantvalue
20484 Property.\ncontaminantvalue contains the actual measured or qualitative level.\nrange contains the
20485 allowed range for the value that is being reported (from oic.r.baseresource).\nIf valueType is
20486 'Measured' then the units for the contaminant types are as follows:\nMethanal (also known as
20487 Formaldehyde): CH2O (ug/m^3),\nCarbon Dioxide: CO2 (ppm),\nCarbon Monoxide: CO (ppm),\n
20488 Particulate Matter (less than 2.5 microns in diameter): PM2.5 (ug/m^3),\nParticulate Matter (less
20489 than 10 microns in diameter): PM10 (ug/m^3),\nVolatile Organic Compounds: VOC (ug/m^3)\nRetrieves
20490 the current air quality.\n",
20491       "parameters": [
20492         { "$ref": "#/parameters/interface" }
20493       ],
20494       "responses": {
20495         "200": {
20496           "description": "",
20497           "x-example":
20498             {
20499               "rt": ["oic.r.airquality"],
20500               "id": "unique_example_id",
20501               "contaminanttype": "CO",
20502               "valuetype": "Measured",
20503               "contaminantvalue": 10,
20504               "range": [0,500]
20505             }
20506         },
20507         "schema": { "$ref": "#/definitions/AirQuality" }
20508       }
20509     }
20510   }
20511 },
20512 },
20513 "parameters": {
20514   "interface" : {
20515     "in" : "query",
20516     "name" : "if",
20517     "type" : "string",
20518     "enum" : ["oic.if.s", "oic.if.baseline"]
20519   }
20520 },
20521 "definitions": {
20522   "AirQuality" : {
20523     "properties": {
20524       "contaminanttype" :
20525         {

```

```

20526     "description": "The contaminant being measured.",
20527     "enum": [
20528         "CH2O",
20529         "CO2",
20530         "CO",
20531         "PM2.5",
20532         "PM10",
20533         "VOC",
20534         "Smoke",
20535         "Odor",
20536         "AirPollution"
20537     ],
20538     "readOnly": true,
20539     "type": "string"
20540 },
20541
20542 "rt" :
20543     {
20544         "description": "Resource Type",
20545         "items": {
20546             "maxLength": 64,
20547             "type": "string"
20548         },
20549         "minItems": 1,
20550         "readOnly": true,
20551         "type": "array"
20552     },
20553
20554 "valuetype" :
20555     {
20556         "description": "Indicates whether the provided value is qualitative or measured.",
20557         "enum": [
20558             "Qualitative",
20559             "Measured"
20560         ],
20561         "readOnly": true,
20562         "type": "string"
20563     },
20564
20565 "precision" :
20566     {
20567         "description": "Accuracy granularity of the exposed value",
20568         "readOnly": true,
20569         "type": "number"
20570     },
20571
20572 "value" :
20573     {
20574         "anyOf": [
20575             {
20576                 "type": "array"
20577             },
20578             {
20579                 "type": "string"
20580             },
20581             {
20582                 "type": "boolean"
20583             },
20584             {
20585                 "type": "integer"
20586             },
20587             {
20588                 "type": "number"
20589             },
20590             {
20591                 "type": "object"
20592             }
20593         ],
20594         "description": "The value sensed or actuated by this Resource"
20595     },
20596

```



```

20597     "n" :
20598         {
20599             "description": "Friendly name of the resource",
20600             "maxLength": 64,
20601             "readOnly": true,
20602             "type": "string"
20603         },
20604
20605     "range" :
20606         {
20607             "description": "The valid range for the value Property",
20608             "items": {
20609                 "anyOf": [
20610                     {
20611                         "type": "number"
20612                     },
20613                     {
20614                         "type": "integer"
20615                     }
20616                 ]
20617             },
20618             "maxItems": 2,
20619             "minItems": 2,
20620             "readOnly": true,
20621             "type": "array"
20622         },
20623
20624     "step" :
20625         {
20626             "anyOf": [
20627                 {
20628                     "type": "integer"
20629                 },
20630                 {
20631                     "type": "number"
20632                 }
20633             ],
20634             "description": "Step value across the defined range",
20635             "readOnly": true
20636         },
20637
20638     "contaminantvalue" :
20639         {
20640             "description": "The measured or qualitative value for the contaminant.",
20641             "readOnly": true,
20642             "type": "integer"
20643         },
20644
20645     "id" :
20646         {
20647             "description": "Instance ID of this specific resource",
20648             "maxLength": 64,
20649             "readOnly": true,
20650             "type": "string"
20651         },
20652
20653     "if" :
20654         {
20655             "description": "The interface set supported by this resource",
20656             "items": {
20657                 "enum": [
20658                     "oic.if.baseline",
20659                     "oic.if.ll",
20660                     "oic.if.b",
20661                     "oic.if.lb",
20662                     "oic.if.rw",
20663                     "oic.if.r",
20664                     "oic.if.a",
20665                     "oic.if.s"
20666                 ],
20667                 "type": "string"

```

```

20668     },
20669     "minItems": 1,
20670     "readOnly": true,
20671     "type": "array"
20672   }
20673 }
20674 }
20675 , "type" : "object"
20676 , "required": ["contaminantvalue", "contaminanttype", "valuetype", "range"]
20677 }
20678 }
20679 }
20680

```

20681 **B.6.5 Property Definition**

20682 **Table 249 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
valuetype	string	Yes	Read Only	Indicates whether the provided value is qualitative or measured.
n	string	No	Read Only	Friendly name of the resource
id	string	No	Read Only	Instance ID of this specific resource
range	array: see schema	Yes	Read Only	The valid range for the value Property
contaminanttype	string	Yes	Read Only	The contaminant being measured.
if	array: see schema	No	Read Only	The interface set supported by this resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
precision	number	No	Read Only	Accuracy granularity of the exposed value
contaminantvalue	integer	Yes	Read Only	The measured or qualitative value for the contaminant.
rt	array: see schema	No	Read Only	Resource Type

value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
-------	-------------------------------	----	------------	---

20683 **B.6.6 CRUDN behaviour**

20684 **Table 250 The CRUDN operations of the**

Resource	Create	Read	Update	Delete	Notify
/AirQualityResURI		get			observe

20685 **B.7 Air Quality Collection**

20686 **B.7.1 Introduction**

20687 This resource describes a sensor that provides the qualitative or measured Air Quality.
 20688 The resource is a collection of instances of oic.r.airquality detailing the individual exposed
 20689 contaminant measures
 20690 There is one collection entry per contaminant type supported by the device. A device must
 20691 expose at least one measured or qualitative value.
 20692

20693 **B.7.2 Example URI**

20694 /AirQualityResURI

20695 **B.7.3 Resource Type**

20696 The resource type (rt) is defined as: ['oic.r.airqualitycollection', 'oic.wk.col'].

20697 **B.7.4 Swagger2.0 Definition**

```

20698 {
20699   "swagger": "2.0",
20700   "info": {
20701     "title": "Air Quality Collection",
20702     "version": "v1.1.0-20160519",
20703     "license": {
20704       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
20705       "x-description": "Redistribution and use in source and binary forms, with or without
20706 modification, are permitted provided that the following conditions are met:\n
20707 1.
20708 Redistributions of source code must retain the above copyright notice, this list of conditions and
20709 the following disclaimer.\n
20710 2. Redistributions in binary form must reproduce the above
20711 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
20712 other materials provided with the distribution.\n\n
20713 THIS SOFTWARE IS PROVIDED BY THE Open
20714 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
20715 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
20716 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n
20717 IN NO EVENT SHALL THE Open Connectivity
20718 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
20719 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
20720 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n
20721 HOWEVER CAUSED AND
20722 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
20723 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
20724 OF SUCH DAMAGE.\n"
20725 }
20726 },
20727 "schemes": ["http"],
20728 "consumes": ["application/json"],
20729 "produces": ["application/json"],
20730 "paths": {
20731   "/AirQualityResURI?if=oic.if.ll" : {
20732     "get": {
20733       "description": "This resource describes a sensor that provides the qualitative or measured
20734 Air Quality.\nThe resource is a collection of instances of oic.r.airquality detailing the
20735 individual exposed contaminant measures\nThere is one collection entry per contaminant type
20736 supported by the device. A device must expose at least one measured or qualitative
  
```

```

20732 value.\nRetrieves the current air quality.\n",
20733     "parameters": [
20734         {"$ref": "#/parameters/interface-ll"}
20735     ],
20736     "responses": {
20737         "200": {
20738             "description": "",
20739             "x-example":
20740                 [
20741                     {"href": "/myCOMeasureResURI", "rt": ["oic.r.airquality"], "if":
20742 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
20743                     {"href": "/myCO2ResURI", "rt": ["oic.r.airquality"], "if":
20744 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
20745                 ]
20746             ,
20747             "schema": { "$ref": "#/definitions/AirQuality-ll" }
20748         }
20749     }
20750 },
20751 },
20752 "/AirQualityResURI?if=oic.if.baseline" : {
20753     "get": {
20754         "description": "This resource describes a sensor that provides the qualitative or measured
20755 Air Quality.\nThe resource is a collection of instances of oic.r.airquality detailing the
20756 individual exposed contaminant measures\nThere is one collection entry per contaminant type
20757 supported by the device. A device must expose at least one measured or qualitative
20758 value.\nRetrieves the current air quality.\n",
20759         "parameters": [
20760             {"$ref": "#/parameters/interface-baseline"}
20761         ],
20762         "responses": {
20763             "200": {
20764                 "description": "",
20765                 "x-example":
20766                     {
20767                         "rt": ["oic.r.airqualitycollection", "oic.wk.col"],
20768                         "if": ["oic.if.baseline", "oic.if.ll"],
20769                         "id": "unique_example_id",
20770                         "links": [
20771                             {"href": "/myCOMeasureResURI", "rt": ["oic.r.airquality"], "if":
20772 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
20773                             {"href": "/myCO2ResURI", "rt": ["oic.r.airquality"], "if":
20774 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
20775                         ]
20776                     }
20777                 ,
20778                 "schema": { "$ref": "#/definitions/AirQuality" }
20779             }
20780         }
20781     }
20782 },
20783 },
20784 "parameters": {
20785     "interface-ll" : {
20786         "in" : "query",
20787         "name" : "if",
20788         "type" : "string",
20789         "enum" : ["oic.if.ll"]
20790     },
20791     "interface-baseline" : {
20792         "in" : "query",
20793         "name" : "if",
20794         "type" : "string",
20795         "enum" : ["oic.if.baseline"]
20796     },
20797     "interface-all" : {
20798         "in" : "query",
20799         "name" : "if",
20800         "type" : "string",
20801         "enum" : ["oic.if.ll", "oic.if.baseline"]
20802     }

```

```

20803 },
20804 "definitions": {
20805   "AirQuality-ll" : {
20806     "title" :
20807       "Air Quality Collection Link List Schema (auto merged)"
20808
20809     , "items" :
20810       {
20811         "$ref": "#/definitions/oic.oic-link"
20812       }
20813
20814     , "type" :
20815       "array"
20816
20817   }
20818 ,
20819 "AirQuality" : {
20820   "properties": {
20821     "rt" :
20822       {
20823         "items": {
20824           "enum": [
20825             "oic.r.airqualitycollection",
20826             "oic.wk.col"
20827           ],
20828           "type": "string"
20829         },
20830         "maxItems": 2,
20831         "minItems": 2,
20832         "type": "array",
20833         "uniqueItems": true
20834       },
20835
20836     "links" :
20837       {
20838         "description": "A set of simple or individual OIC Links.",
20839         "items": {
20840           "properties": {
20841             "anchor": {
20842               "description": "This is used to override the context URI e.g. override the URI of
20843 the containing collection.",
20844               "format": "uri",
20845               "maxLength": 256,
20846               "type": "string"
20847             },
20848             "di": {
20849               "description": "The Device ID formatted according to IETF RFC 4122.",
20850               "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
20851 9]{12}$",
20852               "type": "string"
20853             },
20854             "eps": {
20855               "description": "the Endpoint information of the target Resource",
20856               "items": {
20857                 "properties": {
20858                   "ep": {
20859                     "description": "Transport Protocol Suite + Endpoint Locator",
20860                     "format": "uri",
20861                     "type": "string"
20862                   },
20863                   "pri": {
20864                     "description": "The priority among multiple Endpoints",
20865                     "minimum": 1,
20866                     "type": "integer"
20867                   }
20868                 },
20869                 "type": "object"
20870               },
20871               "type": "array"
20872             },
20873             "href": {

```

```

20874         "description": "This is the target URI, it can be specified as a Relative Reference
20875 or fully-qualified URI.",
20876         "format": "uri",
20877         "maxLength": 256,
20878         "type": "string"
20879     },
20880     "if": {
20881         "description": "The interface set supported by this resource",
20882         "items": {
20883             "enum": [
20884                 "oic.if.baseline",
20885                 "oic.if.ll",
20886                 "oic.if.b",
20887                 "oic.if.rw",
20888                 "oic.if.r",
20889                 "oic.if.a",
20890                 "oic.if.s"
20891             ],
20892             "type": "string"
20893         },
20894         "minItems": 1,
20895         "type": "array"
20896     },
20897     "ins": {
20898         "description": "The instance identifier for this web link in an array of web links
20899 - used in collections",
20900         "type": "integer"
20901     },
20902     "p": {
20903         "description": "Specifies the framework policies on the Resource referenced by the
20904 target URI",
20905         "properties": {
20906             "bm": {
20907                 "description": "Specifies the framework policies on the Resource referenced by
20908 the target URI for e.g. observable and discoverable",
20909                 "type": "integer"
20910             }
20911         },
20912         "required": [
20913             "bm"
20914         ],
20915         "type": "object"
20916     },
20917     "rel": {
20918         "description": "The relation of the target URI referenced by the link to the
20919 context URI",
20920         "oneOf": [
20921             {
20922                 "default": [
20923                     "hosts"
20924                 ],
20925                 "items": {
20926                     "maxLength": 64,
20927                     "type": "string"
20928                 },
20929                 "minItems": 1,
20930                 "type": "array"
20931             },
20932             {
20933                 "default": "hosts",
20934                 "maxLength": 64,
20935                 "type": "string"
20936             }
20937         ]
20938     },
20939     "rt": {
20940         "description": "Resource Type of the Resource",
20941         "items": {
20942             "maxLength": 64,
20943             "type": "string"
20944         },

```

```

20945         "minItems": 1,
20946         "type": "array"
20947     },
20948     "title": {
20949         "description": "A title for the link relation. Can be used by the UI to provide a
context.",
20950         "maxLength": 64,
20951         "type": "string"
20952     },
20953     "type": {
20954         "default": "application/cbor",
20955         "description": "A hint at the representation of the resource referenced by the
target URI. This represents the media types that are used for both accepting and emitting.",
20956         "items": {
20957             "maxLength": 64,
20958             "type": "string"
20959         },
20960         "minItems": 1,
20961         "type": "array"
20962     },
20963     "required": [
20964         "href",
20965         "rt",
20966         "if"
20967     ],
20968     "type": "object"
20969 },
20970 "type": "array"
20971 },
20972 "n" :
20973 {
20974     "description": "Friendly name of the resource",
20975     "maxLength": 64,
20976     "readOnly": true,
20977     "type": "string"
20978 },
20979 "rts" :
20980 {
20981     "items": {
20982         "anyOf": [
20983             {
20984                 "enum": [
20985                     "oic.r.airquality",
20986                     "oic.r.value.conditional"
20987                 ],
20988                 "type": "string"
20989             },
20990             {
20991                 "enum": [
20992                     "oic.r.airquality"
20993                 ],
20994                 "type": "string"
20995             }
20996         ]
20997     }
20998 },
20999 "maxItems": 2,
21000 "minItems": 1,
21001 "type": "array",
21002 "uniqueItems": true
21003 },
21004 "id" :
21005 {
21006     "description": "Instance ID of this specific resource",
21007     "maxLength": 64,
21008     "readOnly": true,
21009     "type": "string"
21010 },
21011

```

```

21016
21017     "if" :
21018         {
21019             "description": "The interface set supported by this resource",
21020             "items": {
21021                 "enum": [
21022                     "oic.if.baseline",
21023                     "oic.if.ll",
21024                     "oic.if.b",
21025                     "oic.if.lb",
21026                     "oic.if.rw",
21027                     "oic.if.r",
21028                     "oic.if.a",
21029                     "oic.if.s"
21030                 ],
21031                 "type": "string"
21032             },
21033             "minItems": 1,
21034             "readOnly": true,
21035             "type": "array"
21036         }
21037     }
21038     , "type" : "object"
21039 }
21040 , "airqualitycollection-ll" :
21041     {
21042         "items": {
21043             "$ref": "#/definitions/oic.oic-link"
21044         },
21045         "type": "array"
21046     }
21047 }
21048 , "oic.collection.links.arrayoflinks" :
21049     {
21050         "properties": {
21051             "links": {
21052                 "description": "A set of simple or individual OIC Links.",
21053                 "items": {
21054                     "properties": {
21055                         "anchor": {
21056                             "description": "This is used to override the context URI e.g. override the URI of
21057 the containing collection.",
21058                             "format": "uri",
21059                             "maxLength": 256,
21060                             "type": "string"
21061                         },
21062                         "di": {
21063                             "description": "The Device ID formatted according to IETF RFC 4122.",
21064                             "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
21065 9]{12}$",
21066                             "type": "string"
21067                         },
21068                         "eps": {
21069                             "description": "the Endpoint information of the target Resource",
21070                             "items": {
21071                                 "properties": {
21072                                     "ep": {
21073                                         "description": "Transport Protocol Suite + Endpoint Locator",
21074                                         "format": "uri",
21075                                         "type": "string"
21076                                     },
21077                                     "pri": {
21078                                         "description": "The priority among multiple Endpoints",
21079                                         "minimum": 1,
21080                                         "type": "integer"
21081                                     }
21082                                 }
21083                             },
21084                             "type": "object"
21085                         },
21086                     "type": "array"

```



```

21087     },
21088     "href": {
21089         "description": "This is the target URI, it can be specified as a Relative Reference
21090 or fully-qualified URI.",
21091         "format": "uri",
21092         "maxLength": 256,
21093         "type": "string"
21094     },
21095     "if": {
21096         "description": "The interface set supported by this resource",
21097         "items": {
21098             "enum": [
21099                 "oic.if.baseline",
21100                 "oic.if.ll",
21101                 "oic.if.b",
21102                 "oic.if.rw",
21103                 "oic.if.r",
21104                 "oic.if.a",
21105                 "oic.if.s"
21106             ],
21107             "type": "string"
21108         },
21109         "minItems": 1,
21110         "type": "array"
21111     },
21112     "ins": {
21113         "description": "The instance identifier for this web link in an array of web links
21114 - used in collections",
21115         "type": "integer"
21116     },
21117     "p": {
21118         "description": "Specifies the framework policies on the Resource referenced by the
21119 target URI",
21120         "properties": {
21121             "bm": {
21122                 "description": "Specifies the framework policies on the Resource referenced by
21123 the target URI for e.g. observable and discoverable",
21124                 "type": "integer"
21125             }
21126         },
21127         "required": [
21128             "bm"
21129         ],
21130         "type": "object"
21131     },
21132     "rel": {
21133         "description": "The relation of the target URI referenced by the link to the
21134 context URI",
21135         "oneOf": [
21136             {
21137                 "default": [
21138                     "hosts"
21139                 ],
21140                 "items": {
21141                     "maxLength": 64,
21142                     "type": "string"
21143                 },
21144                 "minItems": 1,
21145                 "type": "array"
21146             },
21147             {
21148                 "default": "hosts",
21149                 "maxLength": 64,
21150                 "type": "string"
21151             }
21152         ]
21153     },
21154     "rt": {
21155         "description": "Resource Type of the Resource",
21156         "items": {
21157             "maxLength": 64,

```

```

21158         "type": "string"
21159     },
21160     "minItems": 1,
21161     "type": "array"
21162 },
21163 "title": {
21164     "description": "A title for the link relation. Can be used by the UI to provide a
21165 context.",
21166     "maxLength": 64,
21167     "type": "string"
21168 },
21169 "type": {
21170     "default": "application/cbor",
21171     "description": "A hint at the representation of the resource referenced by the
21172 target URI. This represents the media types that are used for both accepting and emitting.",
21173     "items": {
21174         "maxLength": 64,
21175         "type": "string"
21176     },
21177     "minItems": 1,
21178     "type": "array"
21179 }
21180 },
21181 "required": [
21182     "href",
21183     "rt",
21184     "if"
21185 ],
21186 "type": "object"
21187 },
21188 "type": "array"
21189 }
21190 }
21191 }
21192
21193 , "oic.collection.properties" :
21194 {
21195     "description": "A collection is a set of links along with additional properties to describe
21196 the collection itself",
21197     "properties": {
21198         "rts": {
21199             "$ref": "#/definitions/oic.core/properties/rt",
21200             "description": "The list of allowable resource types (for Target and anchors) in links
21201 included in the collection"
21202         }
21203     },
21204     "type": "object"
21205 }
21206
21207 , "oic.core" :
21208 {
21209     "properties": {
21210         "id": {
21211             "description": "Instance ID of this specific resource",
21212             "maxLength": 64,
21213             "readOnly": true,
21214             "type": "string"
21215         },
21216         "if": {
21217             "description": "The interface set supported by this resource",
21218             "items": {
21219                 "enum": [
21220                     "oic.if.baseline",
21221                     "oic.if.ll",
21222                     "oic.if.b",
21223                     "oic.if.lb",
21224                     "oic.if.rw",
21225                     "oic.if.r",
21226                     "oic.if.a",
21227                     "oic.if.s"
21228                 ]

```

```

21229         "type": "string"
21230     },
21231     "minItems": 1,
21232     "readOnly": true,
21233     "type": "array"
21234 },
21235 "n": {
21236     "description": "Friendly name of the resource",
21237     "maxLength": 64,
21238     "readOnly": true,
21239     "type": "string"
21240 },
21241 "rt": {
21242     "description": "Resource Type",
21243     "items": {
21244         "maxLength": 64,
21245         "type": "string"
21246     },
21247     "minItems": 1,
21248     "readOnly": true,
21249     "type": "array"
21250 }
21251 },
21252 "type": "object"
21253 }
21254
21255 ,"oic.r.airqualitycollection" :
21256 {
21257     "properties": {
21258         "rt": {
21259             "items": {
21260                 "enum": [
21261                     "oic.r.airqualitycollection",
21262                     "oic.wk.col"
21263                 ],
21264                 "type": "string"
21265             },
21266             "maxItems": 2,
21267             "minItems": 2,
21268             "type": "array",
21269             "uniqueItems": true
21270         },
21271         "rts": {
21272             "items": {
21273                 "anyOf": [
21274                     {
21275                         "enum": [
21276                             "oic.r.airquality",
21277                             "oic.r.value.conditional"
21278                         ],
21279                         "type": "string"
21280                     },
21281                     {
21282                         "enum": [
21283                             "oic.r.airquality"
21284                         ],
21285                         "type": "string"
21286                     }
21287                 ]
21288             },
21289             "maxItems": 2,
21290             "minItems": 1,
21291             "type": "array",
21292             "uniqueItems": true
21293         }
21294     },
21295     "type": "object"
21296 }
21297
21298 ,"oic.oic-link" :
21299 {

```

```

21300     "properties": {
21301         "anchor": {
21302             "description": "This is used to override the context URI e.g. override the URI of the
21303 containing collection.",
21304             "format": "uri",
21305             "maxLength": 256,
21306             "type": "string"
21307         },
21308         "di": {
21309             "description": "The Device ID formatted according to IETF RFC 4122.",
21310             "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
21311 9]{12}$",
21312             "type": "string"
21313         },
21314         "eps": {
21315             "description": "the Endpoint information of the target Resource",
21316             "items": {
21317                 "properties": {
21318                     "ep": {
21319                         "description": "Transport Protocol Suite + Endpoint Locator",
21320                         "format": "uri",
21321                         "type": "string"
21322                     },
21323                     "pri": {
21324                         "description": "The priority among multiple Endpoints",
21325                         "minimum": 1,
21326                         "type": "integer"
21327                     }
21328                 },
21329                 "type": "object"
21330             },
21331             "type": "array"
21332         },
21333         "href": {
21334             "description": "This is the target URI, it can be specified as a Relative Reference or
21335 fully-qualified URI.",
21336             "format": "uri",
21337             "maxLength": 256,
21338             "type": "string"
21339         },
21340         "if": {
21341             "description": "The interface set supported by this resource",
21342             "items": {
21343                 "enum": [
21344                     "oic.if.baseline",
21345                     "oic.if.ll",
21346                     "oic.if.b",
21347                     "oic.if.rw",
21348                     "oic.if.r",
21349                     "oic.if.a",
21350                     "oic.if.s"
21351                 ],
21352                 "type": "string"
21353             },
21354             "minItems": 1,
21355             "type": "array"
21356         },
21357         "ins": {
21358             "description": "The instance identifier for this web link in an array of web links - used
21359 in collections",
21360             "type": "integer"
21361         },
21362         "p": {
21363             "description": "Specifies the framework policies on the Resource referenced by the target
21364 URI",
21365             "properties": {
21366                 "bm": {
21367                     "description": "Specifies the framework policies on the Resource referenced by the
21368 target URI for e.g. observable and discoverable",
21369                     "type": "integer"
21370                 }

```

```

21371         },
21372         "required": [
21373             "bm"
21374         ],
21375         "type": "object"
21376     },
21377     "rel": {
21378         "description": "The relation of the target URI referenced by the link to the context
21379 URI",
21380         "oneOf": [
21381             {
21382                 "default": [
21383                     "hosts"
21384                 ],
21385                 "items": {
21386                     "maxLength": 64,
21387                     "type": "string"
21388                 },
21389                 "minItems": 1,
21390                 "type": "array"
21391             },
21392             {
21393                 "default": "hosts",
21394                 "maxLength": 64,
21395                 "type": "string"
21396             }
21397         ]
21398     },
21399     "rt": {
21400         "description": "Resource Type of the Resource",
21401         "items": {
21402             "maxLength": 64,
21403             "type": "string"
21404         },
21405         "minItems": 1,
21406         "type": "array"
21407     },
21408     "title": {
21409         "description": "A title for the link relation. Can be used by the UI to provide a
21410 context.",
21411         "maxLength": 64,
21412         "type": "string"
21413     },
21414     "type": {
21415         "default": "application/cbor",
21416         "description": "A hint at the representation of the resource referenced by the target
21417 URI. This represents the media types that are used for both accepting and emitting.",
21418         "items": {
21419             "maxLength": 64,
21420             "type": "string"
21421         },
21422         "minItems": 1,
21423         "type": "array"
21424     }
21425 },
21426 "required": [
21427     "href",
21428     "rt",
21429     "if"
21430 ],
21431 "type": "object"
21432 }
21433 }
21434 }
21435 }
21436

```

Table 251 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
rts	array: see schema		Read Write	
rt	array: see schema		Read Write	
n	string	No	Read Only	Friendly name of the resource
id	string	No	Read Only	Instance ID of this specific resource
links	array: see schema	No	Read Write	A set of simple or individual OIC Links.
rts	array: see schema	No	Read Write	
rt	array: see schema	Yes	Read Write	
if	array: see schema	Yes	Read Only	The interface set supported by this resource
rts	multiple types: see schema		Read Write	The list of allowable resource types (for Target and anchors) in links included in the collection
n	string		Read Only	Friendly name of the resource
id	string		Read Only	Instance ID of this specific resource
rt	array: see schema		Read Only	Resource Type
if	array: see schema		Read Only	The interface set supported by this resource
title	string	No	Read Write	A title for the link relation. Can be used by the UI to provide a context.

eps	array: schema	see	No	Read Write	the Endpoint information of the target Resource
type	array: schema	see	No	Read Write	A hint at the representation of the resource referenced by the target URI. This represents the media types that are used for both accepting and emitting.
href	string		Yes	Read Write	This is the target URI, it can be specified as a Relative Reference or fully-qualified URI.
ins	integer		No	Read Write	The instance identifier for this web link in an array of web links - used in collections
di	string		No	Read Write	The Device ID formatted according to IETF RFC 4122.
p	object: schema	see	No	Read Write	Specifies the framework policies on the Resource referenced by the target URI
anchor	string		No	Read Write	This is used to override the context URI e.g. override the URI of the containing collection.
rel	multiple types: see schema		No	Read Write	The relation of the target URI referenced by

					the link to the context URI
rt	array: schema	see	Yes	Read Write	Resource Type of the Resource
if	array: schema	see	Yes	Read Write	The interface set supported by this resource
links	array: schema	see	No	Read Write	A set of simple or individual OIC Links.

21439 **B.7.6 CRUDN behaviour**

21440 **Table 252 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/AirQualityResURI		get			observe

21441 **B.8 Altimeter**

21442 **B.8.1 Introduction**

21443 This resource describes the properties associated with altimeter. Altimeter is a height of the
21444 position (metres).

21445

21446 **B.8.2 Example URI**

21447 /AltimeterResURI

21448 **B.8.3 Resource Type**

21449 The resource type (rt) is defined as: ['oic.r.altimeter'].

21450 **B.8.4 Swagger2.0 Definition**

```

21451 {
21452   "swagger": "2.0",
21453   "info": {
21454     "title": "Altimeter",
21455     "version": "v1.1.0-20160519",
21456     "license": {
21457       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
21458       "x-description": "Redistribution and use in source and binary forms, with or without
21459 modification, are permitted provided that the following conditions are met:\n      1.
21460 Redistributions of source code must retain the above copyright notice, this list of conditions and
21461 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
21462 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
21463 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
21464 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
21465 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
21466 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
21467 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
21468 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
21469 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
21470 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
21471 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
21472 OF SUCH DAMAGE.\n"
21473     }
21474   },
21475   "schemes": ["http"],
21476   "consumes": ["application/json"],
21477   "produces": ["application/json"],
21478   "paths": {

```



```

21479     "/AltimeterResURI" : {
21480       "get": {
21481         "description": "This resource describes the properties associated with
21482 altimeter.\nAltimeter is a height of the position (metres).\nRetrieves the current the height of
21483 the position (metres).\n",
21484         "parameters": [
21485           {"$ref": "#/parameters/interface"}
21486         ],
21487         "responses": {
21488           "200": {
21489             "description": "",
21490             "x-example":
21491             {
21492               "rt": ["oic.r.altimeter"],
21493               "id": "unique_example_id",
21494               "alt": 1500.0
21495             }
21496           ,
21497           "schema": { "$ref": "#/definitions/Altimeter" }
21498         }
21499       }
21500     }
21501   },
21502 },
21503 "parameters": {
21504   "interface" : {
21505     "in" : "query",
21506     "name" : "if",
21507     "type" : "string",
21508     "enum" : ["oic.if.s", "oic.if.baseline"]
21509   }
21510 },
21511 "definitions": {
21512   "Altimeter" : {
21513     "properties": {
21514       "rt" :
21515       {
21516         "description": "Resource Type",
21517         "items": {
21518           "maxLength": 64,
21519           "type": "string"
21520         },
21521         "minItems": 1,
21522         "readOnly": true,
21523         "type": "array"
21524       },
21525     "precision" :
21526     {
21527       "description": "Accuracy granularity of the exposed value",
21528       "readOnly": true,
21529       "type": "number"
21530     },
21531   },
21532   "value" :
21533   {
21534     "anyOf": [
21535       {
21536         "type": "array"
21537       },
21538       {
21539         "type": "string"
21540       },
21541       {
21542         "type": "boolean"
21543       },
21544       {
21545         "type": "integer"
21546       },
21547       {
21548         "type": "number"
21549     ]

```

```

21550         },
21551         {
21552             "type": "object"
21553         }
21554     ],
21555     "description": "The value sensed or actuated by this Resource"
21556 },
21557
21558 "n" :
21559     {
21560         "description": "Friendly name of the resource",
21561         "maxLength": 64,
21562         "readOnly": true,
21563         "type": "string"
21564     },
21565
21566 "range" :
21567     {
21568         "description": "The valid range for the value Property",
21569         "items": {
21570             "anyOf": [
21571                 {
21572                     "type": "number"
21573                 },
21574                 {
21575                     "type": "integer"
21576                 }
21577             ]
21578         },
21579         "maxItems": 2,
21580         "minItems": 2,
21581         "readOnly": true,
21582         "type": "array"
21583     },
21584
21585 "step" :
21586     {
21587         "anyOf": [
21588             {
21589                 "type": "integer"
21590             },
21591             {
21592                 "type": "number"
21593             }
21594         ],
21595         "description": "Step value across the defined range",
21596         "readOnly": true
21597     },
21598
21599 "alt" :
21600     {
21601         "description": "The current height of the position (metres)",
21602         "minimum": 0,
21603         "readOnly": true,
21604         "type": "number"
21605     },
21606
21607 "id" :
21608     {
21609         "description": "Instance ID of this specific resource",
21610         "maxLength": 64,
21611         "readOnly": true,
21612         "type": "string"
21613     },
21614
21615 "if" :
21616     {
21617         "description": "The interface set supported by this resource",
21618         "items": {
21619             "enum": [
21620                 "oic.if.baseline",

```

```

21621         "oic.if.ll",
21622         "oic.if.b",
21623         "oic.if.lb",
21624         "oic.if.rw",
21625         "oic.if.r",
21626         "oic.if.a",
21627         "oic.if.s"
21628     ],
21629     "type": "string"
21630 },
21631     "minItems": 1,
21632     "readOnly": true,
21633     "type": "array"
21634 }
21635
21636 }
21637 , "type" : "object"
21638 , "required": ["alt"]
21639 }
21640 }
21641 }
21642

```

21643 **B.8.5 Property Definition**

21644 **Table 253 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
id	string	No	Read Only	Instance ID of this specific resource
alt	number	Yes	Read Only	The current height of the position (metres)
step	multiple types: see schema	No	Read Only	Step value across the defined range
rt	array: see schema	No	Read Only	Resource Type
range	array: see schema	No	Read Only	The valid range for the value Property
precision	number	No	Read Only	Accuracy granularity of the exposed value
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
n	string	No	Read Only	Friendly name of the resource
if	array: see schema	No	Read Only	

				The interface set supported by this resource
--	--	--	--	--

21645 **B.8.6 CRUDN behaviour**

21646 **Table 254 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/AltimeterResURI		get			observe

21647 **B.9 Atmospheric Pressure Sensor**

21648 **B.9.1 Introduction**

21649 This resource provides a measurement of Mean Sea Level Pressure experienced at the
 21650 measuring point expressed in millibars.
 21651 The value is float which describes the atmospheric pressure in hPa (hectoPascals).
 21652 Note that hPa and the also commonly used unit of millibars (mbar) are numerically equivalent.
 21653

21654 **B.9.2 Example URI**

21655 /AtmosphericPressureResURI

21656 **B.9.3 Resource Type**

21657 The resource type (rt) is defined as: ['oic.r.sensor.atmosphericpressure'].

21658 **B.9.4 Swagger2.0 Definition**

```

21659 {
21660   "swagger": "2.0",
21661   "info": {
21662     "title": "Atmospheric Pressure Sensor",
21663     "version": "v1.1.0-20160519",
21664     "license": {
21665       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
21666       "x-description": "Redistribution and use in source and binary forms, with or without
21667 modification, are permitted provided that the following conditions are met:\n      1.
21668 Redistributions of source code must retain the above copyright notice, this list of conditions and
21669 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
21670 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
21671 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
21672 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
21673 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
21674 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
21675 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
21676 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
21677 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
21678 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
21679 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
21680 OF SUCH DAMAGE.\n"
21681     }
21682   },
21683   "schemes": ["http"],
21684   "consumes": ["application/json"],
21685   "produces": ["application/json"],
21686   "paths": {
21687     "/AtmosphericPressureResURI": {
21688       "get": {
21689         "description": "This resource provides a measurement of Mean Sea Level Pressure experienced
21690 at the measuring point expressed in millibars.\nThe value is float which describes the atmospheric
21691 pressure in hPa (hectoPascals).\nNote that hPa and the also commonly used unit of millibars (mbar)
21692 are numerically equivalent.\n",
21693         "parameters": [
21694           { "$ref": "#/parameters/interface" }
21695         ],
21696         "responses": {

```

```

21697         "200": {
21698             "description" : "",
21699             "x-example":
21700                 {
21701                     "rt":          ["oic.r.sensor.atmosphericpressure"],
21702                     "id":         "unique_example_id",
21703                     "atmosphericPressure": 1000.4
21704                 }
21705             ,
21706             "schema": { "$ref": "#/definitions/atmosphericPressure" }
21707         }
21708     }
21709 }
21710 },
21711 },
21712 "parameters": {
21713     "interface" : {
21714         "in" : "query",
21715         "name" : "if",
21716         "type" : "string",
21717         "enum" : ["oic.if.s", "oic.if.baseline"]
21718     }
21719 },
21720 "definitions": {
21721     "atmosphericPressure" : {
21722         "properties": {
21723             "rt" :
21724                 {
21725                     "description": "Resource Type",
21726                     "items": {
21727                         "maxLength": 64,
21728                         "type": "string"
21729                     },
21730                     "minItems": 1,
21731                     "readOnly": true,
21732                     "type": "array"
21733                 },
21734
21735         "atmosphericPressure" :
21736             {
21737                 "description": "Current atmospheric pressure in hPa.",
21738                 "readOnly": true,
21739                 "type": "number"
21740             },
21741
21742         "value" :
21743             {
21744                 "anyOf": [
21745                     {
21746                         "type": "array"
21747                     },
21748                     {
21749                         "type": "string"
21750                     },
21751                     {
21752                         "type": "boolean"
21753                     },
21754                     {
21755                         "type": "integer"
21756                     },
21757                     {
21758                         "type": "number"
21759                     },
21760                     {
21761                         "type": "object"
21762                     }
21763                 ],
21764                 "description": "The value sensed or actuated by this Resource"
21765             },
21766
21767         "n" :

```

```

21768         {
21769         "description": "Friendly name of the resource",
21770         "maxLength": 64,
21771         "readOnly": true,
21772         "type": "string"
21773     },
21774
21775     "range" :
21776     {
21777         "description": "The valid range for the value Property",
21778         "items": {
21779             "anyOf": [
21780                 {
21781                     "type": "number"
21782                 },
21783                 {
21784                     "type": "integer"
21785                 }
21786             ]
21787         },
21788         "maxItems": 2,
21789         "minItems": 2,
21790         "readOnly": true,
21791         "type": "array"
21792     },
21793
21794     "precision" :
21795     {
21796         "description": "Accuracy granularity of the exposed value",
21797         "readOnly": true,
21798         "type": "number"
21799     },
21800
21801     "step" :
21802     {
21803         "anyOf": [
21804             {
21805                 "type": "integer"
21806             },
21807             {
21808                 "type": "number"
21809             }
21810         ],
21811         "description": "Step value across the defined range",
21812         "readOnly": true
21813     },
21814
21815     "id" :
21816     {
21817         "description": "Instance ID of this specific resource",
21818         "maxLength": 64,
21819         "readOnly": true,
21820         "type": "string"
21821     },
21822
21823     "if" :
21824     {
21825         "description": "The interface set supported by this resource",
21826         "items": {
21827             "enum": [
21828                 "oic.if.baseline",
21829                 "oic.if.ll",
21830                 "oic.if.b",
21831                 "oic.if.lb",
21832                 "oic.if.rw",
21833                 "oic.if.r",
21834                 "oic.if.a",
21835                 "oic.if.s"
21836             ],
21837             "type": "string"
21838         },

```

```

21839         "minItems": 1,
21840         "readOnly": true,
21841         "type": "array"
21842     }
21843 }
21844     }, "type" : "object"
21845     , "required": ["atmosphericPressure"]
21846 }
21847 }
21848 }
21849 }
21850

```

21851 **B.9.5 Property Definition**

21852 **Table 255 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema	No	Read Only	The interface set supported by this resource
n	string	No	Read Only	Friendly name of the resource
rt	array: see schema	No	Read Only	Resource Type
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
id	string	No	Read Only	Instance ID of this specific resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
atmosphericPressure	number	Yes	Read Only	Current atmospheric pressure in hPa.
range	array: see schema	No	Read Only	The valid range for the value Property
precision	number	No	Read Only	Accuracy granularity of the exposed value

21853 **B.9.6 CRUDN behaviour**

21854 **Table 256 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/AtmosphericPressureResURI		get			observe

21855 **B.10 Audio Controls**

21856 **B.10.1 Introduction**

21857 This resource defines basic audio control functions.

21858 The volume is an integer containing a percentage [0,100]. A volume of 0 (zero) means no sound
21859 produced. A volume of 100 means maximum sound production.

21860 The mute control is implemented as a boolean. A mute value of true means that the device is
21861 muted (no audio). A mute value of false means that the device is not muted (audio).
21862

21863 **B.10.2 Example URI**

21864 /AudioResURI

21865 **B.10.3 Resource Type**

21866 The resource type (rt) is defined as: ['oic.r.audio'].

21867 **B.10.4 Swagger2.0 Definition**

```
21868 {  
21869   "swagger": "2.0",  
21870   "info": {  
21871     "title": "Audio Controls",  
21872     "version": "v1.1.0-20160519",  
21873     "license": {  
21874       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
21875       "x-description": "Redistribution and use in source and binary forms, with or without  
21876 modification, are permitted provided that the following conditions are met:\n      1.  
21877 Redistributions of source code must retain the above copyright notice, this list of conditions and  
21878 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
21879 copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
21880 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open  
21881 Connectivity Foundation, INC. \\\nAS IS\\n AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT  
21882 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR  
21883 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity  
21884 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,  
21885 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS  
21886 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND  
21887 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR  
21888 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY  
21889 OF SUCH DAMAGE.\n\n    }  
21890   },  
21891   "schemes": ["http"],  
21892   "consumes": ["application/json"],  
21893   "produces": ["application/json"],  
21894   "paths": {  
21895     "/AudioResURI" : {  
21896       "get": {  
21897         "description": "This resource defines basic audio control functions.\n\nThe volume is an  
21898 integer containing a percentage [0,100].\n\nA volume of 0 (zero) means no sound produced.\n\nA volume  
21899 of 100 means maximum sound production.\n\nThe mute control is implemented as a boolean.\n\nA mute value  
21900 of true means that the device is muted (no audio).\n\nA mute value of false means that the device is  
21901 not muted (audio).\n\n",  
21902         "parameters": [  
21903           { "$ref": "#/parameters/interface" }  
21904         ],  
21905         "responses": {  
21906           "200": {  
21907             "description": "",  
21908             "x-example":  
21909               {  
21910                 "rt": ["oic.r.audio"],  
21911                 "id": "unique_example_id",  
21912                 "volume": 50,  
21913                 "mute": false  
21914               }  
21915             }  
21916           }  
21917         }  
21918       }  
21919     }  
21920   }  
21921 }
```



```

21917         "schema": { "$ref": "#/definitions/Audio" }
21918     }
21919 }
21920 },
21921 "post": {
21922     "description": "",
21923     "parameters": [
21924         { "$ref": "#/parameters/interface" },
21925         {
21926             "name": "body",
21927             "in": "body",
21928             "required": true,
21929             "schema": { "$ref": "#/definitions/Audio" },
21930             "x-example":
21931                 {
21932                     "id": "unique_example_id",
21933                     "volume": 75,
21934                     "mute": false
21935                 }
21936         }
21937     ],
21938     "responses": {
21939         "200": {
21940             "description": "",
21941             "x-example":
21942                 {
21943                     "id": "unique_example_id",
21944                     "volume": 75,
21945                     "mute": false
21946                 }
21947             ,
21948             "schema": { "$ref": "#/definitions/Audio" }
21949         }
21950     }
21951 }
21952 }
21953 },
21954 "parameters": {
21955     "interface": {
21956         "in": "query",
21957         "name": "if",
21958         "type": "string",
21959         "enum": ["oic.if.a", "oic.if.baseline"]
21960     }
21961 },
21962 "definitions": {
21963     "Audio": {
21964         "properties": {
21965             "rt":
21966                 {
21967                     "description": "Resource Type",
21968                     "items": {
21969                         "maxLength": 64,
21970                         "type": "string"
21971                     },
21972                     "minItems": 1,
21973                     "readOnly": true,
21974                     "type": "array"
21975                 },
21976             "mute":
21977                 {
21978                     "description": "Mute setting of an audio rendering device",
21979                     "type": "boolean"
21980                 },
21981             "precision":
21982                 {
21983                     "description": "Accuracy granularity of the exposed value",
21984                     "readOnly": true,
21985                     "type": "number"
21986                 }
21987         }

```

```

21988     },
21989
21990     "value" :
21991     {
21992         "anyOf": [
21993             {
21994                 "type": "array"
21995             },
21996             {
21997                 "type": "string"
21998             },
21999             {
22000                 "type": "boolean"
22001             },
22002             {
22003                 "type": "integer"
22004             },
22005             {
22006                 "type": "number"
22007             },
22008             {
22009                 "type": "object"
22010             }
22011         ],
22012         "description": "The value sensed or actuated by this Resource"
22013     },
22014
22015     "n" :
22016     {
22017         "description": "Friendly name of the resource",
22018         "maxLength": 64,
22019         "readOnly": true,
22020         "type": "string"
22021     },
22022
22023     "volume" :
22024     {
22025         "description": "Volume setting of an audio rendering device.",
22026         "maximum": 100,
22027         "minimum": 0,
22028         "type": "integer"
22029     },
22030
22031     "range" :
22032     {
22033         "description": "The valid range for the value Property",
22034         "items": {
22035             "anyOf": [
22036                 {
22037                     "type": "number"
22038                 },
22039                 {
22040                     "type": "integer"
22041                 }
22042             ]
22043         },
22044         "maxItems": 2,
22045         "minItems": 2,
22046         "readOnly": true,
22047         "type": "array"
22048     },
22049
22050     "step" :
22051     {
22052         "anyOf": [
22053             {
22054                 "type": "integer"
22055             },
22056             {
22057                 "type": "number"
22058             }

```

```

22059     ],
22060     "description": "Step value across the defined range",
22061     "readOnly": true
22062   },
22063
22064   "id" :
22065     {
22066     "description": "Instance ID of this specific resource",
22067     "maxLength": 64,
22068     "readOnly": true,
22069     "type": "string"
22070   },
22071
22072   "if" :
22073     {
22074     "description": "The interface set supported by this resource",
22075     "items": {
22076       "enum": [
22077         "oic.if.baseline",
22078         "oic.if.ll",
22079         "oic.if.b",
22080         "oic.if.lb",
22081         "oic.if.rw",
22082         "oic.if.r",
22083         "oic.if.a",
22084         "oic.if.s"
22085       ],
22086       "type": "string"
22087     },
22088     "minItems": 1,
22089     "readOnly": true,
22090     "type": "array"
22091   }
22092
22093   },
22094   "type" : "object"
22095   ,"required": ["volume", "mute"]
22096 }
22097 }
22098 }
22099

```

22100 **B.10.5 Property Definition**

22101 **Table 257 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
n	string	No	Read Only	Friendly name of the resource
range	array: see schema	No	Read Only	The valid range for the value Property
rt	array: see schema	No	Read Only	Resource Type
mute	boolean	Yes	Read Write	Mute setting of an audio rendering device
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource

step	multiple types: see schema	No	Read Only	Step value across the defined range
id	string	No	Read Only	Instance ID of this specific resource
if	array: see schema	No	Read Only	The interface set supported by this resource
volume	integer	Yes	Read Write	Volume setting of an audio rendering device.
precision	number	No	Read Only	Accuracy granularity of the exposed value

22102 **B.10.6 CRUDN behaviour**

22103 **Table 258 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/AudioResURI		get	post		observe

22104 **B.11 Auto Focus**

22105 **B.11.1 Introduction**

22106 This resource describes an auto focus on/off feature.
 22107 The value is a boolean. An AutoFocus value of 'true' means that the switch is on. An AutoFocus
 22108 value of 'false' means that the switch is off.
 22109 Note that when Pan Tilt Zoom (see 'Pan Tilt Zoom' Resource definition) is used the autofocus
 22110 works only in the selected area.
 22111

22112 **B.11.2 Example URI**

22113 /AutoFocusResURI

22114 **B.11.3 Resource Type**

22115 The resource type (rt) is defined as: ['oic.r.autofocus'].

22116 **B.11.4 Swagger2.0 Definition**

```

22117 {
22118   "swagger": "2.0",
22119   "info": {
22120     "title": "Auto Focus",
22121     "version": "v1.1.0-20160519",
22122     "license": {
22123       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
22124       "x-description": "Redistribution and use in source and binary forms, with or without
22125 modification, are permitted provided that the following conditions are met:\n      1.
22126 Redistributions of source code must retain the above copyright notice, this list of conditions and
22127 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
22128 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
22129 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
22130 Connectivity Foundation, INC. \ "AS IS\ " AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT

```

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 22132 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n IN NO EVENT SHALL THE Open Connectivity
 22133 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
 22134 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
 22135 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n HOWEVER CAUSED AND
 22136 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
 22137 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
 22138 OF SUCH DAMAGE.\n"

```

22139   }
22140 },
22141 "schemes": ["http"],
22142 "consumes": ["application/json"],
22143 "produces": ["application/json"],
22144 "paths": {
22145   "/AutoFocusResURI" : {
22146     "get": {
22147       "description": "This resource describes an auto focus on/off feature.\nThe value is a
22148 boolean.\nAn AutoFocus value of 'true' means that the switch is on.\nAn AutoFocus value of 'false'
22149 means that the switch is off.\nNote that when Pan Tilt Zoom (see 'Pan Tilt Zoom' Resource
22150 definition) is used the autofocus works only in the selected area.\n",
22151       "parameters": [
22152         { "$ref": "#/parameters/interface" }
22153       ],
22154       "responses": {
22155         "200": {
22156           "description": "",
22157           "x-example":
22158             {
22159               "rt": ["oic.r.autofocus"],
22160               "id": "unique_example_id",
22161               "autoFocus": false
22162             }
22163           ,
22164           "schema": { "$ref": "#/definitions/AutoFocus" }
22165         }
22166       }
22167     },
22168     "post": {
22169       "description": "",
22170       "parameters": [
22171         { "$ref": "#/parameters/interface" },
22172         {
22173           "name": "body",
22174           "in": "body",
22175           "required": true,
22176           "schema": { "$ref": "#/definitions/AutoFocus" },
22177           "x-example":
22178             {
22179               "id": "unique_example_id",
22180               "autoFocus": true
22181             }
22182         }
22183       ],
22184       "responses": {
22185         "200": {
22186           "description": "",
22187           "x-example":
22188             {
22189               "id": "unique_example_id",
22190               "autoFocus": true
22191             }
22192           ,
22193           "schema": { "$ref": "#/definitions/AutoFocus" }
22194         }
22195       }
22196     }
22197   }
22198 },
22199 "parameters": {
22200   "interface" : {
22201     "in" : "query",
  
```

```

22202     "name" : "if",
22203     "type" : "string",
22204     "enum" : ["oic.if.a", "oic.if.baseline"]
22205   }
22206 },
22207 "definitions": {
22208   "AutoFocus" : {
22209     "properties": {
22210       "rt" :
22211         {
22212           "description": "Resource Type",
22213           "items": {
22214             "maxLength": 64,
22215             "type": "string"
22216           },
22217           "minItems": 1,
22218           "readOnly": true,
22219           "type": "array"
22220         },
22221     "precision" :
22222       {
22223         "description": "Accuracy granularity of the exposed value",
22224         "readOnly": true,
22225         "type": "number"
22226       },
22227     },
22228   "value" :
22229     {
22230       "anyOf": [
22231         {
22232           "type": "array"
22233         },
22234         {
22235           "type": "string"
22236         },
22237         {
22238           "type": "boolean"
22239         },
22240         {
22241           "type": "integer"
22242         },
22243         {
22244           "type": "number"
22245         },
22246         {
22247           "type": "object"
22248         }
22249       ],
22250     "description": "The value sensed or actuated by this Resource"
22251   },
22252 },
22253 "n" :
22254   {
22255     "description": "Friendly name of the resource",
22256     "maxLength": 64,
22257     "readOnly": true,
22258     "type": "string"
22259   },
22260 },
22261 "range" :
22262   {
22263     "description": "The valid range for the value Property",
22264     "items": {
22265       "anyOf": [
22266         {
22267           "type": "number"
22268         },
22269         {
22270           "type": "integer"
22271         }
22272       ]

```

```

22273     ]
22274     },
22275     "maxItems": 2,
22276     "minItems": 2,
22277     "readOnly": true,
22278     "type": "array"
22279   },
22280
22281   "step" :
22282     {
22283     "anyOf": [
22284       {
22285         "type": "integer"
22286       },
22287       {
22288         "type": "number"
22289       }
22290     ],
22291     "description": "Step value across the defined range",
22292     "readOnly": true
22293   },
22294
22295   "autoFocus" :
22296     {
22297     "description": "Status of the Auto Focus",
22298     "type": "boolean"
22299   },
22300
22301   "id" :
22302     {
22303     "description": "Instance ID of this specific resource",
22304     "maxLength": 64,
22305     "readOnly": true,
22306     "type": "string"
22307   },
22308
22309   "if" :
22310     {
22311     "description": "The interface set supported by this resource",
22312     "items": {
22313       "enum": [
22314         "oic.if.baseline",
22315         "oic.if.ll",
22316         "oic.if.b",
22317         "oic.if.lb",
22318         "oic.if.rw",
22319         "oic.if.r",
22320         "oic.if.a",
22321         "oic.if.s"
22322       ],
22323       "type": "string"
22324     },
22325     "minItems": 1,
22326     "readOnly": true,
22327     "type": "array"
22328   }
22329 }
22330 }
22331 , "type" : "object"
22332 , "required": ["autoFocus"]
22333 }
22334 }
22335 }
22336

```

22337 B.11.5 Property Definition

22338 **Table 259 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
id	string	No	Read Only	

				Instance ID of this specific resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
rt	array: see schema	No	Read Only	Resource Type
if	array: see schema	No	Read Only	The interface set supported by this resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
range	array: see schema	No	Read Only	The valid range for the value Property
autoFocus	boolean	Yes	Read Write	Status of the Auto Focus
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
n	string	No	Read Only	Friendly name of the resource

22339 **B.11.6 CRUDN behaviour**

22340 **Table 260 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/AutoFocusResURI		get	post		observe

22341 **B.12 Automatic Document Feeder**

22342 **B.12.1 Introduction**

22343 This resource describes the state of an automatic document feeder, typically used with a scanner.

22344 The states are read only.

22345 The adfStates is an array of the possible operational states.

22346 adfProcessing is the OK state, other states are errors or require 'user attention'.

22347 The currentAdfState is the current value of the ADF state on the device.

22348

22349 **B.12.2 Example URI**

22350 /AutomaticDocumentFeederResURI

22351 **B.12.3 Resource Type**

22352 The resource type (rt) is defined as: ['oic.r.automaticdocumentfeeder'].

22354 **B.12.4 Swagger2.0 Definition**

```
22355 {
22356   "swagger": "2.0",
22357   "info": {
22358     "title": "Automatic Document Feeder",
22359     "version": "v1.1.0-20160519",
22360     "license": {
22361       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
22362       "x-description": "Redistribution and use in source and binary forms, with or without
22363 modification, are permitted provided that the following conditions are met:\n      1.
22364 Redistributions of source code must retain the above copyright notice, this list of conditions and
22365 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
22366 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
22367 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
22368 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
22369 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
22370 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
22371 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
22372 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
22373 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND
22374 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
22375 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
22376 OF SUCH DAMAGE.\n"
22377     }
22378   },
22379   "schemes": ["http"],
22380   "consumes": ["application/json"],
22381   "produces": ["application/json"],
22382   "paths": {
22383     "/AutomaticDocumentFeederResURI" : {
22384       "get": {
22385         "description": "This resource describes the state of an automatic document feeder,
22386 typically used with a scanner.\nThe states are read only.\nThe adfStates is an array of the
22387 possible operational states.\nadfProcessing is the OK state, other states are errors or require
22388 'user attention'.\nThe currentAdfState is the current value of the ADF state on the
22389 device.\nRetrieves the current automatic document feeder state.\n",
22390         "parameters": [
22391           { "$ref": "#/parameters/interface" }
22392         ],
22393         "responses": {
22394           "200": {
22395             "description": "",
22396             "x-example":
22397             {
22398               "rt": ["oic.r.automaticdocumentfeeder"],
22399               "id": ["unique_example_id"],
22400               "adfStates": ["adfProcessing", "adfEmpty", "adfJam", "adfLoaded",
22401 "adfMispick", "adfHatchOpen", "adfDuplexPageTooShort", "adfDuplexPageTooLong",
22402 "adfMultipickDetected", "adfInputTrayFailed", "adfInputTrayOverloaded"],
22403               "currentAdfState": "adfProcessing"
22404             }
22405           },
22406           "schema": { "$ref": "#/definitions/AutomaticDocumentFeeder" }
22407         }
22408       }
22409     }
22410   },
22411 },
22412 "parameters": {
22413   "interface" : {
22414     "in" : "query",
22415     "name" : "if",
22416     "type" : "string",
22417     "enum" : ["oic.if.s", "oic.if.baseline"]
22418   }
22419 },
22420 "definitions": {
22421   "AutomaticDocumentFeeder" : {
22422     "properties": {
22423       "adfStates" :
```

```

22424     {
22425     "description": "array of the possible adf states.",
22426     "items": {
22427         "type": "string"
22428     },
22429     "readOnly": true,
22430     "type": "array"
22431 },
22432
22433 "rt" :
22434     {
22435     "description": "Resource Type",
22436     "items": {
22437         "maxLength": 64,
22438         "type": "string"
22439     },
22440     "minItems": 1,
22441     "readOnly": true,
22442     "type": "array"
22443 },
22444
22445 "precision" :
22446     {
22447     "description": "Accuracy granularity of the exposed value",
22448     "readOnly": true,
22449     "type": "number"
22450 },
22451
22452 "value" :
22453     {
22454     "anyOf": [
22455         {
22456             "type": "array"
22457         },
22458         {
22459             "type": "string"
22460         },
22461         {
22462             "type": "boolean"
22463         },
22464         {
22465             "type": "integer"
22466         },
22467         {
22468             "type": "number"
22469         },
22470         {
22471             "type": "object"
22472         }
22473     ],
22474     "description": "The value sensed or actuated by this Resource"
22475 },
22476
22477 "n" :
22478     {
22479     "description": "Friendly name of the resource",
22480     "maxLength": 64,
22481     "readOnly": true,
22482     "type": "string"
22483 },
22484
22485 "range" :
22486     {
22487     "description": "The valid range for the value Property",
22488     "items": {
22489         "anyOf": [
22490             {
22491                 "type": "number"
22492             },
22493             {
22494                 "type": "integer"

```

```

22495     }
22496   ]
22497 },
22498   "maxItems": 2,
22499   "minItems": 2,
22500   "readOnly": true,
22501   "type": "array"
22502 },
22503
22504 "step" :
22505   {
22506     "anyOf": [
22507       {
22508         "type": "integer"
22509       },
22510       {
22511         "type": "number"
22512       }
22513     ],
22514     "description": "Step value across the defined range",
22515     "readOnly": true
22516   },
22517
22518 "currentAdfState" :
22519   {
22520     "description": "Current adf state.",
22521     "readOnly": true,
22522     "type": "string"
22523   },
22524
22525 "id" :
22526   {
22527     "description": "Instance ID of this specific resource",
22528     "maxLength": 64,
22529     "readOnly": true,
22530     "type": "string"
22531   },
22532
22533 "if" :
22534   {
22535     "description": "The interface set supported by this resource",
22536     "items": {
22537       "enum": [
22538         "oic.if.baseline",
22539         "oic.if.ll",
22540         "oic.if.b",
22541         "oic.if.lb",
22542         "oic.if.rw",
22543         "oic.if.r",
22544         "oic.if.a",
22545         "oic.if.s"
22546       ],
22547       "type": "string"
22548     },
22549     "minItems": 1,
22550     "readOnly": true,
22551     "type": "array"
22552   }
22553 }
22554 }
22555 , "type" : "object"
22556 , "required": ["adfStates", "currentAdfState"]
22557 }
22558 }
22559 }
22560

```

22561

B.12.5 Property Definition

22562

Table 261 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
range	array: see schema	No	Read Only	The valid range for the value Property
step	multiple types: see schema	No	Read Only	Step value across the defined range
rt	array: see schema	No	Read Only	Resource Type
precision	number	No	Read Only	Accuracy granularity of the exposed value
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
if	array: see schema	No	Read Only	The interface set supported by this resource
id	string	No	Read Only	Instance ID of this specific resource
currentAdfState	string	Yes	Read Only	Current adf state.
adfStates	array: see schema	Yes	Read Only	array of the possible adf states.
n	string	No	Read Only	Friendly name of the resource

22563

B.12.6 CRUDN behaviour

22564

Table 262 The CRUDN operations of the resource

Resource	Create	Read	Update	Delete	Notify
/AutomaticDocumentFeederResURI		get			observe

22565

B.13 Base Resource Schema

22566

B.13.1 Introduction

22567 This is the base resource schema on which all other resources defined in this specification build.

22568 value is the sensed or actuated value of the Resource.

22569 precision is the accuracy granularity of the value.

22570 range is the range over which value is valid.

22571 step is the step function over the defined range if applicable (e.g. always step by '2').

22572

22573 **B.13.2 Example URI**

22574 /BaseResourceSchemaResURI

22575 **B.13.3 Resource Type**

22576 The resource type (rt) is defined as: ['oic.baseresource'].

22577 **B.13.4 Swagger2.0 Definition**

```
22578 {
22579   "swagger": "2.0",
22580   "info": {
22581     "title": "Base Resource Schema",
22582     "version": "v1.1.0-20160519",
22583     "license": {
22584       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
22585       "x-description": "Redistribution and use in source and binary forms, with or without
22586 modification, are permitted provided that the following conditions are met:\n      1.
22587 Redistributions of source code must retain the above copyright notice, this list of conditions and
22588 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
22589 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
22590 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
22591 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
22592 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
22593 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
22594 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
22595 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
22596 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
22597 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
22598 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
22599 OF SUCH DAMAGE.\n"
22600     }
22601   },
22602   "schemes": ["http"],
22603   "consumes": ["application/json"],
22604   "produces": ["application/json"],
22605   "paths": {
22606     "/BaseResourceSchemaResURI" : {
22607       "get": {
22608         "description": "This is the base resource schema on which all other resources defined in
22609 this specification build.\nvalue is the sensed or actuated value of the Resource.\nprecision is the
22610 accuracy granularity of the value.\nrange is the range over which value is valid.\nstep is the step
22611 function over the defined range if applicable (e.g. always step by '2').\nretrieves the state of
22612 the resource.",
22613         "parameters": [
22614           {"$ref": "#/parameters/interface-baseline"}
22615         ],
22616         "responses": {
22617           "200": {
22618             "description": "",
22619             "x-example":
22620               {
22621                 "rt" : ["oic.baseresource"],
22622                 "if" : ["oic.if.baseline"],
22623                 "id" : "unique_example_id",
22624                 "value" : 10.5,
22625                 "precision" : 0.5,
22626                 "range" : [0.0,100.0]
22627               }
22628           },
22629           "schema": { "$ref": "#/definitions/base" }
22630         }
22631       }
22632     },
22633     "post": {
22634       "description": "sets the read-write resource properties",
22635       "parameters": [
22636         {"$ref": "#/parameters/interface-a"}],

```

```

22637     {
22638         "name": "body",
22639         "in": "body",
22640         "required": true,
22641         "schema": { "$ref": "#/definitions/base" },
22642         "x-example":
22643             {
22644                 "value": 20.5
22645             }
22646     },
22647 ],
22648 "responses": {
22649     "200": {
22650         "description": "",
22651         "x-example":
22652             {
22653                 "value": 20.5
22654             }
22655     },
22656     "schema": { "$ref": "#/definitions/base" }
22657 },
22658 }
22659 }
22660 }
22661 },
22662 "parameters": {
22663     "interface-a" : {
22664         "in" : "query",
22665         "name" : "if",
22666         "type" : "string",
22667         "enum" : ["oic.if.a"]
22668     },
22669     "interface-baseline" : {
22670         "in" : "query",
22671         "name" : "if",
22672         "type" : "string",
22673         "enum" : ["oic.if.baseline"]
22674     }
22675 },
22676 "definitions": {
22677     "base" : {
22678         "properties": {
22679             "step" :
22680                 {
22681                     "anyOf": [
22682                         {
22683                             "type": "integer"
22684                         },
22685                         {
22686                             "type": "number"
22687                         }
22688                     ],
22689                     "description": "Step value across the defined range",
22690                     "readOnly": true
22691                 },
22692     },
22693     "range" :
22694         {
22695             "description": "The valid range for the value Property",
22696             "items": {
22697                 "anyOf": [
22698                     {
22699                         "type": "number"
22700                     },
22701                     {
22702                         "type": "integer"
22703                     }
22704                 ]
22705             },
22706             "maxItems": 2,
22707             "minItems": 2,

```

```

22708         "readOnly": true,
22709         "type": "array"
22710     },
22711
22712     "value" :
22713     {
22714         "anyOf": [
22715             {
22716                 "type": "array"
22717             },
22718             {
22719                 "type": "string"
22720             },
22721             {
22722                 "type": "boolean"
22723             },
22724             {
22725                 "type": "integer"
22726             },
22727             {
22728                 "type": "number"
22729             },
22730             {
22731                 "type": "object"
22732             }
22733         ],
22734         "description": "The value sensed or actuated by this Resource"
22735     },
22736
22737     "precision" :
22738     {
22739         "description": "Accuracy granularity of the exposed value",
22740         "readOnly": true,
22741         "type": "number"
22742     }
22743 }
22744 }, "type" : "object"
22745 }
22746 }, "oic.r.baseresource" :
22747 {
22748     "allof": [
22749         {
22750             "$ref": "oic.core.json"
22751         },
22752         {
22753             "properties": {
22754                 "precision": {
22755                     "description": "Accuracy granularity of the exposed value",
22756                     "readOnly": true,
22757                     "type": "number"
22758                 },
22759                 "range": {
22760                     "description": "The valid range for the value Property",
22761                     "items": {
22762                         "anyOf": [
22763                             {
22764                                 "type": "number"
22765                             },
22766                             {
22767                                 "type": "integer"
22768                             }
22769                         ]
22770                     },
22771                     "maxItems": 2,
22772                     "minItems": 2,
22773                     "readOnly": true,
22774                     "type": "array"
22775                 },
22776                 "step": {
22777                     "anyOf": [

```

```

22779         {
22780             "type": "integer"
22781         },
22782         {
22783             "type": "number"
22784         }
22785     ],
22786     "description": "Step value across the defined range",
22787     "readOnly": true
22788 },
22789 "value": {
22790     "anyOf": [
22791         {
22792             "type": "array"
22793         },
22794         {
22795             "type": "string"
22796         },
22797         {
22798             "type": "boolean"
22799         },
22800         {
22801             "type": "integer"
22802         },
22803         {
22804             "type": "number"
22805         },
22806         {
22807             "type": "object"
22808         }
22809     ],
22810     "description": "The value sensed or actuated by this Resource"
22811 }
22812 },
22813 "type": "object"
22814 }
22815 ]
22816 }
22817 }
22818 }
22819 }
22820

```

22821 B.13.5 Property Definition

22822 **Table 263 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
precision	number		Read Only	Accuracy granularity of the exposed value
value	multiple types: see schema		Read Write	The value sensed or actuated by this Resource
range	array: see schema		Read Only	The valid range for the value Property
step	multiple types: see schema		Read Only	Step value across the defined range
precision	number		Read Only	

				Accuracy granularity of the exposed value
value	multiple types: see schema		Read Write	The value sensed or actuated by this Resource
step	multiple types: see schema		Read Only	Step value across the defined range
range	array: see schema		Read Only	The valid range for the value Property

22823 **B.13.6 CRUDN behaviour**

22824 **Table 264 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/BaseResourceSchemaResURI		get	post		observe

22825 **B.14 Battery**

22826 **B.14.1 Introduction**

22827 This resource describes the attributes associated with a battery. The charge is an integer
 22828 showing the current battery charge level as a percentage in the range 0 (fully discharged) to 100
 22829 (fully charged). The capacity represents the total capacity of battery in Amp Hours (Ah). The
 22830 charging status and discharging status are represented by boolean values set to "True"
 22831 indicating enabled and "False" indicating disabled. Low battery status is represented by a
 22832 boolean value set to "True" indicating low charge level and "False" indicating otherwise, based
 22833 upon the battery threshold represented as a percentage.
 22834

22835 **B.14.2 Example URI**

22836 /BatteryResURI

22837 **B.14.3 Resource Type**

22838 The resource type (rt) is defined as: ['oic.r.energy.battery'].

22839 **B.14.4 Swagger2.0 Definition**

```

22840 {
22841   "swagger": "2.0",
22842   "info": {
22843     "title": "Battery",
22844     "version": "v1.2.0-20170814",
22845     "license": {
22846       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
22847       "x-description": "Redistribution and use in source and binary forms, with or without
22848 modification, are permitted provided that the following conditions are met:\n      1.
22849 Redistributions of source code must retain the above copyright notice, this list of conditions and
22850 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
22851 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
22852 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
22853 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
22854 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
22855 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
22856 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
22857 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
  
```

```

22858 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n          HOWEVER CAUSED AND
22859 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
22860 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
22861 OF SUCH DAMAGE.\n"
22862 }
22863 },
22864 "schemes": ["http"],
22865 "consumes": ["application/json"],
22866 "produces": ["application/json"],
22867 "paths": {
22868   "/BatteryResURI" : {
22869     "get": {
22870       "description": "This resource describes the attributes associated with a battery. The
22871 charge is an integer showing the current battery charge level as a percentage in the range 0 (fully
22872 discharged) to 100 (fully charged). The capacity represents the total capacity of battery in Amp
22873 Hours (Ah). The charging status and discharging status are represented by boolean values set to
22874 \"True\" indicating enabled and \"False\" indicating disabled. Low battery status is represented by
22875 a boolean value set to \"True\" indicating low charge level and \"False\" indicating otherwise,
22876 based upon the battery threshold represented as a percentage.\nRetrieves the state of the
22877 battery.\n",
22878 "parameters": [
22879   {"$ref": "#/parameters/interface"}
22880 ],
22881 "responses": {
22882   "200": {
22883     "description": "",
22884     "x-example":
22885       {
22886         "rt": ["oic.r.energy.battery"],
22887         "id": "unique_example_id",
22888         "charge": 50,
22889         "capacity": 3000,
22890         "charging": true,
22891         "discharging": false,
22892         "lowbattery": false,
22893         "batterythreshold": 20
22894       }
22895     ,
22896     "schema": { "$ref": "#/definitions/Battery" }
22897   }
22898 },
22899 },
22900 "post": {
22901   "description": "Sets current battery values\n",
22902   "parameters": [
22903     {"$ref": "#/parameters/interface"},
22904     {
22905       "name": "body",
22906       "in": "body",
22907       "required": true,
22908       "schema": { "$ref": "#/definitions/BatteryUpdate" },
22909       "x-example":
22910         {
22911           "id": "unique_example_id",
22912           "batterythreshold": 20
22913         }
22914     }
22915   ],
22916   "responses": {
22917     "200": {
22918       "description": "",
22919       "x-example":
22920         {
22921           "id": "unique_example_id",
22922           "batterythreshold": 20
22923         }
22924     ,
22925     "schema": { "$ref": "#/definitions/BatteryUpdate" }
22926   }
22927 }
22928 }

```

```

22929     }
22930   },
22931   "parameters": {
22932     "interface" : {
22933       "in" : "query",
22934       "name" : "if",
22935       "type" : "string",
22936       "enum" : ["oic.if.rw", "oic.if.baseline"]
22937     }
22938   },
22939   "definitions": {
22940     "Battery" : {
22941       "properties": {
22942         "rt" :
22943           {
22944             "description": "Resource Type",
22945             "items": {
22946               "maxLength": 64,
22947               "type": "string"
22948             },
22949             "minItems": 1,
22950             "readOnly": true,
22951             "type": "array"
22952           },
22953         "discharging" :
22954           {
22955             "description": "The status of discharging.",
22956             "readOnly": true,
22957             "type": "boolean"
22958           },
22959         "lowbattery" :
22960           {
22961             "description": "The status of the low battery warning based upon the defined threshold.",
22962             "readOnly": true,
22963             "type": "boolean"
22964           },
22965         "capacity" :
22966           {
22967             "description": "The total capacity in Amp-hours (Ah).",
22968             "readOnly": true,
22969             "type": "number"
22970           },
22971         "precision" :
22972           {
22973             "description": "Accuracy granularity of the exposed value",
22974             "readOnly": true,
22975             "type": "number"
22976           },
22977         "value" :
22978           {
22979             "anyOf": [
22980               {
22981                 "type": "array"
22982               },
22983               {
22984                 "type": "string"
22985               },
22986               {
22987                 "type": "boolean"
22988               },
22989               {
22990                 "type": "integer"
22991               },
22992               {
22993                 "type": "number"
22994               }
22995             ]
22996           }
22997         }
22998     }
22999   }

```

```

23000         {
23001             "type": "object"
23002         }
23003     ],
23004     "description": "The value sensed or actuated by this Resource"
23005 },
23006
23007     "id" :
23008         {
23009             "description": "Instance ID of this specific resource",
23010             "maxLength": 64,
23011             "readOnly": true,
23012             "type": "string"
23013         },
23014
23015     "batterythreshold" :
23016         {
23017             "description": "The threshold percentage for the low battery warning.",
23018             "maximum": 100,
23019             "minimum": 0,
23020             "type": "integer"
23021         },
23022
23023     "charge" :
23024         {
23025             "description": "The current charge percentage.",
23026             "maximum": 100,
23027             "minimum": 0,
23028             "readOnly": true,
23029             "type": "integer"
23030         },
23031
23032     "step" :
23033         {
23034             "anyOf": [
23035                 {
23036                     "type": "integer"
23037                 },
23038                 {
23039                     "type": "number"
23040                 }
23041             ],
23042             "description": "Step value across the defined range",
23043             "readOnly": true
23044         },
23045
23046     "range" :
23047         {
23048             "description": "The valid range for the value Property",
23049             "items": {
23050                 "anyOf": [
23051                     {
23052                         "type": "number"
23053                     },
23054                     {
23055                         "type": "integer"
23056                     }
23057                 ]
23058             },
23059             "maxItems": 2,
23060             "minItems": 2,
23061             "readOnly": true,
23062             "type": "array"
23063         },
23064
23065     "n" :
23066         {
23067             "description": "Friendly name of the resource",
23068             "maxLength": 64,
23069             "readOnly": true,
23070             "type": "string"

```

```

23071     },
23072
23073     "charging" :
23074     {
23075         "description": "The status of charging.",
23076         "readOnly": true,
23077         "type": "boolean"
23078     },
23079
23080     "if" :
23081     {
23082         "description": "The interface set supported by this resource",
23083         "items": {
23084             "enum": [
23085                 "oic.if.baseline",
23086                 "oic.if.ll",
23087                 "oic.if.b",
23088                 "oic.if.lb",
23089                 "oic.if.rw",
23090                 "oic.if.r",
23091                 "oic.if.a",
23092                 "oic.if.s"
23093             ],
23094             "type": "string"
23095         },
23096         "minItems": 1,
23097         "readOnly": true,
23098         "type": "array"
23099     }
23100
23101     },
23102     "type" : "object"
23103 , "required": ["charge"]
23104 }
23105
23106 "BatteryUpdate" : {
23107     "properties": {
23108         "rt" :
23109         {
23110             "description": "Resource Type",
23111             "items": {
23112                 "maxLength": 64,
23113                 "type": "string"
23114             },
23115             "minItems": 1,
23116             "readOnly": true,
23117             "type": "array"
23118         },
23119
23120         "precision" :
23121         {
23122             "description": "Accuracy granularity of the exposed value",
23123             "readOnly": true,
23124             "type": "number"
23125         },
23126
23127         "value" :
23128         {
23129             "anyOf": [
23130                 {
23131                     "type": "array"
23132                 },
23133                 {
23134                     "type": "string"
23135                 },
23136                 {
23137                     "type": "boolean"
23138                 },
23139                 {
23140                     "type": "integer"
23141                 }

```

```

23142         {
23143             "type": "number"
23144         },
23145         {
23146             "type": "object"
23147         }
23148     ],
23149     "description": "The value sensed or actuated by this Resource"
23150 },
23151 "n" :
23152     {
23153         "description": "Friendly name of the resource",
23154         "maxLength": 64,
23155         "readOnly": true,
23156         "type": "string"
23157     },
23158 "batterythreshold" :
23159     {
23160         "description": "The threshold percentage for the low battery warning.",
23161         "maximum": 100,
23162         "minimum": 0,
23163         "type": "integer"
23164     },
23165 "range" :
23166     {
23167         "description": "The valid range for the value Property",
23168         "items": {
23169             "anyOf": [
23170                 {
23171                     "type": "number"
23172                 },
23173                 {
23174                     "type": "integer"
23175                 }
23176             ]
23177         },
23178         "maxItems": 2,
23179         "minItems": 2,
23180         "readOnly": true,
23181         "type": "array"
23182     },
23183 "step" :
23184     {
23185         "anyOf": [
23186             {
23187                 "type": "integer"
23188             },
23189             {
23190                 "type": "number"
23191             }
23192         ],
23193         "description": "Step value across the defined range",
23194         "readOnly": true
23195     },
23196 "id" :
23197     {
23198         "description": "Instance ID of this specific resource",
23199         "maxLength": 64,
23200         "readOnly": true,
23201         "type": "string"
23202     },
23203 "if" :
23204     {
23205         "description": "The interface set supported by this resource",
23206         "items": {

```

```

23213         "enum": [
23214             "oic.if.baseline",
23215             "oic.if.ll",
23216             "oic.if.b",
23217             "oic.if.lb",
23218             "oic.if.rw",
23219             "oic.if.r",
23220             "oic.if.a",
23221             "oic.if.s"
23222         ],
23223         "type": "string"
23224     },
23225     "minItems": 1,
23226     "readOnly": true,
23227     "type": "array"
23228 }
23229
23230 }
23231 , "type" : "object"
23232 , "required": ["batterythreshold"]
23233 }
23234 }
23235 }
23236

```

23237 B.14.5 Property Definition

23238 **Table 265 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
range	array: see schema	No	Read Only	The valid range for the value Property
step	multiple types: see schema	No	Read Only	Step value across the defined range
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
batterythreshold	integer	No	Read Write	The threshold percentage for the low battery warning.
id	string	No	Read Only	Instance ID of this specific resource
lowbattery	boolean	No	Read Only	The status of the low battery warning based upon the defined threshold.
charging	boolean	No	Read Only	

				The status of charging.
n	string	No	Read Only	Friendly name of the resource
capacity	number	No	Read Only	The total capacity in Amp-hours (Ah).
charge	integer	Yes	Read Only	The current charge percentage.
precision	number	No	Read Only	Accuracy granularity of the exposed value
if	array: schema see	No	Read Only	The interface set supported by this resource
discharging	boolean	No	Read Only	The status of discharging.
rt	array: schema see	No	Read Only	Resource Type
range	array: schema see	No	Read Only	The valid range for the value Property
step	multiple types: see schema	No	Read Only	Step value across the defined range
n	string	No	Read Only	Friendly name of the resource
if	array: schema see	No	Read Only	The interface set supported by this resource
id	string	No	Read Only	Instance ID of this specific resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
batterythreshold	integer	Yes	Read Write	

				The threshold percentage for the low battery warning.
--	--	--	--	---

23239 **B.14.6 CRUDN behaviour**

23240 **Table 266 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/BatteryResURI		get	post		observe

23241 **B.15 Battery Material**

23242 **B.15.1 Introduction**

23243 This resource describes the battery material represented as an enumerated set of strings.
23244

23245 **B.15.2 Example URI**

23246 /BatteryMaterialResURI

23247 **B.15.3 Resource Type**

23248 The resource type (rt) is defined as: ['oic.r.batterymaterial'].

23249 **B.15.4 Swagger2.0 Definition**

```

23250 {
23251   "swagger": "2.0",
23252   "info": {
23253     "title": "Battery Material",
23254     "version": "v1.1.0-20170815",
23255     "license": {
23256       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
23257       "x-description": "Redistribution and use in source and binary forms, with or without
23258 modification, are permitted provided that the following conditions are met:\n      1.
23259 Redistributions of source code must retain the above copyright notice, this list of conditions and
23260 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
23261 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
23262 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
23263 Connectivity Foundation, INC. \ "AS IS\ " AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
23264 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
23265 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
23266 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
23267 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
23268 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
23269 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
23270 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
23271 OF SUCH DAMAGE.\n"
23272     }
23273   },
23274   "schemes": ["http"],
23275   "consumes": ["application/json"],
23276   "produces": ["application/json"],
23277   "paths": {
23278     "/BatteryMaterialResURI" : {
23279       "get": {
23280         "description": "This resource describes the battery material represented as an enumerated
23281 set of strings.\nRetrieves the battery material.\n",
23282         "parameters": [
23283           {"$ref": "#/parameters/interface"}
23284         ],
23285         "responses": {
23286           "200": {
23287             "description": "",
23288             "x-example":
23289             {
23290               "rt": ["oic.r.batterymaterial"],

```

```

23291         "id": "unique_example_id",
23292         "material": "Alkaline"
23293     }
23294     ,
23295     "schema": { "$ref": "#/definitions/BatteryMaterial" }
23296 }
23297 }
23298 }
23299 }
23300 },
23301 "parameters": {
23302     "interface" : {
23303         "in" : "query",
23304         "name" : "if",
23305         "type" : "string",
23306         "enum" : ["oic.if.s", "oic.if.baseline"]
23307     }
23308 },
23309 "definitions": {
23310     "BatteryMaterial" : {
23311         "properties": {
23312             "rt" :
23313                 {
23314                     "description": "Resource Type",
23315                     "items": {
23316                         "maxLength": 64,
23317                         "type": "string"
23318                     },
23319                     "minItems": 1,
23320                     "readOnly": true,
23321                     "type": "array"
23322                 },
23323         "material" :
23324             {
23325                 "description": "Battery construction material (type).",
23326                 "enum": [
23327                     "Alkaline",
23328                     "Aluminium Air",
23329                     "Aluminium Ion",
23330                     "Atomic Betavoltaics",
23331                     "Atomic Optoelectric Nuclear",
23332                     "Atomic Nuclear",
23333                     "Bunsen Cell",
23334                     "Chromic Acid Cell",
23335                     "Poggendorff Cell",
23336                     "Clark Cell",
23337                     "Daniell Cell",
23338                     "Dry Cell",
23339                     "Earth",
23340                     "Flow",
23341                     "Flow Vanadium Redox",
23342                     "Flow Zinc Bromine",
23343                     "Flow Zinc Cerium",
23344                     "Frog",
23345                     "Fuel",
23346                     "Galvanic Cell",
23347                     "Glass",
23348                     "Grove Cell",
23349                     "Lead Acid",
23350                     "Lead Acid Deep Cycle",
23351                     "Lead Acid VRLA",
23352                     "Lead Acid AGM",
23353                     "Lead Acid Gel",
23354                     "Leclanche Cell",
23355                     "Lemon Potato",
23356                     "Lithium",
23357                     "Lithium Air",
23358                     "Lithium Ion",
23359                     "Lithium Ion Cobalt Oxide (ICR)",
23360                     "Lithium Ion Manganese Oxide (IMR)",
23361

```

```

23362         "Lithium Ion Polymer",
23363         "Lithium Iron Phosphate",
23364         "Lithium Sulfur",
23365         "Lithium Titanate",
23366         "Lithium Ion Thin Film",
23367         "Magnesium",
23368         "Magnesium Ion",
23369         "Mercury",
23370         "Molten Salt",
23371         "Nickel Cadmium",
23372         "Nickel Cadmium Vented Cell",
23373         "Nickel Hydrogen",
23374         "Nickel Iron ",
23375         "Nickel Metal Hydride",
23376         "Nickel Metal Hydride Low Self-Discharge",
23377         "Nickel Oxyhydroxide",
23378         "Nickel Oxyride",
23379         "Nickel Zinc",
23380         "Organic Radical",
23381         "Paper",
23382         "Polymer Based",
23383         "Polysulfide Bromide",
23384         "Potassium Ion",
23385         "Pulvermachers Chain",
23386         "Silicon Air",
23387         "Silver Calcium",
23388         "Silver Oxide",
23389         "Silver Zinc",
23390         "Sodium Ion",
23391         "Sodium Sulfur",
23392         "Solid State",
23393         "Sugar",
23394         "Super Iron",
23395         "UltraBattery",
23396         "Voltaic Pile",
23397         "Voltaic Pile Penny",
23398         "Voltaic Pile Trough",
23399         "Water Activated",
23400         "Weston Cell",
23401         "Zinc Air",
23402         "Zinc Carbon",
23403         "Zinc Chloride",
23404         "Zinc Ion",
23405         "Unknown"
23406     ],
23407     "readOnly": true,
23408     "type": "string"
23409 },
23410 "precision" :
23411     {
23412         "description": "Accuracy granularity of the exposed value",
23413         "readOnly": true,
23414         "type": "number"
23415     },
23416 "value" :
23417     {
23418         "anyOf": [
23419             {
23420                 "type": "array"
23421             },
23422             {
23423                 "type": "string"
23424             },
23425             {
23426                 "type": "boolean"
23427             },
23428             {
23429                 "type": "integer"
23430             }
23431         ]
23432     },

```

```

23433         {
23434             "type": "number"
23435         },
23436         {
23437             "type": "object"
23438         }
23439     ],
23440     "description": "The value sensed or actuated by this Resource"
23441 },
23442
23443 "n" :
23444     {
23445         "description": "Friendly name of the resource",
23446         "maxLength": 64,
23447         "readOnly": true,
23448         "type": "string"
23449     },
23450
23451 "range" :
23452     {
23453         "description": "The valid range for the value Property",
23454         "items": {
23455             "anyOf": [
23456                 {
23457                     "type": "number"
23458                 },
23459                 {
23460                     "type": "integer"
23461                 }
23462             ]
23463         },
23464         "maxItems": 2,
23465         "minItems": 2,
23466         "readOnly": true,
23467         "type": "array"
23468     },
23469
23470 "step" :
23471     {
23472         "anyOf": [
23473             {
23474                 "type": "integer"
23475             },
23476             {
23477                 "type": "number"
23478             }
23479         ],
23480         "description": "Step value across the defined range",
23481         "readOnly": true
23482     },
23483
23484 "id" :
23485     {
23486         "description": "Instance ID of this specific resource",
23487         "maxLength": 64,
23488         "readOnly": true,
23489         "type": "string"
23490     },
23491
23492 "if" :
23493     {
23494         "description": "The interface set supported by this resource",
23495         "items": {
23496             "enum": [
23497                 "oic.if.baseline",
23498                 "oic.if.ll",
23499                 "oic.if.b",
23500                 "oic.if.lb",
23501                 "oic.if.rw",
23502                 "oic.if.r",
23503                 "oic.if.a",

```

```

23504         "oic.if.s"
23505     ],
23506     "type": "string"
23507 },
23508     "minItems": 1,
23509     "readOnly": true,
23510     "type": "array"
23511 }
23512
23513 }
23514     , "type" : "object"
23515     , "required": ["material"]
23516 }
23517 }
23518 }
23519

```

23520 B.15.5 Property Definition

23521 **Table 267 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
precision	number	No	Read Only	Accuracy granularity of the exposed value
range	array: see schema	No	Read Only	The valid range for the value Property
n	string	No	Read Only	Friendly name of the resource
if	array: see schema	No	Read Only	The interface set supported by this resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
rt	array: see schema	No	Read Only	Resource Type
step	multiple types: see schema	No	Read Only	Step value across the defined range
id	string	No	Read Only	Instance ID of this specific resource
material	string	Yes	Read Only	Battery construction material (type).

23522 **B.15.6 CRUDN behaviour**

23523 **Table 268 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/BatteryMaterialResURI		get			observe

23524 **B.16 Binary Switch**

23525 **B.16.1 Introduction**

23526 This resource describes a binary switch (on/off).
 23527 The value is a boolean. A value of 'true' means that the switch is on. A value of 'false' means that
 23528 the switch is off.
 23529

23530 **B.16.2 Example URI**

23531 /BinarySwitchResURI

23532 **B.16.3 Resource Type**

23533 The resource type (rt) is defined as: ['oic.r.switch.binary'].

23534 **B.16.4 Swagger2.0 Definition**

```

23535 {
23536   "swagger": "2.0",
23537   "info": {
23538     "title": "Binary Switch",
23539     "version": "v1.1.0-20160519",
23540     "license": {
23541       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
23542       "x-description": "Redistribution and use in source and binary forms, with or without
23543 modification, are permitted provided that the following conditions are met:\n      1.
23544 Redistributions of source code must retain the above copyright notice, this list of conditions and
23545 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
23546 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
23547 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
23548 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
23549 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
23550 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
23551 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
23552 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
23553 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
23554 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
23555 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
23556 OF SUCH DAMAGE.\n"
23557     }
23558   },
23559   "schemes": ["http"],
23560   "consumes": ["application/json"],
23561   "produces": ["application/json"],
23562   "paths": {
23563     "/BinarySwitchResURI" : {
23564       "get": {
23565         "description": "This resource describes a binary switch (on/off).\n\nThe value is a
23566 boolean.\n\nA value of 'true' means that the switch is on.\n\nA value of 'false' means that the switch
23567 is off.\n",
23568         "parameters": [
23569           { "$ref": "#/parameters/interface" }
23570         ],
23571         "responses": {
23572           "200": {
23573             "description": "",
23574             "x-example": {
23575               "rt": ["oic.r.switch.binary"],
23576               "id": "unique_example_id",
23577               "value": false
23578             }
23579           }
23580         }
23581       }
23582     }
23583   }
23584 }
  
```

```

23579         }
23580     },
23581     "schema": { "$ref": "#/definitions/BinarySwitch" }
23582 }
23583 },
23584 ],
23585 "post": {
23586     "description": "",
23587     "parameters": [
23588         { "$ref": "#/parameters/interface" },
23589         {
23590             "name": "body",
23591             "in": "body",
23592             "required": true,
23593             "schema": { "$ref": "#/definitions/BinarySwitch" },
23594             "x-example":
23595                 {
23596                     "id": "unique_example_id",
23597                     "value": true
23598                 }
23599         }
23600     ],
23601     "responses": {
23602         "200": {
23603             "description": "",
23604             "x-example":
23605                 {
23606                     "id": "unique_example_id",
23607                     "value": true
23608                 }
23609             ,
23610             "schema": { "$ref": "#/definitions/BinarySwitch" }
23611         }
23612     }
23613 },
23614 },
23615 },
23616 "parameters": {
23617     "interface": {
23618         "in": "query",
23619         "name": "if",
23620         "type": "string",
23621         "enum": ["oic.if.a", "oic.if.baseline"]
23622     }
23623 },
23624 "definitions": {
23625     "BinarySwitch": {
23626         "properties": {
23627             "rt":
23628                 {
23629                     "description": "Resource Type",
23630                     "items": {
23631                         "maxLength": 64,
23632                         "type": "string"
23633                     },
23634                     "minItems": 1,
23635                     "readOnly": true,
23636                     "type": "array"
23637                 },
23638             "precision":
23639                 {
23640                     "description": "Accuracy granularity of the exposed value",
23641                     "readOnly": true,
23642                     "type": "number"
23643                 },
23644             "value":
23645                 {
23646                     "description": "Status of the switch",
23647                     "type": "boolean"

```

```

23650     },
23651
23652     "n" :
23653     {
23654         "description": "Friendly name of the resource",
23655         "maxLength": 64,
23656         "readOnly": true,
23657         "type": "string"
23658     },
23659
23660     "range" :
23661     {
23662         "description": "The valid range for the value Property",
23663         "items": {
23664             "anyOf": [
23665                 {
23666                     "type": "number"
23667                 },
23668                 {
23669                     "type": "integer"
23670                 }
23671             ]
23672         },
23673         "maxItems": 2,
23674         "minItems": 2,
23675         "readOnly": true,
23676         "type": "array"
23677     },
23678
23679     "step" :
23680     {
23681         "anyOf": [
23682             {
23683                 "type": "integer"
23684             },
23685             {
23686                 "type": "number"
23687             }
23688         ],
23689         "description": "Step value across the defined range",
23690         "readOnly": true
23691     },
23692
23693     "id" :
23694     {
23695         "description": "Instance ID of this specific resource",
23696         "maxLength": 64,
23697         "readOnly": true,
23698         "type": "string"
23699     },
23700
23701     "if" :
23702     {
23703         "description": "The interface set supported by this resource",
23704         "items": {
23705             "enum": [
23706                 "oic.if.baseline",
23707                 "oic.if.ll",
23708                 "oic.if.b",
23709                 "oic.if.lb",
23710                 "oic.if.rw",
23711                 "oic.if.r",
23712                 "oic.if.a",
23713                 "oic.if.s"
23714             ],
23715             "type": "string"
23716         },
23717         "minItems": 1,
23718         "readOnly": true,
23719         "type": "array"
23720     }

```



```

23721     }
23722     , "type" : "object"
23723     , "required": ["value"]
23724   }
23725 }
23726 }
23727 }
23728 }

```

23729 **B.16.5 Property Definition**

23730 **Table 269 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
value	boolean	Yes	Read Write	Status of the switch
id	string	No	Read Only	Instance ID of this specific resource
rt	array: see schema	No	Read Only	Resource Type
range	array: see schema	No	Read Only	The valid range for the value Property
precision	number	No	Read Only	Accuracy granularity of the exposed value
if	array: see schema	No	Read Only	The interface set supported by this resource
n	string	No	Read Only	Friendly name of the resource
step	multiple types: see schema	No	Read Only	Step value across the defined range

23731 **B.16.6 CRUDN behaviour**

23732 **Table 270 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/BinarySwitchResURI		get	post		observe

23733 **B.17 Blood Pressure**

23734 **B.17.1 Introduction**

23735 This resource describes the properties associated with a person's Blood Pressure.
 23736 The unit is a single value that is one of mmHg or kPa.
 23737 If the unit Property is missing the default is a millimeter of mercury [mmHg].
 23738 The BloodPressure and unit Properties are read-only values that are provided by the server.
 23739 When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.
 23740

23741 **B.17.2 Example URI**

23742 /BloodPressureResURI

23743 **B.17.3 Resource Type**

23744 The resource type (rt) is defined as: ['oic.r.blood.pressure'].

23745 **B.17.4 Swagger2.0 Definition**

```
23746 {
23747   "swagger": "2.0",
23748   "info": {
23749     "title": "Blood Pressure",
23750     "version": "v1.1.0-20160519",
23751     "license": {
23752       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
23753       "x-description": "Redistribution and use in source and binary forms, with or without
23754 modification, are permitted provided that the following conditions are met:\n      1.
23755 Redistributions of source code must retain the above copyright notice, this list of conditions and
23756 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
23757 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
23758 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
23759 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
23760 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
23761 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
23762 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
23763 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
23764 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
23765 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
23766 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
23767 OF SUCH DAMAGE.\n"
23768     }
23769   },
23770   "schemes": ["http"],
23771   "consumes": ["application/json"],
23772   "produces": ["application/json"],
23773   "paths": {
23774     "/BloodPressureResURI" : {
23775       "get": {
23776         "description": "This resource describes the properties associated with a person's Blood
23777 Pressure.\nThe unit is a single value that is one of mmHg or kPa.\nIf the unit Property is missing
23778 the default is a millimeter of mercury [mmHg].\nThe BloodPressure and unit Properties are read-only
23779 values that are provided by the server.\nWhen range (from oic.r.baseresource) is omitted the
23780 default is 0 to +MAXFLOAT.\nRetrieves blood pressure of an object.\n",
23781         "parameters": [
23782           {"$ref": "#/parameters/interface"}
23783         ],
23784         "responses": {
23785           "200": {
23786             "description": "",
23787             "x-example":
23788               {
23789                 "rt": ["oic.r.blood.pressure"],
23790                 "id": "unique_example_id",
23791                 "systolic": 110,
23792                 "diastolic": 85,
23793                 "units": "mmHg"
23794               }
23795           },
23796           "schema": { "$ref": "#/definitions/BloodPressure" }
23797         }
23798       }
23799     }
23800   },
23801   "parameters": {
23802     "interface" : {
23803       "in" : "query",
23804       "name" : "if",
23805       "type" : "string",
23806       "enum" : ["oic.if.s", "oic.if.baseline"]
23807     }
23808   }
23809 }
```

```

23808     }
23809   },
23810   "definitions": {
23811     "BloodPressure": {
23812       "properties": {
23813         "rt": :
23814           {
23815             "description": "Resource Type",
23816             "items": {
23817               "maxLength": 64,
23818               "type": "string"
23819             },
23820             "minItems": 1,
23821             "readOnly": true,
23822             "type": "array"
23823           },
23824         "map": :
23825           {
23826             "description": "Mean Arterial Pressure (MAP)",
23827             "minimum": 0,
23828             "readOnly": true,
23829             "type": "number"
23830           },
23831         "precision": :
23832           {
23833             "description": "Accuracy granularity of the exposed value",
23834             "readOnly": true,
23835             "type": "number"
23836           },
23837         "value": :
23838           {
23839             "anyOf": [
23840               {
23841                 "type": "array"
23842               },
23843               {
23844                 "type": "string"
23845               },
23846               {
23847                 "type": "boolean"
23848               },
23849               {
23850                 "type": "integer"
23851               },
23852               {
23853                 "type": "number"
23854               },
23855               {
23856                 "type": "object"
23857               }
23858             ],
23859             "description": "The value sensed or actuated by this Resource"
23860           },
23861         "n": :
23862           {
23863             "description": "Friendly name of the resource",
23864             "maxLength": 64,
23865             "readOnly": true,
23866             "type": "string"
23867           },
23868         "units": :
23869           {
23870             "description": "Blood pressure unit",
23871             "enum": [
23872               "mmHg",
23873               "kPa"
23874             ]
23875           }
23876       }
23877     }
23878   }

```

```

23879     ],
23880     "readOnly": true,
23881     "type": "string"
23882 },
23883
23884 "range" :
23885 {
23886     "description": "The valid range for the value Property",
23887     "items": {
23888         "anyOf": [
23889             {
23890                 "type": "number"
23891             },
23892             {
23893                 "type": "integer"
23894             }
23895         ]
23896     },
23897     "maxItems": 2,
23898     "minItems": 2,
23899     "readOnly": true,
23900     "type": "array"
23901 },
23902
23903 "systolic" :
23904 {
23905     "description": "Systolic blood pressure",
23906     "minimum": 0,
23907     "readOnly": true,
23908     "type": "number"
23909 },
23910
23911 "step" :
23912 {
23913     "anyOf": [
23914         {
23915             "type": "integer"
23916         },
23917         {
23918             "type": "number"
23919         }
23920     ],
23921     "description": "Step value across the defined range",
23922     "readOnly": true
23923 },
23924
23925 "diastolic" :
23926 {
23927     "description": "Diastolic blood pressure",
23928     "minimum": 0,
23929     "readOnly": true,
23930     "type": "number"
23931 },
23932
23933 "id" :
23934 {
23935     "description": "Instance ID of this specific resource",
23936     "maxLength": 64,
23937     "readOnly": true,
23938     "type": "string"
23939 },
23940
23941 "if" :
23942 {
23943     "description": "The interface set supported by this resource",
23944     "items": {
23945         "enum": [
23946             "oic.if.baseline",
23947             "oic.if.ll",
23948             "oic.if.b",
23949             "oic.if.lb",

```

```

23950         "oic.if.rw",
23951         "oic.if.r",
23952         "oic.if.a",
23953         "oic.if.s"
23954     ],
23955     "type": "string"
23956 },
23957 "minItems": 1,
23958 "readOnly": true,
23959 "type": "array"
23960 }
23961 }
23962 }
23963 , "type" : "object"
23964 , "required": ["systolic", "diastolic"]
23965 }
23966 }
23967 }
23968

```

B.17.5 Property Definition

Table 271 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
units	string	No	Read Only	Blood pressure unit
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
diastolic	number	Yes	Read Only	Diastolic blood pressure
rt	array: see schema	No	Read Only	Resource Type
precision	number	No	Read Only	Accuracy granularity of the exposed value
map	number	No	Read Only	Mean Arterial Pressure (MAP)
systolic	number	Yes	Read Only	Systolic blood pressure
if	array: see schema	No	Read Only	The interface set supported by this resource
n	string	No	Read Only	Friendly name of the resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
id	string	No	Read Only	

				Instance ID of this specific resource
range	array: schema	see	No	Read Only
				The valid range for the value Property

23971 **B.17.6 CRUDN behaviour**

23972 **Table 272 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/BloodPressureResURI		get			observe

23973 **B.18 Blood Pressure Monitor Atomic Measurement**

23974 **B.18.1 Introduction**

23975 This resource describes the properties associated with Blood Pressure Monitor.
 23976 The resource is an atomic measurement of blood pressure (oic.r.blood.pressure), pulse rate
 23977 (oic.r.pulserate), observed time (oic.r.time.stamp), and user ID (oic.r.userid).
 23978 Retrieves the current blood pressure.
 23979

23980 **B.18.2 Example URI**

23981 /BloodPressureMonitorAMResURI

23982 **B.18.3 Resource Type**

23983 The resource type (rt) is defined as: ['oic.r.bloodpressuremonitor-am'].

23984 **B.18.4 Swagger2.0 Definition**

```

23985 {
23986   "swagger": "2.0",
23987   "info": {
23988     "title": "Blood Pressure Monitor Atomic Measurement Batch Representation",
23989     "version": "v1.1.0-20160519",
23990     "license": {
23991       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
23992       "x-description": "Redistribution and use in source and binary forms, with or without
23993 modification, are permitted provided that the following conditions are met:\n      1.
23994 Redistributions of source code must retain the above copyright notice, this list of conditions and
23995 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
23996 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
23997 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
23998 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
23999 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
24000 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
24001 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
24002 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
24003 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
24004 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
24005 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
24006 OF SUCH DAMAGE.\n"
24007     }
24008   },
24009   "schemes": ["http"],
24010   "consumes": ["application/json"],
24011   "produces": ["application/json"],
24012   "paths": {
24013     "/BloodPressureMonitorAMResURI?if=oic.if.b" : {
24014       "get": {
24015         "description": "This resource describes the properties associated with Blood Pressure
24016 Monitor.\nThe resource is an atomic measurement of blood pressure (oic.r.blood.pressure), pulse
24017 rate (oic.r.pulserate), observed time (oic.r.time.stamp), and user ID (oic.r.userid).\nRetrieves
  
```

```

24018 the current blood pressure.\n",
24019     "parameters": [
24020         {"$ref": "#/parameters/interface-b"}
24021     ],
24022     "responses": {
24023         "200": {
24024             "description": "",
24025             "x-example":
24026                 [
24027                     {
24028                         "href": "/myBloodPressureResURI",
24029                         "rep":
24030                             {
24031                                 "systolic": 120,
24032                                 "diastolic": 80,
24033                                 "units": "mmHg"
24034                             }
24035                     },
24036                     {
24037                         "href": "/myPulseRateResURI",
24038                         "rep":
24039                             {
24040                                 "pulserate": 70
24041                             }
24042                     }
24043                 ],
24044             "schema": { "$ref": "#/definitions/batch-retrieve" }
24045         }
24046     }
24047 },
24048 },
24049 ],
24050 "/BloodPressureMonitorAMResURI?if=oic.if.ll" : {
24051     "get": {
24052         "description": "This resource describes the properties associated with Blood Pressure
24053 Monitor.\nThe resource is an atomic measurement of blood pressure (oic.r.blood.pressure), pulse
24054 rate (oic.r.pulserate), observed time (oic.r.time.stamp), and user ID (oic.r.userid).\nRetrieves
24055 the current blood pressure.\n",
24056         "parameters": [
24057             {"$ref": "#/parameters/interface-ll"}
24058         ],
24059         "responses": {
24060             "200": {
24061                 "description": "",
24062                 "x-example":
24063                     [
24064                         {
24065                             "href": "/myBloodPressureResURI",
24066                             "rt": ["oic.r.blood.pressure"],
24067                             "if": ["oic.if.s", "oic.if.baseline"]
24068                         },
24069                         {
24070                             "href": "/myPulseRateResURI",
24071                             "rt": ["oic.r.pulserate"],
24072                             "if": ["oic.if.s", "oic.if.baseline"]
24073                         }
24074                     ],
24075                 "schema": { "$ref": "#/definitions/links" }
24076             }
24077         }
24078     }
24079 },
24080 ],
24081 "/BloodPressureMonitorAMResURI?if=oic.if.baseline" : {
24082     "get": {
24083         "description": "This resource describes the properties associated with Blood Pressure
24084 Monitor.\nThe resource is an atomic measurement of blood pressure (oic.r.blood.pressure), pulse
24085 rate (oic.r.pulserate), observed time (oic.r.time.stamp), and user ID (oic.r.userid).\nRetrieves
24086 the current blood pressure.\n",
24087         "parameters": [
24088             {"$ref": "#/parameters/interface-baseline"}

```

```

24089     ],
24090     "responses": {
24091         "200": {
24092             "description": "",
24093             "x-example":
24094                 {
24095                     "rt": ["oic.r.bloodpressuremonitor-am", "oic.wk.atomicmeasurement"],
24096                     "if": ["oic.if.b", "oic.if.ll", "oic.if.baseline"],
24097                     "rts-m": ["oic.r.blood.pressure"],
24098                     "rts": ["oic.r.blood.pressure", "oic.r.pulserate"],
24099                     "links": [
24100                         {
24101                             "href": "/myBloodPressureResURI",
24102                             "rt": ["oic.r.blood.pressure"],
24103                             "if": ["oic.if.s", "oic.if.baseline"]
24104                         },
24105                         {
24106                             "href": "/myPulseRateResURI",
24107                             "rt": ["oic.r.pulserate"],
24108                             "if": ["oic.if.s", "oic.if.baseline"]
24109                         }
24110                     ]
24111                 }
24112             ,
24113             "schema": { "$ref": "#/definitions/baseline" }
24114         }
24115     }
24116 },
24117 },
24118 },
24119 "parameters": {
24120     "interface-ll" : {
24121         "in" : "query",
24122         "name" : "if",
24123         "type" : "string",
24124         "enum" : ["oic.if.ll"]
24125     },
24126     "interface-b" : {
24127         "in" : "query",
24128         "name" : "if",
24129         "type" : "string",
24130         "enum" : ["oic.if.b"]
24131     },
24132     "interface-baseline" : {
24133         "in" : "query",
24134         "name" : "if",
24135         "type" : "string",
24136         "enum" : ["oic.if.baseline"]
24137     },
24138     "interface-all" : {
24139         "in" : "query",
24140         "name" : "if",
24141         "type" : "string",
24142         "enum" : ["oic.if.b", "oic.if.ll", "oic.if.baseline"]
24143     }
24144 },
24145 "definitions": {
24146     "batch-retrieve" : {
24147         "title" :
24148             "Collection Batch Retrieve Format"
24149     },
24150     "minItems" :
24151         1
24152     ,
24153     "items" :
24154         {
24155             "additionalProperties": true,
24156             "properties": {
24157                 "href": {
24158                     "description": "URI of the target resource relative assuming the collection URI as
24159 anchor",

```



```

24160         "type": "string"
24161     },
24162     "rep": {
24163         "oneOf": [
24164             {
24165                 "description": "The response payload from a single resource",
24166                 "type": "object"
24167             },
24168             {
24169                 "description": " The response payload from a collection (batch) resource",
24170                 "type": "array"
24171             }
24172         ]
24173     },
24174 },
24175 "required": [
24176     "href",
24177     "rep"
24178 ],
24179 "type": "object"
24180 }
24181 , "type" :
24182     "array"
24183 }
24184 ,
24185 "links" : {
24186     "type" :
24187         "array"
24188     , "items" :
24189         {
24190             "$ref": "#/definitions/oic.oic-link"
24191         }
24192     }
24193 }
24194 ,
24195 "baseline" : {
24196     "properties": {
24197         "rt" :
24198             {
24199                 "items": {
24200                     "enum": [
24201                         "oic.r.bloodpressuremonitor-am",
24202                         "oic.wk.atomicmeasurement"
24203                     ]
24204                 },
24205                 "maxItems": 2,
24206                 "minItems": 2,
24207                 "type": "array",
24208                 "uniqueItems": true
24209             },
24210     "links" :
24211         {
24212             "description": "A set of simple or individual OIC Links.",
24213             "items": {
24214                 "properties": {
24215                     "anchor": {
24216                         "description": "This is used to override the context URI e.g. override the URI of
24217 the containing collection.",
24218                         "format": "uri",
24219                         "maxLength": 256,
24220                         "type": "string"
24221                     },
24222                     "di": {
24223                         "description": "The Device ID formatted according to IETF RFC 4122.",
24224                         "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
24225 9]{12}$",
24226                         "type": "string"
24227                     }
24228                 }
24229             }
24230         }

```

```

24231     },
24232     "eps": {
24233         "description": "the Endpoint information of the target Resource",
24234         "items": {
24235             "properties": {
24236                 "ep": {
24237                     "description": "Transport Protocol Suite + Endpoint Locator",
24238                     "format": "uri",
24239                     "type": "string"
24240                 },
24241                 "pri": {
24242                     "description": "The priority among multiple Endpoints",
24243                     "minimum": 1,
24244                     "type": "integer"
24245                 }
24246             },
24247             "type": "object"
24248         },
24249         "type": "array"
24250     },
24251     "href": {
24252         "description": "This is the target URI, it can be specified as a Relative Reference
or fully-qualified URI.",
24253         "format": "uri",
24254         "maxLength": 256,
24255         "type": "string"
24256     },
24257     "if": {
24258         "description": "The interface set supported by this resource",
24259         "items": {
24260             "enum": [
24261                 "oic.if.baseline",
24262                 "oic.if.ll",
24263                 "oic.if.b",
24264                 "oic.if.rw",
24265                 "oic.if.r",
24266                 "oic.if.a",
24267                 "oic.if.s"
24268             ],
24269             "type": "string"
24270         },
24271     },
24272     "minItems": 1,
24273     "type": "array"
24274 },
24275 "ins": {
24276     "description": "The instance identifier for this web link in an array of web links
- used in collections",
24277     "type": "integer"
24278 },
24279 "p": {
24280     "description": "Specifies the framework policies on the Resource referenced by the
target URI",
24281     "properties": {
24282         "bm": {
24283             "description": "Specifies the framework policies on the Resource referenced by
the target URI for e.g. observable and discoverable",
24284             "type": "integer"
24285         }
24286     },
24287     "required": [
24288         "bm"
24289     ],
24290     "type": "object"
24291 },
24292 "rel": {
24293     "description": "The relation of the target URI referenced by the link to the
context URI",
24294     "oneOf": [
24295         {
24296             "default": [
24297                 "hosts"
24298             ]
24299         }
24300     ]
24301 }

```

```

24302         ],
24303         "items": {
24304             "maxLength": 64,
24305             "type": "string"
24306         },
24307         "minItems": 1,
24308         "type": "array"
24309     },
24310     {
24311         "default": "hosts",
24312         "maxLength": 64,
24313         "type": "string"
24314     }
24315 ]
24316 },
24317 "rt": {
24318     "description": "Resource Type of the Resource",
24319     "items": {
24320         "maxLength": 64,
24321         "type": "string"
24322     },
24323     "minItems": 1,
24324     "type": "array"
24325 },
24326 "title": {
24327     "description": "A title for the link relation. Can be used by the UI to provide a
context.",
24328     "maxLength": 64,
24329     "type": "string"
24330 },
24331 },
24332 "type": {
24333     "default": "application/cbor",
24334     "description": "A hint at the representation of the resource referenced by the
target URI. This represents the media types that are used for both accepting and emitting.",
24335     "items": {
24336         "maxLength": 64,
24337         "type": "string"
24338     },
24339     "minItems": 1,
24340     "type": "array"
24341 }
24342 },
24343 },
24344 "required": [
24345     "href",
24346     "rt",
24347     "if"
24348 ],
24349 "type": "object"
24350 },
24351 "type": "array"
24352 },
24353 "n" :
24354 {
24355     "description": "Friendly name of the resource",
24356     "maxLength": 64,
24357     "readOnly": true,
24358     "type": "string"
24359 },
24360 },
24361 "rts" :
24362 {
24363     "description": "This contains all possible resource types for this atomic measurement.",
24364     "items": {
24365         "enum": [
24366             "oic.r.blood.pressure",
24367             "oic.r.pulserate",
24368             "oic.r.userid",
24369             "oic.r.time.stamp"
24370         ]
24371     }
24372 },

```

```

24373         "minItems": 1,
24374         "type": "array",
24375         "uniqueItems": true
24376     },
24377
24378     "id" :
24379     {
24380         "description": "Instance ID of this specific resource",
24381         "maxLength": 64,
24382         "readOnly": true,
24383         "type": "string"
24384     },
24385
24386     "rts-m" :
24387     {
24388         "description": "This contains all mandatory resource types for this atomic measurement.",
24389         "items": {
24390             "enum": [
24391                 "oic.r.blood.pressure"
24392             ]
24393         },
24394         "maxItems": 1,
24395         "minItems": 1,
24396         "type": "array",
24397         "uniqueItems": true
24398     },
24399
24400     "if" :
24401     {
24402         "description": "The interface set supported by this resource",
24403         "items": {
24404             "enum": [
24405                 "oic.if.baseline",
24406                 "oic.if.ll",
24407                 "oic.if.b",
24408                 "oic.if.lb",
24409                 "oic.if.rw",
24410                 "oic.if.r",
24411                 "oic.if.a",
24412                 "oic.if.s"
24413             ],
24414             "type": "string"
24415         },
24416         "minItems": 1,
24417         "readOnly": true,
24418         "type": "array"
24419     }
24420
24421     },
24422     "type" : "object"
24423 }, "required": ["rts-m"]
24424 }
24425 ,"oic.oic-link" :
24426 {
24427     "properties": {
24428         "anchor": {
24429             "description": "This is used to override the context URI e.g. override the URI of the
24430 containing collection.",
24431             "format": "uri",
24432             "maxLength": 256,
24433             "type": "string"
24434         },
24435         "di": {
24436             "description": "The Device ID formatted according to IETF RFC 4122.",
24437             "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
24438 9]{12}$",
24439             "type": "string"
24440         },
24441         "eps": {
24442             "description": "the Endpoint information of the target Resource",
24443             "items": {

```

```

24444         "properties": {
24445             "ep": {
24446                 "description": "Transport Protocol Suite + Endpoint Locator",
24447                 "format": "uri",
24448                 "type": "string"
24449             },
24450             "pri": {
24451                 "description": "The priority among multiple Endpoints",
24452                 "minimum": 1,
24453                 "type": "integer"
24454             }
24455         },
24456         "type": "object"
24457     },
24458     "type": "array"
24459 },
24460 "href": {
24461     "description": "This is the target URI, it can be specified as a Relative Reference or
24462 fully-qualified URI.",
24463     "format": "uri",
24464     "maxLength": 256,
24465     "type": "string"
24466 },
24467 "if": {
24468     "description": "The interface set supported by this resource",
24469     "items": {
24470         "enum": [
24471             "oic.if.baseline",
24472             "oic.if.ll",
24473             "oic.if.b",
24474             "oic.if.rw",
24475             "oic.if.r",
24476             "oic.if.a",
24477             "oic.if.s"
24478         ],
24479         "type": "string"
24480     },
24481     "minItems": 1,
24482     "type": "array"
24483 },
24484 "ins": {
24485     "description": "The instance identifier for this web link in an array of web links - used
24486 in collections",
24487     "type": "integer"
24488 },
24489 "p": {
24490     "description": "Specifies the framework policies on the Resource referenced by the target
24491 URI",
24492     "properties": {
24493         "bm": {
24494             "description": "Specifies the framework policies on the Resource referenced by the
24495 target URI for e.g. observable and discoverable",
24496             "type": "integer"
24497         }
24498     },
24499     "required": [
24500         "bm"
24501     ],
24502     "type": "object"
24503 },
24504 "rel": {
24505     "description": "The relation of the target URI referenced by the link to the context
24506 URI",
24507     "oneOf": [
24508         {
24509             "default": [
24510                 "hosts"
24511             ],
24512             "items": {
24513                 "maxLength": 64,
24514                 "type": "string"

```

```

24515         },
24516         "minItems": 1,
24517         "type": "array"
24518     },
24519     {
24520         "default": "hosts",
24521         "maxLength": 64,
24522         "type": "string"
24523     }
24524 ]
24525 },
24526 "rt": {
24527     "description": "Resource Type of the Resource",
24528     "items": {
24529         "maxLength": 64,
24530         "type": "string"
24531     },
24532     "minItems": 1,
24533     "type": "array"
24534 },
24535 "title": {
24536     "description": "A title for the link relation. Can be used by the UI to provide a
24537 context.",
24538     "maxLength": 64,
24539     "type": "string"
24540 },
24541 "type": {
24542     "default": "application/cbor",
24543     "description": "A hint at the representation of the resource referenced by the target
24544 URI. This represents the media types that are used for both accepting and emitting.",
24545     "items": {
24546         "maxLength": 64,
24547         "type": "string"
24548     },
24549     "minItems": 1,
24550     "type": "array"
24551 }
24552 },
24553 "required": [
24554     "href",
24555     "rt",
24556     "if"
24557 ],
24558 "type": "object"
24559 }
24560 }
24561 }
24562 }
24563

```

24564 B.18.5 Property Definition

24565 **Table 273 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
rep	multiple types: see schema	Yes	Read Write	
href	string	Yes	Read Write	URI of the target resource relative assuming the collection URI as anchor
title	string	No	Read Write	A title for the link relation. Can be used by the UI to

				provide a context.
type	array: schema see	No	Read Write	A hint at the representation of the resource referenced by the target URI. This represents the media types that are used for both accepting and emitting.
p	object: schema see	No	Read Write	Specifies the framework policies on the Resource referenced by the target URI
anchor	string	No	Read Write	This is used to override the context URI e.g. override the URI of the containing collection.
di	string	No	Read Write	The Device ID formatted according to IETF RFC 4122.
href	string	Yes	Read Write	This is the target URI, it can be specified as a Relative Reference or fully-qualified URI.
if	array: schema see	Yes	Read Write	The interface set supported by this resource
rel	multiple types: see schema	No	Read Write	The relation of the target URI referenced by the link to the context URI
rt	array: schema see	Yes	Read Write	Resource Type of the Resource
eps	array: schema see	No	Read Write	

				the Endpoint information of the target Resource
ins	integer	No	Read Write	The instance identifier for this web link in an array of web links - used in collections
rts-m	array: schema see	Yes	Read Write	This contains all mandatory resource types for this atomic measurement.
links	array: schema see	No	Read Write	A set of simple or individual OIC Links.
rts	array: schema see	No	Read Write	This contains all possible resource types for this atomic measurement.
rt	array: schema see	No	Read Write	
if	array: schema see	No	Read Only	The interface set supported by this resource
n	string	No	Read Only	Friendly name of the resource
id	string	No	Read Only	Instance ID of this specific resource

24566 **B.18.6 CRUDN behaviour**

24567 **Table 274 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/BloodPressureMonitorAMResURI		get			observe

24568 **B.19 BMI**

24569 **B.19.1 Introduction**

24570 This resource describes the properties associated with a person's Body Mass Index (BMI).
 24571 The unit, which is the default unit, is kg/m².
 24572 The bmi and unit Properties are read-only values that are provided by the server.
 24573 When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.
 24574

24575 **B.19.2 Example URI**

24576 /BMIResURI

24577 **B.19.3 Resource Type**

24578 The resource type (rt) is defined as: ['oic.r.bmi'].

24579 **B.19.4 Swagger2.0 Definition**

```
24580 {
24581   "swagger": "2.0",
24582   "info": {
24583     "title": "BMI",
24584     "version": "v1.1.0-20160519",
24585     "license": {
24586       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
24587       "x-description": "Redistribution and use in source and binary forms, with or without
24588 modification, are permitted provided that the following conditions are met:\n      1.
24589 Redistributions of source code must retain the above copyright notice, this list of conditions and
24590 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
24591 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
24592 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
24593 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
24594 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
24595 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
24596 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
24597 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
24598 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
24599 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
24600 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
24601 OF SUCH DAMAGE.\n"
24602     }
24603   },
24604   "schemes": ["http"],
24605   "consumes": ["application/json"],
24606   "produces": ["application/json"],
24607   "paths": {
24608     "/BMIResURI" : {
24609       "get": {
24610         "description": "This resource describes the properties associated with a person's Body Mass
24611 Index (BMI).\nThe unit, which is the default unit, is kg/m^2.\nThe bmi and unit Properties are
24612 read-only values that are provided by the server.\nWhen range (from oic.r.baseresource) is omitted
24613 the default is 0 to +MAXFLOAT.\nRetrieves BMI of an object.\n",
24614         "parameters": [
24615           { "$ref": "#/parameters/interface" }
24616         ],
24617         "responses": {
24618           "200": {
24619             "description": "",
24620             "x-example":
24621               {
24622                 "rt": ["oic.r.bmi"],
24623                 "id": "unique_example_id",
24624                 "bmi": 20
24625               }
24626           },
24627           "schema": { "$ref": "#/definitions/BMI" }
24628         }
24629       }
24630     }
24631   },
24632 },
24633 "parameters": {
24634   "interface": {
24635     "in": "query",
24636     "name": "if",
24637     "type": "string",
24638     "enum": ["oic.if.s", "oic.if.baseline"]
24639   }
24640 },
24641 "definitions": {
```

```

24642 "BMI" : {
24643   "properties": {
24644     "rt" :
24645       {
24646         "description": "Resource Type",
24647         "items": {
24648           "maxLength": 64,
24649           "type": "string"
24650         },
24651         "minItems": 1,
24652         "readOnly": true,
24653         "type": "array"
24654       },
24655     "bmi" :
24656       {
24657         "description": "Body Mass Index (BMI) in kg/m^2",
24658         "minimum": 0,
24659         "readOnly": true,
24660         "type": "number"
24661       },
24662     "precision" :
24663       {
24664         "description": "Accuracy granularity of the exposed value",
24665         "readOnly": true,
24666         "type": "number"
24667       },
24668     "value" :
24669       {
24670         "anyOf": [
24671           {
24672             "type": "array"
24673           },
24674           {
24675             "type": "string"
24676           },
24677           {
24678             "type": "boolean"
24679           },
24680           {
24681             "type": "integer"
24682           },
24683           {
24684             "type": "number"
24685           },
24686           {
24687             "type": "object"
24688           }
24689         ],
24690         "description": "The value sensed or actuated by this Resource"
24691       },
24692     "n" :
24693       {
24694         "description": "Friendly name of the resource",
24695         "maxLength": 64,
24696         "readOnly": true,
24697         "type": "string"
24700       },
24701     "range" :
24702       {
24703         "description": "The valid range for the value Property",
24704         "items": {
24705           "anyOf": [
24706             {
24707               "type": "number"
24708             }
24709           ]
24710         }
24711       }
24712

```

```

24713         "type": "integer"
24714     }
24715 ]
24716 },
24717 "maxItems": 2,
24718 "minItems": 2,
24719 "readOnly": true,
24720 "type": "array"
24721 },
24722
24723 "step" :
24724 {
24725   "anyOf": [
24726     {
24727       "type": "integer"
24728     },
24729     {
24730       "type": "number"
24731     }
24732   ],
24733   "description": "Step value across the defined range",
24734   "readOnly": true
24735 },
24736
24737 "id" :
24738 {
24739   "description": "Instance ID of this specific resource",
24740   "maxLength": 64,
24741   "readOnly": true,
24742   "type": "string"
24743 },
24744
24745 "if" :
24746 {
24747   "description": "The interface set supported by this resource",
24748   "items": {
24749     "enum": [
24750       "oic.if.baseline",
24751       "oic.if.ll",
24752       "oic.if.b",
24753       "oic.if.lb",
24754       "oic.if.rw",
24755       "oic.if.r",
24756       "oic.if.a",
24757       "oic.if.s"
24758     ],
24759     "type": "string"
24760   },
24761   "minItems": 1,
24762   "readOnly": true,
24763   "type": "array"
24764 }
24765 }
24766 , "type" : "object"
24767 , "required": ["bmi"]
24768 }
24769 }
24770 }
24771 }
24772

```

24773 B.19.5 Property Definition

24774 **Table 275 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
n	string	No	Read Only	Friendly name of the resource
precision	number	No	Read Only	

				Accuracy granularity of the exposed value
range	array: see schema	No	Read Only	The valid range for the value Property
bmi	number	Yes	Read Only	Body Mass Index (BMI) in kg/m ²
id	string	No	Read Only	Instance ID of this specific resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
rt	array: see schema	No	Read Only	Resource Type
if	array: see schema	No	Read Only	The interface set supported by this resource

24775 **B.19.6 CRUDN behaviour**

24776 **Table 276 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/BMIResURI		get			observe

24777 **B.20 Body Fat**

24778 **B.20.1 Introduction**

24779 This resource describes the properties associated with a person's Body fat.
 24780 The unit is a single value that is one of kg, lb or %.
 24781 If the unit Property is missing the default is kilograms [kg].
 24782 The bodyfat and unit Properties are read-only values that are provided by the server.
 24783 When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.
 24784

24785 **B.20.2 Example URI**

24786 /BodyFatResURI

24787 **B.20.3 Resource Type**

24788 The resource type (rt) is defined as: ['oic.r.body.fat'].

24789 **B.20.4 Swagger2.0 Definition**

```
24790 {
24791   "swagger": "2.0",
24792   "info": {
24793     "title": "Body Fat",
```

```

24794     "version": "v1.1.0-20160519",
24795     "license": {
24796         "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
24797         "x-description": "Redistribution and use in source and binary forms, with or without
24798 modification, are permitted provided that the following conditions are met:\n      1.
24799 Redistributions of source code must retain the above copyright notice, this list of conditions and
24800 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
24801 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
24802 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
24803 Connectivity Foundation, INC. \ "AS IS\ " AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
24804 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
24805 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
24806 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
24807 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
24808 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
24809 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
24810 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
24811 OF SUCH DAMAGE.\n"
24812     }
24813 },
24814 "schemes": ["http"],
24815 "consumes": ["application/json"],
24816 "produces": ["application/json"],
24817 "paths": {
24818     "/BodyFatResURI" : {
24819         "get": {
24820             "description": "This resource describes the properties associated with a person's Body
24821 fat.\nThe unit is a single value that is one of kg, lb or %.\nIf the unit Property is missing the
24822 default is kilograms [kg].\nThe bodyfat and unit Properties are read-only values that are provided
24823 by the server.\nWhen range (from oic.r.baseresource) is omitted the default is 0 to
24824 +MAXFLOAT.\nRetrieves Body fat of an object.\n",
24825             "parameters": [
24826                 { "$ref": "#/parameters/interface" }
24827             ],
24828             "responses": {
24829                 "200": {
24830                     "description": "",
24831                     "x-example":
24832                     {
24833                         "rt": ["oic.r.body.fat"],
24834                         "id": "unique_example_id",
24835                         "bodyfat": 20,
24836                         "units": "kg"
24837                     }
24838                 },
24839                 "schema": { "$ref": "#/definitions/BodyFat" }
24840             }
24841         }
24842     }
24843 },
24844 },
24845 "parameters": {
24846     "interface" : {
24847         "in" : "query",
24848         "name" : "if",
24849         "type" : "string",
24850         "enum" : ["oic.if.s", "oic.if.baseline"]
24851     }
24852 },
24853 "definitions": {
24854     "BodyFat" : {
24855         "properties": {
24856             "rt" :
24857             {
24858                 "description": "Resource Type",
24859                 "items": {
24860                     "maxLength": 64,
24861                     "type": "string"
24862                 },
24863                 "minItems": 1,
24864                 "readOnly": true,

```

```

24865     "type": "array"
24866   },
24867
24868   "precision" :
24869     {
24870       "description": "Accuracy granularity of the exposed value",
24871       "readOnly": true,
24872       "type": "number"
24873     },
24874
24875   "bodyfat" :
24876     {
24877       "description": "Body fat.",
24878       "minimum": 0,
24879       "readOnly": true,
24880       "type": "number"
24881     },
24882
24883   "n" :
24884     {
24885       "description": "Friendly name of the resource",
24886       "maxLength": 64,
24887       "readOnly": true,
24888       "type": "string"
24889     },
24890
24891   "units" :
24892     {
24893       "description": "Body fat units",
24894       "enum": [
24895         "kg",
24896         "lb",
24897         "%"
24898       ],
24899       "readOnly": true,
24900       "type": "string"
24901     },
24902
24903   "range" :
24904     {
24905       "description": "The valid range for the value Property",
24906       "items": {
24907         "anyOf": [
24908           {
24909             "type": "number"
24910           },
24911           {
24912             "type": "integer"
24913           }
24914         ]
24915       },
24916       "maxItems": 2,
24917       "minItems": 2,
24918       "readOnly": true,
24919       "type": "array"
24920     },
24921
24922   "value" :
24923     {
24924       "anyOf": [
24925         {
24926           "type": "array"
24927         },
24928         {
24929           "type": "string"
24930         },
24931         {
24932           "type": "boolean"
24933         },
24934         {
24935           "type": "integer"

```

```

24936         },
24937         {
24938             "type": "number"
24939         },
24940         {
24941             "type": "object"
24942         }
24943     ],
24944     "description": "The value sensed or actuated by this Resource"
24945 },
24946
24947     "step" :
24948     {
24949         "anyOf": [
24950             {
24951                 "type": "integer"
24952             },
24953             {
24954                 "type": "number"
24955             }
24956         ],
24957         "description": "Step value across the defined range",
24958         "readOnly": true
24959     },
24960
24961     "id" :
24962     {
24963         "description": "Instance ID of this specific resource",
24964         "maxLength": 64,
24965         "readOnly": true,
24966         "type": "string"
24967     },
24968
24969     "if" :
24970     {
24971         "description": "The interface set supported by this resource",
24972         "items": {
24973             "enum": [
24974                 "oic.if.baseline",
24975                 "oic.if.ll",
24976                 "oic.if.b",
24977                 "oic.if.lb",
24978                 "oic.if.rw",
24979                 "oic.if.r",
24980                 "oic.if.a",
24981                 "oic.if.s"
24982             ],
24983             "type": "string"
24984         },
24985         "minItems": 1,
24986         "readOnly": true,
24987         "type": "array"
24988     }
24989
24990     },
24991     "type" : "object"
24992 }, "required": ["bodyfat"]
24993 }
24994 }
24995 }
24996

```

B.20.5 Property Definition

Table 277 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
n	string	No	Read Only	Friendly name of the resource

units	string	No	Read Only	Body fat units
precision	number	No	Read Only	Accuracy granularity of the exposed value
rt	array: see schema	No	Read Only	Resource Type
if	array: see schema	No	Read Only	The interface set supported by this resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
id	string	No	Read Only	Instance ID of this specific resource
bodyfat	number	Yes	Read Only	Body fat.
range	array: see schema	No	Read Only	The valid range for the value Property

24999 **B.20.6 CRUDN behaviour**

25000 **Table 278 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/BodyFatResURI		get			observe

25001 **B.21 Body Fat Free Mass**

25002 **B.21.1 Introduction**

25003 This resource describes the properties associated with a person's Body fat free mass.

25004 The unit is a single value that is one of kg, lb or %.

25005 If the unit Property is missing the default is kilograms [kg].

25006 The ffm and unit Properties are read-only values that are provided by the server.

25007 When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.

25008

25009 **B.21.2 Example URI**

25010 /BodyFatFreeMassResURI

25011 **B.21.3 Resource Type**

25012 The resource type (rt) is defined as: ['oic.r.body.ffm'].

25013 **B.21.4 Swagger2.0 Definition**

```
25014 {
25015   "swagger": "2.0",
25016   "info": {
25017     "title": "Body Fat Free Mass",
25018     "version": "v1.1.0-20160519",
25019     "license": {
25020       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
25021       "x-description": "Redistribution and use in source and binary forms, with or without
25022 modification, are permitted provided that the following conditions are met:\n      1.
25023 Redistributions of source code must retain the above copyright notice, this list of conditions and
25024 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
25025 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
25026 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
25027 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
25028 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
25029 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
25030 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
25031 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
25032 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND
25033 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
25034 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
25035 OF SUCH DAMAGE.\n"
25036   }
25037 },
25038 "schemes": ["http"],
25039 "consumes": ["application/json"],
25040 "produces": ["application/json"],
25041 "paths": {
25042   "/BodyFatFreeMassResURI" : {
25043     "get": {
25044       "description": "This resource describes the properties associated with a person's Body fat
25045 free mass.\nThe unit is a single value that is one of kg, lb or %.\nIf the unit Property is missing
25046 the default is kilograms [kg].\nThe ffm and unit Properties are read-only values that are provided
25047 by the server.\nWhen range (from oic.r.baseresource) is omitted the default is 0 to
25048 +MAXFLOAT.\nRetrieves Body fat free mass of an object.\n",
25049       "parameters": [
25050         { "$ref": "#/parameters/interface" }
25051       ],
25052       "responses": {
25053         "200": {
25054           "description": "",
25055           "x-example":
25056             {
25057               "rt": ["oic.r.body.ffm"],
25058               "id": "unique_example_id",
25059               "ffm": 40,
25060               "units": "kg"
25061             }
25062           ,
25063           "schema": { "$ref": "#/definitions/BodyFatFreeMass" }
25064         }
25065       }
25066     }
25067   }
25068 },
25069 "parameters": {
25070   "interface": {
25071     "in": "query",
25072     "name": "if",
25073     "type": "string",
25074     "enum": ["oic.if.s", "oic.if.baseline"]
25075   }
25076 },
25077 "definitions": {
25078   "BodyFatFreeMass": {
25079     "properties": {
25080       "rt":
25081         {
25082           "description": "Resource Type",
```

```

25083     "items": {
25084         "maxLength": 64,
25085         "type": "string"
25086     },
25087     "minItems": 1,
25088     "readOnly": true,
25089     "type": "array"
25090 },
25091 "ffm" :
25092     {
25093         "description": "Body fat free mass.",
25094         "minimum": 0,
25095         "readOnly": true,
25096         "type": "number"
25097     },
25098 },
25099 "value" :
25100     {
25101         "anyOf": [
25102             {
25103                 "type": "array"
25104             },
25105             {
25106                 "type": "string"
25107             },
25108             {
25109                 "type": "boolean"
25110             },
25111             {
25112                 "type": "integer"
25113             },
25114             {
25115                 "type": "number"
25116             },
25117             {
25118                 "type": "object"
25119             }
25120         ],
25121     },
25122     "description": "The value sensed or actuated by this Resource"
25123 },
25124 "n" :
25125     {
25126         "description": "Friendly name of the resource",
25127         "maxLength": 64,
25128         "readOnly": true,
25129         "type": "string"
25130     },
25131 },
25132 "units" :
25133     {
25134         "description": "Body fat free mass units",
25135         "enum": [
25136             "kg",
25137             "lb",
25138             "%"
25139         ],
25140         "readOnly": true,
25141         "type": "string"
25142     },
25143 },
25144 "range" :
25145     {
25146         "description": "The valid range for the value Property",
25147         "items": {
25148             "anyOf": [
25149                 {
25150                     "type": "number"
25151                 },
25152             ],
25153         }

```

```

25154         "type": "integer"
25155     }
25156     ]
25157 },
25158 "maxItems": 2,
25159 "minItems": 2,
25160 "readOnly": true,
25161 "type": "array"
25162 },
25163
25164 "precision" :
25165 {
25166     "description": "Accuracy granularity of the exposed value",
25167     "readOnly": true,
25168     "type": "number"
25169 },
25170
25171 "step" :
25172 {
25173     "anyOf": [
25174     {
25175         "type": "integer"
25176     },
25177     {
25178         "type": "number"
25179     }
25180     ],
25181     "description": "Step value across the defined range",
25182     "readOnly": true
25183 },
25184
25185 "id" :
25186 {
25187     "description": "Instance ID of this specific resource",
25188     "maxLength": 64,
25189     "readOnly": true,
25190     "type": "string"
25191 },
25192
25193 "if" :
25194 {
25195     "description": "The interface set supported by this resource",
25196     "items": {
25197         "enum": [
25198             "oic.if.baseline",
25199             "oic.if.ll",
25200             "oic.if.b",
25201             "oic.if.lb",
25202             "oic.if.rw",
25203             "oic.if.r",
25204             "oic.if.a",
25205             "oic.if.s"
25206         ],
25207         "type": "string"
25208     },
25209     "minItems": 1,
25210     "readOnly": true,
25211     "type": "array"
25212 }
25213
25214 }
25215 , "type" : "object"
25216 , "required": ["ffm"]
25217 }
25218 }
25219 }
25220

```

25221

B.21.5 Property Definition

25222

Table 279 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
if	array: see schema	No	Read Only	The interface set supported by this resource
ffm	number	Yes	Read Only	Body fat free mass.
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
id	string	No	Read Only	Instance ID of this specific resource
range	array: see schema	No	Read Only	The valid range for the value Property
precision	number	No	Read Only	Accuracy granularity of the exposed value
units	string	No	Read Only	Body fat free mass units
n	string	No	Read Only	Friendly name of the resource

25223

B.21.6 CRUDN behaviour

25224

Table 280 The CRUDN operations of the resource

Resource	Create	Read	Update	Delete	Notify
/BodyFatFreeMassResURI		get			observe

25225

B.22 Body Location

25226

B.22.1 Introduction

25227

This resource describes the properties associated with Body location of a person.

25228

The bloc Property is a read-only value that is provided by the server.

25229

25230 **B.22.2 Example URI**

25231 /BodyLocationResURI

25232 **B.22.3 Resource Type**

25233 The resource type (rt) is defined as: ['oic.r.body.location'].

25234 **B.22.4 Swagger2.0 Definition**

```
25235 {
25236   "swagger": "2.0",
25237   "info": {
25238     "title": "Body Location",
25239     "version": "v1.1.0-20160519",
25240     "license": {
25241       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
25242       "x-description": "Redistribution and use in source and binary forms, with or without
25243 modification, are permitted provided that the following conditions are met:\n      1.
25244 Redistributions of source code must retain the above copyright notice, this list of conditions and
25245 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
25246 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
25247 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
25248 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
25249 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
25250 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
25251 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
25252 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
25253 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
25254 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
25255 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
25256 OF SUCH DAMAGE.\n"
25257     }
25258   },
25259   "schemes": ["http"],
25260   "consumes": ["application/json"],
25261   "produces": ["application/json"],
25262   "paths": {
25263     "/BodyLocationResURI" : {
25264       "get": {
25265         "description": "This resource describes the properties associated with Body location of a
25266 person.\nThe bloc Property is a read-only value that is provided by the server.\nRetrieves Body
25267 location of a person.\n",
25268         "parameters": [
25269           { "$ref": "#/parameters/interface" }
25270         ],
25271         "responses": {
25272           "200": {
25273             "description": "",
25274             "x-example":
25275             {
25276               "rt": ["oic.r.body.location"],
25277               "id": "unique_example_id",
25278               "bloc": "axillary"
25279             }
25280           },
25281           "schema": { "$ref": "#/definitions/BodyLocation" }
25282         }
25283       }
25284     }
25285   },
25286   "parameters": {
25287     "interface" : {
25288       "in" : "query",
25289       "name" : "if",
25290       "type" : "string",
25291       "enum" : ["oic.if.s", "oic.if.baseline"]
25292     }
25293   },
25294   "definitions": {
25295     "BodyLocation" : {
25296
```

```

25297 "properties": {
25298   "rt" :
25299     {
25300       "description": "Resource Type",
25301       "items": {
25302         "maxLength": 64,
25303         "type": "string"
25304       },
25305       "minItems": 1,
25306       "readOnly": true,
25307       "type": "array"
25308     },
25309
25310   "precision" :
25311     {
25312       "description": "Accuracy granularity of the exposed value",
25313       "readOnly": true,
25314       "type": "number"
25315     },
25316
25317   "value" :
25318     {
25319       "anyOf": [
25320         {
25321           "type": "array"
25322         },
25323         {
25324           "type": "string"
25325         },
25326         {
25327           "type": "boolean"
25328         },
25329         {
25330           "type": "integer"
25331         },
25332         {
25333           "type": "number"
25334         },
25335         {
25336           "type": "object"
25337         }
25338       ],
25339       "description": "The value sensed or actuated by this Resource"
25340     },
25341
25342   "n" :
25343     {
25344       "description": "Friendly name of the resource",
25345       "maxLength": 64,
25346       "readOnly": true,
25347       "type": "string"
25348     },
25349
25350   "range" :
25351     {
25352       "description": "The valid range for the value Property",
25353       "items": {
25354         "anyOf": [
25355           {
25356             "type": "number"
25357           },
25358           {
25359             "type": "integer"
25360           }
25361         ]
25362       },
25363       "maxItems": 2,
25364       "minItems": 2,
25365       "readOnly": true,
25366       "type": "array"
25367     },

```

```

25368
25369     "bloc" :
25370     {
25371         "description": "A list of all potential body locations",
25372         "enum": [
25373             "axillary",
25374             "body",
25375             "ear",
25376             "finger",
25377             "gitract",
25378             "mouth",
25379             "rectum",
25380             "toe",
25381             "tympanum"
25382         ],
25383         "readOnly": true,
25384         "type": "string"
25385     },
25386
25387     "step" :
25388     {
25389         "anyOf": [
25390             {
25391                 "type": "integer"
25392             },
25393             {
25394                 "type": "number"
25395             }
25396         ],
25397         "description": "Step value across the defined range",
25398         "readOnly": true
25399     },
25400
25401     "id" :
25402     {
25403         "description": "Instance ID of this specific resource",
25404         "maxLength": 64,
25405         "readOnly": true,
25406         "type": "string"
25407     },
25408
25409     "if" :
25410     {
25411         "description": "The interface set supported by this resource",
25412         "items": {
25413             "enum": [
25414                 "oic.if.baseline",
25415                 "oic.if.ll",
25416                 "oic.if.b",
25417                 "oic.if.lb",
25418                 "oic.if.rw",
25419                 "oic.if.r",
25420                 "oic.if.a",
25421                 "oic.if.s"
25422             ],
25423             "type": "string"
25424         },
25425         "minItems": 1,
25426         "readOnly": true,
25427         "type": "array"
25428     }
25429
25430     },
25431     "type" : "object"
25432 }
25433 }
25434 }
25435

```

25436
25437

B.22.5 Property Definition

Table 281 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
precision	number		Read Only	Accuracy granularity of the exposed value
rt	array: see schema		Read Only	Resource Type
step	multiple types: see schema		Read Only	Step value across the defined range
value	multiple types: see schema		Read Write	The value sensed or actuated by this Resource
id	string		Read Only	Instance ID of this specific resource
if	array: see schema		Read Only	The interface set supported by this resource
bloc	string		Read Only	A list of all potential body locations
n	string		Read Only	Friendly name of the resource
range	array: see schema		Read Only	The valid range for the value Property

25438
25439

B.22.6 CRUDN behaviour

Table 282 The CRUDN operations of the resource

Resource	Create	Read	Update	Delete	Notify
/BodyLocationResURI		get			observe

25440

B.23 Body Location Temperature

25441

B.23.1 Introduction

25442 This resource describes the properties associated with Body location for temperature
25443 measurement of a person.

25444 The bloc Property is a read-only value that is provided by the server.

25445

25446

B.23.2 Example URI

25447 /BodyLocationTemperatureResURI

25448 **B.23.3 Resource Type**

25449 The resource type (rt) is defined as: ['oic.r.body.location.temperature'].

25450 **B.23.4 Swagger2.0 Definition**

```
25451 {
25452   "swagger": "2.0",
25453   "info": {
25454     "title": "Body Location Temperature",
25455     "version": "v1.1.0-20160519",
25456     "license": {
25457       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
25458       "x-description": "Redistribution and use in source and binary forms, with or without
25459 modification, are permitted provided that the following conditions are met:\n      1.
25460 Redistributions of source code must retain the above copyright notice, this list of conditions and
25461 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
25462 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
25463 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
25464 Connectivity Foundation, INC. \ "AS IS\ " AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
25465 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
25466 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
25467 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
25468 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
25469 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
25470 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
25471 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
25472 OF SUCH DAMAGE.\n"
25473     }
25474   },
25475   "schemes": ["http"],
25476   "consumes": ["application/json"],
25477   "produces": ["application/json"],
25478   "paths": {
25479     "/BodyLocationTemperatureResURI" : {
25480       "get": {
25481         "description": "This resource describes the properties associated with Body location for
25482 temperature measurement of a person.\nThe bloc Property is a read-only value that is provided by
25483 the server.\nRetrieves Body location for temperature measurement of a person.\n",
25484         "parameters": [
25485           { "$ref": "#/parameters/interface" }
25486         ],
25487         "responses": {
25488           "200": {
25489             "description": "",
25490             "x-example":
25491               {
25492                 "rt": ["oic.r.body.location.temperature"],
25493                 "id": "unique_example_id",
25494                 "bloc": "ear"
25495               }
25496           },
25497           "schema": { "$ref": "#/definitions/BodyLocationTemperature" }
25498         }
25499       }
25500     }
25501   },
25502   },
25503   "parameters": {
25504     "interface" : {
25505       "in" : "query",
25506       "name" : "if",
25507       "type" : "string",
25508       "enum" : ["oic.if.s", "oic.if.baseline"]
25509     }
25510   },
25511   "definitions": {
25512     "BodyLocationTemperature" : {
25513       "properties": {
25514         "rt" :
25515           {
25516             "description": "Resource Type",
```

```

25517         "items": {
25518             "maxLength": 64,
25519             "type": "string"
25520         },
25521         "minItems": 1,
25522         "readOnly": true,
25523         "type": "array"
25524     },
25525
25526     "precision" :
25527     {
25528         "description": "Accuracy granularity of the exposed value",
25529         "readOnly": true,
25530         "type": "number"
25531     },
25532
25533     "value" :
25534     {
25535         "anyOf": [
25536             {
25537                 "type": "array"
25538             },
25539             {
25540                 "type": "string"
25541             },
25542             {
25543                 "type": "boolean"
25544             },
25545             {
25546                 "type": "integer"
25547             },
25548             {
25549                 "type": "number"
25550             },
25551             {
25552                 "type": "object"
25553             }
25554         ],
25555         "description": "The value sensed or actuated by this Resource"
25556     },
25557
25558     "n" :
25559     {
25560         "description": "Friendly name of the resource",
25561         "maxLength": 64,
25562         "readOnly": true,
25563         "type": "string"
25564     },
25565
25566     "range" :
25567     {
25568         "description": "The valid range for the value Property",
25569         "items": {
25570             "anyOf": [
25571                 {
25572                     "type": "number"
25573                 },
25574                 {
25575                     "type": "integer"
25576                 }
25577             ]
25578         },
25579         "maxItems": 2,
25580         "minItems": 2,
25581         "readOnly": true,
25582         "type": "array"
25583     },
25584
25585     "bloc" :
25586     {
25587         "description": "A list specific to temperature site",

```

```

25588     "enum": [
25589         "axillary",
25590         "body",
25591         "ear",
25592         "finger",
25593         "gitract",
25594         "mouth",
25595         "rectum",
25596         "toe",
25597         "tympanum"
25598     ],
25599     "readOnly": true,
25600     "type": "string"
25601 },
25602
25603     "step" :
25604     {
25605         "anyOf": [
25606             {
25607                 "type": "integer"
25608             },
25609             {
25610                 "type": "number"
25611             }
25612         ],
25613         "description": "Step value across the defined range",
25614         "readOnly": true
25615     },
25616
25617     "id" :
25618     {
25619         "description": "Instance ID of this specific resource",
25620         "maxLength": 64,
25621         "readOnly": true,
25622         "type": "string"
25623     },
25624
25625     "if" :
25626     {
25627         "description": "The interface set supported by this resource",
25628         "items": {
25629             "enum": [
25630                 "oic.if.baseline",
25631                 "oic.if.ll",
25632                 "oic.if.b",
25633                 "oic.if.lb",
25634                 "oic.if.rw",
25635                 "oic.if.r",
25636                 "oic.if.a",
25637                 "oic.if.s"
25638             ],
25639             "type": "string"
25640         },
25641         "minItems": 1,
25642         "readOnly": true,
25643         "type": "array"
25644     }
25645
25646     },
25647     "type" : "object"
25648     , "required": ["bloc"]
25649 }
25650 }
25651 }
25652

```

25653 B.23.5 Property Definition

25654 **Table 283** The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
---------------	------------	-----------	-------------	-------------

precision	number	No	Read Only	Accuracy granularity of the exposed value
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
n	string	No	Read Only	Friendly name of the resource
id	string	No	Read Only	Instance ID of this specific resource
if	array: see schema	No	Read Only	The interface set supported by this resource
rt	array: see schema	No	Read Only	Resource Type
bloc	string	Yes	Read Only	A list specific to temperature site
step	multiple types: see schema	No	Read Only	Step value across the defined range
range	array: see schema	No	Read Only	The valid range for the value Property

25655 **B.23.6 CRUDN behaviour**

25656 **Table 284 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/BodyLocationTemperatureResURI		get			observe

25657 **B.24 Body Scale Atomic Measurement**

25658 **B.24.1 Introduction**

25659 This resource describes the properties associated with Body Scale.
 25660 The resource is an atomic measurement of Weight (oic.r.weight), Body Mass Index (BMI)
 25661 (oic.r.bmi), Height (oic.r.height), Body Fat (oic.r.body.fat), Body Water (oic.r.body.water), Body
 25662 Soft Lean Mass (oic.r.body.slm), Body Fat Free Mass (oic.r.body.ffm), Observed time
 25663 (oic.r.time.stamp), and User ID (oic.r.userid).
 25664

25665 **B.24.2 Example URI**

25666 /BodyScaleAMResURI

25667 **B.24.3 Resource Type**

25668 The resource type (rt) is defined as: ['oic.r.bodyscale-am']

25669 **B.24.4 Swagger2.0 Definition**

```
25670 {
25671   "swagger": "2.0",
25672   "info": {
25673     "title": "Body Scale Atomic Measurement Linked List Representation",
25674     "version": "v1.1.0-20160519",
25675     "license": {
25676       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
25677       "x-description": "Redistribution and use in source and binary forms, with or without
25678 modification, are permitted provided that the following conditions are met:\n      1.
25679 Redistributions of source code must retain the above copyright notice, this list of conditions and
25680 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
25681 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
25682 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
25683 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
25684 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
25685 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
25686 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
25687 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
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25689 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
25690 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
25691 OF SUCH DAMAGE.\n"
25692     }
25693   },
25694   "schemes": ["http"],
25695   "consumes": ["application/json"],
25696   "produces": ["application/json"],
25697   "paths": {
25698     "/BodyScaleAMResURI?if=oic.if.ll" : {
25699       "get": {
25700         "description": "This resource describes the properties associated with Body Scale.\n\nThe
25701 resource is an atomic measurement of Weight (oic.r.weight), Body Mass Index (BMI) (oic.r.bmi),
25702 Height (oic.r.height), Body Fat (oic.r.body.fat), Body Water (oic.r.body.water), Body Soft Lean
25703 Mass (oic.r.body.slm), Body Fat Free Mass (oic.r.body ffm), Observed time (oic.r.time.stamp), and
25704 User ID (oic.r.userid).\n\nRetrieves the current weight.\n",
25705         "parameters": [
25706           { "$ref": "#/parameters/interface-ll" }
25707         ],
25708         "responses": {
25709           "200": {
25710             "description": "",
25711             "x-example":
25712             [
25713               {
25714                 "href": "/myWeightResURI",
25715                 "rt": ["oic.r.weight"],
25716                 "if": ["oic.if.s", "oic.if.baseline"]
25717               },
25718               {
25719                 "href": "/myBMIResURI",
25720                 "rt": ["oic.r.bmi"],
25721                 "if": ["oic.if.s", "oic.if.baseline"]
25722               }
25723             ]
25724           },
25725           "schema": { "$ref": "#/definitions/links" }
25726         }
25727       }
25728     },
25729     "/BodyScaleAMResURI?if=oic.if.baseline" : {
25730       "get": {
25731         "description": "This resource describes the properties associated with Body Scale.\n\nThe
25732 resource is an atomic measurement of Weight (oic.r.weight), Body Mass Index (BMI) (oic.r.bmi),
25733 Height (oic.r.height), Body Fat (oic.r.body.fat), Body Water (oic.r.body.water), Body Soft Lean
25734 Mass (oic.r.body.slm), Body Fat Free Mass (oic.r.body ffm), Observed time (oic.r.time.stamp), and
25735 User ID (oic.r.userid).\n\nRetrieves the current weight.\n",
25736         "parameters": [
25737           { "$ref": "#/parameters/interface-baseline" }
25738         ]
25739       }
25740     }
25741   }
25742 }
```

```

25739 ],
25740 "responses": {
25741   "200": {
25742     "description": "",
25743     "x-example":
25744       {
25745         "rt": ["oic.r.bodyscale-am", "oic.wk.atomicmeasurement"],
25746         "if": ["oic.if.b", "oic.if.ll", "oic.if.baseline"],
25747         "rts": ["oic.r.weight", "oic.r.bmi"],
25748         "rts-m": ["oic.r.weight"],
25749         "links": [
25750           {
25751             "href": "/myWeightResURI",
25752             "rt": ["oic.r.weight"],
25753             "if": ["oic.if.s", "oic.if.baseline"]
25754           },
25755           {
25756             "href": "/myBMIResURI",
25757             "rt": ["oic.r.bmi"],
25758             "if": ["oic.if.s", "oic.if.baseline"]
25759           }
25760         ]
25761       }
25762     ,
25763     "schema": { "$ref": "#/definitions/baseline" }
25764   }
25765 }
25766 },
25767 "/BodyScaleAMResURI?if=oic.if.b" : {
25768   "get": {
25769     "description": "This resource describes the properties associated with Body Scale.\nThe
25770 resource is an atomic measurement of Weight (oic.r.weight), Body Mass Index (BMI) (oic.r.bmi),
25771 Height (oic.r.height), Body Fat (oic.r.body.fat), Body Water (oic.r.body.water), Body Soft Lean
25772 Mass (oic.r.body.slm), Body Fat Free Mass (oic.r.body.ffm), Observed time (oic.r.time.stamp), and
25773 User ID (oic.r.userid).\nRetrieves the current weight.\n",
25774     "parameters": [
25775       { "$ref": "#/parameters/interface-b" }
25776     ],
25777     "responses": {
25778       "200": {
25779         "description": "",
25780         "x-example":
25781           [
25782             {
25783               "href": "/myWeightResURI",
25784               "rep":
25785                 {
25786                   "weight": 80,
25787                   "units": "kg"
25788                 }
25789             },
25790             {
25791               "href": "/myBMIResURI",
25792               "rep":
25793                 {
25794                   "bmi": 20
25795                 }
25796             }
25797           ]
25798         ,
25799         "schema": { "$ref": "#/definitions/batch-retrieve" }
25800       }
25801     }
25802   }
25803 },
25804 },
25805 },
25806 "parameters": {
25807   "interface-11" : {
25808     "in" : "query",
25809     "name" : "if",

```

```

25810         "type" : "string",
25811         "enum" : ["oic.if.ll"]
25812     },
25813     "interface-b" : {
25814         "in" : "query",
25815         "name" : "if",
25816         "type" : "string",
25817         "enum" : ["oic.if.b"]
25818     },
25819     "interface-baseline" : {
25820         "in" : "query",
25821         "name" : "if",
25822         "type" : "string",
25823         "enum" : ["oic.if.baseline"]
25824     },
25825     "interface-all" : {
25826         "in" : "query",
25827         "name" : "if",
25828         "type" : "string",
25829         "enum" : ["oic.if.b", "oic.if.ll", "oic.if.baseline"]
25830     }
25831 },
25832 "definitions": {
25833     "links" : {
25834         "type" :
25835             "array"
25836
25837         , "items" :
25838             {
25839                 "$ref": "#/definitions/oic.oic-link"
25840             }
25841     }
25842 },
25843 'baseline" : {
25844     "properties": {
25845         "rt" :
25846             {
25847                 "items": {
25848                     "enum": [
25849                         "oic.r.bodyscale-am",
25850                         "oic.wk.atomicmeasurement"
25851                     ]
25852                 },
25853                 "maxItems": 2,
25854                 "minItems": 2,
25855                 "type": "array",
25856                 "uniqueItems": true
25857             },
25858     },
25859     "links" :
25860         {
25861             "description": "A set of simple or individual OIC Links.",
25862             "items": {
25863                 "properties": {
25864                     "anchor": {
25865                         "description": "This is used to override the context URI e.g. override the URI of
25866 the containing collection.",
25867                         "format": "uri",
25868                         "maxLength": 256,
25869                         "type": "string"
25870                     },
25871                     "di": {
25872                         "description": "The Device ID formatted according to IETF RFC 4122.",
25873                         "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
25874 9]{12}$",
25875                         "type": "string"
25876                     },
25877                     "eps": {
25878                         "description": "the Endpoint information of the target Resource",
25879                         "items": {
25880

```

```

25881         "properties": {
25882             "ep": {
25883                 "description": "Transport Protocol Suite + Endpoint Locator",
25884                 "format": "uri",
25885                 "type": "string"
25886             },
25887             "pri": {
25888                 "description": "The priority among multiple Endpoints",
25889                 "minimum": 1,
25890                 "type": "integer"
25891             }
25892         },
25893         "type": "object"
25894     },
25895     "type": "array"
25896 },
25897 "href": {
25898     "description": "This is the target URI, it can be specified as a Relative Reference
or fully-qualified URI.",
25899     "format": "uri",
25900     "maxLength": 256,
25901     "type": "string"
25902 },
25903 "if": {
25904     "description": "The interface set supported by this resource",
25905     "items": {
25906         "enum": [
25907             "oic.if.baseline",
25908             "oic.if.ll",
25909             "oic.if.b",
25910             "oic.if.rw",
25911             "oic.if.r",
25912             "oic.if.a",
25913             "oic.if.s"
25914         ],
25915         "type": "string"
25916     },
25917     "minItems": 1,
25918     "type": "array"
25919 },
25920 "ins": {
25921     "description": "The instance identifier for this web link in an array of web links
- used in collections",
25922     "type": "integer"
25923 },
25924 "p": {
25925     "description": "Specifies the framework policies on the Resource referenced by the
target URI",
25926     "properties": {
25927         "bm": {
25928             "description": "Specifies the framework policies on the Resource referenced by
the target URI for e.g. observable and discoverable",
25929             "type": "integer"
25930         }
25931     },
25932     "required": [
25933         "bm"
25934     ],
25935     "type": "object"
25936 },
25937 "rel": {
25938     "description": "The relation of the target URI referenced by the link to the
context URI",
25939     "oneOf": [
25940         {
25941             "default": [
25942                 "hosts"
25943             ],
25944             "items": {
25945                 "maxLength": 64,
25946                 "type": "string"
25947             }
25948         }
25949     ]
25950 }
25951

```



```

25952         },
25953         "minItems": 1,
25954         "type": "array"
25955     },
25956     {
25957         "default": "hosts",
25958         "maxLength": 64,
25959         "type": "string"
25960     }
25961 ]
25962 },
25963 "rt": {
25964     "description": "Resource Type of the Resource",
25965     "items": {
25966         "maxLength": 64,
25967         "type": "string"
25968     },
25969     "minItems": 1,
25970     "type": "array"
25971 },
25972 "title": {
25973     "description": "A title for the link relation. Can be used by the UI to provide a
25974 context.",
25975     "maxLength": 64,
25976     "type": "string"
25977 },
25978 "type": {
25979     "default": "application/cbor",
25980     "description": "A hint at the representation of the resource referenced by the
25981 target URI. This represents the media types that are used for both accepting and emitting.",
25982     "items": {
25983         "maxLength": 64,
25984         "type": "string"
25985     },
25986     "minItems": 1,
25987     "type": "array"
25988 }
25989 },
25990 "required": [
25991     "href",
25992     "rt",
25993     "if"
25994 ],
25995 "type": "object"
25996 },
25997 "type": "array"
25998 },
26000 "n" :
26001 {
26002     "description": "Friendly name of the resource",
26003     "maxLength": 64,
26004     "readOnly": true,
26005     "type": "string"
26006 },
26007
26008 "rts" :
26009 {
26010     "description": "This contains all possible resource types for this atomic measurement.",
26011     "items": {
26012         "enum": [
26013             "oic.r.weight",
26014             "oic.r.bmi",
26015             "oic.r.height",
26016             "oic.r.body.fat",
26017             "oic.r.body.water",
26018             "oic.r.body.slm",
26019             "oic.r.body.ffmpeg",
26020             "oic.r.time.stamp",
26021             "oic.r.userid"
26022 ]

```

```

26023     },
26024     "minItems": 1,
26025     "type": "array",
26026     "uniqueItems": true
26027 },
26028
26029 "id" :
26030     {
26031     "description": "Instance ID of this specific resource",
26032     "maxLength": 64,
26033     "readOnly": true,
26034     "type": "string"
26035     },
26036
26037 "rts-m" :
26038     {
26039     "description": "This contains all mandatory resource types for this atomic measurement.",
26040     "items": {
26041     "enum": [
26042     "oic.r.weight"
26043     ]
26044     },
26045     "maxItems": 1,
26046     "minItems": 1,
26047     "type": "array",
26048     "uniqueItems": true
26049     },
26050
26051 "if" :
26052     {
26053     "description": "The interface set supported by this resource",
26054     "items": {
26055     "enum": [
26056     "oic.if.baseline",
26057     "oic.if.ll",
26058     "oic.if.b",
26059     "oic.if.lb",
26060     "oic.if.rw",
26061     "oic.if.r",
26062     "oic.if.a",
26063     "oic.if.s"
26064     ],
26065     "type": "string"
26066     },
26067     "minItems": 1,
26068     "readOnly": true,
26069     "type": "array"
26070     }
26071 }
26072 }
26073 , "type" : "object"
26074 , "required": ["rts-m"]
26075 }
26076 ,
26077 "batch-retrieve" : {
26078     "title" :
26079     "Collection Batch Retrieve Format"
26080
26081     , "minItems" :
26082     1
26083
26084     , "items" :
26085     {
26086     "additionalProperties": true,
26087     "properties": {
26088     "href": {
26089     "description": "URI of the target resource relative assuming the collection URI as
26090 anchor",
26091     "type": "string"
26092     },
26093     "rep": {

```

```

26094         "oneOf": [
26095             {
26096                 "description": "The response payload from a single resource",
26097                 "type": "object"
26098             },
26099             {
26100                 "description": " The response payload from a collection (batch) resource",
26101                 "type": "array"
26102             }
26103         ]
26104     },
26105     "required": [
26106         "href",
26107         "rep"
26108     ],
26109     "type": "object"
26110 }
26111
26112 , "type" :
26113     "array"
26114 }
26115
26116 , "oic.oic-link" :
26117     {
26118         "properties": {
26119             "anchor": {
26120                 "description": "This is used to override the context URI e.g. override the URI of the
26121 containing collection.",
26122                 "format": "uri",
26123                 "maxLength": 256,
26124                 "type": "string"
26125             },
26126             "di": {
26127                 "description": "The Device ID formatted according to IETF RFC 4122.",
26128                 "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
26129 9]{12}$",
26130                 "type": "string"
26131             },
26132             "eps": {
26133                 "description": "the Endpoint information of the target Resource",
26134                 "items": {
26135                     "properties": {
26136                         "ep": {
26137                             "description": "Transport Protocol Suite + Endpoint Locator",
26138                             "format": "uri",
26139                             "type": "string"
26140                         },
26141                         "pri": {
26142                             "description": "The priority among multiple Endpoints",
26143                             "minimum": 1,
26144                             "type": "integer"
26145                         }
26146                     }
26147                 },
26148                 "type": "object"
26149             },
26150             "type": "array"
26151         },
26152         "href": {
26153             "description": "This is the target URI, it can be specified as a Relative Reference or
26154 fully-qualified URI.",
26155             "format": "uri",
26156             "maxLength": 256,
26157             "type": "string"
26158         },
26159         "if": {
26160             "description": "The interface set supported by this resource",
26161             "items": {
26162                 "enum": [
26163                     "oic.if.baseline",
26164                     "oic.if.ll",

```

```

26165         "oic.if.b",
26166         "oic.if.rw",
26167         "oic.if.r",
26168         "oic.if.a",
26169         "oic.if.s"
26170     ],
26171     "type": "string"
26172 },
26173 "minItems": 1,
26174 "type": "array"
26175 },
26176 "ins": {
26177     "description": "The instance identifier for this web link in an array of web links - used
in collections",
26178     "type": "integer"
26179 },
26180 "p": {
26181     "description": "Specifies the framework policies on the Resource referenced by the target
URI",
26182     "properties": {
26183         "bm": {
26184             "description": "Specifies the framework policies on the Resource referenced by the
target URI for e.g. observable and discoverable",
26185             "type": "integer"
26186         }
26187     },
26188     "required": [
26189         "bm"
26190     ],
26191     "type": "object"
26192 },
26193 "rel": {
26194     "description": "The relation of the target URI referenced by the link to the context
URI",
26195     "oneOf": [
26196         {
26197             "default": [
26198                 "hosts"
26199             ],
26200             "items": {
26201                 "maxLength": 64,
26202                 "type": "string"
26203             },
26204             "minItems": 1,
26205             "type": "array"
26206         },
26207         {
26208             "default": "hosts",
26209             "maxLength": 64,
26210             "type": "string"
26211         }
26212     ]
26213 },
26214 "rt": {
26215     "description": "Resource Type of the Resource",
26216     "items": {
26217         "maxLength": 64,
26218         "type": "string"
26219     },
26220     "minItems": 1,
26221     "type": "array"
26222 },
26223 "title": {
26224     "description": "A title for the link relation. Can be used by the UI to provide a
context.",
26225     "maxLength": 64,
26226     "type": "string"
26227 },
26228 "type": {
26229     "default": "application/cbor",
26230     "description": "A hint at the representation of the resource referenced by the target
26231
26232
26233
26234
26235

```

```

26236 URI. This represents the media types that are used for both accepting and emitting.",
26237     "items": {
26238         "maxLength": 64,
26239         "type": "string"
26240     },
26241     "minItems": 1,
26242     "type": "array"
26243 },
26244 },
26245 "required": [
26246     "href",
26247     "rt",
26248     "if"
26249 ],
26250 "type": "object"
26251 }
26252 }
26253 }
26254 }
26255

```

26256 B.24.5 Property Definition

26257 **Table 285 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
rep	multiple types: see schema	Yes	Read Write	
href	string	Yes	Read Write	URI of the target resource relative assuming the collection URI as anchor
rt	array: see schema	No	Read Write	
links	array: see schema	No	Read Write	A set of simple or individual OIC Links.
rts	array: see schema	No	Read Write	This contains all possible resource types for this atomic measurement.
id	string	No	Read Only	Instance ID of this specific resource
n	string	No	Read Only	Friendly name of the resource
if	array: see schema	No	Read Only	The interface set supported by this resource
rts-m	array: see schema	Yes	Read Write	This contains all mandatory resource types

				for this atomic measurement.
rt	array: schema see	Yes	Read Write	Resource Type of the Resource
anchor	string	No	Read Write	This is used to override the context URI e.g. override the URI of the containing collection.
di	string	No	Read Write	The Device ID formatted according to IETF RFC 4122.
rel	multiple types: see schema	No	Read Write	The relation of the target URI referenced by the link to the context URI
type	array: schema see	No	Read Write	A hint at the representation of the resource referenced by the target URI. This represents the media types that are used for both accepting and emitting.
p	object: schema see	No	Read Write	Specifies the framework policies on the Resource referenced by the target URI
ins	integer	No	Read Write	The instance identifier for this web link in an array of web links - used in collections
eps	array: schema see	No	Read Write	the Endpoint information of the target Resource
title	string	No	Read Write	

				A title for the link relation. Can be used by the UI to provide a context.
if	array: schema	see	Yes	Read Write
href	string		Yes	Read Write
				This is the target URI, it can be specified as a Relative Reference or fully-qualified URI.

26258 **B.24.6 CRUDN behaviour**

26259 **Table 286 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/BodyScaleAMResURI		get			observe

26260 **B.25 Body Soft Lean Mass**

26261 **B.25.1 Introduction**

26262 This resource describes the properties associated with a person's Body soft lean mass.

26263 The unit is a single value that is one of kg, lb or %.

26264 If the unit Property is missing the default is kilograms [kg].

26265 The slm and unit Properties are read-only values that are provided by the server.

26266 When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.

26267

26268

26269 **B.25.2 Example URI**

26270 /BodySoftLeanMassResURI

26271 **B.25.3 Resource Type**

26272 The resource type (rt) is defined as: ['oic.r.body.slm'].

26273 **B.25.4 Swagger2.0 Definition**

```

26274 {
26275   "swagger": "2.0",
26276   "info": {
26277     "title": "BodySoftLeanMass",
26278     "version": "v1.1.0-20160519",
26279     "license": {
26280       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
26281       "x-description": "Redistribution and use in source and binary forms, with or without
26282 modification, are permitted provided that the following conditions are met:\n
26283 1.
26284 Redistributions of source code must retain the above copyright notice, this list of conditions and
26285 the following disclaimer.\n
26286 2. Redistributions in binary form must reproduce the above
26287 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
26288 other materials provided with the distribution.\n\n
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26293 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
26294 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
26295 OF SUCH DAMAGE.\n"
26296     }
26297   },
26298   "schemes": ["http"],
26299   "consumes": ["application/json"],
26300   "produces": ["application/json"],
26301   "paths": {
26302     "/BodySoftLeanMassResURI" : {
26303       "get": {
26304         "description": "This resource describes the properties associated with a person's Body soft
26305 lean mass.\nThe unit is a single value that is one of kg, lb or %.\nIf the unit Property is missing
26306 the default is kilograms [kg].\nThe slm and unit Properties are read-only values that are provided
26307 by the server.\nWhen range (from oic.r.baseresource) is omitted the default is 0 to
26308 +MAXFLOAT.\nRetrieves Body soft lean mass of an object.\n",
26309         "parameters": [
26310           { "$ref": "#/parameters/interface" }
26311         ],
26312         "responses": {
26313           "200": {
26314             "description": "",
26315             "x-example":
26316               {
26317                 "rt": ["oic.r.body.slm"],
26318                 "id": "unique_example_id",
26319                 "slm": 20,
26320                 "units": "kg"
26321               }
26322           },
26323           "schema": { "$ref": "#/definitions/BodySoftLeanMass" }
26324         }
26325       }
26326     }
26327   }
26328 },
26329 "parameters": {
26330   "interface": {
26331     "in": "query",
26332     "name": "if",
26333     "type": "string",
26334     "enum": ["oic.if.s", "oic.if.baseline"]
26335   }
26336 },
26337 "definitions": {
26338   "BodySoftLeanMass": {
26339     "properties": {
26340       "rt":
26341         {
26342           "description": "Resource Type",
26343           "items": {
26344             "maxLength": 64,
26345             "type": "string"
26346           },
26347           "minItems": 1,
26348           "readOnly": true,
26349           "type": "array"
26350         },
26351       "units":
26352         {
26353           "description": "Body soft lean mass units",
26354           "enum": [
26355             "kg",
26356             "lb",
26357             "%"
26358           ],
26359           "readOnly": true,
26360           "type": "string"
26361         }
26362     },

```



```

26363
26364     "precision" :
26365         {
26366             "description": "Accuracy granularity of the exposed value",
26367             "readOnly": true,
26368             "type": "number"
26369         },
26370
26371     "value" :
26372         {
26373             "anyOf": [
26374                 {
26375                     "type": "array"
26376                 },
26377                 {
26378                     "type": "string"
26379                 },
26380                 {
26381                     "type": "boolean"
26382                 },
26383                 {
26384                     "type": "integer"
26385                 },
26386                 {
26387                     "type": "number"
26388                 },
26389                 {
26390                     "type": "object"
26391                 }
26392             ],
26393             "description": "The value sensed or actuated by this Resource"
26394         },
26395
26396     "n" :
26397         {
26398             "description": "Friendly name of the resource",
26399             "maxLength": 64,
26400             "readOnly": true,
26401             "type": "string"
26402         },
26403
26404     "slm" :
26405         {
26406             "description": "Body soft lean mass.",
26407             "minimum": 0,
26408             "readOnly": true,
26409             "type": "number"
26410         },
26411
26412     "range" :
26413         {
26414             "description": "The valid range for the value Property",
26415             "items": {
26416                 "anyOf": [
26417                     {
26418                         "type": "number"
26419                     },
26420                     {
26421                         "type": "integer"
26422                     }
26423                 ]
26424             },
26425             "maxItems": 2,
26426             "minItems": 2,
26427             "readOnly": true,
26428             "type": "array"
26429         },
26430
26431     "step" :
26432         {
26433             "anyOf": [

```

```

26434         {
26435             "type": "integer"
26436         },
26437         {
26438             "type": "number"
26439         }
26440     ],
26441     "description": "Step value across the defined range",
26442     "readOnly": true
26443 },
26444 "id" :
26445     {
26446         "description": "Instance ID of this specific resource",
26447         "maxLength": 64,
26448         "readOnly": true,
26449         "type": "string"
26450     },
26451 "if" :
26452     {
26453         "description": "The interface set supported by this resource",
26454         "items": {
26455             "enum": [
26456                 "oic.if.baseline",
26457                 "oic.if.ll",
26458                 "oic.if.b",
26459                 "oic.if.lb",
26460                 "oic.if.rw",
26461                 "oic.if.r",
26462                 "oic.if.a",
26463                 "oic.if.s"
26464             ],
26465             "type": "string"
26466         },
26467         "minItems": 1,
26468         "readOnly": true,
26469         "type": "array"
26470     }
26471 },
26472 "type" : "object"
26473 , "required": ["slm"]
26474 }
26475 }
26476 }
26477 }
26478 }
26479 }
26480 }

```

B.25.5 Property Definition

Table 287 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
id	string	No	Read Only	Instance ID of this specific resource
if	array: see schema	No	Read Only	The interface set supported by this resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
range	array: see schema	No	Read Only	

				The valid range for the value Property
units	string	No	Read Only	Body soft lean mass units
rt	array: see schema	No	Read Only	Resource Type
precision	number	No	Read Only	Accuracy granularity of the exposed value
slm	number	Yes	Read Only	Body soft lean mass.
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
n	string	No	Read Only	Friendly name of the resource

26483 **B.25.6 CRUDN behaviour**

26484 **Table 288 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/BodySoftLeanMassResURI		get			observe

26485 **B.26 Body Thermometer Atomic Measurement**

26486 **B.26.1 Introduction**

26487 This resource describes the properties associated with body thermometer.
 26488 The resource is an atomic measurement of temperature (oic.r.temperature), body location for
 26489 temperature (oic.r.body.location.temperature), observed time (oic.r.time.stamp), and user ID
 26490 (oic.r.userid).
 26491

26492 **B.26.2 Example URI**

26493 /BodyThermometerAMResURI

26494 **B.26.3 Resource Type**

26495 The resource type (rt) is defined as: ['oic.r.bodythermometer-am']

26496 **B.26.4 Swagger2.0 Definition**

```

26497 {
26498   "swagger": "2.0",
26499   "info": {
26500     "title": "Body Thermometer Atomic Measurement Batch Representation",
26501     "version": "v1.1.0-20160519",
26502     "license": {
26503       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
26504       "x-description": "Redistribution and use in source and binary forms, with or without
26505 modification, are permitted provided that the following conditions are met:\n      1.
26506 Redistributions of source code must retain the above copyright notice, this list of conditions and
26507 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
26508 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
  
```

```

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26516 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
26517 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
26518 OF SUCH DAMAGE.\n"
26519     }
26520   },
26521   "schemes": ["http"],
26522   "consumes": ["application/json"],
26523   "produces": ["application/json"],
26524   "paths": {
26525     "/BodyThermometerAMResURI?if=oic.if.b" : {
26526       "get": {
26527         "description": "This resource describes the properties associated with body
26528 thermometer.\nThe resource is an atomic measurement of temperature (oic.r.temperature), body
26529 location for temperature (oic.r.body.location.temperature), observed time (oic.r.time.stamp), and
26530 user ID (oic.r.userid).\nRetrieves the current body temperature.\n",
26531         "parameters": [
26532           { "$ref": "#/parameters/interface-b" }
26533         ],
26534         "responses": {
26535           "200": {
26536             "description": "",
26537             "x-example":
26538               [
26539                 {
26540                   "href": "/myTemperatureResURI",
26541                   "rep":
26542                     {
26543                       "temperature": 38,
26544                       "units": "C"
26545                     }
26546                 },
26547                 {
26548                   "href": "/myBodyLocationForTemperatureResURI",
26549                   "rep":
26550                     {
26551                       "bloc": "mouth"
26552                     }
26553                 }
26554               ]
26555           },
26556           "schema": { "$ref": "#/definitions/batch-retrieve" }
26557         }
26558       }
26559     },
26560   },
26561   "/BodyThermometerAMResURI?if=oic.if.ll" : {
26562     "get": {
26563       "description": "This resource describes the properties associated with body
26564 thermometer.\nThe resource is an atomic measurement of temperature (oic.r.temperature), body
26565 location for temperature (oic.r.body.location.temperature), observed time (oic.r.time.stamp), and
26566 user ID (oic.r.userid).\nRetrieves the current body temperature.\n",
26567       "parameters": [
26568         { "$ref": "#/parameters/interface-ll" }
26569       ],
26570       "responses": {
26571         "200": {
26572           "description": "",
26573           "x-example":
26574             [
26575               {
26576                 "href": "/myTemperatureResURI",
26577                 "rt": ["oic.r.temperature"],
26578                 "if": ["oic.if.s", "oic.if.baseline"]
26579               }

```

```

26580         {
26581             "href": "/myBodyLocationForTemperatureResURI",
26582             "rt": ["oic.r.body.location.temperature"],
26583             "if": ["oic.if.s", "oic.if.baseline"]
26584         }
26585     ]
26586     ,
26587     "schema": { "$ref": "#/definitions/links" }
26588 }
26589 }
26590 },
26591 },
26592 "/BodyThermometerAMResURI?if=oic.if.baseline" : {
26593     "get": {
26594         "description": "This resource describes the properties associated with body
26595 thermometer.\n\nThe resource is an atomic measurement of temperature (oic.r.temperature), body
26596 location for temperature (oic.r.body.location.temperature), observed time (oic.r.time.stamp), and
26597 user ID (oic.r.userid).\n\nRetrieves the current body temperature.\n",
26598         "parameters": [
26599             { "$ref": "#/parameters/interface-baseline" }
26600         ],
26601         "responses": {
26602             "200": {
26603                 "description": "",
26604                 "x-example":
26605                 {
26606                     "rt": ["oic.r.bodythermometer-am", "oic.wk.atomicmeasurement"],
26607                     "if": ["oic.if.b", "oic.if.ll", "oic.if.baseline"],
26608                     "rts": ["oic.r.temperature", "oic.r.body.location.temperature"],
26609                     "rts-m": ["oic.r.temperature"],
26610                     "links": [
26611                         {
26612                             "href": "/myTemperatureResURI",
26613                             "rt": ["oic.r.temperature"],
26614                             "if": ["oic.if.s", "oic.if.baseline"]
26615                         },
26616                         {
26617                             "href": "/myBodyLocationForTemperatureResURI",
26618                             "rt": ["oic.r.body.location.temperature"],
26619                             "if": ["oic.if.s", "oic.if.baseline"]
26620                         }
26621                     ]
26622                 }
26623             }
26624         },
26625         "schema": { "$ref": "#/definitions/baseline" }
26626     }
26627 }
26628 },
26629 },
26630 "parameters": {
26631     "interface-ll" : {
26632         "in" : "query",
26633         "name" : "if",
26634         "type" : "string",
26635         "enum" : ["oic.if.ll"]
26636     },
26637     "interface-b" : {
26638         "in" : "query",
26639         "name" : "if",
26640         "type" : "string",
26641         "enum" : ["oic.if.b"]
26642     },
26643     "interface-baseline" : {
26644         "in" : "query",
26645         "name" : "if",
26646         "type" : "string",
26647         "enum" : ["oic.if.baseline"]
26648     },
26649     "interface-all" : {
26650         "in" : "query",

```

```

26651     "name" : "if",
26652     "type" : "string",
26653     "enum" : ["oic.if.b", "oic.if.ll", "oic.if.baseline"]
26654   }
26655 },
26656 "definitions": {
26657   "batch-retrieve" : {
26658     "title" :
26659       "Collection Batch Retrieve Format"
26660
26661     , "minItems" :
26662       1
26663
26664     , "items" :
26665       {
26666         "additionalProperties": true,
26667         "properties": {
26668           "href": {
26669             "description": "URI of the target resource relative assuming the collection URI as
26670 anchor",
26671             "type": "string"
26672           },
26673           "rep": {
26674             "oneOf": [
26675               {
26676                 "description": "The response payload from a single resource",
26677                 "type": "object"
26678               },
26679               {
26680                 "description": " The response payload from a collection (batch) resource",
26681                 "type": "array"
26682               }
26683             ]
26684           }
26685         },
26686         "required": [
26687           "href",
26688           "rep"
26689         ],
26690         "type": "object"
26691       }
26692
26693     , "type" :
26694       "array"
26695   }
26696 },
26697 ,
26698 "links" : {
26699   "type" :
26700     "array"
26701
26702   , "items" :
26703     {
26704       "$ref": "#/definitions/oic.oic-link"
26705     }
26706 }
26707 ,
26708 "baseline" : {
26709   "properties": {
26710     "rt" :
26711       {
26712         "items": {
26713           "enum": [
26714             "oic.r.bodythermometer-am",
26715             "oic.wk.atomicmeasurement"
26716           ]
26717         },
26718         "maxItems": 2,
26719         "minItems": 2,
26720         "type": "array",

```

```

26722         "uniqueItems": true
26723     },
26724
26725     "links" :
26726     {
26727         "description": "A set of simple or individual OIC Links.",
26728         "items": {
26729             "properties": {
26730                 "anchor": {
26731                     "description": "This is used to override the context URI e.g. override the URI of
26732 the containing collection.",
26733                     "format": "uri",
26734                     "maxLength": 256,
26735                     "type": "string"
26736                 },
26737                 "di": {
26738                     "description": "The Device ID formatted according to IETF RFC 4122.",
26739                     "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
26740 9]{12}$",
26741                     "type": "string"
26742                 },
26743                 "eps": {
26744                     "description": "the Endpoint information of the target Resource",
26745                     "items": {
26746                         "properties": {
26747                             "ep": {
26748                                 "description": "Transport Protocol Suite + Endpoint Locator",
26749                                 "format": "uri",
26750                                 "type": "string"
26751                             },
26752                             "pri": {
26753                                 "description": "The priority among multiple Endpoints",
26754                                 "minimum": 1,
26755                                 "type": "integer"
26756                             }
26757                         },
26758                         "type": "object"
26759                     },
26760                     "type": "array"
26761                 },
26762                 "href": {
26763                     "description": "This is the target URI, it can be specified as a Relative Reference
26764 or fully-qualified URI.",
26765                     "format": "uri",
26766                     "maxLength": 256,
26767                     "type": "string"
26768                 },
26769                 "if": {
26770                     "description": "The interface set supported by this resource",
26771                     "items": {
26772                         "enum": [
26773                             "oic.if.baseline",
26774                             "oic.if.ll",
26775                             "oic.if.b",
26776                             "oic.if.rw",
26777                             "oic.if.r",
26778                             "oic.if.a",
26779                             "oic.if.s"
26780                         ],
26781                         "type": "string"
26782                     },
26783                     "minItems": 1,
26784                     "type": "array"
26785                 },
26786                 "ins": {
26787                     "description": "The instance identifier for this web link in an array of web links
26788 - used in collections",
26789                     "type": "integer"
26790                 },
26791                 "p": {
26792                     "description": "Specifies the framework policies on the Resource referenced by the

```

```

26793 target URI",
26794     "properties": {
26795         "bm": {
26796             "description": "Specifies the framework policies on the Resource referenced by
26797 the target URI for e.g. observable and discoverable",
26798             "type": "integer"
26799         }
26800     },
26801     "required": [
26802         "bm"
26803     ],
26804     "type": "object"
26805 },
26806 "rel": {
26807     "description": "The relation of the target URI referenced by the link to the
26808 context URI",
26809     "oneOf": [
26810         {
26811             "default": [
26812                 "hosts"
26813             ],
26814             "items": {
26815                 "maxLength": 64,
26816                 "type": "string"
26817             },
26818             "minItems": 1,
26819             "type": "array"
26820         },
26821         {
26822             "default": "hosts",
26823             "maxLength": 64,
26824             "type": "string"
26825         }
26826     ]
26827 },
26828 "rt": {
26829     "description": "Resource Type of the Resource",
26830     "items": {
26831         "maxLength": 64,
26832         "type": "string"
26833     },
26834     "minItems": 1,
26835     "type": "array"
26836 },
26837 "title": {
26838     "description": "A title for the link relation. Can be used by the UI to provide a
26839 context.",
26840     "maxLength": 64,
26841     "type": "string"
26842 },
26843 "type": {
26844     "default": "application/cbor",
26845     "description": "A hint at the representation of the resource referenced by the
26846 target URI. This represents the media types that are used for both accepting and emitting.",
26847     "items": {
26848         "maxLength": 64,
26849         "type": "string"
26850     },
26851     "minItems": 1,
26852     "type": "array"
26853 }
26854 },
26855 "required": [
26856     "href",
26857     "rt",
26858     "if"
26859 ],
26860 "type": "object"
26861 },
26862 "type": "array"
26863 },

```



```

26864
26865     "n" :
26866         {
26867             "description": "Friendly name of the resource",
26868             "maxLength": 64,
26869             "readOnly": true,
26870             "type": "string"
26871         },
26872
26873     "rts" :
26874         {
26875             "description": "This contains all possible resource types for this atomic measurement.",
26876             "items": {
26877                 "enum": [
26878                     "oic.r.temperature",
26879                     "oic.r.body.location.temperature",
26880                     "oic.r.time.observed",
26881                     "oic.r.userid"
26882                 ]
26883             },
26884             "minItems": 1,
26885             "type": "array",
26886             "uniqueItems": true
26887         },
26888
26889     "id" :
26890         {
26891             "description": "Instance ID of this specific resource",
26892             "maxLength": 64,
26893             "readOnly": true,
26894             "type": "string"
26895         },
26896
26897     "rts-m" :
26898         {
26899             "description": "This contains all mandatory resource types for this atomic measurement.",
26900             "items": {
26901                 "enum": [
26902                     "oic.r.temperature"
26903                 ]
26904             },
26905             "maxItems": 1,
26906             "minItems": 1,
26907             "type": "array",
26908             "uniqueItems": true
26909         },
26910
26911     "if" :
26912         {
26913             "description": "The interface set supported by this resource",
26914             "items": {
26915                 "enum": [
26916                     "oic.if.baseline",
26917                     "oic.if.ll",
26918                     "oic.if.b",
26919                     "oic.if.lb",
26920                     "oic.if.rw",
26921                     "oic.if.r",
26922                     "oic.if.a",
26923                     "oic.if.s"
26924                 ],
26925                 "type": "string"
26926             },
26927             "minItems": 1,
26928             "readOnly": true,
26929             "type": "array"
26930         }
26931     }
26932 }, "type" : "object"
26933 , "required": ["rts-m"]
26934

```

```

26935     }
26936     , "oic.oic-link" :
26937     {
26938         "properties": {
26939             "anchor": {
26940                 "description": "This is used to override the context URI e.g. override the URI of the
26941 containing collection.",
26942                 "format": "uri",
26943                 "maxLength": 256,
26944                 "type": "string"
26945             },
26946             "di": {
26947                 "description": "The Device ID formatted according to IETF RFC 4122.",
26948                 "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
26949 9]{12}$",
26950                 "type": "string"
26951             },
26952             "eps": {
26953                 "description": "the Endpoint information of the target Resource",
26954                 "items": {
26955                     "properties": {
26956                         "ep": {
26957                             "description": "Transport Protocol Suite + Endpoint Locator",
26958                             "format": "uri",
26959                             "type": "string"
26960                         },
26961                         "pri": {
26962                             "description": "The priority among multiple Endpoints",
26963                             "minimum": 1,
26964                             "type": "integer"
26965                         }
26966                     },
26967                     "type": "object"
26968                 },
26969                 "type": "array"
26970             },
26971             "href": {
26972                 "description": "This is the target URI, it can be specified as a Relative Reference or
26973 fully-qualified URI.",
26974                 "format": "uri",
26975                 "maxLength": 256,
26976                 "type": "string"
26977             },
26978             "if": {
26979                 "description": "The interface set supported by this resource",
26980                 "items": {
26981                     "enum": [
26982                         "oic.if.baseline",
26983                         "oic.if.ll",
26984                         "oic.if.b",
26985                         "oic.if.rw",
26986                         "oic.if.r",
26987                         "oic.if.a",
26988                         "oic.if.s"
26989                     ],
26990                     "type": "string"
26991                 },
26992                 "minItems": 1,
26993                 "type": "array"
26994             },
26995             "ins": {
26996                 "description": "The instance identifier for this web link in an array of web links - used
26997 in collections",
26998                 "type": "integer"
26999             },
27000             "p": {
27001                 "description": "Specifies the framework policies on the Resource referenced by the target
27002 URI",
27003                 "properties": {
27004                     "bm": {
27005                         "description": "Specifies the framework policies on the Resource referenced by the

```

```

27006 target URI for e.g. observable and discoverable",
27007     "type": "integer"
27008     },
27009     },
27010     "required": [
27011         "bm"
27012     ],
27013     "type": "object"
27014 },
27015 "rel": {
27016     "description": "The relation of the target URI referenced by the link to the context
27017 URI",
27018     "oneOf": [
27019         {
27020             "default": [
27021                 "hosts"
27022             ],
27023             "items": {
27024                 "maxLength": 64,
27025                 "type": "string"
27026             },
27027             "minItems": 1,
27028             "type": "array"
27029         },
27030         {
27031             "default": "hosts",
27032             "maxLength": 64,
27033             "type": "string"
27034         }
27035     ]
27036 },
27037 "rt": {
27038     "description": "Resource Type of the Resource",
27039     "items": {
27040         "maxLength": 64,
27041         "type": "string"
27042     },
27043     "minItems": 1,
27044     "type": "array"
27045 },
27046 "title": {
27047     "description": "A title for the link relation. Can be used by the UI to provide a
27048 context.",
27049     "maxLength": 64,
27050     "type": "string"
27051 },
27052 "type": {
27053     "default": "application/cbor",
27054     "description": "A hint at the representation of the resource referenced by the target
27055 URI. This represents the media types that are used for both accepting and emitting.",
27056     "items": {
27057         "maxLength": 64,
27058         "type": "string"
27059     },
27060     "minItems": 1,
27061     "type": "array"
27062 }
27063 },
27064 "required": [
27065     "href",
27066     "rt",
27067     "if"
27068 ],
27069 "type": "object"
27070 }
27071 }
27072 }
27073 }
27074

```

Table 289 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
title	string	No	Read Write	A title for the link relation. Can be used by the UI to provide a context.
di	string	No	Read Write	The Device ID formatted according to IETF RFC 4122.
href	string	Yes	Read Write	This is the target URI, it can be specified as a Relative Reference or fully-qualified URI.
anchor	string	No	Read Write	This is used to override the context URI e.g. override the URI of the containing collection.
type	array: schema see	No	Read Write	A hint at the representation of the resource referenced by the target URI. This represents the media types that are used for both accepting and emitting.
p	object: schema see	No	Read Write	Specifies the framework policies on the Resource referenced by the target URI
rt	array: schema see	Yes	Read Write	Resource Type of the Resource
ins	integer	No	Read Write	The instance identifier for this web link in an

				array of web links - used in collections
eps	array: schema see	No	Read Write	the Endpoint information of the target Resource
rel	multiple types: see schema	No	Read Write	The relation of the target URI referenced by the link to the context URI
if	array: schema see	Yes	Read Write	The interface set supported by this resource
rep	multiple types: see schema	Yes	Read Write	
href	string	Yes	Read Write	URI of the target resource relative assuming the collection URI as anchor
id	string	No	Read Only	Instance ID of this specific resource
rts	array: schema see	No	Read Write	This contains all possible resource types for this atomic measurement.
rts-m	array: schema see	Yes	Read Write	This contains all mandatory resource types for this atomic measurement.
rt	array: schema see	No	Read Write	
links	array: schema see	No	Read Write	A set of simple or individual OIC Links.
n	string	No	Read Only	Friendly name of the resource
if	array: schema see	No	Read Only	The interface set supported by this resource

27077 **B.26.6 CRUDN behaviour**

27078 **Table 290 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/BodyThermometerAMResURI		get			observe

27079 **B.27 Body Water**

27080 **B.27.1 Introduction**

27081 This resource describes the properties associated with a person's Body water.

27082 The unit is a single value that is one of kg or lb.

27083 If the unit Property is missing the default is kilograms [kg].

27084 The bwater and unit Properties are read-only values that are provided by the server.

27085 When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.

27086

27087 **B.27.2 Example URI**

27088 /BodyWaterResURI

27089 **B.27.3 Resource Type**

27090 The resource type (rt) is defined as: ['oic.r.body.water'].

27091 **B.27.4 Swagger2.0 Definition**

```

27092 {
27093   "swagger": "2.0",
27094   "info": {
27095     "title": "Body Water",
27096     "version": "v1.1.0-20160519",
27097     "license": {
27098       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
27099       "x-description": "Redistribution and use in source and binary forms, with or without
27100 modification, are permitted provided that the following conditions are met:\n      1.
27101 Redistributions of source code must retain the above copyright notice, this list of conditions and
27102 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
27103 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
27104 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
27105 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
27106 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
27107 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
27108 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
27109 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
27110 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND
27111 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
27112 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
27113 OF SUCH DAMAGE.\n"
27114     }
27115   },
27116   "schemes": ["http"],
27117   "consumes": ["application/json"],
27118   "produces": ["application/json"],
27119   "paths": {
27120     "/BodyWaterResURI" : {
27121       "get": {
27122         "description": "This resource describes the properties associated with a person's Body
27123 water.\nThe unit is a single value that is one of kg or lb.\nIf the unit Property is missing the
27124 default is kilograms [kg].\nThe bwater and unit Properties are read-only values that are provided
27125 by the server.\nWhen range (from oic.r.baseresource) is omitted the default is 0 to
27126 +MAXFLOAT.\nRetrieves Body water of an object.\n",
27127         "parameters": [
27128           {"$ref": "#/parameters/interface"}
27129         ],
27130         "responses": {
27131           "200": {
27132             "description": ""

```

```

27133         "x-example":
27134             {
27135                 "rt":      ["oic.r.body.water"],
27136                 "id":      "unique_example_id",
27137                 "bwater":  20,
27138                 "units":   "kg"
27139             }
27140         ,
27141         "schema": { "$ref": "#/definitions/BodyWater" }
27142     }
27143 }
27144 }
27145 },
27146 },
27147 "parameters": {
27148     "interface" : {
27149         "in" : "query",
27150         "name" : "if",
27151         "type" : "string",
27152         "enum" : ["oic.if.s", "oic.if.baseline"]
27153     }
27154 },
27155 "definitions": {
27156     "BodyWater" : {
27157         "properties": {
27158             "rt" :
27159                 {
27160                     "description": "Resource Type",
27161                     "items": {
27162                         "maxLength": 64,
27163                         "type": "string"
27164                     },
27165                     "minItems": 1,
27166                     "readOnly": true,
27167                     "type": "array"
27168                 },
27169             "step" :
27170                 {
27171                     "anyOf": [
27172                         {
27173                             "type": "integer"
27174                         },
27175                         {
27176                             "type": "number"
27177                         }
27178                     ],
27179                     "description": "Step value across the defined range",
27180                     "readOnly": true
27181                 },
27182             "precision" :
27183                 {
27184                     "description": "Accuracy granularity of the exposed value",
27185                     "readOnly": true,
27186                     "type": "number"
27187                 },
27188             "value" :
27189                 {
27190                     "anyOf": [
27191                         {
27192                             "type": "array"
27193                         },
27194                         {
27195                             "type": "string"
27196                         },
27197                         {
27198                             "type": "boolean"
27199                         }
27200                     ],
27201                     "type": "boolean"
27202                 }
27203         }

```

```

27204         "type": "integer"
27205     },
27206     {
27207         "type": "number"
27208     },
27209     {
27210         "type": "object"
27211     }
27212 ],
27213 "description": "The value sensed or actuated by this Resource"
27214 },
27215
27216 "n" :
27217     {
27218         "description": "Friendly name of the resource",
27219         "maxLength": 64,
27220         "readOnly": true,
27221         "type": "string"
27222     },
27223
27224 "units" :
27225     {
27226         "description": "Body water unit",
27227         "enum": [
27228             "kg",
27229             "lb"
27230         ],
27231         "readOnly": true,
27232         "type": "string"
27233     },
27234
27235 "range" :
27236     {
27237         "description": "The valid range for the value Property",
27238         "items": {
27239             "anyOf": [
27240                 {
27241                     "type": "number"
27242                 },
27243                 {
27244                     "type": "integer"
27245                 }
27246             ]
27247         },
27248         "maxItems": 2,
27249         "minItems": 2,
27250         "readOnly": true,
27251         "type": "array"
27252     },
27253
27254 "id" :
27255     {
27256         "description": "Instance ID of this specific resource",
27257         "maxLength": 64,
27258         "readOnly": true,
27259         "type": "string"
27260     },
27261
27262 "bwater" :
27263     {
27264         "description": "Body water.",
27265         "minimum": 0,
27266         "readOnly": true,
27267         "type": "number"
27268     },
27269
27270 "if" :
27271     {
27272         "description": "The interface set supported by this resource",
27273         "items": {
27274             "enum": [

```



```

27275         "oic.if.baseline",
27276         "oic.if.ll",
27277         "oic.if.b",
27278         "oic.if.lb",
27279         "oic.if.rw",
27280         "oic.if.r",
27281         "oic.if.a",
27282         "oic.if.s"
27283     ],
27284     "type": "string"
27285 },
27286 "minItems": 1,
27287 "readOnly": true,
27288 "type": "array"
27289 }
27290
27291 }
27292 , "type" : "object"
27293 , "required": ["bwater"]
27294 }
27295 }
27296 }
27297

```

B.27.5 Property Definition

Table 291 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
range	array: see schema	No	Read Only	The valid range for the value Property
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
n	string	No	Read Only	Friendly name of the resource
id	string	No	Read Only	Instance ID of this specific resource
bwater	number	Yes	Read Only	Body water.
precision	number	No	Read Only	Accuracy granularity of the exposed value
units	string	No	Read Only	Body water unit
if	array: see schema	No	Read Only	The interface set supported by this resource
step	multiple types: see schema	No	Read Only	

				Step value across the defined range
--	--	--	--	-------------------------------------

27300 **B.27.6 CRUDN behaviour**

27301 **Table 292 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/BodyWaterResURI		get			observe

27302 **B.28 Brewing**

27303 **B.28.1 Introduction**

27304 This resource describes the attributes associated with brewing. This resource is used for
 27305 configuration only. Operation is handled independently of this resource. The amount requested is
 27306 in ml. The strength of a brewed drink is an integer, the range of which may be enforced by the
 27307 presence of a strengthrange Property.
 27308

27309 **B.28.2 Example URI**

27310 /BrewingResURI

27311 **B.28.3 Resource Type**

27312 The resource type (rt) is defined as: ['oic.r.brewing'].

27313 **B.28.4 Swagger2.0 Definition**

```

27314 {
27315   "swagger": "2.0",
27316   "info": {
27317     "title": "Brewing",
27318     "version": "v1.1.0-20170815",
27319     "license": {
27320       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
27321       "x-description": "Redistribution and use in source and binary forms, with or without
27322 modification, are permitted provided that the following conditions are met:\n      1.
27323 Redistributions of source code must retain the above copyright notice, this list of conditions and
27324 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
27325 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
27326 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
27327 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
27328 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
27329 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
27330 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
27331 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
27332 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
27333 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
27334 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
27335 OF SUCH DAMAGE.\n"
27336     }
27337   },
27338   "schemes": ["http"],
27339   "consumes": ["application/json"],
27340   "produces": ["application/json"],
27341   "paths": {
27342     "/BrewingResURI" : {
27343       "get": {
27344         "description": "This resource describes the attributes associated with brewing. This
27345 resource is used for configuration only. Operation is handled independently of this resource. The
27346 amount requested is in ml. The strength of a brewed drink is an integer, the range of which may be
27347 enforced by the presence of a strengthrange Property.\nRetrieves the state of brewing.\n",
27348         "parameters": [
27349           { "$ref": "#/parameters/interface" }
27350         ],
27351         "responses": {

```

```

27352         "200": {
27353             "description" : "",
27354             "x-example":
27355                 {
27356                     "rt":      ["oic.r.brewing"],
27357                     "id":      "unique_example_id",
27358                     "amountrequested": 120,
27359                     "strength": 8,
27360                     "strengthrange": [1,10]
27361                 }
27362             ,
27363             "schema": { "$ref": "#/definitions/Brewing" }
27364         }
27365     },
27366     "post": {
27367         "description": "Sets the brewing values\n",
27368         "parameters": [
27369             { "$ref": "#/parameters/interface" },
27370             {
27371                 "name": "body",
27372                 "in": "body",
27373                 "required": true,
27374                 "schema": { "$ref": "#/definitions/Brewing" },
27375                 "x-example":
27376                     {
27377                         "id":      "unique_example_id",
27378                         "amountrequested": 120,
27379                         "strength": 8
27380                     }
27381             }
27382         ],
27383         "responses": {
27384             "200": {
27385                 "description" : "",
27386                 "x-example":
27387                     {
27388                         "id":      "unique_example_id",
27389                         "amountrequested": 120,
27390                         "strength": 8
27391                     }
27392             }
27393         }
27394     }
27395 },
27396 },
27397 },
27398 "parameters": {
27399     "interface" : {
27400         "in" : "query",
27401         "name" : "if",
27402         "type" : "string",
27403         "enum" : ["oic.if.rw", "oic.if.baseline"]
27404     }
27405 },
27406 "definitions": {
27407     "Brewing" : {
27408         "properties": {
27409             "rt" :
27410                 {
27411                     "description": "Resource Type",
27412                     "items": {
27413                         "maxLength": 64,
27414                         "type": "string"
27415                     },
27416                     "minItems": 1,
27417                     "readOnly": true,
27418                     "type": "array"
27419                 },
27420             "strength" :
27421                 {

```

```

27423     "description": "The strength of a brewed drink.",
27424     "type": "integer"
27425   },
27426
27427   "amountrequested" :
27428     {
27429     "description": "The amount requested in ml.",
27430     "type": "integer"
27431     },
27432
27433   "precision" :
27434     {
27435     "description": "Accuracy granularity of the exposed value",
27436     "readOnly": true,
27437     "type": "number"
27438     },
27439
27440   "value" :
27441     {
27442     "anyOf": [
27443       {
27444         "type": "array"
27445       },
27446       {
27447         "type": "string"
27448       },
27449       {
27450         "type": "boolean"
27451       },
27452       {
27453         "type": "integer"
27454       },
27455       {
27456         "type": "number"
27457       },
27458       {
27459         "type": "object"
27460       }
27461     ],
27462     "description": "The value sensed or actuated by this Resource"
27463   },
27464
27465   "n" :
27466     {
27467     "description": "Friendly name of the resource",
27468     "maxLength": 64,
27469     "readOnly": true,
27470     "type": "string"
27471     },
27472
27473   "range" :
27474     {
27475     "description": "The valid range for the value Property",
27476     "items": {
27477       "anyOf": [
27478         {
27479         "type": "number"
27480         },
27481         {
27482         "type": "integer"
27483         }
27484       ]
27485     },
27486     "maxItems": 2,
27487     "minItems": 2,
27488     "readOnly": true,
27489     "type": "array"
27490   },
27491
27492   "strengthrange" :
27493     {

```

```

27494     "items": {
27495         "type": "integer"
27496     },
27497     "maxItems": 2,
27498     "minItems": 2,
27499     "readOnly": true,
27500     "type": "array"
27501 },
27502
27503 "step" :
27504     {
27505     "anyOf": [
27506         {
27507             "type": "integer"
27508         },
27509         {
27510             "type": "number"
27511         }
27512     ],
27513     "description": "Step value across the defined range",
27514     "readOnly": true
27515 },
27516
27517 "id" :
27518     {
27519     "description": "Instance ID of this specific resource",
27520     "maxLength": 64,
27521     "readOnly": true,
27522     "type": "string"
27523 },
27524
27525 "if" :
27526     {
27527     "description": "The interface set supported by this resource",
27528     "items": {
27529         "enum": [
27530             "oic.if.baseline",
27531             "oic.if.ll",
27532             "oic.if.b",
27533             "oic.if.lb",
27534             "oic.if.rw",
27535             "oic.if.r",
27536             "oic.if.a",
27537             "oic.if.s"
27538         ],
27539         "type": "string"
27540     },
27541     "minItems": 1,
27542     "readOnly": true,
27543     "type": "array"
27544     }
27545
27546     }
27547     , "type" : "object"
27548     , "required": ["amountrequested"]
27549 }
27550 }
27551 }
27552

```

27553 B.28.5 Property Definition

27554 **Table 293 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
range	array: see schema	No	Read Only	The valid range for the value Property

if	array: see schema	No	Read Only	The interface set supported by this resource
rt	array: see schema	No	Read Only	Resource Type
strengthrange	array: see schema	No	Read Only	
step	multiple types: see schema	No	Read Only	Step value across the defined range
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
strength	integer	No	Read Write	The strength of a brewed drink.
id	string	No	Read Only	Instance ID of this specific resource
n	string	No	Read Only	Friendly name of the resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
amountrequested	integer	Yes	Read Write	The amount requested in ml.

27555 **B.28.6 CRUDN behaviour**

27556 **Table 294 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/BrewingResURI		get	post		observe

27557 **B.29 Brightness**

27558 **B.29.1 Introduction**

27559 This resource describes the brightness of a light or lamp.
 27560 brightness is an integer showing the current brightness level as a quantized representation in the
 27561 range 0-100.
 27562 A brightness of 0 is the minimum for the resource.
 27563 A brightness of 100 is the maximum for the resource.
 27564

27565 **B.29.2 Example URI**

27566 /BrightnessResURI

27567 **B.29.3 Resource Type**

27568 The resource type (rt) is defined as: ['oic.r.light.brightness'].

27569 **B.29.4 Swagger2.0 Definition**

```
27570 {
27571   "swagger": "2.0",
27572   "info": {
27573     "title": "Brightness",
27574     "version": "v1.1.0-20160519",
27575     "license": {
27576       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
27577       "x-description": "Redistribution and use in source and binary forms, with or without
27578 modification, are permitted provided that the following conditions are met:\n      1.
27579 Redistributions of source code must retain the above copyright notice, this list of conditions and
27580 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
27581 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
27582 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
27583 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
27584 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
27585 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
27586 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
27587 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
27588 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
27589 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
27590 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
27591 OF SUCH DAMAGE.\n"
27592     }
27593   },
27594   "schemes": ["http"],
27595   "consumes": ["application/json"],
27596   "produces": ["application/json"],
27597   "paths": {
27598     "/BrightnessResURI" : {
27599       "get": {
27600         "description": "This resource describes the brightness of a light or lamp.\nbrightness is
27601 an integer showing the current brightness level as a quantized representation in the range 0-
27602 100.\nA brightness of 0 is the minimum for the resource.\nA brightness of 100 is the maximum for
27603 the resource.\nRetrieves the current brightness level.\n",
27604         "parameters": [
27605           { "$ref": "#/parameters/interface" }
27606         ],
27607         "responses": {
27608           "200": {
27609             "description": "",
27610             "x-example":
27611             {
27612               "rt": ["oic.r.light.brightness"],
27613               "id": "unique_example_id",
27614               "brightness": 50
27615             }
27616           },
27617           "schema": { "$ref": "#/definitions/Brightness" }
27618         }
27619       }
27620     },
27621     "post": {
27622       "description": "Sets the desired brightness level.\n",
27623       "parameters": [
27624         { "$ref": "#/parameters/interface" },
27625         {
27626           "name": "body",
27627           "in": "body",
27628           "required": true,
27629           "schema": { "$ref": "#/definitions/Brightness" },
27630           "x-example":
27631           {
27632             "id": "unique_example_id",
27633             "brightness": 10
27634           }
27635         }
27636       ]
27637     }
27638   }
27639 }
```

```

27636     ],
27637     "responses": {
27638         "200": {
27639             "description": "Indicates that the brightness was changed.\n\nThe new brightness level
27640 is provided in the response.\n",
27641             "x-example":
27642                 {
27643                     "id": "unique_example_id",
27644                     "brightness": 10
27645                 }
27646             ,
27647             "schema": { "$ref": "#/definitions/Brightness" }
27648         }
27649     }
27650 }
27651 }
27652 },
27653 "parameters": {
27654     "interface" : {
27655         "in" : "query",
27656         "name" : "if",
27657         "type" : "string",
27658         "enum" : ["oic.if.a", "oic.if.baseline"]
27659     }
27660 },
27661 "definitions": {
27662     "Brightness" : {
27663         "properties": {
27664             "rt" :
27665                 {
27666                     "description": "Resource Type",
27667                     "items": {
27668                         "maxLength": 64,
27669                         "type": "string"
27670                     },
27671                     "minItems": 1,
27672                     "readOnly": true,
27673                     "type": "array"
27674                 },
27675             "brightness" :
27676                 {
27677                     "description": "Quantized representation in the range 0-100 of the current sensed or set
27678 value for Brightness",
27679                     "maximum": 100,
27680                     "minimum": 0,
27681                     "type": "integer"
27682                 },
27683             "precision" :
27684                 {
27685                     "description": "Accuracy granularity of the exposed value",
27686                     "readOnly": true,
27687                     "type": "number"
27688                 },
27689             "value" :
27690                 {
27691                     "anyOf": [
27692                         {
27693                             "type": "array"
27694                         },
27695                         {
27696                             "type": "string"
27697                         },
27698                         {
27699                             "type": "boolean"
27700                         },
27701                         {
27702                             "type": "integer"
27703                         }
27704                     ],
27705                 }
27706         }

```



```

27707         {
27708             "type": "number"
27709         },
27710         {
27711             "type": "object"
27712         }
27713     ],
27714     "description": "The value sensed or actuated by this Resource"
27715 },
27716
27717 "n" :
27718     {
27719         "description": "Friendly name of the resource",
27720         "maxLength": 64,
27721         "readOnly": true,
27722         "type": "string"
27723     },
27724
27725 "range" :
27726     {
27727         "description": "The valid range for the value Property",
27728         "items": {
27729             "anyOf": [
27730                 {
27731                     "type": "number"
27732                 },
27733                 {
27734                     "type": "integer"
27735                 }
27736             ]
27737         },
27738         "maxItems": 2,
27739         "minItems": 2,
27740         "readOnly": true,
27741         "type": "array"
27742     },
27743
27744 "step" :
27745     {
27746         "anyOf": [
27747             {
27748                 "type": "integer"
27749             },
27750             {
27751                 "type": "number"
27752             }
27753         ],
27754         "description": "Step value across the defined range",
27755         "readOnly": true
27756     },
27757
27758 "id" :
27759     {
27760         "description": "Instance ID of this specific resource",
27761         "maxLength": 64,
27762         "readOnly": true,
27763         "type": "string"
27764     },
27765
27766 "if" :
27767     {
27768         "description": "The interface set supported by this resource",
27769         "items": {
27770             "enum": [
27771                 "oic.if.baseline",
27772                 "oic.if.ll",
27773                 "oic.if.b",
27774                 "oic.if.lb",
27775                 "oic.if.rw",
27776                 "oic.if.r",
27777                 "oic.if.a",

```

```

27778         "oic.if.s"
27779     ],
27780     "type": "string"
27781 },
27782 "minItems": 1,
27783 "readOnly": true,
27784 "type": "array"
27785 }
27786
27787 }
27788 , "type" : "object"
27789 , "required": ["brightness"]
27790 }
27791 }
27792 }
27793

```

27794 **B.29.5 Property Definition**

27795 **Table 295 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
brightness	integer	Yes	Read Write	Quantized representation in the range 0-100 of the current sensed or set value for Brightness
range	array: see schema	No	Read Only	The valid range for the value Property
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
rt	array: see schema	No	Read Only	Resource Type
id	string	No	Read Only	Instance ID of this specific resource
if	array: see schema	No	Read Only	The interface set supported by this resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
n	string	No	Read Only	Friendly name of the resource

27796 **B.29.6 CRUDN behaviour**

27797 **Table 296 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/BrightnessResURI		get	post		observe

27798 **B.30 Button Switch**

27799 **B.30.1 Introduction**

27800 This resource describes the operation of a button style switch.

27801 The value is a boolean.

27802 A value of 'true' means that the button is being pushed/pressed.

27803 A value of 'false' means that the button is not being pushed/pressed.

27804

27805 **B.30.2 Example URI**

27806 /ButtonResURI

27807 **B.30.3 Resource Type**

27808 The resource type (rt) is defined as: ['oic.r.button'].

27809 **B.30.4 Swagger2.0 Definition**

```

27810 {
27811   "swagger": "2.0",
27812   "info": {
27813     "title": "Button Switch",
27814     "version": "v1.1.0-20160519",
27815     "license": {
27816       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
27817       "x-description": "Redistribution and use in source and binary forms, with or without
27818 modification, are permitted provided that the following conditions are met:\n      1.
27819 Redistributions of source code must retain the above copyright notice, this list of conditions and
27820 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
27821 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
27822 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
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27826 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
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27829 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
27830 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
27831 OF SUCH DAMAGE.\n"
27832   }
27833 },
27834 "schemes": ["http"],
27835 "consumes": ["application/json"],
27836 "produces": ["application/json"],
27837 "paths": {
27838   "/ButtonResURI" : {
27839     "get": {
27840       "description": "This resource describes the operation of a button style switch.\nThe value
27841 is a boolean.\nA value of 'true' means that the button is being pushed/pressed.\nA value of 'false'
27842 means that the button is not being pushed/pressed.\n",
27843       "parameters": [
27844         {"$ref": "#/parameters/interface"}
27845       ],
27846       "responses": {
27847         "200": {
27848           "description": "",
27849           "x-example":
27850             {
27851               "rt": ["oic.r.button"],
27852               "id": "unique_example_id",

```

```

27853         "value": true
27854     }
27855     ,
27856     "schema": { "$ref": "#/definitions/Button" }
27857 }
27858 }
27859 }
27860 }
27861 },
27862 "parameters": {
27863     "interface" : {
27864         "in" : "query",
27865         "name" : "if",
27866         "type" : "string",
27867         "enum" : ["oic.if.s", "oic.if.baseline"]
27868     }
27869 },
27870 "definitions": {
27871     "Button" : {
27872         "properties": {
27873             "rt" :
27874                 {
27875                     "description": "Resource Type",
27876                     "items": {
27877                         "maxLength": 64,
27878                         "type": "string"
27879                     },
27880                     "minItems": 1,
27881                     "readOnly": true,
27882                     "type": "array"
27883                 },
27884             "precision" :
27885                 {
27886                     "description": "Accuracy granularity of the exposed value",
27887                     "readOnly": true,
27888                     "type": "number"
27889                 },
27890             "value" :
27891                 {
27892                     "description": "Status of the button",
27893                     "readOnly": true,
27894                     "type": "boolean"
27895                 },
27896             "n" :
27897                 {
27898                     "description": "Friendly name of the resource",
27899                     "maxLength": 64,
27900                     "readOnly": true,
27901                     "type": "string"
27902                 },
27903             "range" :
27904                 {
27905                     "description": "The valid range for the value Property",
27906                     "items": {
27907                         "anyOf": [
27908                             {
27909                                 "type": "number"
27910                             },
27911                             {
27912                                 "type": "integer"
27913                             }
27914                         ]
27915                     },
27916                     "maxItems": 2,
27917                     "minItems": 2,
27918                     "readOnly": true,
27919                     "type": "array"
27920 }
27921 }
27922 }
27923 }

```

```

27924 },
27925
27926 "step" :
27927 {
27928   "anyOf": [
27929     {
27930       "type": "integer"
27931     },
27932     {
27933       "type": "number"
27934     }
27935   ],
27936   "description": "Step value across the defined range",
27937   "readOnly": true
27938 },
27939
27940 "id" :
27941 {
27942   "description": "Instance ID of this specific resource",
27943   "maxLength": 64,
27944   "readOnly": true,
27945   "type": "string"
27946 },
27947
27948 "if" :
27949 {
27950   "description": "The interface set supported by this resource",
27951   "items": {
27952     "enum": [
27953       "oic.if.baseline",
27954       "oic.if.ll",
27955       "oic.if.b",
27956       "oic.if.lb",
27957       "oic.if.rw",
27958       "oic.if.r",
27959       "oic.if.a",
27960       "oic.if.s"
27961     ],
27962     "type": "string"
27963   },
27964   "minItems": 1,
27965   "readOnly": true,
27966   "type": "array"
27967 }
27968 }
27969 }
27970 , "type" : "object"
27971 , "required": ["value"]
27972 }
27973 }
27974 }
27975

```

27976 B.30.5 Property Definition

27977 **Table 297 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
precision	number	No	Read Only	Accuracy granularity of the exposed value
step	multiple types: see schema	No	Read Only	Step value across the defined range
n	string	No	Read Only	

				Friendly name of the resource
range	array: see schema	No	Read Only	The valid range for the value Property
rt	array: see schema	No	Read Only	Resource Type
value	boolean	Yes	Read Only	Status of the button
if	array: see schema	No	Read Only	The interface set supported by this resource
id	string	No	Read Only	Instance ID of this specific resource

27978 **B.30.6 CRUDN behaviour**

27979 **Table 298 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/ButtonResURI		get			observe

27980 **B.31 Carbon Dioxide Sensor**

27981 **B.31.1 Introduction**

27982 This resource describes whether carbon dioxide has been sensed or not.

27983 The value is a boolean.

27984 A value of 'true' means that carbon dioxide has been detected.

27985 A value of 'false' means that carbon dioxide has not been detected.

27986

27987 **B.31.2 Example URI**

27988 /CarbonDioxideResURI

27989 **B.31.3 Resource Type**

27990 The resource type (rt) is defined as: ['oic.r.sensor.carbondioxide'].

27991 **B.31.4 Swagger2.0 Definition**

```

27992 {
27993   "swagger": "2.0",
27994   "info": {
27995     "title": "Carbon Dioxide Sensor",
27996     "version": "v1.1.0-20160519",
27997     "license": {
27998       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
27999       "x-description": "Redistribution and use in source and binary forms, with or without
28000 modification, are permitted provided that the following conditions are met:\n      1.
28001 Redistributions of source code must retain the above copyright notice, this list of conditions and
28002 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
28003 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
28004 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
28005 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
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28007 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
28008 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
28009 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS

```

```

28010 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n          HOWEVER CAUSED AND
28011 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
28012 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
28013 OF SUCH DAMAGE.\n"
28014 }
28015 },
28016 "schemes": ["http"],
28017 "consumes": ["application/json"],
28018 "produces": ["application/json"],
28019 "paths": {
28020   "/CarbonDioxideResURI" : {
28021     "get": {
28022       "description": "This resource describes whether carbon dioxide has been sensed or not.\nThe
28023 value is a boolean.\nA value of 'true' means that carbon dioxide has been detected.\nA value of
28024 'false' means that carbon dioxide has not been detected.\n",
28025       "parameters": [
28026         {"$ref": "#/parameters/interface"}
28027       ],
28028       "responses": {
28029         "200": {
28030           "description": "",
28031           "x-example":
28032             {
28033               "rt": ["oic.r.sensor.carbondioxide"],
28034               "id": "unique_example_id",
28035               "value": true
28036             }
28037           ,
28038           "schema": { "$ref": "#/definitions/CO2" }
28039         }
28040       }
28041     }
28042   },
28043 },
28044 "parameters": {
28045   "interface" : {
28046     "in" : "query",
28047     "name" : "if",
28048     "type" : "string",
28049     "enum" : ["oic.if.s", "oic.if.baseline"]
28050   }
28051 },
28052 "definitions": {
28053   "CO2" : {
28054     "properties": {
28055       "rt" :
28056         {
28057           "description": "Resource Type",
28058           "items": {
28059             "maxLength": 64,
28060             "type": "string"
28061           },
28062           "minItems": 1,
28063           "readOnly": true,
28064           "type": "array"
28065         },
28066       "precision" :
28067         {
28068           "description": "Accuracy granularity of the exposed value",
28069           "readOnly": true,
28070           "type": "number"
28071         },
28072       "value" :
28073         {
28074           "description": "true = sensed, false = not sensed.",
28075           "readOnly": true,
28076           "type": "boolean"
28077         }
28078     },
28079   },
28080 }

```

```

28081     "n" :
28082         {
28083             "description": "Friendly name of the resource",
28084             "maxLength": 64,
28085             "readOnly": true,
28086             "type": "string"
28087         },
28088
28089     "range" :
28090         {
28091             "description": "The valid range for the value Property",
28092             "items": {
28093                 "anyOf": [
28094                     {
28095                         "type": "number"
28096                     },
28097                     {
28098                         "type": "integer"
28099                     }
28100                 ]
28101             },
28102             "maxItems": 2,
28103             "minItems": 2,
28104             "readOnly": true,
28105             "type": "array"
28106         },
28107
28108     "step" :
28109         {
28110             "anyOf": [
28111                 {
28112                     "type": "integer"
28113                 },
28114                 {
28115                     "type": "number"
28116                 }
28117             ],
28118             "description": "Step value across the defined range",
28119             "readOnly": true
28120         },
28121
28122     "id" :
28123         {
28124             "description": "Instance ID of this specific resource",
28125             "maxLength": 64,
28126             "readOnly": true,
28127             "type": "string"
28128         },
28129
28130     "if" :
28131         {
28132             "description": "The interface set supported by this resource",
28133             "items": {
28134                 "enum": [
28135                     "oic.if.baseline",
28136                     "oic.if.ll",
28137                     "oic.if.b",
28138                     "oic.if.lb",
28139                     "oic.if.rw",
28140                     "oic.if.r",
28141                     "oic.if.a",
28142                     "oic.if.s"
28143                 ],
28144                 "type": "string"
28145             },
28146             "minItems": 1,
28147             "readOnly": true,
28148             "type": "array"
28149         }
28150     }
28151 }

```



```

28152     , "type" : "object"
28153     , "required": ["value"]
28154   }
28155 }
28156 }
28157

```

28158 **B.31.5 Property Definition**

28159 **Table 299 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
value	boolean	Yes	Read Only	true = sensed, false = not sensed.
rt	array: see schema	No	Read Only	Resource Type
range	array: see schema	No	Read Only	The valid range for the value Property
id	string	No	Read Only	Instance ID of this specific resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
step	multiple types: see schema	No	Read Only	Step value across the defined range
n	string	No	Read Only	Friendly name of the resource
if	array: see schema	No	Read Only	The interface set supported by this resource

28160 **B.31.6 CRUDN behaviour**

28161 **Table 300 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/CarbonDioxideResURI		get			observe

28162 **B.32 Carbon Monoxide Sensor**

28163 **B.32.1 Introduction**

28164 This resource describes whether carbon monoxide has been sensed or not.

28165 The value is a boolean.

28166 A value of 'true' means that carbon monoxide has been detected.

28167 A value of 'false' means that carbon monoxide has not been detected.

28168

28169 **B.32.2 Example URI**

28170 /CarbonMonoxideResURI

28171 **B.32.3 Resource Type**

28172 The resource type (rt) is defined as: ['oic.r.sensor.carbonmonoxide'].

28173 **B.32.4 Swagger2.0 Definition**

```
28174 {
28175   "swagger": "2.0",
28176   "info": {
28177     "title": "Carbon Monoxide Sensor",
28178     "version": "v1.1.0-20160519",
28179     "license": {
28180       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
28181       "x-description": "Redistribution and use in source and binary forms, with or without
28182 modification, are permitted provided that the following conditions are met:\n      1.
28183 Redistributions of source code must retain the above copyright notice, this list of conditions and
28184 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
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28193 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
28194 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
28195 OF SUCH DAMAGE.\n"
28196     }
28197   },
28198   "schemes": ["http"],
28199   "consumes": ["application/json"],
28200   "produces": ["application/json"],
28201   "paths": {
28202     "/CarbonMonoxideResURI" : {
28203       "get": {
28204         "description": "This resource describes whether carbon monoxide has been sensed or
28205 not.\nThe value is a boolean.\nA value of 'true' means that carbon monoxide has been detected.\nA
28206 value of 'false' means that carbon monoxide has not been detected.\n",
28207         "parameters": [
28208           { "$ref": "#/parameters/interface" }
28209         ],
28210         "responses": {
28211           "200": {
28212             "description": "",
28213             "x-example":
28214             {
28215               "rt": ["oic.r.sensor.carbonmonoxide"],
28216               "id": "unique_example_id",
28217               "value": true
28218             }
28219           },
28220           "schema": { "$ref": "#/definitions/CO" }
28221         }
28222       }
28223     }
28224   },
28225   "parameters": {
28226     "interface" : {
28227       "in" : "query",
28228       "name" : "if",
28229       "type" : "string",
28230       "enum" : ["oic.if.s", "oic.if.baseline"]
28231     }
28232   },
28233   "definitions": {
28234     "CO" : {
28235
```

```

28236 "properties": {
28237   "rt" :
28238     {
28239       "description": "Resource Type",
28240       "items": {
28241         "maxLength": 64,
28242         "type": "string"
28243       },
28244       "minItems": 1,
28245       "readOnly": true,
28246       "type": "array"
28247     },
28248
28249   "precision" :
28250     {
28251       "description": "Accuracy granularity of the exposed value",
28252       "readOnly": true,
28253       "type": "number"
28254     },
28255
28256   "value" :
28257     {
28258       "description": "true = sensed, false = not sensed.",
28259       "readOnly": true,
28260       "type": "boolean"
28261     },
28262
28263   "n" :
28264     {
28265       "description": "Friendly name of the resource",
28266       "maxLength": 64,
28267       "readOnly": true,
28268       "type": "string"
28269     },
28270
28271   "range" :
28272     {
28273       "description": "The valid range for the value Property",
28274       "items": {
28275         "anyOf": [
28276           {
28277             "type": "number"
28278           },
28279           {
28280             "type": "integer"
28281           }
28282         ]
28283       },
28284       "maxItems": 2,
28285       "minItems": 2,
28286       "readOnly": true,
28287       "type": "array"
28288     },
28289
28290   "step" :
28291     {
28292       "anyOf": [
28293         {
28294           "type": "integer"
28295         },
28296         {
28297           "type": "number"
28298         }
28299       ],
28300       "description": "Step value across the defined range",
28301       "readOnly": true
28302     },
28303
28304   "id" :
28305     {
28306       "description": "Instance ID of this specific resource",

```

```

28307     "maxLength": 64,
28308     "readOnly": true,
28309     "type": "string"
28310 },
28311
28312 "if" :
28313     {
28314     "description": "The interface set supported by this resource",
28315     "items": {
28316         "enum": [
28317             "oic.if.baseline",
28318             "oic.if.ll",
28319             "oic.if.b",
28320             "oic.if.lb",
28321             "oic.if.rw",
28322             "oic.if.r",
28323             "oic.if.a",
28324             "oic.if.s"
28325         ],
28326         "type": "string"
28327     },
28328     "minItems": 1,
28329     "readOnly": true,
28330     "type": "array"
28331     }
28332
28333     },
28334     "type" : "object"
28335     , "required": ["value"]
28336 }
28337 }
28338 }
28339

```

28340 **B.32.5 Property Definition**

28341 **Table 301 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
range	array: see schema	No	Read Only	The valid range for the value Property
if	array: see schema	No	Read Only	The interface set supported by this resource
n	string	No	Read Only	Friendly name of the resource
id	string	No	Read Only	Instance ID of this specific resource
value	boolean	Yes	Read Only	true = sensed, false = not sensed.
step	multiple types: see schema	No	Read Only	Step value across the defined range

precision	number	No	Read Only	Accuracy granularity of the exposed value
-----------	--------	----	-----------	---

28342 **B.32.6 CRUDN behaviour**

28343 **Table 302 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/CarbonMonoxideResURI		get			observe

28344 **B.33 Clock**

28345 **B.33.1 Introduction**

28346 This resource describes the properties associated with clock and time.
 28347 Clock is a time information.
 28348 Datetime is using ISO 8601 datetime format (e.g: "2007-04-05T14:30Z") (Time+Date+Timezone)
 28349 Countdown is the desired total seconds for countdown.
 28350

28351 **B.33.2 Example URI**

28352 /ClockResURI

28353 **B.33.3 Resource Type**

28354 The resource type (rt) is defined as: ['oic.r.clock'].

28355 **B.33.4 Swagger2.0 Definition**

```

28356 {
28357   "swagger": "2.0",
28358   "info": {
28359     "title": "Clock",
28360     "version": "v1.1.0-20160519",
28361     "license": {
28362       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
28363       "x-description": "Redistribution and use in source and binary forms, with or without
28364 modification, are permitted provided that the following conditions are met:\n      1.
28365 Redistributions of source code must retain the above copyright notice, this list of conditions and
28366 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
28367 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
28368 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
28369 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
28370 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
28371 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
28372 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
28373 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
28374 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
28375 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
28376 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
28377 OF SUCH DAMAGE.\n"
28378     }
28379   },
28380   "schemes": ["http"],
28381   "consumes": ["application/json"],
28382   "produces": ["application/json"],
28383   "paths": {
28384     "/ClockResURI" : {
28385       "get": {
28386         "description": "This resource describes the properties associated with clock and
28387 time.\nClock is a time information.\nDatetime is using ISO 8601 datetime format (e.g: \"2007-04-
28388 05T14:30Z\") (Time+Date+Timezone)\nCountdown is the desired total seconds for countdown.\nRetrieves
28389 the current datetime data.\n",
28390         "parameters": [
28391           { "$ref": "#/parameters/interface" }
28392         ],

```

```

28393     "responses": {
28394         "200": {
28395             "description" : "",
28396             "x-example":
28397                 {
28398                     "rt":          ["oic.r.clock"],
28399                     "id":          "unique_example_id",
28400                     "datetime":    "2015-11-05T14:30Z",
28401                     "countdown":  0.0
28402                 }
28403             ,
28404             "schema": { "$ref": "#/definitions/Clock" }
28405         }
28406     },
28407 },
28408 "post": {
28409     "description": "Sets the desired datetime.\n",
28410     "parameters": [
28411         { "$ref": "#/parameters/interface" },
28412         {
28413             "name": "body",
28414             "in": "body",
28415             "required": true,
28416             "schema": { "$ref": "#/definitions/Clock" },
28417             "x-example":
28418                 {
28419                     "id":          "unique_example_id",
28420                     "datetime":    "2015-11-05T14:30Z",
28421                     "countdown":  0.0
28422                 }
28423         }
28424     ],
28425     "responses": {
28426         "200": {
28427             "description" : "Indicates that the datetime value was successfully changed.\nThe new
28428 datetime value is provided in the response.\n",
28429             "x-example":
28430                 {
28431                     "id":          "unique_example_id",
28432                     "datetime":    "2015-11-05T14:30Z",
28433                     "countdown":  0.0
28434                 }
28435             ,
28436             "schema": { "$ref": "#/definitions/Clock" }
28437         },
28438         "403": {
28439             "description" : "Indicates that OIC client sent an invalid property value to the
28440 server.\nThe server responds with the required input representation.\n",
28441             "x-example":
28442                 {
28443                     "id":          "unique_example_id",
28444                     "datetime":    "2015-11-05T14:30Z",
28445                     "countdown":  0.0
28446                 }
28447             ,
28448             "schema": { "$ref": "#/definitions/Clock" }
28449         }
28450     }
28451 },
28452 },
28453 },
28454 "parameters": {
28455     "interface" : {
28456         "in" : "query",
28457         "name" : "if",
28458         "type" : "string",
28459         "enum" : ["oic.if.a", "oic.if.baseline"]
28460     }
28461 },
28462 "definitions": {
28463     "Clock" : {

```

```

28464 "properties": {
28465   "rt" :
28466     {
28467       "description": "Resource Type",
28468       "items": {
28469         "maxLength": 64,
28470         "type": "string"
28471       },
28472       "minItems": 1,
28473       "readOnly": true,
28474       "type": "array"
28475     },
28476
28477   "precision" :
28478     {
28479       "description": "Accuracy granularity of the exposed value",
28480       "readOnly": true,
28481       "type": "number"
28482     },
28483
28484   "value" :
28485     {
28486       "anyOf": [
28487         {
28488           "type": "array"
28489         },
28490         {
28491           "type": "string"
28492         },
28493         {
28494           "type": "boolean"
28495         },
28496         {
28497           "type": "integer"
28498         },
28499         {
28500           "type": "number"
28501         },
28502         {
28503           "type": "object"
28504         }
28505       ],
28506       "description": "The value sensed or actuated by this Resource"
28507     },
28508
28509   "n" :
28510     {
28511       "description": "Friendly name of the resource",
28512       "maxLength": 64,
28513       "readOnly": true,
28514       "type": "string"
28515     },
28516
28517   "countdown" :
28518     {
28519       "description": "Desired total seconds for countdown",
28520       "minimum": 0,
28521       "type": "number"
28522     },
28523
28524   "range" :
28525     {
28526       "description": "The valid range for the value Property",
28527       "items": {
28528         "anyOf": [
28529           {
28530             "type": "number"
28531           },
28532           {
28533             "type": "integer"
28534           }

```

```

28535     ]
28536     },
28537     "maxItems": 2,
28538     "minItems": 2,
28539     "readOnly": true,
28540     "type": "array"
28541   },
28542
28543   "step" :
28544     {
28545     "anyOf": [
28546       {
28547         "type": "integer"
28548       },
28549       {
28550         "type": "number"
28551       }
28552     ],
28553     "description": "Step value across the defined range",
28554     "readOnly": true
28555   },
28556
28557   "datetime" :
28558     {
28559     "description": "Using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z, 2007-04-
28560 05T14:30+09:00)",
28561     "type": "string"
28562   },
28563
28564   "id" :
28565     {
28566     "description": "Instance ID of this specific resource",
28567     "maxLength": 64,
28568     "readOnly": true,
28569     "type": "string"
28570   },
28571
28572   "if" :
28573     {
28574     "description": "The interface set supported by this resource",
28575     "items": {
28576       "enum": [
28577         "oic.if.baseline",
28578         "oic.if.ll",
28579         "oic.if.b",
28580         "oic.if.lb",
28581         "oic.if.rw",
28582         "oic.if.r",
28583         "oic.if.a",
28584         "oic.if.s"
28585       ],
28586       "type": "string"
28587     },
28588     "minItems": 1,
28589     "readOnly": true,
28590     "type": "array"
28591   }
28592
28593   },
28594   "type" : "object"
28595   , "required": ["datetime"]
28596 }
28597 }
28598 }
28599

```

28600 B.33.5 Property Definition

28601 **Table 303** The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
---------------	------------	-----------	-------------	-------------

datetime	string	Yes	Read Write	Using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z, 2007-04-05T14:30+09:00)
countdown	number	No	Read Write	Desired total seconds for countdown
if	array: see schema	No	Read Only	The interface set supported by this resource
n	string	No	Read Only	Friendly name of the resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
id	string	No	Read Only	Instance ID of this specific resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
rt	array: see schema	No	Read Only	Resource Type
range	array: see schema	No	Read Only	The valid range for the value Property

28602 **B.33.6 CRUDN behaviour**

28603 **Table 304 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/ClockResURI		get	post		observe

28604 **B.34 Auto White Balance**

28605 **B.34.1 Introduction**

28606 This resource describes an auto balance on/off feature.

28607 The value is a boolean.

28608 An AutoWhiteBalance value of 'true' means that the switch is on.

28609 An AutoWhiteBalance value of 'false' means that the switch is off.

28610

28611 **B.34.2 Example URI**

28612 /AutoWhiteBalanceResURI

28613 **B.34.3 Resource Type**

28614 The resource type (rt) is defined as: ['oic.r.colour.autowhitebalance'].

28615 **B.34.4 Swagger2.0 Definition**

```
28616 {
28617   "swagger": "2.0",
28618   "info": {
28619     "title": "Auto White Balance",
28620     "version": "v1.1.0-20160519",
28621     "license": {
28622       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
28623       "x-description": "Redistribution and use in source and binary forms, with or without
28624 modification, are permitted provided that the following conditions are met:\n      1.
28625 Redistributions of source code must retain the above copyright notice, this list of conditions and
28626 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
28627 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
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28629 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
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28632 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
28633 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
28634 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
28635 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
28636 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
28637 OF SUCH DAMAGE.\n"
28638     }
28639   },
28640   "schemes": ["http"],
28641   "consumes": ["application/json"],
28642   "produces": ["application/json"],
28643   "paths": {
28644     "/AutoWhiteBalanceResURI" : {
28645       "get": {
28646         "description": "This resource describes an auto balance on/off feature.\nThe value is a
28647 boolean.\nAn AutoWhiteBalance value of 'true' means that the switch is on.\nAn AutoWhiteBalance
28648 value of 'false' means that the switch is off.\n",
28649         "parameters": [
28650           { "$ref": "#/parameters/interface" }
28651         ],
28652         "responses": {
28653           "200": {
28654             "description": "",
28655             "x-example":
28656               {
28657                 "rt": ["oic.r.colour.autowhitebalance"],
28658                 "id": "unique_example_id",
28659                 "autoWhiteBalance": false
28660               }
28661             ,
28662             "schema": { "$ref": "#/definitions/AutoWhiteBalance" }
28663           }
28664         }
28665       },
28666       "post": {
28667         "description": "",
28668         "parameters": [
28669           { "$ref": "#/parameters/interface" },
28670           {
28671             "name": "body",
28672             "in": "body",
28673             "required": true,
28674             "schema": { "$ref": "#/definitions/AutoWhiteBalance" } ,

```

```

28675         "x-example":
28676             {
28677                 "id": "unique_example_id",
28678                 "autoWhiteBalance": true
28679             }
28680         },
28681     ],
28682     "responses": {
28683         "200": {
28684             "description": "",
28685             "x-example":
28686                 {
28687                     "id": "unique_example_id",
28688                     "autoWhiteBalance": true
28689                 },
28690             ,
28691             "schema": { "$ref": "#/definitions/AutoWhiteBalance" }
28692         }
28693     }
28694 }
28695 },
28696 },
28697 "parameters": {
28698     "interface" : {
28699         "in" : "query",
28700         "name" : "if",
28701         "type" : "string",
28702         "enum" : ["oic.if.a", "oic.if.baseline"]
28703     }
28704 },
28705 "definitions": {
28706     "AutoWhiteBalance" : {
28707         "properties": {
28708             "rt" :
28709                 {
28710                     "description": "Resource Type",
28711                     "items": {
28712                         "maxLength": 64,
28713                         "type": "string"
28714                     },
28715                     "minItems": 1,
28716                     "readOnly": true,
28717                     "type": "array"
28718                 },
28719         "autoWhiteBalance" :
28720             {
28721                 "description": "Status of the Auto White balance",
28722                 "type": "boolean"
28723             },
28724     },
28725     "precision" :
28726         {
28727             "description": "Accuracy granularity of the exposed value",
28728             "readOnly": true,
28729             "type": "number"
28730         },
28731     },
28732     "value" :
28733         {
28734             "anyOf": [
28735                 {
28736                     "type": "array"
28737                 },
28738                 {
28739                     "type": "string"
28740                 },
28741                 {
28742                     "type": "boolean"
28743                 },
28744             ],
28745         }

```

```

28746         "type": "integer"
28747     },
28748     {
28749         "type": "number"
28750     },
28751     {
28752         "type": "object"
28753     }
28754 ],
28755 "description": "The value sensed or actuated by this Resource"
28756 },
28757
28758 "n" :
28759     {
28760         "description": "Friendly name of the resource",
28761         "maxLength": 64,
28762         "readOnly": true,
28763         "type": "string"
28764     },
28765
28766 "range" :
28767     {
28768         "description": "The valid range for the value Property",
28769         "items": {
28770             "anyOf": [
28771                 {
28772                     "type": "number"
28773                 },
28774                 {
28775                     "type": "integer"
28776                 }
28777             ]
28778         },
28779         "maxItems": 2,
28780         "minItems": 2,
28781         "readOnly": true,
28782         "type": "array"
28783     },
28784
28785 "step" :
28786     {
28787         "anyOf": [
28788             {
28789                 "type": "integer"
28790             },
28791             {
28792                 "type": "number"
28793             }
28794         ],
28795         "description": "Step value across the defined range",
28796         "readOnly": true
28797     },
28798
28799 "id" :
28800     {
28801         "description": "Instance ID of this specific resource",
28802         "maxLength": 64,
28803         "readOnly": true,
28804         "type": "string"
28805     },
28806
28807 "if" :
28808     {
28809         "description": "The interface set supported by this resource",
28810         "items": {
28811             "enum": [
28812                 "oic.if.baseline",
28813                 "oic.if.ll",
28814                 "oic.if.b",
28815                 "oic.if.lb",
28816                 "oic.if.rw",

```

```

28817         "oic.if.r",
28818         "oic.if.a",
28819         "oic.if.s"
28820     ],
28821     "type": "string"
28822 },
28823     "minItems": 1,
28824     "readOnly": true,
28825     "type": "array"
28826 }
28827
28828 }
28829 , "type" : "object"
28830 , "required": ["autoWhiteBalance"]
28831 }
28832 }
28833 }
28834

```

28835 **B.34.5 Property Definition**

28836 **Table 305 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
range	array: see schema	No	Read Only	The valid range for the value Property
autoWhiteBalance	boolean	Yes	Read Write	Status of the Auto White balance
n	string	No	Read Only	Friendly name of the resource
rt	array: see schema	No	Read Only	Resource Type
id	string	No	Read Only	Instance ID of this specific resource
if	array: see schema	No	Read Only	The interface set supported by this resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
precision	number	No	Read Only	Accuracy granularity of the exposed value

28837 **B.34.6 CRUDN behaviour**

28838 **Table 306 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/AutoWhiteBalanceResURI		get	post		observe

28839 **B.35 Colour Saturation**

28840 **B.35.1 Introduction**

28841 This resource describes a Colour saturation value.
 28842 The value is an integer.
 28843 A coloursaturation has a range of [0,100].
 28844 A coloursaturation value of 0 means producing black and white images.
 28845 A coloursaturation value of 50 means producing device specific normal colour images.
 28846 A coloursaturation value of 100 means producing device very full colour images.
 28847

28848 **B.35.2 Example URI**

28849 /ColourSaturationResURI

28850 **B.35.3 Resource Type**

28851 The resource type (rt) is defined as: ['oic.r.colour.saturation'].

28852 **B.35.4 Swagger2.0 Definition**

```

28853 {
28854   "swagger": "2.0",
28855   "info": {
28856     "title": "Colour Saturation",
28857     "version": "v1.1.0-20160519",
28858     "license": {
28859       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
28860       "x-description": "Redistribution and use in source and binary forms, with or without
28861 modification, are permitted provided that the following conditions are met:\n      1.
28862 Redistributions of source code must retain the above copyright notice, this list of conditions and
28863 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
28864 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
28865 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
28866 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
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28868 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
28869 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
28870 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
28871 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND
28872 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
28873 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
28874 OF SUCH DAMAGE.\n"
28875     }
28876   },
28877   "schemes": ["http"],
28878   "consumes": ["application/json"],
28879   "produces": ["application/json"],
28880   "paths": {
28881     "/ColourSaturationResURI" : {
28882       "get": {
28883         "description": "This resource describes a Colour saturation value.\nThe value is an
28884 integer.\nA coloursaturation has a range of [0,100].\nA coloursaturation value of 0 means producing
28885 black and white images.\nA coloursaturation value of 50 means producing device specific normal
28886 colour images.\nA coloursaturation value of 100 means producing device very full colour images.\n",
28887         "parameters": [
28888           {"$ref": "#/parameters/interface"}
28889         ],
28890         "responses": {
28891           "200": {
28892             "description": "",

```

```

28893         "x-example":
28894             {
28895                 "rt": ["oic.r.colour.saturation"],
28896                 "id": "unique_example_id",
28897                 "colourSaturation": 50
28898             }
28899         ,
28900         "schema": { "$ref": "#/definitions/Saturation" }
28901     }
28902 },
28903 },
28904 "post": {
28905     "description": "",
28906     "parameters": [
28907         { "$ref": "#/parameters/interface" },
28908         {
28909             "name": "body",
28910             "in": "body",
28911             "required": true,
28912             "schema": { "$ref": "#/definitions/Saturation" },
28913             "x-example":
28914                 {
28915                     "id": "unique_example_id",
28916                     "colourSaturation": 60
28917                 }
28918         }
28919     ],
28920     "responses": {
28921         "200": {
28922             "description": "",
28923             "x-example":
28924                 {
28925                     "id": "unique_example_id",
28926                     "colourSaturation": 60
28927                 }
28928             ,
28929             "schema": { "$ref": "#/definitions/Saturation" }
28930         }
28931     }
28932 },
28933 },
28934 },
28935 "parameters": {
28936     "interface": {
28937         "in": "query",
28938         "name": "if",
28939         "type": "string",
28940         "enum": ["oic.if.a", "oic.if.baseline"]
28941     }
28942 },
28943 "definitions": {
28944     "Saturation": {
28945         "properties": {
28946             "rt": {
28947                 {
28948                     "description": "Resource Type",
28949                     "items": {
28950                         "maxLength": 64,
28951                         "type": "string"
28952                     },
28953                     "minItems": 1,
28954                     "readOnly": true,
28955                     "type": "array"
28956                 },
28957             "precision": {
28958                 {
28959                     "description": "Accuracy granularity of the exposed value",
28960                     "readOnly": true,
28961                     "type": "number"
28962                 }
28963             }
28964         }
28965     }
28966 }

```

```

28964
28965 "value" :
28966 {
28967   "anyOf": [
28968     {
28969       "type": "array"
28970     },
28971     {
28972       "type": "string"
28973     },
28974     {
28975       "type": "boolean"
28976     },
28977     {
28978       "type": "integer"
28979     },
28980     {
28981       "type": "number"
28982     },
28983     {
28984       "type": "object"
28985     }
28986   ],
28987   "description": "The value sensed or actuated by this Resource"
28988 },
28989
28990 "n" :
28991 {
28992   "description": "Friendly name of the resource",
28993   "maxLength": 64,
28994   "readOnly": true,
28995   "type": "string"
28996 },
28997
28998 "range" :
28999 {
29000   "description": "The valid range for the value Property",
29001   "items": {
29002     "anyOf": [
29003       {
29004         "type": "number"
29005       },
29006       {
29007         "type": "integer"
29008       }
29009     ]
29010   },
29011   "maxItems": 2,
29012   "minItems": 2,
29013   "readOnly": true,
29014   "type": "array"
29015 },
29016
29017 "step" :
29018 {
29019   "anyOf": [
29020     {
29021       "type": "integer"
29022     },
29023     {
29024       "type": "number"
29025     }
29026   ],
29027   "description": "Step value across the defined range",
29028   "readOnly": true
29029 },
29030
29031 "colourSaturation" :
29032 {
29033   "description": "The colour saturation value",
29034   "maximum": 100,

```



```

29035         "minimum": 0,
29036         "type": "integer"
29037     },
29038
29039     "id" :
29040     {
29041         "description": "Instance ID of this specific resource",
29042         "maxLength": 64,
29043         "readOnly": true,
29044         "type": "string"
29045     },
29046
29047     "if" :
29048     {
29049         "description": "The interface set supported by this resource",
29050         "items": {
29051             "enum": [
29052                 "oic.if.baseline",
29053                 "oic.if.ll",
29054                 "oic.if.b",
29055                 "oic.if.lb",
29056                 "oic.if.rw",
29057                 "oic.if.r",
29058                 "oic.if.a",
29059                 "oic.if.s"
29060             ],
29061             "type": "string"
29062         },
29063         "minItems": 1,
29064         "readOnly": true,
29065         "type": "array"
29066     }
29067
29068     }, "type" : "object"
29069     , "required": ["colourSaturation"]
29070 }
29071 }
29072 }
29073 }
29074

```

29075 B.35.5 Property Definition

29076 **Table 307 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
precision	number	No	Read Only	Accuracy granularity of the exposed value
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
id	string	No	Read Only	Instance ID of this specific resource
if	array: see schema	No	Read Only	The interface set supported by this resource

range	array: see schema	No	Read Only	The valid range for the value Property
n	string	No	Read Only	Friendly name of the resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
colourSaturation	integer	Yes	Read Write	The colour saturation value

29077 **B.35.6 CRUDN behaviour**

29078 **Table 308 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/ColourSaturationResURI		get	post		observe

29079 **B.36 Colour Chroma**

29080 **B.36.1 Introduction**

29081 This resource describes the colour using chroma conventions.
 29082 Properties are hue, saturation, csc, and ct.
 29083 hue is the hue angle, it is an integer value as defined by the CIECAM02 model definition (see
 29084 reference [CIE CIE159:2004]).
 29085 saturation is an integer value as defined by the CIECAM02 model definition (see reference [CIE
 29086 CIE159:2004]).
 29087 maximumsaturation is the upper bound on the saturation supported by the Device. If not present
 29088 the maximum value for saturation is 32767.
 29089 csc is the colour space coordinates in CIE colour space. The first item in the array is the X
 29090 coordinate. The second item in the array is the Y coordinate.
 29091 ct is the Mired colour temperature.
 29092

29093 **B.36.2 Example URI**

29094 /example/ColourChromaResURI

29095 **B.36.3 Resource Type**

29096 The resource type (rt) is defined as: ['oic.r.colour.chroma'].

29097 **B.36.4 Swagger2.0 Definition**

```

29098 {
29099   "swagger": "2.0",
29100   "info": {
29101     "title": "Colour Chroma",
29102     "version": "v1.1.0-20160519",
29103     "license": {
29104       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
29105       "x-description": "Redistribution and use in source and binary forms, with or without
29106 modification, are permitted provided that the following conditions are met:\n      1.
29107 Redistributions of source code must retain the above copyright notice, this list of conditions and
29108 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
29109 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
29110 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
29111 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
29112 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
  
```

```

29113 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n          IN NO EVENT SHALL THE Open Connectivity
29114 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
29115 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
29116 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n          HOWEVER CAUSED AND
29117 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
29118 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
29119 OF SUCH DAMAGE.\n"
29120 }
29121 },
29122 "schemes": ["http"],
29123 "consumes": ["application/json"],
29124 "produces": ["application/json"],
29125 "paths": {
29126   "/example/ColourChromaResURI" : {
29127     "get": {
29128       "description": "This resource describes the colour using chroma conventions.\nProperties
29129 are hue, saturation, csc, and ct.\nhue is the hue angle, it is an integer value as defined by the
29130 CIECAM02 model definition (see reference [CIE CIE159:2004]).\nsaturation is an integer value as
29131 defined by the CIECAM02 model definition (see reference [CIE CIE159:2004]).\nmaximumsaturation is
29132 the upper bound on the saturation supported by the Device.\n If not present the maximum value
29133 for saturation is 32767.\ncsc is the colour space coordinates in CIE colour space.\n The first
29134 item in the array is the X coordinate.\n The second item in the array is the Y coordinate.\nct is
29135 the Mired colour temperature.\nProvides the colour using chroma conventions.\n",
29136     "parameters": [
29137       { "$ref": "#/parameters/interface" }
29138     ],
29139     "responses": {
29140       "200": {
29141         "description": "",
29142         "x-example":
29143           {
29144             "rt": ["oic.r.colour.chroma"],
29145             "id": "unique_example_id",
29146             "hue": 256.0,
29147             "saturation": 212,
29148             "maximumsaturation": 1000,
29149             "csc": [0.41,0.51],
29150             "ct": 457
29151           }
29152       },
29153       "schema": { "$ref": "#/definitions/ColourChroma" }
29154     }
29155   }
29156 },
29157 "post": {
29158   "description": "Sets current colour chroma values\n",
29159   "parameters": [
29160     { "$ref": "#/parameters/interface" },
29161     {
29162       "name": "body",
29163       "in": "body",
29164       "required": true,
29165       "schema": { "$ref": "#/definitions/ColourChroma" },
29166       "x-example":
29167         {
29168           "id": "unique_example_id",
29169           "hue": 300.0,
29170           "saturation": 212,
29171           "csc": [0.41,0.51],
29172           "ct": 457
29173         }
29174     }
29175   ],
29176   "responses": {
29177     "200": {
29178       "description": "",
29179       "x-example":
29180         {
29181           "id": "unique_example_id",
29182           "hue": 300.0,
29183           "saturation": 212,

```

```

29184         "csc":          [0.41,0.51],
29185         "ct":           467
29186     }
29187     ,
29188     "schema": { "$ref": "#/definitions/ColourChroma" }
29189     }
29190     }
29191     }
29192     },
29193     },
29194     "parameters": {
29195         "interface" : {
29196             "in" : "query",
29197             "name" : "if",
29198             "type" : "string",
29199             "enum" : ["oic.if.a", "oic.if.baseline"]
29200         }
29201     },
29202     "definitions": {
29203         "ColourChroma" : {
29204             "properties": {
29205                 "rt" :
29206                     {
29207                         "description": "Resource Type",
29208                         "items": {
29209                             "maxLength": 64,
29210                             "type": "string"
29211                         },
29212                         "minItems": 1,
29213                         "readOnly": true,
29214                         "type": "array"
29215                     },
29216                 "hue" :
29217                     {
29218                         "description": "Hue angle as defined by the CIECAM02 model definition",
29219                         "maximum": 360.0,
29220                         "minimum": 0.0,
29221                         "type": "number"
29222                     },
29223                 "saturation" :
29224                     {
29225                         "description": "Saturation as defined by the CIECAM02 model definition",
29226                         "maximum": 32767,
29227                         "minimum": 0,
29228                         "type": "integer"
29229                     },
29230                 "maximumsaturation" :
29231                     {
29232                         "description": "Maximum supported value of Saturation for this Device",
29233                         "maximum": 32767,
29234                         "minimum": 0,
29235                         "readOnly": true,
29236                         "type": "integer"
29237                     },
29238                 "precision" :
29239                     {
29240                         "description": "Accuracy granularity of the exposed value",
29241                         "readOnly": true,
29242                         "type": "number"
29243                     },
29244                 "csc" :
29245                     {
29246                         "description": "X and Y coordinates of the colour in CIE colour space",
29247                         "items": {
29248                             "maximum": 1,
29249                             "minimum": 0,

```

```

29255         "type": "number"
29256     },
29257     "maxItems": 2,
29258     "minItems": 2,
29259     "type": "array"
29260 },
29261
29262 "n" :
29263     {
29264         "description": "Friendly name of the resource",
29265         "maxLength": 64,
29266         "readOnly": true,
29267         "type": "string"
29268     },
29269
29270 "range" :
29271     {
29272         "description": "The valid range for the value Property",
29273         "items": {
29274             "anyOf": [
29275                 {
29276                     "type": "number"
29277                 },
29278                 {
29279                     "type": "integer"
29280                 }
29281             ]
29282         },
29283         "maxItems": 2,
29284         "minItems": 2,
29285         "readOnly": true,
29286         "type": "array"
29287     },
29288
29289 "value" :
29290     {
29291         "anyOf": [
29292             {
29293                 "type": "array"
29294             },
29295             {
29296                 "type": "string"
29297             },
29298             {
29299                 "type": "boolean"
29300             },
29301             {
29302                 "type": "integer"
29303             },
29304             {
29305                 "type": "number"
29306             },
29307             {
29308                 "type": "object"
29309             }
29310         ],
29311         "description": "The value sensed or actuated by this Resource"
29312     },
29313
29314 "step" :
29315     {
29316         "anyOf": [
29317             {
29318                 "type": "integer"
29319             },
29320             {
29321                 "type": "number"
29322             }
29323         ],
29324         "description": "Step value across the defined range",
29325         "readOnly": true

```

```

29326     },
29327
29328     "ct" :
29329     {
29330         "description": "Mired colour temperature",
29331         "minimum": 0,
29332         "type": "integer"
29333     },
29334
29335     "id" :
29336     {
29337         "description": "Instance ID of this specific resource",
29338         "maxLength": 64,
29339         "readOnly": true,
29340         "type": "string"
29341     },
29342
29343     "if" :
29344     {
29345         "description": "The interface set supported by this resource",
29346         "items": {
29347             "enum": [
29348                 "oic.if.baseline",
29349                 "oic.if.ll",
29350                 "oic.if.b",
29351                 "oic.if.lb",
29352                 "oic.if.rw",
29353                 "oic.if.r",
29354                 "oic.if.a",
29355                 "oic.if.s"
29356             ],
29357             "type": "string"
29358         },
29359         "minItems": 1,
29360         "readOnly": true,
29361         "type": "array"
29362     }
29363 }
29364     },
29365     "type" : "object"
29366     , "required": ["hue", "saturation", "csc"]
29367 }
29368 }
29369 }
29370

```

29371 B.36.5 Property Definition

29372 **Table 309 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
n	string	No	Read Only	Friendly name of the resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
maximumsaturation	integer	No	Read Only	

				Maximum supported value of Saturation for this Device
if	array: see schema	No	Read Only	The interface set supported by this resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
csc	array: see schema	Yes	Read Write	X and Y coordinates of the colour in CIE colour space
ct	integer	No	Read Write	Mired colour temperature
id	string	No	Read Only	Instance ID of this specific resource
hue	number	Yes	Read Write	Hue angle as defined by the CIECAM02 model definition
rt	array: see schema	No	Read Only	Resource Type
range	array: see schema	No	Read Only	The valid range for the value Property
saturation	integer	Yes	Read Write	Saturation as defined by the CIECAM02 model definition

29373 **B.36.6 CRUDN behaviour**

29374 **Table 310 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/example/ColourChromaResURI		get	post		observe

29375 **B.37 Colour Space Coordinates**

29376 **B.37.1 Introduction**

29377 This resource describes the colour using colour space co-ordinates.
 29378 csc is the colour space coordinates in CIE colour space. The first item in the array is the X
 29379 coordinate. The second item in the array is the Y coordinate. If precision (from
 29380 oic.r.baseresource) is provided it applies to both the X and Y coordinates.
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B.37.2 Example URI

/example/ColourSpaceCoordinatesResURI

B.37.3 Resource Type

The resource type (rt) is defined as: ['oic.r.colour.csc'].

B.37.4 Swagger2.0 Definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Colour Space Coordinates",
    "version": "OCFv1.1.0-2017",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
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Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/example/ColourSpaceCoordinatesResURI" : {
      "get": {
        "description": "This resource describes the colour using colour space co-ordinates.\ncsc is
the colour space coordinates in CIE colour space.\n The first item in the array is the X
coordinate.\n The second item in the array is the Y coordinate.\n If precision (from
oic.r.baseresource) is provided it applies to both the X and Y coordinates.\nProvides the colour
using colour space coordinates.\n",
        "parameters": [
          {"$ref": "#/parameters/interface-all"}
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.colour.csc"],
              "id": "unique_example_id",
              "csc": [0.41,0.51]
            }
          },
          "schema": { "$ref": "#/definitions/ColourCSC" }
        }
      },
      "post": {
        "description": "Sets current colour space coordinates\n",
        "parameters": [
          {"$ref": "#/parameters/interface-a"},
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/ColourCSC" },
            "x-example":

```



```

29449         {
29450             "id":          "unique_example_id",
29451             "csc":        [0.40,0.70]
29452         }
29453     },
29454 ],
29455 "responses": {
29456     "200": {
29457         "description" : "",
29458         "x-example":
29459         {
29460             "id":          "unique_example_id",
29461             "csc":        [0.40,0.70]
29462         }
29463     },
29464     "schema": { "$ref": "#/definitions/ColourCSC" }
29465 }
29466 }
29467 }
29468 }
29469 },
29470 "parameters": {
29471     "interface-a" : {
29472         "in" : "query",
29473         "name" : "if",
29474         "type" : "string",
29475         "enum" : ["oic.if.a"]
29476     },
29477     "interface-all" : {
29478         "in" : "query",
29479         "name" : "if",
29480         "type" : "string",
29481         "enum" : ["oic.if.a", "oic.if.baseline"]
29482     }
29483 },
29484 "definitions": {
29485     "ColourCSC" : {
29486         "properties": {
29487             "rt" :
29488             {
29489                 "description": "Resource Type",
29490                 "items": {
29491                     "maxLength": 64,
29492                     "type": "string"
29493                 },
29494                 "minItems": 1,
29495                 "readOnly": true,
29496                 "type": "array"
29497             },
29498         },
29499         "precision" :
29500         {
29501             "description": "Accuracy granularity of the exposed value",
29502             "readOnly": true,
29503             "type": "number"
29504         },
29505     },
29506     "csc" :
29507     {
29508         "description": "X and Y coordinates of the colour in CIE colour space",
29509         "items": {
29510             "maximum": 1,
29511             "minimum": 0,
29512             "type": "number"
29513         },
29514         "maxItems": 2,
29515         "minItems": 2,
29516         "type": "array"
29517     },
29518     "n" :
29519

```

```

29520         {
29521             "description": "Friendly name of the resource",
29522             "maxLength": 64,
29523             "readOnly": true,
29524             "type": "string"
29525         },
29526
29527         "range" :
29528         {
29529             "description": "The valid range for the value Property",
29530             "items": {
29531                 "anyOf": [
29532                     {
29533                         "type": "number"
29534                     },
29535                     {
29536                         "type": "integer"
29537                     }
29538                 ]
29539             },
29540             "maxItems": 2,
29541             "minItems": 2,
29542             "readOnly": true,
29543             "type": "array"
29544         },
29545
29546         "value" :
29547         {
29548             "anyOf": [
29549                 {
29550                     "type": "array"
29551                 },
29552                 {
29553                     "type": "string"
29554                 },
29555                 {
29556                     "type": "boolean"
29557                 },
29558                 {
29559                     "type": "integer"
29560                 },
29561                 {
29562                     "type": "number"
29563                 },
29564                 {
29565                     "type": "object"
29566                 }
29567             ],
29568             "description": "The value sensed or actuated by this Resource"
29569         },
29570
29571         "step" :
29572         {
29573             "anyOf": [
29574                 {
29575                     "type": "integer"
29576                 },
29577                 {
29578                     "type": "number"
29579                 }
29580             ],
29581             "description": "Step value across the defined range",
29582             "readOnly": true
29583         },
29584
29585         "id" :
29586         {
29587             "description": "Instance ID of this specific resource",
29588             "maxLength": 64,
29589             "readOnly": true,
29590             "type": "string"

```

```

29591     },
29592
29593     "if" :
29594     {
29595         "description": "The interface set supported by this resource",
29596         "items": {
29597             "enum": [
29598                 "oic.if.baseline",
29599                 "oic.if.ll",
29600                 "oic.if.b",
29601                 "oic.if.lb",
29602                 "oic.if.rw",
29603                 "oic.if.r",
29604                 "oic.if.a",
29605                 "oic.if.s"
29606             ],
29607             "type": "string"
29608         },
29609         "minItems": 1,
29610         "readOnly": true,
29611         "type": "array"
29612     }
29613
29614     },
29615     "type" : "object"
29616     , "required": ["csc"]
29617 }
29618 }
29619 }
29620

```

29621 **B.37.5 Property Definition**

29622 **Table 311 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
rt	array: see schema	No	Read Only	Resource Type
if	array: see schema	No	Read Only	The interface set supported by this resource
id	string	No	Read Only	Instance ID of this specific resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
n	string	No	Read Only	Friendly name of the resource
csc	array: see schema	Yes	Read Write	X and Y coordinates of the colour in CIE colour space

range	array: see schema	No	Read Only	The valid range for the value Property
step	multiple types: see schema	No	Read Only	Step value across the defined range

29623 **B.37.6 CRUDN behaviour**

29624 **Table 312 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/example/ColourSpaceCoordinatesResURI		get	post		observe

29625 **B.38 Colour Temperature**

29626 **B.38.1 Introduction**

29627 This resource describes the colour using colour temperature conventions.
 29628 ct is the Mired colour temperature.
 29629 The equivalent value in Kelvin is obtained by Colour Temp(K) = 1,000,000/Colour Temp(Mired)
 29630

29631 **B.38.2 Example URI**

29632 /example/ColourTemperatureResURI

29633 **B.38.3 Resource Type**

29634 The resource type (rt) is defined as: ['oic.r.colour.colourtemperature'].

29635 **B.38.4 Swagger2.0 Definition**

```

29636 {
29637   "swagger": "2.0",
29638   "info": {
29639     "title": "Colour Temperature",
29640     "version": "OCFv1.0-2017",
29641     "license": {
29642       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
29643       "x-description": "Redistribution and use in source and binary forms, with or without
29644 modification, are permitted provided that the following conditions are met:\n      1.
29645 Redistributions of source code must retain the above copyright notice, this list of conditions and
29646 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
29647 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
29648 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
29649 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
29650 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
29651 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
29652 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
29653 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
29654 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
29655 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
29656 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
29657 OF SUCH DAMAGE.\n"
29658     }
29659   },
29660   "schemes": ["http"],
29661   "consumes": ["application/json"],
29662   "produces": ["application/json"],
29663   "paths": {
29664     "/example/ColourTemperatureResURI" : {
29665       "get": {
29666         "description": "This resource describes the colour using colour temperature
29667 conventions.\nct is the Mired colour temperature.\nThe equivalent value in Kelvin is obtained by
29668 Colour Temp(K) = 1,000,000/Colour Temp(Mired)\nProvides the colour using colour temperature
  
```

```

29669 conventions.\n",
29670     "parameters": [
29671       {"$ref": "#/parameters/interface-all"}
29672     ],
29673     "responses": {
29674       "200": {
29675         "description": "",
29676         "x-example":
29677           {
29678             "rt": ["oic.r.colour.colourtemperature"],
29679             "id": "unique_example_id",
29680             "ct": 457
29681           }
29682         ,
29683         "schema": { "$ref": "#/definitions/ColourTemp" }
29684       }
29685     },
29686   },
29687   "post": {
29688     "description": "Sets current colour temperature value\n",
29689     "parameters": [
29690       {"$ref": "#/parameters/interface-a"},
29691       {
29692         "name": "body",
29693         "in": "body",
29694         "required": true,
29695         "schema": { "$ref": "#/definitions/ColourTemp" },
29696         "x-example":
29697           {
29698             "id": "unique_example_id",
29699             "ct": 457
29700           }
29701       }
29702     ],
29703     "responses": {
29704       "200": {
29705         "description": "",
29706         "x-example":
29707           {
29708             "id": "unique_example_id",
29709             "ct": 467
29710           }
29711         ,
29712         "schema": { "$ref": "#/definitions/ColourTemp" }
29713       }
29714     }
29715   }
29716 },
29717 "parameters": {
29718   "interface-a": {
29719     "in": "query",
29720     "name": "if",
29721     "type": "string",
29722     "enum": ["oic.if.a"]
29723   },
29724   "interface-all": {
29725     "in": "query",
29726     "name": "if",
29727     "type": "string",
29728     "enum": ["oic.if.a", "oic.if.baseline"]
29729   }
29730 },
29731 "definitions": {
29732   "ColourTemp": {
29733     "properties": {
29734       "rt":
29735         {
29736           "description": "Resource Type",
29737           "items": {
29738             "maxLength": 64,

```

```

29740         "type": "string"
29741     },
29742     "minItems": 1,
29743     "readOnly": true,
29744     "type": "array"
29745 },
29746
29747 "precision" :
29748     {
29749     "description": "Accuracy granularity of the exposed value",
29750     "readOnly": true,
29751     "type": "number"
29752     },
29753
29754 "value" :
29755     {
29756     "anyOf": [
29757         {
29758         "type": "array"
29759         },
29760         {
29761         "type": "string"
29762         },
29763         {
29764         "type": "boolean"
29765         },
29766         {
29767         "type": "integer"
29768         },
29769         {
29770         "type": "number"
29771         },
29772         {
29773         "type": "object"
29774         }
29775     ],
29776     "description": "The value sensed or actuated by this Resource"
29777     },
29778
29779 "n" :
29780     {
29781     "description": "Friendly name of the resource",
29782     "maxLength": 64,
29783     "readOnly": true,
29784     "type": "string"
29785     },
29786
29787 "range" :
29788     {
29789     "description": "The valid range for the value Property",
29790     "items": {
29791     "anyOf": [
29792         {
29793         "type": "number"
29794         },
29795         {
29796         "type": "integer"
29797         }
29798     ]
29799     },
29800     "maxItems": 2,
29801     "minItems": 2,
29802     "readOnly": true,
29803     "type": "array"
29804     },
29805
29806 "step" :
29807     {
29808     "anyOf": [
29809         {
29810         "type": "integer"

```

```

29811         },
29812         {
29813             "type": "number"
29814         }
29815     ],
29816     "description": "Step value across the defined range",
29817     "readOnly": true
29818 },
29819
29820 "ct" :
29821     {
29822         "description": "Mired colour temperature",
29823         "minimum": 0,
29824         "type": "integer"
29825     },
29826
29827 "id" :
29828     {
29829         "description": "Instance ID of this specific resource",
29830         "maxLength": 64,
29831         "readOnly": true,
29832         "type": "string"
29833     },
29834
29835 "if" :
29836     {
29837         "description": "The interface set supported by this resource",
29838         "items": {
29839             "enum": [
29840                 "oic.if.baseline",
29841                 "oic.if.ll",
29842                 "oic.if.b",
29843                 "oic.if.lb",
29844                 "oic.if.rw",
29845                 "oic.if.r",
29846                 "oic.if.a",
29847                 "oic.if.s"
29848             ],
29849             "type": "string"
29850         },
29851         "minItems": 1,
29852         "readOnly": true,
29853         "type": "array"
29854     }
29855 }
29856 }, "type" : "object"
29857 , "required": ["ct"]
29858 }
29859 }
29860 }
29861 }
29862

```

29863 B.38.5 Property Definition

29864 **Table 313 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema	No	Read Only	Step value across the defined range
precision	number	No	Read Only	Accuracy granularity of the exposed value
n	string	No	Read Only	

				Friendly name of the resource
if	array: see schema	No	Read Only	The interface set supported by this resource
rt	array: see schema	No	Read Only	Resource Type
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
id	string	No	Read Only	Instance ID of this specific resource
range	array: see schema	No	Read Only	The valid range for the value Property
ct	integer	Yes	Read Write	Mired colour temperature

29865 **B.38.6 CRUDN behaviour**

29866 **Table 314 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/example/ColourTemperatureResURI		get	post		observe

29867 **B.39 Colour Hue and Saturation**

29868 **B.39.1 Introduction**

29869 This resource describes the colour using hue-saturation conventions.
 29870 hue is the hue angle, it is a number value as defined by the CIECAM02 model definition (see
 29871 reference [CIE CIE159:2004]). A Device that does not support fractional hue angles can provide
 29872 integer values. If precision (from oic.r.baseresource) is provided it applies to the hue angle.
 29873 saturation is an integer value as defined by the CIECAM02 model definition (see reference [CIE
 29874 CIE159:2004]). saturation can be converted to a percentage by saturation/maximumsaturation X
 29875 100; where maximumsaturation is 32767 if the Property itself is not present.
 29876 maximumsaturation is the upper bound on the saturation supported by the Device. If not present
 29877 the maximum value for saturation is 32767.
 29878

29879 **B.39.2 Example URI**

29880 /example/ColourHueSaturationResURI

29881 **B.39.3 Resource Type**

29882 The resource type (rt) is defined as: ['oic.r.colour.hs'].

29883 **B.39.4 Swagger2.0 Definition**

```

29884 {
29885   "swagger": "2.0",
29886   "info": {
29887     "title": "Colour Hue and Saturation",
29888     "version": "v1.0-2017",

```



```

29889     "license": {
29890         "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
29891         "x-description": "Redistribution and use in source and binary forms, with or without
29892 modification, are permitted provided that the following conditions are met:\n        1.
29893 Redistributions of source code must retain the above copyright notice, this list of conditions and
29894 the following disclaimer.\n        2. Redistributions in binary form must reproduce the above
29895 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
29896 other materials provided with the distribution.\n\n        THIS SOFTWARE IS PROVIDED BY THE Open
29897 Connectivity Foundation, INC. \ "AS IS\ " AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
29898 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
29899 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n        IN NO EVENT SHALL THE Open Connectivity
29900 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
29901 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
29902 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n        HOWEVER CAUSED AND
29903 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
29904 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
29905 OF SUCH DAMAGE.\n"
29906     }
29907 },
29908 "schemes": ["http"],
29909 "consumes": ["application/json"],
29910 "produces": ["application/json"],
29911 "paths": {
29912     "/example/ColourHueSaturationResURI" : {
29913         "get": {
29914             "description": "This resource describes the colour using hue-saturation conventions.\nhue
29915 is the hue angle, it is a number value as defined by the CIECAM02 model definition (see reference
29916 [CIE CIE159:2004]).\n A Device that does not support fractional hue angles can provide integer
29917 values.\n If precision (from oic.r.baseresource) is provided it applies to the hue
29918 angle.\nsaturation is an integer value as defined by the CIECAM02 model definition (see reference
29919 [CIE CIE159:2004]).\n saturation can be converted to a percentage by saturation/maximumsaturation
29920 X 100; where maximumsaturation is 32767 if the Property itself is not present.\nmaximumsaturation
29921 is the upper bound on the saturation supported by the Device.\n If not present the maximum value
29922 for saturation is 32767.\nProvides the colour using hue and saturation conventions.\n",
29923             "parameters": [
29924                 { "$ref": "#/parameters/interface-all" }
29925             ],
29926             "responses": {
29927                 "200": {
29928                     "description": "",
29929                     "x-example":
29930                     {
29931                         "rt": ["oic.r.colour.hs"],
29932                         "id": "unique_example_id",
29933                         "hue": 300.0,
29934                         "saturation": 212,
29935                         "maximumsaturation": 1000
29936                     }
29937                 },
29938                 "schema": { "$ref": "#/definitions/ColourHS" }
29939             }
29940         }
29941     },
29942     "post": {
29943         "description": "Sets current colour hue and saturation values.\nAt least one of hue or
29944 saturation shall be provided in the payload.\n",
29945         "parameters": [
29946             { "$ref": "#/parameters/interface-a" },
29947             {
29948                 "name": "body",
29949                 "in": "body",
29950                 "required": true,
29951                 "schema": { "$ref": "#/definitions/ColourHS" },
29952                 "x-example":
29953                 {
29954                     "id": "unique_example_id",
29955                     "hue": 300.0,
29956                     "saturation": 212
29957                 }
29958             }
29959         ]

```

```

29960     "responses": {
29961         "200": {
29962             "description" : "",
29963             "x-example":
29964                 {
29965                     "id":          "unique_example_id",
29966                     "hue":         300.0,
29967                     "saturation": 212
29968                 }
29969             ,
29970             "schema": { "$ref": "#/definitions/ColourHS" }
29971         }
29972     }
29973 }
29974 },
29975 },
29976 "parameters": {
29977     "interface-a" : {
29978         "in" : "query",
29979         "name" : "if",
29980         "type" : "string",
29981         "enum" : ["oic.if.a"]
29982     },
29983     "interface-all" : {
29984         "in" : "query",
29985         "name" : "if",
29986         "type" : "string",
29987         "enum" : ["oic.if.a", "oic.if.baseline"]
29988     }
29989 },
29990 "definitions": {
29991     "ColourHS" : {
29992         "properties": {
29993             "rt" :
29994                 {
29995                     "description": "Resource Type",
29996                     "items": {
29997                         "maxLength": 64,
29998                         "type": "string"
29999                     },
30000                     "minItems": 1,
30001                     "readOnly": true,
30002                     "type": "array"
30003                 },
30004             "hue" :
30005                 {
30006                     "description": "Hue angle as defined by the CIECAM02 model definition",
30007                     "maximum": 360.0,
30008                     "minimum": 0.0,
30009                     "type": "number"
30010                 },
30011             "saturation" :
30012                 {
30013                     "description": "Saturation as defined by the CIECAM02 model definition",
30014                     "maximum": 32767,
30015                     "minimum": 0,
30016                     "type": "integer"
30017                 },
30018             "maximalsaturation" :
30019                 {
30020                     "description": "Maximum supported value of Saturation for this Device",
30021                     "maximum": 32767,
30022                     "minimum": 0,
30023                     "readOnly": true,
30024                     "type": "integer"
30025                 },
30026             "precision" :

```

```

30031         {
30032         "description": "Accuracy granularity of the exposed value",
30033         "readOnly": true,
30034         "type": "number"
30035     },
30036
30037     "value" :
30038     {
30039         "anyOf": [
30040         {
30041             "type": "array"
30042         },
30043         {
30044             "type": "string"
30045         },
30046         {
30047             "type": "boolean"
30048         },
30049         {
30050             "type": "integer"
30051         },
30052         {
30053             "type": "number"
30054         },
30055         {
30056             "type": "object"
30057         }
30058     ],
30059     "description": "The value sensed or actuated by this Resource"
30060 },
30061
30062     "n" :
30063     {
30064         "description": "Friendly name of the resource",
30065         "maxLength": 64,
30066         "readOnly": true,
30067         "type": "string"
30068     },
30069
30070     "range" :
30071     {
30072         "description": "The valid range for the value Property",
30073         "items": {
30074             "anyOf": [
30075             {
30076                 "type": "number"
30077             },
30078             {
30079                 "type": "integer"
30080             }
30081         ]
30082     },
30083     "maxItems": 2,
30084     "minItems": 2,
30085     "readOnly": true,
30086     "type": "array"
30087 },
30088
30089     "step" :
30090     {
30091         "anyOf": [
30092         {
30093             "type": "integer"
30094         },
30095         {
30096             "type": "number"
30097         }
30098     ],
30099     "description": "Step value across the defined range",
30100     "readOnly": true
30101 },

```

```

30102
30103     "id" :
30104         {
30105             "description": "Instance ID of this specific resource",
30106             "maxLength": 64,
30107             "readOnly": true,
30108             "type": "string"
30109         },
30110
30111     "if" :
30112         {
30113             "description": "The interface set supported by this resource",
30114             "items": {
30115                 "enum": [
30116                     "oic.if.baseline",
30117                     "oic.if.ll",
30118                     "oic.if.b",
30119                     "oic.if.lb",
30120                     "oic.if.rw",
30121                     "oic.if.r",
30122                     "oic.if.a",
30123                     "oic.if.s"
30124                 ],
30125                 "type": "string"
30126             },
30127             "minItems": 1,
30128             "readOnly": true,
30129             "type": "array"
30130         }
30131     }
30132     , "type" : "object"
30133     , "required": ["hue", "saturation"]
30134 }
30135 }
30136 }
30137 }
30138

```

30139 B.39.5 Property Definition

30140 **Table 315 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
n	string	No	Read Only	Friendly name of the resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
saturation	integer	Yes	Read Write	Saturation as defined by the CIECAM02 model definition
id	string	No	Read Only	Instance ID of this specific resource
range	array: see schema	No	Read Only	The valid range for the value Property
maximumsaturation	integer	No	Read Only	

				Maximum supported value of Saturation for this Device
precision	number	No	Read Only	Accuracy granularity of the exposed value
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
rt	array: see schema	No	Read Only	Resource Type
hue	number	Yes	Read Write	Hue angle as defined by the CIECAM02 model definition
if	array: see schema	No	Read Only	The interface set supported by this resource

30141 **B.39.6 CRUDN behaviour**

30142 **Table 316 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/example/ColourHueSaturationResURI		get	post		observe

30143 **B.40 Colour RGB**

30144 **B.40.1 Introduction**

30145 This resource specifies the actual colour in the RGB space represented as an array of integers.
30146 Each colour value is described with a Red, Green, Blue component.
30147 These colour values are encoded as an array of integer values ([R,G,B]).
30148 The minimum and maximum colour value per component may be described by range (from
30149 oic.r.baseresource).
30150 When range (from oic.r.baseresource) is omitted, then the range is [0,255].
30151 Retrieves the current colour in RGB.
30152 Value is an array of integer values in the order R,G,B.

30154 **B.40.2 Example URI**

30155 /ColourRGBResURI

30156 **B.40.3 Resource Type**

30157 The resource type (rt) is defined as: ['oic.r.colour.rgb'].

30158 **B.40.4 Swagger2.0 Definition**

```
30159 {
30160   "swagger": "2.0",
30161   "info": {
30162     "title": "Colour RGB",
30163     "version": "v1.1.0-20160519",
```

```

30164     "license": {
30165         "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
30166         "x-description": "Redistribution and use in source and binary forms, with or without
30167 modification, are permitted provided that the following conditions are met:\n      1.
30168 Redistributions of source code must retain the above copyright notice, this list of conditions and
30169 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
30170 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
30171 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
30172 Connectivity Foundation, INC. \ "AS IS\ " AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
30173 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
30174 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
30175 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
30176 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
30177 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
30178 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
30179 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
30180 OF SUCH DAMAGE.\n"
30181     }
30182 },
30183 "schemes": ["http"],
30184 "consumes": ["application/json"],
30185 "produces": ["application/json"],
30186 "paths": {
30187     "/ColourRGBResURI" : {
30188         "get": {
30189             "description": "This resource specifies the actual colour in the RGB space represented as
30190 an array of integers.\nEach colour value is described with a Red, Green, Blue component.\nThese
30191 colour values are encoded as an array of integer values ([R,G,B]).\nThe minimum and maximum colour
30192 value per component may be described by range (from oic.r.baseresource).\nWhen range (from
30193 oic.r.baseresource) is omitted, then the range is [0,255].\nRetrieves the current colour in
30194 RGB.\nValue is an array of integer values in the order R,G,B.\n",
30195             "parameters": [
30196                 { "$ref": "#/parameters/interface" }
30197             ],
30198             "responses": {
30199                 "200": {
30200                     "description": "",
30201                     "x-example":
30202                     {
30203                         "rt": ["oic.r.colour.rgb"],
30204                         "id": "unique_example_id",
30205                         "rgbValue": [255,255,255],
30206                         "range": [0,255]
30207                     }
30208                 },
30209                 "schema": { "$ref": "#/definitions/ColourRGB" }
30210             }
30211         }
30212     },
30213     "post": {
30214         "description": "Sets the current colourRGB value\n",
30215         "parameters": [
30216             { "$ref": "#/parameters/interface" },
30217             {
30218                 "name": "body",
30219                 "in": "body",
30220                 "required": true,
30221                 "schema": { "$ref": "#/definitions/ColourRGB" },
30222                 "x-example":
30223                 {
30224                     "id": "unique_example_id",
30225                     "rgbValue": [255,0,0]
30226                 }
30227             }
30228         ],
30229         "responses": {
30230             "200": {
30231                 "description": "",
30232                 "x-example":
30233                 {
30234                     "id": "unique_example_id",

```

```

30235         "rgbValue": [255,0,0]
30236     }
30237     ,
30238     "schema": { "$ref": "#/definitions/ColourRGB" }
30239 }
30240 }
30241 }
30242 }
30243 },
30244 "parameters": {
30245     "interface" : {
30246         "in" : "query",
30247         "name" : "if",
30248         "type" : "string",
30249         "enum" : ["oic.if.a", "oic.if.baseline"]
30250     }
30251 },
30252 "definitions": {
30253     "ColourRGB" : {
30254         "properties": {
30255             "rt" :
30256                 {
30257                     "description": "Resource Type",
30258                     "items": {
30259                         "maxLength": 64,
30260                         "type": "string"
30261                     },
30262                     "minItems": 1,
30263                     "readOnly": true,
30264                     "type": "array"
30265                 },
30266             "step" :
30267                 {
30268                     "anyOf": [
30269                         {
30270                             "type": "integer"
30271                         },
30272                         {
30273                             "type": "number"
30274                         }
30275                     ],
30276                     "description": "Step value across the defined range",
30277                     "readOnly": true
30278                 },
30279             "precision" :
30280                 {
30281                     "description": "Accuracy granularity of the exposed value",
30282                     "readOnly": true,
30283                     "type": "number"
30284                 },
30285             "value" :
30286                 {
30287                     "anyOf": [
30288                         {
30289                             "type": "array"
30290                         },
30291                         {
30292                             "type": "string"
30293                         },
30294                         {
30295                             "type": "boolean"
30296                         },
30297                         {
30298                             "type": "integer"
30299                         },
30300                         {
30301                             "type": "number"
30302                         }
30303                     ],
30304                 }
30305 }

```

```

30306         {
30307             "type": "object"
30308         }
30309     ],
30310     "description": "The value sensed or actuated by this Resource"
30311 },
30312
30313     "n" :
30314         {
30315             "description": "Friendly name of the resource",
30316             "maxLength": 64,
30317             "readOnly": true,
30318             "type": "string"
30319         },
30320
30321     "range" :
30322         {
30323             "description": "The valid range for the value Property",
30324             "items": {
30325                 "anyOf": [
30326                     {
30327                         "type": "number"
30328                     },
30329                     {
30330                         "type": "integer"
30331                     }
30332                 ]
30333             },
30334             "maxItems": 2,
30335             "minItems": 2,
30336             "readOnly": true,
30337             "type": "array"
30338         },
30339
30340     "rgbValue" :
30341         {
30342             "description": "RGB value; the first item is the R, second the G, third the B.",
30343             "items": {
30344                 "type": "integer"
30345             },
30346             "maxItems": 3,
30347             "minItems": 3,
30348             "type": "array"
30349         },
30350
30351     "id" :
30352         {
30353             "description": "Instance ID of this specific resource",
30354             "maxLength": 64,
30355             "readOnly": true,
30356             "type": "string"
30357         },
30358
30359     "if" :
30360         {
30361             "description": "The interface set supported by this resource",
30362             "items": {
30363                 "enum": [
30364                     "oic.if.baseline",
30365                     "oic.if.ll",
30366                     "oic.if.b",
30367                     "oic.if.lb",
30368                     "oic.if.rw",
30369                     "oic.if.r",
30370                     "oic.if.a",
30371                     "oic.if.s"
30372                 ],
30373                 "type": "string"
30374             },
30375             "minItems": 1,
30376             "readOnly": true,

```



```

30377         "type": "array"
30378     }
30379
30380     }
30381     , "type" : "object"
30382     , "required": ["rgbValue"]
30383 }
30384 }
30385 }
30386

```

30387 **B.40.5 Property Definition**

30388 **Table 317 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
precision	number	No	Read Only	Accuracy granularity of the exposed value
rt	array: see schema	No	Read Only	Resource Type
n	string	No	Read Only	Friendly name of the resource
if	array: see schema	No	Read Only	The interface set supported by this resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
rgbValue	array: see schema	Yes	Read Write	RGB value; the first item is the R, second the G, third the B.
range	array: see schema	No	Read Only	The valid range for the value Property
id	string	No	Read Only	Instance ID of this specific resource

30389 **B.40.6 CRUDN behaviour**

30390 **Table 318 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/ColourRGBResURI		get	post		observe

30391 **B.41 Consumable**

30392 **B.41.1 Introduction**

30393 This resource specifies a thing that can be consumed such as filter material, printer toner etc
30394 The type is an enumeration defining the thing being consumed as defined by the Smart Home
30395 Device Specification
30396 The remaining is an integer capturing the percentatge remaining life
30397 The orderpercentage is an integer capturing the percentage life at which replacement or
30398 replenishment is recommended by the manufacturer
30399 The url is a string containing a URL at which further information may be obtained with respect to
30400 the consumable
30401

30402 **B.41.2 Example URI**

30403 /ConsumableResURI

30404 **B.41.3 Resource Type**

30405 The resource type (rt) is defined as: ['oic.r.consumable'].

30406 **B.41.4 Swagger2.0 Definition**

```

30407 {
30408   "swagger": "2.0",
30409   "info": {
30410     "title": "Consumable",
30411     "version": "OCF-v1.0.0-20160620",
30412     "license": {
30413       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
30414       "x-description": "Redistribution and use in source and binary forms, with or without
30415 modification, are permitted provided that the following conditions are met:\n      1.
30416 Redistributions of source code must retain the above copyright notice, this list of conditions and
30417 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
30418 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
30419 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
30420 Connectivity Foundation, INC. \ "AS IS\ " AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
30421 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
30422 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
30423 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
30424 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
30425 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
30426 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
30427 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
30428 OF SUCH DAMAGE.\n"
30429     }
30430   },
30431   "schemes": ["http"],
30432   "consumes": ["application/json"],
30433   "produces": ["application/json"],
30434   "paths": {
30435     "/ConsumableResURI" : {
30436       "get": {
30437         "description": "This resource specifies a thing that can be consumed such as filter
30438 material, printer toner etc\nThe type is an enumeration defining the thing being consumed as
30439 defined by the Smart Home Device Specification\nThe remaining is an integer capturing the
30440 percentatge remaining life\nThe orderpercentage is an integer capturing the percentage life at
30441 which replacement or replenishment is recommended by the manufacturer\nThe url is a string
30442 containing a URL at which further information may be obtained with respect to the consumable\n",
30443         "parameters": [
30444           {"$ref": "#/parameters/interface"}
30445         ],
30446         "responses": {
30447           "200": {
30448             "description": "",
30449             "x-example":
30450               {
30451                 "rt": ["oic.r.consumable"],
30452                 "id": "unique_example_id",

```

```

30453         "typeofconsumable": "tonerBlack",
30454         "remaining": 20,
30455         "orderpercentage": 10,
30456         "url": "http://myreorderURL"
30457     }
30458     ,
30459     "schema": { "$ref": "#/definitions/consumable" }
30460 }
30461 }
30462 }
30463 }
30464 },
30465 "parameters": {
30466     "interface" : {
30467         "in" : "query",
30468         "name" : "if",
30469         "type" : "string",
30470         "enum" : ["oic.if.s", "oic.if.baseline"]
30471     }
30472 },
30473 "definitions": {
30474     "consumable" : {
30475         "properties": {
30476             "rt" :
30477                 {
30478                     "description": "Resource Type",
30479                     "items": {
30480                         "maxLength": 64,
30481                         "type": "string"
30482                     },
30483                     "minItems": 1,
30484                     "readOnly": true,
30485                     "type": "array"
30486                 },
30487             "remaining" :
30488                 {
30489                     "description": "Percentage remaining lifespan.",
30490                     "maximum": 100,
30491                     "minimum": 0,
30492                     "readOnly": true,
30493                     "type": "integer"
30494                 },
30495             "typeofconsumable" :
30496                 {
30497                     "description": "Thing that is being consumed.",
30498                     "readOnly": true,
30499                     "type": "string"
30500                 },
30501             "url" :
30502                 {
30503                     "description": "URL at which additional ordering information may be found.",
30504                     "format": "uri",
30505                     "readOnly": true,
30506                     "type": "string"
30507                 },
30508             "precision" :
30509                 {
30510                     "description": "Accuracy granularity of the exposed value",
30511                     "readOnly": true,
30512                     "type": "number"
30513                 },
30514             "value" :
30515                 {
30516                     "anyOf": [
30517                         {
30518                             "type": "array"

```

```

30524     },
30525     {
30526         "type": "string"
30527     },
30528     {
30529         "type": "boolean"
30530     },
30531     {
30532         "type": "integer"
30533     },
30534     {
30535         "type": "number"
30536     },
30537     {
30538         "type": "object"
30539     }
30540 ],
30541 "description": "The value sensed or actuated by this Resource"
30542 },
30543
30544 "n" :
30545     {
30546         "description": "Friendly name of the resource",
30547         "maxLength": 64,
30548         "readOnly": true,
30549         "type": "string"
30550     },
30551
30552 "range" :
30553     {
30554         "description": "The valid range for the value Property",
30555         "items": {
30556             "anyOf": [
30557                 {
30558                     "type": "number"
30559                 },
30560                 {
30561                     "type": "integer"
30562                 }
30563             ]
30564         },
30565         "maxItems": 2,
30566         "minItems": 2,
30567         "readOnly": true,
30568         "type": "array"
30569     },
30570
30571 "orderpercentage" :
30572     {
30573         "description": "Percentage at which re-ordering is recommended by the manufacturer",
30574         "maximum": 100,
30575         "minimum": 0,
30576         "readOnly": true,
30577         "type": "integer"
30578     },
30579
30580 "step" :
30581     {
30582         "anyOf": [
30583             {
30584                 "type": "integer"
30585             },
30586             {
30587                 "type": "number"
30588             }
30589         ],
30590         "description": "Step value across the defined range",
30591         "readOnly": true
30592     },
30593
30594 "id" :

```

```

30595     {
30596         "description": "Instance ID of this specific resource",
30597         "maxLength": 64,
30598         "readOnly": true,
30599         "type": "string"
30600     },
30601
30602     "if" :
30603     {
30604         "description": "The interface set supported by this resource",
30605         "items": {
30606             "enum": [
30607                 "oic.if.baseline",
30608                 "oic.if.ll",
30609                 "oic.if.b",
30610                 "oic.if.lb",
30611                 "oic.if.rw",
30612                 "oic.if.r",
30613                 "oic.if.a",
30614                 "oic.if.s"
30615             ],
30616             "type": "string"
30617         },
30618         "minItems": 1,
30619         "readOnly": true,
30620         "type": "array"
30621     }
30622 }
30623
30624 , "type" : "object"
30625 , "required": ["typeofconsumable", "remaining"]
30626 }
30627 }
30628 }
30629

```

B.41.5 Property Definition

Table 319 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema	No	Read Only	The interface set supported by this resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
url	string	No	Read Only	URL at which additional ordering information may be found.
step	multiple types: see schema	No	Read Only	Step value across the defined range

orderpercentage	integer	No	Read Only	Percentage at which re-ordering is recommended by the manufacturer
remaining	integer	Yes	Read Only	Percentage remaining lifespan.
n	string	No	Read Only	Friendly name of the resource
rt	array: see schema	No	Read Only	Resource Type
range	array: see schema	No	Read Only	The valid range for the value Property
typeofconsumable	string	Yes	Read Only	Thing that is being consumed.
id	string	No	Read Only	Instance ID of this specific resource

30632 **B.41.6 CRUDN behaviour**

30633 **Table 320 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/ConsumableResURI		get			observe

30634 **B.42 Consumables Collection**

30635 **B.42.1 Introduction**

30636 This resource specifies things that can be consumed such as filter material, printer toner etc
30637 The resource is a collection of instances of oic.r.consumable detailing the individual consumed
30638 items
30639 supportedconsumables is the set of consumable types that this instance of the Resource
30640 supports
30641

30642 **B.42.2 Example URI**

30643 /ConsumablesResURI

30644 **B.42.3 Resource Type**

30645 The resource type (rt) is defined as: ['oic.r.consumablecollection', 'oic.wk.col'].

30646 **B.42.4 Swagger2.0 Definition**

```
30647 {
30648   "swagger": "2.0",
30649   "info": {
30650     "title": "Consumables",
30651     "version": "OCF-v1.0.0-20160620",
30652     "license": {
```

```

30653         "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
30654         "x-description": "Redistribution and use in source and binary forms, with or without
30655 modification, are permitted provided that the following conditions are met:\n          1.
30656 Redistributions of source code must retain the above copyright notice, this list of conditions and
30657 the following disclaimer.\n          2. Redistributions in binary form must reproduce the above
30658 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
30659 other materials provided with the distribution.\n\n          THIS SOFTWARE IS PROVIDED BY THE Open
30660 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
30661 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
30662 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n          IN NO EVENT SHALL THE Open Connectivity
30663 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
30664 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
30665 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n          HOWEVER CAUSED AND
30666 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
30667 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
30668 OF SUCH DAMAGE.\n"
30669     }
30670 },
30671 "schemes": ["http"],
30672 "consumes": ["application/json"],
30673 "produces": ["application/json"],
30674 "paths": {
30675     "/ConsumablesResURI?if=oic.if.ll" : {
30676         "get": {
30677             "description": "This resource specifies things that can be consumed such as filter
30678 material, printer toner etc\nThe resource is a collection of instances of oic.r.consumable
30679 detailing the individual consumed items\nsupportedconsumables is the set of consumable types that
30680 this instance of the Resource supports\n",
30681             "parameters": [
30682                 {"$ref": "#/parameters/interface-ll"}
30683             ],
30684             "responses": {
30685                 "200": {
30686                     "description": "",
30687                     "x-example":
30688                         [
30689                             {
30690                                 "href": "/myTonerBlackResURI", "rt": ["oic.r.consumable"], "if":
30691 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}},
30692                                 "href": "/myTonerCyanResURI", "rt": ["oic.r.consumable"], "if":
30693 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}},
30694                                 "href": "/myTonerMagentaResURI", "rt": ["oic.r.consumable"], "if":
30695 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}},
30696                                 "href": "/myTonerYellowResURI", "rt": ["oic.r.consumable"], "if":
30697 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
30698                             ]
30699                         ,
30700                     "schema": { "$ref": "#/definitions/consumables-ll" }
30701                 }
30702             }
30703         },
30704         "/ConsumablesResURI?if=oic.if.baseline" : {
30705             "get": {
30706                 "description": "This resource specifies things that can be consumed such as filter
30707 material, printer toner etc\nThe resource is a collection of instances of oic.r.consumable
30708 detailing the individual consumed items\nsupportedconsumables is the set of consumable types that
30709 this instance of the Resource supports\n",
30710                 "parameters": [
30711                     {"$ref": "#/parameters/interface-baseline"}
30712                 ],
30713                 "responses": {
30714                     "200": {
30715                         "description": "",
30716                         "x-example":
30717                             {
30718                                 "rt": ["oic.r.consumablecollection", "oic.wk.col"],
30719                                 "id": "unique_example_id",
30720                                 "rts": ["oic.r.consumable", "oic.r.value.conditional"],
30721                                 "supportedconsumables": ["tonerBlack", "tonerCyan", "tonerMagenta", "tonerYellow"],
30722                                 "links": [
30723                                     {"href": "/myTonerBlackResURI", "rt": ["oic.r.consumable"], "if":

```

```

30724 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}],
30725     {"href": "/myTonerCyanResURI", "rt": ["oic.r.consumable"], "if":
30726 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
30727     {"href": "/myTonerMagentaResURI", "rt": ["oic.r.consumable"], "if":
30728 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
30729     {"href": "/myTonerYellowResURI", "rt": ["oic.r.consumable"], "if":
30730 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
30731   ]
30732   }
30733   ,
30734   "schema": { "$ref": "#/definitions/consumables" }
30735   }
30736   }
30737   }
30738   },
30739   },
30740   "parameters": {
30741     "interface-11" : {
30742       "in" : "query",
30743       "name" : "if",
30744       "type" : "string",
30745       "enum" : ["oic.if.11"]
30746     },
30747     "interface-baseline" : {
30748       "in" : "query",
30749       "name" : "if",
30750       "type" : "string",
30751       "enum" : ["oic.if.baseline"]
30752     },
30753     "interface-all" : {
30754       "in" : "query",
30755       "name" : "if",
30756       "type" : "string",
30757       "enum" : ["oic.if.11", "oic.if.baseline"]
30758     }
30759   },
30760   "definitions": {
30761     "consumables-11" : {
30762       "title" :
30763         "Consumables Collection Link List Schema (auto merged)"
30764     },
30765     "items" :
30766     {
30767       "$ref": "#/definitions/oic.oic-link"
30768     }
30769   },
30770   "type" :
30771   "array"
30772   }
30773   },
30774   "consumables" : {
30775     "properties": {
30776       "rt" :
30777       {
30778         "items": {
30779           "enum": [
30780             "oic.r.consumablecollection",
30781             "oic.wk.col"
30782           ],
30783           "type": "string"
30784         },
30785         "maxItems": 2,
30786         "minItems": 2,
30787         "type": "array",
30788         "uniqueItems": true
30789       },
30790     },
30791     "supportedconsumables" :
30792     {
30793       "description": "Array of possible consumables the device measures.",
30794     }

```



```

30795         "items": {
30796             "type": "string"
30797         },
30798         "readOnly": true,
30799         "type": "array"
30800     },
30801
30802     "links" :
30803     {
30804         "description": "A set of simple or individual OIC Links.",
30805         "items": {
30806             "properties": {
30807                 "anchor": {
30808                     "description": "This is used to override the context URI e.g. override the URI of
30809 the containing collection.",
30810                     "format": "uri",
30811                     "maxLength": 256,
30812                     "type": "string"
30813                 },
30814                 "di": {
30815                     "description": "The Device ID formatted according to IETF RFC 4122.",
30816                     "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
30817 9]{12}$",
30818                     "type": "string"
30819                 },
30820                 "eps": {
30821                     "description": "the Endpoint information of the target Resource",
30822                     "items": {
30823                         "properties": {
30824                             "ep": {
30825                                 "description": "Transport Protocol Suite + Endpoint Locator",
30826                                 "format": "uri",
30827                                 "type": "string"
30828                             },
30829                             "pri": {
30830                                 "description": "The priority among multiple Endpoints",
30831                                 "minimum": 1,
30832                                 "type": "integer"
30833                             }
30834                         },
30835                         "type": "object"
30836                     },
30837                     "type": "array"
30838                 },
30839                 "href": {
30840                     "description": "This is the target URI, it can be specified as a Relative Reference
30841 or fully-qualified URI.",
30842                     "format": "uri",
30843                     "maxLength": 256,
30844                     "type": "string"
30845                 },
30846                 "if": {
30847                     "description": "The interface set supported by this resource",
30848                     "items": {
30849                         "enum": [
30850                             "oic.if.baseline",
30851                             "oic.if.ll",
30852                             "oic.if.b",
30853                             "oic.if.rw",
30854                             "oic.if.r",
30855                             "oic.if.a",
30856                             "oic.if.s"
30857                         ],
30858                         "type": "string"
30859                     },
30860                     "minItems": 1,
30861                     "type": "array"
30862                 },
30863                 "ins": {
30864                     "description": "The instance identifier for this web link in an array of web links
30865 - used in collections",

```

```

30866         "type": "integer"
30867     },
30868     "P": {
30869         "description": "Specifies the framework policies on the Resource referenced by the
30870 target URI",
30871         "properties": {
30872             "bm": {
30873                 "description": "Specifies the framework policies on the Resource referenced by
30874 the target URI for e.g. observable and discoverable",
30875                 "type": "integer"
30876             }
30877         },
30878         "required": [
30879             "bm"
30880         ],
30881         "type": "object"
30882     },
30883     "rel": {
30884         "description": "The relation of the target URI referenced by the link to the
30885 context URI",
30886         "oneOf": [
30887             {
30888                 "default": [
30889                     "hosts"
30890                 ],
30891                 "items": {
30892                     "maxLength": 64,
30893                     "type": "string"
30894                 },
30895                 "minItems": 1,
30896                 "type": "array"
30897             },
30898             {
30899                 "default": "hosts",
30900                 "maxLength": 64,
30901                 "type": "string"
30902             }
30903         ]
30904     },
30905     "rt": {
30906         "description": "Resource Type of the Resource",
30907         "items": {
30908             "maxLength": 64,
30909             "type": "string"
30910         },
30911         "minItems": 1,
30912         "type": "array"
30913     },
30914     "title": {
30915         "description": "A title for the link relation. Can be used by the UI to provide a
30916 context.",
30917         "maxLength": 64,
30918         "type": "string"
30919     },
30920     "type": {
30921         "default": "application/cbor",
30922         "description": "A hint at the representation of the resource referenced by the
30923 target URI. This represents the media types that are used for both accepting and emitting.",
30924         "items": {
30925             "maxLength": 64,
30926             "type": "string"
30927         },
30928         "minItems": 1,
30929         "type": "array"
30930     }
30931 },
30932 "required": [
30933     "href",
30934     "rt",
30935     "if"
30936 ],

```

```

30937         "type": "object"
30938     },
30939     "type": "array"
30940 },
30941
30942     "n" :
30943     {
30944         "description": "Friendly name of the resource",
30945         "maxLength": 64,
30946         "readOnly": true,
30947         "type": "string"
30948     },
30949
30950     "rts" :
30951     {
30952         "items": {
30953             "anyOf": [
30954                 {
30955                     "enum": [
30956                         "oic.r.consumable",
30957                         "oic.r.value.conditional"
30958                     ],
30959                     "type": "string"
30960                 },
30961                 {
30962                     "enum": [
30963                         "oic.r.consumable"
30964                     ],
30965                     "type": "string"
30966                 }
30967             ]
30968         },
30969         "maxItems": 2,
30970         "minItems": 1,
30971         "type": "array",
30972         "uniqueItems": true
30973     },
30974
30975     "id" :
30976     {
30977         "description": "Instance ID of this specific resource",
30978         "maxLength": 64,
30979         "readOnly": true,
30980         "type": "string"
30981     },
30982
30983     "if" :
30984     {
30985         "description": "The interface set supported by this resource",
30986         "items": {
30987             "enum": [
30988                 "oic.if.baseline",
30989                 "oic.if.ll",
30990                 "oic.if.b",
30991                 "oic.if.lb",
30992                 "oic.if.rw",
30993                 "oic.if.r",
30994                 "oic.if.a",
30995                 "oic.if.s"
30996             ],
30997             "type": "string"
30998         },
30999         "minItems": 1,
31000         "readOnly": true,
31001         "type": "array"
31002     }
31003 }
31004 },
31005 "type" : "object"
31006 }
31007 , "oic.collection.links.arrayoflinks" :

```

```

31008     {
31009         "properties": {
31010             "links": {
31011                 "description": "A set of simple or individual OIC Links.",
31012                 "items": {
31013                     "properties": {
31014                         "anchor": {
31015                             "description": "This is used to override the context URI e.g. override the URI of
31016 the containing collection.",
31017                             "format": "uri",
31018                             "maxLength": 256,
31019                             "type": "string"
31020                         },
31021                         "di": {
31022                             "description": "The Device ID formatted according to IETF RFC 4122.",
31023                             "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
31024 9]{12}$",
31025                             "type": "string"
31026                         },
31027                         "eps": {
31028                             "description": "the Endpoint information of the target Resource",
31029                             "items": {
31030                                 "properties": {
31031                                     "ep": {
31032                                         "description": "Transport Protocol Suite + Endpoint Locator",
31033                                         "format": "uri",
31034                                         "type": "string"
31035                                     },
31036                                     "pri": {
31037                                         "description": "The priority among multiple Endpoints",
31038                                         "minimum": 1,
31039                                         "type": "integer"
31040                                     }
31041                                 },
31042                                 "type": "object"
31043                             },
31044                             "type": "array"
31045                         },
31046                         "href": {
31047                             "description": "This is the target URI, it can be specified as a Relative Reference
31048 or fully-qualified URI.",
31049                             "format": "uri",
31050                             "maxLength": 256,
31051                             "type": "string"
31052                         },
31053                         "if": {
31054                             "description": "The interface set supported by this resource",
31055                             "items": {
31056                                 "enum": [
31057                                     "oic.if.baseline",
31058                                     "oic.if.ll",
31059                                     "oic.if.b",
31060                                     "oic.if.rw",
31061                                     "oic.if.r",
31062                                     "oic.if.a",
31063                                     "oic.if.s"
31064                                 ],
31065                                 "type": "string"
31066                             },
31067                             "minItems": 1,
31068                             "type": "array"
31069                         },
31070                         "ins": {
31071                             "description": "The instance identifier for this web link in an array of web links
31072 - used in collections",
31073                             "type": "integer"
31074                         },
31075                         "p": {
31076                             "description": "Specifies the framework policies on the Resource referenced by the
31077 target URI",
31078                             "properties": {

```

```

31079         "bm": {
31080             "description": "Specifies the framework policies on the Resource referenced by
the target URI for e.g. observable and discoverable",
31081             "type": "integer"
31082         },
31083     },
31084     "required": [
31085         "bm"
31086     ],
31087     "type": "object"
31088 },
31089 "rel": {
31090     "description": "The relation of the target URI referenced by the link to the
context URI",
31091     "oneOf": [
31092         {
31093             "default": [
31094                 "hosts"
31095             ],
31096             "items": {
31097                 "maxLength": 64,
31098                 "type": "string"
31099             },
31100             "minItems": 1,
31101             "type": "array"
31102         },
31103         {
31104             "default": "hosts",
31105             "maxLength": 64,
31106             "type": "string"
31107         }
31108     ],
31109     "rt": {
31110         "description": "Resource Type of the Resource",
31111         "items": {
31112             "maxLength": 64,
31113             "type": "string"
31114         },
31115         "minItems": 1,
31116         "type": "array"
31117     },
31118     "title": {
31119         "description": "A title for the link relation. Can be used by the UI to provide a
context.",
31120         "maxLength": 64,
31121         "type": "string"
31122     },
31123     "type": {
31124         "default": "application/cbor",
31125         "description": "A hint at the representation of the resource referenced by the
target URI. This represents the media types that are used for both accepting and emitting.",
31126         "items": {
31127             "maxLength": 64,
31128             "type": "string"
31129         },
31130         "minItems": 1,
31131         "type": "array"
31132     }
31133 },
31134     "required": [
31135         "href",
31136         "rt",
31137         "if"
31138     ],
31139     "type": "object"
31140 },
31141     "type": "array"
31142 }
31143 }
31144 }
31145 }
31146 }
31147 }
31148 }
31149 }

```

```

31150
31151     , "oic.collection.properties" :
31152     {
31153         "description": "A collection is a set of links along with additional properties to describe
31154 the collection itself",
31155         "properties": {
31156             "rts": {
31157                 "$ref": "#/definitions/oic.core/properties/rt",
31158                 "description": "The list of allowable resource types (for Target and anchors) in links
31159 included in the collection"
31160             }
31161         },
31162         "type": "object"
31163     }
31164
31165     , "oic.core" :
31166     {
31167         "properties": {
31168             "id": {
31169                 "description": "Instance ID of this specific resource",
31170                 "maxLength": 64,
31171                 "readOnly": true,
31172                 "type": "string"
31173             },
31174             "if": {
31175                 "description": "The interface set supported by this resource",
31176                 "items": {
31177                     "enum": [
31178                         "oic.if.baseline",
31179                         "oic.if.ll",
31180                         "oic.if.b",
31181                         "oic.if.lb",
31182                         "oic.if.rw",
31183                         "oic.if.r",
31184                         "oic.if.a",
31185                         "oic.if.s"
31186                     ],
31187                     "type": "string"
31188                 },
31189                 "minItems": 1,
31190                 "readOnly": true,
31191                 "type": "array"
31192             },
31193             "n": {
31194                 "description": "Friendly name of the resource",
31195                 "maxLength": 64,
31196                 "readOnly": true,
31197                 "type": "string"
31198             },
31199             "rt": {
31200                 "description": "Resource Type",
31201                 "items": {
31202                     "maxLength": 64,
31203                     "type": "string"
31204                 },
31205                 "minItems": 1,
31206                 "readOnly": true,
31207                 "type": "array"
31208             }
31209         },
31210         "type": "object"
31211     }
31212
31213     , "consumablecollection-ll" :
31214     {
31215         "items": {
31216             "$ref": "#/definitions/oic.oic-link"
31217         },
31218         "type": "array"
31219     }
31220

```

```

31221     ,"oic.r.consumablecollection" :
31222     {
31223     "properties": {
31224     "rt": {
31225     "items": {
31226     "enum": [
31227     "oic.r.consumablecollection",
31228     "oic.wk.col"
31229     ],
31230     "type": "string"
31231     },
31232     "maxItems": 2,
31233     "minItems": 2,
31234     "type": "array",
31235     "uniqueItems": true
31236     },
31237     "rts": {
31238     "items": {
31239     "anyOf": [
31240     {
31241     "enum": [
31242     "oic.r.consumable",
31243     "oic.r.value.conditional"
31244     ],
31245     "type": "string"
31246     },
31247     {
31248     "enum": [
31249     "oic.r.consumable"
31250     ],
31251     "type": "string"
31252     }
31253     ]
31254     },
31255     "maxItems": 2,
31256     "minItems": 1,
31257     "type": "array",
31258     "uniqueItems": true
31259     },
31260     "supportedconsumables": {
31261     "description": "Array of possible consumables the device measures.",
31262     "items": {
31263     "type": "string"
31264     },
31265     "readOnly": true,
31266     "type": "array"
31267     }
31268     },
31269     "type": "object"
31270     }
31271
31272     ,"oic.oic-link" :
31273     {
31274     "properties": {
31275     "anchor": {
31276     "description": "This is used to override the context URI e.g. override the URI of the
31277     containing collection.",
31278     "format": "uri",
31279     "maxLength": 256,
31280     "type": "string"
31281     },
31282     "di": {
31283     "description": "The Device ID formatted according to IETF RFC 4122.",
31284     "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
31285     9]{12}$",
31286     "type": "string"
31287     },
31288     "eps": {
31289     "description": "the Endpoint information of the target Resource",
31290     "items": {
31291     "properties": {

```

```

31292         "ep": {
31293             "description": "Transport Protocol Suite + Endpoint Locator",
31294             "format": "uri",
31295             "type": "string"
31296         },
31297         "pri": {
31298             "description": "The priority among multiple Endpoints",
31299             "minimum": 1,
31300             "type": "integer"
31301         }
31302     },
31303     "type": "object"
31304 },
31305 "type": "array"
31306 },
31307 "href": {
31308     "description": "This is the target URI, it can be specified as a Relative Reference or
31309 fully-qualified URI.",
31310     "format": "uri",
31311     "maxLength": 256,
31312     "type": "string"
31313 },
31314 "if": {
31315     "description": "The interface set supported by this resource",
31316     "items": {
31317         "enum": [
31318             "oic.if.baseline",
31319             "oic.if.ll",
31320             "oic.if.b",
31321             "oic.if.rw",
31322             "oic.if.r",
31323             "oic.if.a",
31324             "oic.if.s"
31325         ],
31326         "type": "string"
31327     },
31328     "minItems": 1,
31329     "type": "array"
31330 },
31331 "ins": {
31332     "description": "The instance identifier for this web link in an array of web links - used
31333 in collections",
31334     "type": "integer"
31335 },
31336 "p": {
31337     "description": "Specifies the framework policies on the Resource referenced by the target
31338 URI",
31339     "properties": {
31340         "bm": {
31341             "description": "Specifies the framework policies on the Resource referenced by the
31342 target URI for e.g. observable and discoverable",
31343             "type": "integer"
31344         }
31345     },
31346     "required": [
31347         "bm"
31348     ],
31349     "type": "object"
31350 },
31351 "rel": {
31352     "description": "The relation of the target URI referenced by the link to the context
31353 URI",
31354     "oneOf": [
31355         {
31356             "default": [
31357                 "hosts"
31358             ],
31359             "items": {
31360                 "maxLength": 64,
31361                 "type": "string"
31362             }

```



```

31363         "minItems": 1,
31364         "type": "array"
31365     },
31366     {
31367         "default": "hosts",
31368         "maxLength": 64,
31369         "type": "string"
31370     }
31371 ]
31372 },
31373 "rt": {
31374     "description": "Resource Type of the Resource",
31375     "items": {
31376         "maxLength": 64,
31377         "type": "string"
31378     },
31379     "minItems": 1,
31380     "type": "array"
31381 },
31382 "title": {
31383     "description": "A title for the link relation. Can be used by the UI to provide a
31384 context.",
31385     "maxLength": 64,
31386     "type": "string"
31387 },
31388 "type": {
31389     "default": "application/cbor",
31390     "description": "A hint at the representation of the resource referenced by the target
31391 URI. This represents the media types that are used for both accepting and emitting.",
31392     "items": {
31393         "maxLength": 64,
31394         "type": "string"
31395     },
31396     "minItems": 1,
31397     "type": "array"
31398 }
31399 },
31400 "required": [
31401     "href",
31402     "rt",
31403     "if"
31404 ],
31405 "type": "object"
31406 }
31407 }
31408 }
31409 }
31410

```

31411 B.42.5 Property Definition

31412 **Table 321 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema		Read Only	Resource Type
id	string		Read Only	Instance ID of this specific resource
n	string		Read Only	Friendly name of the resource
if	array: see schema		Read Only	The interface set supported by this resource

rts	array: schema	see		Read Write	
rt	array: schema	see		Read Write	
supportedconsumables	array: schema	see		Read Only	Array of possible consumables the device measures.
links	array: schema	see	No	Read Write	A set of simple or individual OIC Links.
links	array: schema	see	No	Read Write	A set of simple or individual OIC Links.
rt	array: schema	see	Yes	Read Write	
n	string		No	Read Only	Friendly name of the resource
if	array: schema	see	Yes	Read Only	The interface set supported by this resource
rts	array: schema	see	No	Read Write	
id	string		No	Read Only	Instance ID of this specific resource
supportedconsumables	array: schema	see	No	Read Only	Array of possible consumables the device measures.
rts	multiple types: see schema			Read Write	The list of allowable resource types (for Target and anchors) in links included in the collection
ins	integer		No	Read Write	The instance identifier for this web link in an array of web links - used in collections
title	string		No	Read Write	

					A title for the link relation. Can be used by the UI to provide a context.
rt	array: schema	see	Yes	Read Write	Resource Type of the Resource
type	array: schema	see	No	Read Write	A hint at the representation of the resource referenced by the target URI. This represents the media types that are used for both accepting and emitting.
eps	array: schema	see	No	Read Write	the Endpoint information of the target Resource
if	array: schema	see	Yes	Read Write	The interface set supported by this resource
href	string		Yes	Read Write	This is the target URI, it can be specified as a Relative Reference or fully-qualified URI.
di	string		No	Read Write	The Device ID formatted according to IETF RFC 4122.
anchor	string		No	Read Write	This is used to override the context URI e.g. override the URI of the containing collection.
p	object: schema	see	No	Read Write	Specifies the framework policies on the Resource

				referenced by the target URI
rel	multiple types: see schema	No	Read Write	The relation of the target URI referenced by the link to the context URI

31413 **B.42.6 CRUDN behaviour**

31414 **Table 322 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/ConsumablesResURI		get			observe

31415 **B.43 Contact Sensor**

31416 **B.43.1 Introduction**

31417 This resource describes whether a contact sensor has been tripped or not.
 31418 Typical use case is in Security Systems detecting window or door open.
 31419 The value is a boolean.
 31420 A value of 'true' means that contact has been broken (open).
 31421 A value of 'false' means that contact is in place (closed).
 31422

31423 **B.43.2 Example URI**

31424 /ContactResURI

31425 **B.43.3 Resource Type**

31426 The resource type (rt) is defined as: ['oic.r.sensor.contact'].

31427 **B.43.4 Swagger2.0 Definition**

```

31428 {
31429   "swagger": "2.0",
31430   "info": {
31431     "title": "Contact Sensor",
31432     "version": "v1.1.0-20160519",
31433     "license": {
31434       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
31435       "x-description": "Redistribution and use in source and binary forms, with or without
31436 modification, are permitted provided that the following conditions are met:\n      1.
31437 Redistributions of source code must retain the above copyright notice, this list of conditions and
31438 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
31439 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
31440 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
31441 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
31442 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
31443 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
31444 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
31445 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
31446 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND
31447 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
31448 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
31449 OF SUCH DAMAGE.\n"
31450     }
31451   },
31452   "schemes": ["http"],
31453   "consumes": ["application/json"],
31454   "produces": ["application/json"],
31455   "paths": {
31456     "/ContactResURI" : {
31457       "get": {
31458         "description": "This resource describes whether a contact sensor has been tripped or
  
```

```

31459 not.\nTypical use case is in Security Systems detecting window or door open.\nThe value is a
31460 boolean.\nA value of 'true' means that contact has been broken (open).\nA value of 'false' means
31461 that contact is in place (closed).\n",
31462     "parameters": [
31463         {"$ref": "#/parameters/interface"}
31464     ],
31465     "responses": {
31466         "200": {
31467             "description": "",
31468             "x-example":
31469                 {
31470                     "rt": ["oic.r.sensor.contact"],
31471                     "id": "unique_example_id",
31472                     "value": true
31473                 }
31474             ,
31475             "schema": { "$ref": "#/definitions/Contact" }
31476         }
31477     }
31478 }
31479 },
31480 },
31481 "parameters": {
31482     "interface": {
31483         "in": "query",
31484         "name": "if",
31485         "type": "string",
31486         "enum": ["oic.if.s", "oic.if.baseline"]
31487     }
31488 },
31489 "definitions": {
31490     "Contact": {
31491         "properties": {
31492             "rt":
31493                 {
31494                     "description": "Resource Type",
31495                     "items": {
31496                         "maxLength": 64,
31497                         "type": "string"
31498                     },
31499                     "minItems": 1,
31500                     "readOnly": true,
31501                     "type": "array"
31502                 },
31503             "precision":
31504                 {
31505                     "description": "Accuracy granularity of the exposed value",
31506                     "readOnly": true,
31507                     "type": "number"
31508                 },
31509             "value":
31510                 {
31511                     "description": "true = sensed, false = not sensed.",
31512                     "readOnly": true,
31513                     "type": "boolean"
31514                 },
31515             "n":
31516                 {
31517                     "description": "Friendly name of the resource",
31518                     "maxLength": 64,
31519                     "readOnly": true,
31520                     "type": "string"
31521                 },
31522             "range":
31523                 {
31524                     "description": "The valid range for the value Property",
31525                     "items": {

```

```

31530         "anyOf": [
31531             {
31532                 "type": "number"
31533             },
31534             {
31535                 "type": "integer"
31536             }
31537         ]
31538     },
31539     "maxItems": 2,
31540     "minItems": 2,
31541     "readOnly": true,
31542     "type": "array"
31543 },
31544
31545 "step" :
31546     {
31547         "anyOf": [
31548             {
31549                 "type": "integer"
31550             },
31551             {
31552                 "type": "number"
31553             }
31554         ],
31555         "description": "Step value across the defined range",
31556         "readOnly": true
31557     },
31558
31559 "id" :
31560     {
31561         "description": "Instance ID of this specific resource",
31562         "maxLength": 64,
31563         "readOnly": true,
31564         "type": "string"
31565     },
31566
31567 "if" :
31568     {
31569         "description": "The interface set supported by this resource",
31570         "items": {
31571             "enum": [
31572                 "oic.if.baseline",
31573                 "oic.if.ll",
31574                 "oic.if.b",
31575                 "oic.if.lb",
31576                 "oic.if.rw",
31577                 "oic.if.r",
31578                 "oic.if.a",
31579                 "oic.if.s"
31580             ],
31581             "type": "string"
31582         },
31583         "minItems": 1,
31584         "readOnly": true,
31585         "type": "array"
31586     }
31587
31588     },
31589     "type" : "object"
31590 , "required": ["value"]
31591 }
31592 }
31593 }
31594

```

31595 B.43.5 Property Definition

31596 **Table 323** The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
---------------	------------	-----------	-------------	-------------

value	boolean	Yes	Read Only	true = sensed, false = not sensed.
if	array: schema see	No	Read Only	The interface set supported by this resource
id	string	No	Read Only	Instance ID of this specific resource
rt	array: schema see	No	Read Only	Resource Type
precision	number	No	Read Only	Accuracy granularity of the exposed value
range	array: schema see	No	Read Only	The valid range for the value Property
step	multiple types: see schema	No	Read Only	Step value across the defined range
n	string	No	Read Only	Friendly name of the resource

31597 **B.43.6 CRUDN behaviour**

31598 **Table 324 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/ContactResURI		get			observe

31599 **B.44 Delay Defrost**

31600 **B.44.1 Introduction**

31601 This resource describes the delay defrost function as defined by the US Energy Star
31602 Specifications.
31603 See Energy Star Refrigerator Requirements Version 5 Section 4)G
31604 (<https://www.energystar.gov/sites/default/files/specs//private/ENERGY%20STAR%20Final%20Version%205.0%20Residential%20Refrigerators%20and%20Freezers%20Program%20Requirements.pdf>)
31605
31606 The status is a boolean indicating whether the function is on, if off then defrost is scheduled as
31607 part of normal device operation.
31608 start`Time`, from oic.r.time.period (mandatory) is an ISO8601 encoded start time for the interval in
31609 which defrost shall not occur.
31610 stop`Time`, from oic.r.time.period is an ISO8601 encoded stop time for the interval in which
31611 defrost shall not occur.
31612 interval, from oic.r.time.period with additional range restrictions is the time in minutes of the
31613 period that starts at start`time` (if not present the default is 240).
31614 stop`Time` and interval are mutually exclusive; they cannot both be present in a Resource
31615

31616 instance

31617

31618 **B.44.2 Example URI**

31619 /DelayDefrostResURI

31620 **B.44.3 Resource Type**

31621 The resource type (rt) is defined as: ['oic.r.delaydefrost'].

31622 **B.44.4 Swagger2.0 Definition**

```
31623 {
31624   "swagger": "2.0",
31625   "info": {
31626     "title": "Delay Defrost",
31627     "version": "OCF_v1.0.0-2016____",
31628     "license": {
31629       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
31630       "x-description": "Redistribution and use in source and binary forms, with or without
31631 modification, are permitted provided that the following conditions are met:\n
31632 1.
31633 Redistributions of source code must retain the above copyright notice, this list of conditions and
31634 the following disclaimer.\n
31635 2. Redistributions in binary form must reproduce the above
31636 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
31637 other materials provided with the distribution.\n\n
31638 THIS SOFTWARE IS PROVIDED BY THE Open
31639 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
31640 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
31641 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n
31642 IN NO EVENT SHALL THE Open Connectivity
31643 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
31644 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
31645 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n
31646 HOWEVER CAUSED AND
31647 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
31648 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
31649 OF SUCH DAMAGE.\n"
31650 }
31651 },
31652 "schemes": ["http"],
31653 "consumes": ["application/json"],
31654 "produces": ["application/json"],
31655 "paths": {
31656   "/DelayDefrostResURI" : {
31657     "get": {
31658       "description": "This resource describes the delay defrost function as defined by the US
31659 Energy Star Specifications.\nSee Energy Star Refrigerator Requirements Version 5 Section
31660 4)G\n(https://www.energystar.gov/sites/default/files/specs//private/ENERGY%20STAR%20Final%20Version
31661 %205.0%20Residential%20Refrigerators%20and%20Freezers%20Program%20Requirements.pdf)\n\nThe status is
31662 a boolean indicating whether the function is on, if off then defrost is scheduled as part of normal
31663 device operation.\n\nstartTime, from oir.r.time.period (mandatory) is an ISO8601 encoded start time
31664 for the interval in which defrost shall not occur.\n\nstopTime, from oic.r.time.period is an ISO8601
31665 encoded stop time for the interval in which defrost shall not occur.\n\ninterval, from
31666 oic.r.time.period with additional range restrictions is the time in minutes of the period that
31667 starts at starttime (if not present the default is 240).\n\nstopTime and interval are mutually
31668 exclusive; they cannot both be present in a Resource instance\n\nRetrieves the current Delay Defrost
31669 function status\n",
31670       "parameters": [
31671         { "$ref": "#/parameters/interface" }
31672       ],
31673       "responses": {
31674         "200": {
31675           "description": "",
31676           "x-example":
31677             {
31678               "rt": ["oic.r.delaydefrost"],
31679               "id": "unique_example_id",
31680               "startTime": "06:00Z",
31681               "status": false
31682             }
31683         },
31684         "schema": { "$ref": "#/definitions/DelayDefrost" }
31685       }
31686     }
31687   }
31688 }
```



```

31682     },
31683     "post": {
31684         "description": "Activates the desired Delay Defrost functions\n",
31685         "parameters": [
31686             { "$ref": "#/parameters/interface" },
31687             {
31688                 "name": "body",
31689                 "in": "body",
31690                 "required": true,
31691                 "schema": { "$ref": "#/definitions/DelayDefrost" },
31692                 "x-example":
31693                     {
31694                         "id": "unique_example_id",
31695                         "status": true,
31696                         "startTime": "06:00Z",
31697                         "interval": 180
31698                     }
31699             }
31700         ],
31701         "responses": {
31702             "200": {
31703                 "description": "Indicates that the DelayDefrost function was changed.\n\nThe new
31704 representation may be provided in the response.\n",
31705                 "x-example":
31706                     {
31707                         "id": "unique_example_id",
31708                         "status": true,
31709                         "startTime": "06:00Z",
31710                         "interval": 180
31711                     }
31712                 ,
31713                 "schema": { "$ref": "#/definitions/DelayDefrost" }
31714             },
31715             "403": {
31716                 "description": "Indicates the update to the time properties was rejected.\n\nReasons
31717 for rejection:\n\n invalid time entry\n\nThe current unchanged representation may be provided in the
31718 response.\n",
31719                 "x-example":
31720                     {
31721                         "id": "unique_example_id",
31722                         "status": true,
31723                         "startTime": "06:00Z",
31724                         "interval": 180
31725                     }
31726                 ,
31727                 "schema": { "$ref": "#/definitions/DelayDefrost" }
31728             }
31729         }
31730     }
31731 },
31732 },
31733 "parameters": {
31734     "interface": {
31735         "in": "query",
31736         "name": "if",
31737         "type": "string",
31738         "enum": ["oic.if.a", "oic.if.baseline"]
31739     }
31740 },
31741 "definitions": {
31742     "DelayDefrost": {
31743         "properties": {
31744             "rt": {
31745                 {
31746                     "description": "Resource Type",
31747                     "items": {
31748                         "maxLength": 64,
31749                         "type": "string"
31750                     },
31751                     "minItems": 1,
31752                     "readOnly": true,

```

```

31753     "type": "array"
31754   },
31755
31756   "status" :
31757     {
31758       "description": "Indicates whether any supported delay defrost function is active",
31759       "type": "boolean"
31760     },
31761
31762   "interval" :
31763     {
31764       "default": 240,
31765       "description": "Defrost interval as defined by Energy Star",
31766       "maximum": 1440,
31767       "minimum": 1,
31768       "type": "integer"
31769     },
31770
31771   "precision" :
31772     {
31773       "description": "Accuracy granularity of the exposed value",
31774       "readOnly": true,
31775       "type": "number"
31776     },
31777
31778   "value" :
31779     {
31780       "anyOf": [
31781         {
31782           "type": "array"
31783         },
31784         {
31785           "type": "string"
31786         },
31787         {
31788           "type": "boolean"
31789         },
31790         {
31791           "type": "integer"
31792         },
31793         {
31794           "type": "number"
31795         },
31796         {
31797           "type": "object"
31798         }
31799       ],
31800       "description": "The value sensed or actuated by this Resource"
31801     },
31802
31803   "n" :
31804     {
31805       "description": "Friendly name of the resource",
31806       "maxLength": 64,
31807       "readOnly": true,
31808       "type": "string"
31809     },
31810
31811   "range" :
31812     {
31813       "description": "The valid range for the value Property",
31814       "items": {
31815         "anyOf": [
31816           {
31817             "type": "number"
31818           },
31819           {
31820             "type": "integer"
31821           }
31822         ]
31823     },

```

```

31824         "maxItems": 2,
31825         "minItems": 2,
31826         "readOnly": true,
31827         "type": "array"
31828     },
31829
31830     "stopTime" :
31831     {
31832         "description": "Stop time for the time period, if present interval cannot be present",
31833         "type": "string"
31834     },
31835
31836     "startTime" :
31837     {
31838         "description": "Start time for the time period",
31839         "type": "string"
31840     },
31841
31842     "step" :
31843     {
31844         "anyOf": [
31845             {
31846                 "type": "integer"
31847             },
31848             {
31849                 "type": "number"
31850             }
31851         ],
31852         "description": "Step value across the defined range",
31853         "readOnly": true
31854     },
31855
31856     "id" :
31857     {
31858         "description": "Instance ID of this specific resource",
31859         "maxLength": 64,
31860         "readOnly": true,
31861         "type": "string"
31862     },
31863
31864     "if" :
31865     {
31866         "description": "The interface set supported by this resource",
31867         "items": {
31868             "enum": [
31869                 "oic.if.baseline",
31870                 "oic.if.ll",
31871                 "oic.if.b",
31872                 "oic.if.lb",
31873                 "oic.if.rw",
31874                 "oic.if.r",
31875                 "oic.if.a",
31876                 "oic.if.s"
31877             ],
31878             "type": "string"
31879         },
31880         "minItems": 1,
31881         "readOnly": true,
31882         "type": "array"
31883     }
31884 }
31885 }
31886 , "type" : "object"
31887 }
31888 }
31889 }
31890

```

Table 325 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
n	string		Read Only	Friendly name of the resource
step	multiple types: see schema		Read Only	Step value across the defined range
if	array: see schema		Read Only	The interface set supported by this resource
startTime	string		Read Write	Start time for the time period
precision	number		Read Only	Accuracy granularity of the exposed value
stopTime	string		Read Write	Stop time for the time period, if present interval cannot be present
id	string		Read Only	Instance ID of this specific resource
status	boolean		Read Write	Indicates whether any supported delay defrost function is active
interval	integer		Read Write	Defrost interval as defined by Energy Star
rt	array: see schema		Read Only	Resource Type
value	multiple types: see schema		Read Write	The value sensed or actuated by this Resource
range	array: see schema		Read Only	The valid range for the value Property

31893 **B.44.6 CRUDN behaviour**

31894 **Table 326 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/DelayDefrostResURI		get	post		observe

31895 **B.45 Dimming**

31896 **B.45.1 Introduction**

31897 This resource describes a dimming function.
 31898 The value is an integer showing the current dimming level.
 31899 If step (from oic.r.baseresource) is present then it represents the increment between dimmer values.
 31900
 31901 When range (from oic.r.baseresource) is omitted, then the range is [0,100].
 31902 A value of 0 means total dimming; a value of 100 means no dimming.
 31903

31904 **B.45.2 Example URI**

31905 /DimmingResURI

31906 **B.45.3 Resource Type**

31907 The resource type (rt) is defined as: ['oic.r.light.dimming'].

31908 **B.45.4 Swagger2.0 Definition**

```

31909 {
31910   "swagger": "2.0",
31911   "info": {
31912     "title": "Dimming",
31913     "version": "v1.1.0-20160519",
31914     "license": {
31915       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
31916       "x-description": "Redistribution and use in source and binary forms, with or without
31917 modification, are permitted provided that the following conditions are met:\n      1.
31918 Redistributions of source code must retain the above copyright notice, this list of conditions and
31919 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
31920 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
31921 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
31922 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
31923 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
31924 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
31925 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
31926 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
31927 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
31928 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
31929 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
31930 OF SUCH DAMAGE.\n"
31931     }
31932   },
31933   "schemes": ["http"],
31934   "consumes": ["application/json"],
31935   "produces": ["application/json"],
31936   "paths": {
31937     "/DimmingResURI" : {
31938       "get": {
31939         "description": "This resource describes a dimming function.\nThe value is an integer
31940 showing the current dimming level.\nIf step (from oic.r.baseresource) is present then it represents
31941 the increment between dimmer values.\nWhen range (from oic.r.baseresource) is omitted, then the
31942 range is [0,100].\nA value of 0 means total dimming; a value of 100 means no dimming.\nRetrieves
31943 the current dimming level.\n",
31944         "parameters": [
31945           { "$ref": "#/parameters/interface" }
31946         ],
31947         "responses": {
31948           "200": {

```

```

31949         "description" : "",
31950         "x-example":
31951         {
31952             "rt":          ["oic.r.light.dimming"],
31953             "id":          "unique_example_id",
31954             "dimmingSetting": 30,
31955             "step":        5,
31956             "range":       [0,100]
31957         }
31958     },
31959     "schema": { "$ref": "#/definitions/Dimming" }
31960 }
31961 },
31962 ],
31963 "post": {
31964     "description": "Sets the desired dimming level.\n",
31965     "parameters": [
31966         { "$ref": "#/parameters/interface" },
31967         {
31968             "name": "body",
31969             "in": "body",
31970             "required": true,
31971             "schema": { "$ref": "#/definitions/Dimming" },
31972             "x-example":
31973             {
31974                 "id":          "unique_example_id",
31975                 "dimmingSetting": 40
31976             }
31977         }
31978     ],
31979     "responses": {
31980         "200": {
31981             "description": "Indicates that the dimming was changed.\nThe new dimming level is
31982 provided in the response.\n",
31983             "x-example":
31984             {
31985                 "id":          "unique_example_id",
31986                 "dimmingSetting": 40
31987             }
31988         },
31989         "schema": { "$ref": "#/definitions/Dimming" }
31990     },
31991     "403": {
31992         "description": "This response is generated by the OIC Server when the client
31993 sends:\n An update with an out of range property value for dimmingSetting.\nThe server responds
31994 with the current resource representation.\n",
31995         "x-example":
31996         {
31997             "id":          "unique_example_id",
31998             "dimmingSetting": 40
31999         }
32000     },
32001     "schema": { "$ref": "#/definitions/Dimming" }
32002 }
32003 }
32004 }
32005 }
32006 },
32007 "parameters": {
32008     "interface" : {
32009         "in" : "query",
32010         "name" : "if",
32011         "type" : "string",
32012         "enum" : ["oic.if.a", "oic.if.baseline"]
32013     }
32014 },
32015 "definitions": {
32016     "Dimming" : {
32017         "properties": {
32018             "rt" :
32019             {

```

```

32020         "description": "Resource Type",
32021         "items": {
32022             "maxLength": 64,
32023             "type": "string"
32024         },
32025         "minItems": 1,
32026         "readOnly": true,
32027         "type": "array"
32028     },
32029
32030     "precision" :
32031     {
32032         "description": "Accuracy granularity of the exposed value",
32033         "readOnly": true,
32034         "type": "number"
32035     },
32036
32037     "value" :
32038     {
32039         "anyOf": [
32040             {
32041                 "type": "array"
32042             },
32043             {
32044                 "type": "string"
32045             },
32046             {
32047                 "type": "boolean"
32048             },
32049             {
32050                 "type": "integer"
32051             },
32052             {
32053                 "type": "number"
32054             },
32055             {
32056                 "type": "object"
32057             }
32058         ],
32059         "description": "The value sensed or actuated by this Resource"
32060     },
32061
32062     "n" :
32063     {
32064         "description": "Friendly name of the resource",
32065         "maxLength": 64,
32066         "readOnly": true,
32067         "type": "string"
32068     },
32069
32070     "range" :
32071     {
32072         "description": "The valid range for the value Property",
32073         "items": {
32074             "anyOf": [
32075                 {
32076                     "type": "number"
32077                 },
32078                 {
32079                     "type": "integer"
32080                 }
32081             ]
32082         },
32083         "maxItems": 2,
32084         "minItems": 2,
32085         "readOnly": true,
32086         "type": "array"
32087     },
32088
32089     "step" :
32090     {

```

```

32091     "anyOf": [
32092         {
32093             "type": "integer"
32094         },
32095         {
32096             "type": "number"
32097         }
32098     ],
32099     "description": "Step value across the defined range",
32100     "readOnly": true
32101 },
32102
32103     "dimmingSetting" :
32104     {
32105         "description": "Current dimming value",
32106         "type": "integer"
32107     },
32108
32109     "id" :
32110     {
32111         "description": "Instance ID of this specific resource",
32112         "maxLength": 64,
32113         "readOnly": true,
32114         "type": "string"
32115     },
32116
32117     "if" :
32118     {
32119         "description": "The interface set supported by this resource",
32120         "items": {
32121             "enum": [
32122                 "oic.if.baseline",
32123                 "oic.if.ll",
32124                 "oic.if.b",
32125                 "oic.if.lb",
32126                 "oic.if.rw",
32127                 "oic.if.r",
32128                 "oic.if.a",
32129                 "oic.if.s"
32130             ],
32131             "type": "string"
32132         },
32133         "minItems": 1,
32134         "readOnly": true,
32135         "type": "array"
32136     }
32137
32138     },
32139     "type" : "object"
32140     , "required": ["dimmingSetting"]
32141 }
32142 }
32143 }
32144

```

32145 B.45.5 Property Definition

32146 **Table 327** The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
step	multiple types: see schema	No	Read Only	

				Step value across the defined range
if	array: schema	see	No	Read Only
rt	array: schema	see	No	Read Only
range	array: schema	see	No	Read Only
dimmingSetting	integer		Yes	Read Write
id	string		No	Read Only
precision	number		No	Read Only
n	string		No	Read Only
				The interface set supported by this resource
				Resource Type
				The valid range for the value Property
				Current dimming value
				Instance ID of this specific resource
				Accuracy granularity of the exposed value
				Friendly name of the resource

32147 **B.45.6 CRUDN behaviour**

32148 **Table 328 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/DimmingResURI		get	post		observe

32149 **B.46 Door**

32150 **B.46.1 Introduction**

32151 This resource describes the open state of the door.

32152 A door is modelled by means of openState (Open/Closed), openDuration (ISO 8601 Time), and openAlarm (boolean).

32153 For openState, the value 'Open' indicates the door is open.

32154 The value 'Closed' indicates the door is closed.

32155 The type of openDuration is an ISO 8601 Time encoded string.

32156 The openAlarm value 'true' indicates that the open alarm is active.

32157 The openAlarm value 'false' indicates that open alarm is not active.

32158

32159

32160 **B.46.2 Example URI**

32161 /DoorResURI

32162 **B.46.3 Resource Type**

32163 The resource type (rt) is defined as: ['oic.r.door'].

32164 **B.46.4 Swagger2.0 Definition**

32165 {
32166 "swagger": "2.0",

```

32167     "info": {
32168         "title": "Door",
32169         "version": "v1.1.0-20160519",
32170         "license": {
32171             "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
32172             "x-description": "Redistribution and use in source and binary forms, with or without
32173 modification, are permitted provided that the following conditions are met:\n      1.
32174 Redistributions of source code must retain the above copyright notice, this list of conditions and
32175 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
32176 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
32177 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
32178 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
32179 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
32180 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
32181 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
32182 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
32183 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
32184 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
32185 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
32186 OF SUCH DAMAGE.\n"
32187     }
32188 },
32189 "schemes": ["http"],
32190 "consumes": ["application/json"],
32191 "produces": ["application/json"],
32192 "paths": {
32193     "/DoorResURI" : {
32194         "get": {
32195             "description": "This resource describes the open state of the door.\nA door is modelled by
32196 means of openState (Open/Closed), openDuration (ISO 8601 Time), and openAlarm (boolean).\nFor
32197 openState, the value 'Open' indicates the door is open.\nThe value 'Closed' indicates the door is
32198 closed.\nThe type of openDuration is an ISO 8601 Time encoded string.\nThe openAlarm value 'true'
32199 indicates that the open alarm is active.\nThe openAlarm value 'false' indicates that open alarm is
32200 not active.\nretrieves the state of the Door.",
32201             "parameters": [
32202                 { "$ref": "#/parameters/interface-all" }
32203             ],
32204             "responses": {
32205                 "200": {
32206                     "description": "",
32207                     "x-example":
32208                         {
32209                             "rt" :           ["oic.r.door"],
32210                             "id":          "unique_example_id",
32211                             "openState":   "Open",
32212                             "openDuration": "P0Y0M0DT2H25M5S",
32213                             "openAlarm":   true
32214                         }
32215                 },
32216                 "schema": { "$ref": "#/definitions/Door" }
32217             }
32218         },
32219     },
32220     "post": {
32221         "description": "Sets the current Door properties.\nThe only property that can be set as
32222 part of an update operation is\n the openAlarm.\nThis can be made active (true) or inactive
32223 (false)\n",
32224         "parameters": [
32225             { "$ref": "#/parameters/interface-actuator" },
32226             {
32227                 "name": "body",
32228                 "in": "body",
32229                 "required": true,
32230                 "schema": { "$ref": "#/definitions/DoorUpdate" },
32231                 "x-example":
32232                     {
32233                         "id":          "unique_example_id",
32234                         "openAlarm":  false
32235                     }
32236             }
32237         ],

```

```

32238     "responses": {
32239         "200": {
32240             "description" : "",
32241             "x-example":
32242                 {
32243                     "id":         "unique_example_id",
32244                     "openAlarm": false
32245                 }
32246             ,
32247             "schema": { "$ref": "#/definitions/DoorUpdate" }
32248         }
32249     }
32250 }
32251 }
32252 },
32253 "parameters": {
32254     "interface-actuator" : {
32255         "in" : "query",
32256         "name" : "if",
32257         "type" : "string",
32258         "enum" : ["oic.if.a", "oic.if.baseline"]
32259     },
32260     "interface-all" : {
32261         "in" : "query",
32262         "name" : "if",
32263         "type" : "string",
32264         "enum" : ["oic.if.a", "oic.if.s", "oic.if.baseline"]
32265     }
32266 },
32267 "definitions": {
32268     "Door" : {
32269         "properties": {
32270             "rt" :
32271                 {
32272                     "description": "Resource Type",
32273                     "items": {
32274                         "maxLength": 64,
32275                         "type": "string"
32276                     },
32277                     "minItems": 1,
32278                     "readOnly": true,
32279                     "type": "array"
32280                 },
32281         },
32282         "precision" :
32283             {
32284                 "description": "Accuracy granularity of the exposed value",
32285                 "readOnly": true,
32286                 "type": "number"
32287             },
32288         "value" :
32289             {
32290                 "anyOf": [
32291                     {
32292                         "type": "array"
32293                     },
32294                     {
32295                         "type": "string"
32296                     },
32297                     {
32298                         "type": "boolean"
32299                     },
32300                     {
32301                         "type": "integer"
32302                     },
32303                     {
32304                         "type": "number"
32305                     },
32306                     {
32307                         "type": "object"
32308                     }

```

```

32309     }
32310   ],
32311   "description": "The value sensed or actuated by this Resource"
32312 },
32313
32314   "n" :
32315     {
32316       "description": "Friendly name of the resource",
32317       "maxLength": 64,
32318       "readOnly": true,
32319       "type": "string"
32320     },
32321
32322   "range" :
32323     {
32324       "description": "The valid range for the value Property",
32325       "items": {
32326         "anyOf": [
32327           {
32328             "type": "number"
32329           },
32330           {
32331             "type": "integer"
32332           }
32333         ]
32334       },
32335       "maxItems": 2,
32336       "minItems": 2,
32337       "readOnly": true,
32338       "type": "array"
32339     },
32340
32341   "openDuration" :
32342     {
32343       "description": "The time duration the door has been open",
32344       "readOnly": true,
32345       "type": "string"
32346     },
32347
32348   "openState" :
32349     {
32350       "description": "The state of the door (open or closed)",
32351       "enum": [
32352         "Open",
32353         "Closed"
32354       ],
32355       "readOnly": true,
32356       "type": "string"
32357     },
32358
32359   "step" :
32360     {
32361       "anyOf": [
32362         {
32363           "type": "integer"
32364         },
32365         {
32366           "type": "number"
32367         }
32368       ],
32369       "description": "Step value across the defined range",
32370       "readOnly": true
32371     },
32372
32373   "id" :
32374     {
32375       "description": "Instance ID of this specific resource",
32376       "maxLength": 64,
32377       "readOnly": true,
32378       "type": "string"
32379     },

```

```

32380
32381     "openAlarm" :
32382     {
32383         "description": "The state of the door open alarm",
32384         "type": "boolean"
32385     },
32386
32387     "if" :
32388     {
32389         "description": "The interface set supported by this resource",
32390         "items": {
32391             "enum": [
32392                 "oic.if.baseline",
32393                 "oic.if.ll",
32394                 "oic.if.b",
32395                 "oic.if.lb",
32396                 "oic.if.rw",
32397                 "oic.if.r",
32398                 "oic.if.a",
32399                 "oic.if.s"
32400             ],
32401             "type": "string"
32402         },
32403         "minItems": 1,
32404         "readOnly": true,
32405         "type": "array"
32406     }
32407
32408     },
32409     "type" : "object"
32410 }, "required": ["openState"]
32411 }
32412 ,
32413 "DoorUpdate" : {
32414     "properties": {
32415         "rt" :
32416         {
32417             "description": "Resource Type",
32418             "items": {
32419                 "maxLength": 64,
32420                 "type": "string"
32421             },
32422             "minItems": 1,
32423             "readOnly": true,
32424             "type": "array"
32425         },
32426
32427         "precision" :
32428         {
32429             "description": "Accuracy granularity of the exposed value",
32430             "readOnly": true,
32431             "type": "number"
32432         },
32433
32434         "value" :
32435         {
32436             "anyOf": [
32437                 {
32438                     "type": "array"
32439                 },
32440                 {
32441                     "type": "string"
32442                 },
32443                 {
32444                     "type": "boolean"
32445                 },
32446                 {
32447                     "type": "integer"
32448                 },
32449                 {
32450                     "type": "number"

```

```

32451         },
32452         {
32453             "type": "object"
32454         }
32455     ],
32456     "description": "The value sensed or actuated by this Resource"
32457 },
32458 "n" :
32459 {
32460     "description": "Friendly name of the resource",
32461     "maxLength": 64,
32462     "readOnly": true,
32463     "type": "string"
32464 },
32465 },
32466 "range" :
32467 {
32468     "description": "The valid range for the value Property",
32469     "items": {
32470         "anyOf": [
32471             {
32472                 "type": "number"
32473             },
32474             {
32475                 "type": "integer"
32476             }
32477         ]
32478     },
32479     "maxItems": 2,
32480     "minItems": 2,
32481     "readOnly": true,
32482     "type": "array"
32483 },
32484 },
32485 "step" :
32486 {
32487     "anyOf": [
32488         {
32489             "type": "integer"
32490         },
32491         {
32492             "type": "number"
32493         }
32494     ],
32495     "description": "Step value across the defined range",
32496     "readOnly": true
32497 },
32498 },
32499 "id" :
32500 {
32501     "description": "Instance ID of this specific resource",
32502     "maxLength": 64,
32503     "readOnly": true,
32504     "type": "string"
32505 },
32506 },
32507 "openAlarm" :
32508 {
32509     "description": "The state of the door open alarm",
32510     "type": "boolean"
32511 },
32512 },
32513 "if" :
32514 {
32515     "description": "The interface set supported by this resource",
32516     "items": {
32517         "enum": [
32518             "oic.if.baseline",
32519             "oic.if.ll",
32520             "oic.if.b",
32521

```

```

32522         "oic.if.lb",
32523         "oic.if.rw",
32524         "oic.if.r",
32525         "oic.if.a",
32526         "oic.if.s"
32527     ],
32528     "type": "string"
32529 },
32530 "minItems": 1,
32531 "readOnly": true,
32532 "type": "array"
32533 }
32534
32535 }
32536 , "type" : "object"
32537 }
32538 }
32539 }
32540

```

32541 B.46.5 Property Definition

32542 **Table 329 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema	No	Read Only	Step value across the defined range
openState	string	Yes	Read Only	The state of the door (open or closed)
id	string	No	Read Only	Instance ID of this specific resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
rt	array: see schema	No	Read Only	Resource Type
openAlarm	boolean	No	Read Write	The state of the door open alarm
openDuration	string	No	Read Only	The time duration the door has been open
if	array: see schema	No	Read Only	The interface set supported by this resource
n	string	No	Read Only	

				Friendly name of the resource
range	array: see schema	No	Read Only	The valid range for the value Property
step	multiple types: see schema		Read Only	Step value across the defined range
id	string		Read Only	Instance ID of this specific resource
value	multiple types: see schema		Read Write	The value sensed or actuated by this Resource
precision	number		Read Only	Accuracy granularity of the exposed value
rt	array: see schema		Read Only	Resource Type
openAlarm	boolean		Read Write	The state of the door open alarm
if	array: see schema		Read Only	The interface set supported by this resource
n	string		Read Only	Friendly name of the resource
range	array: see schema		Read Only	The valid range for the value Property

32543 **B.46.6 CRUDN behaviour**

32544 **Table 330 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/DoorResURI		get	post		observe

32545 **B.47 Demand Response Load Control (DRLC).**

32546 **B.47.1 Introduction**

32547 This resource describes any to be applied or currently being applied DRLC signal.
32548 The DRType is the ApplianceLoadReductionType defined in Zigbee/HA Smart Energy Profile 2.0.
32549 Start is a string containing an ISO8601 encoded start time.
32550 The duration value is in minutes.
32551 Override indicates whether the consumer has overridden the request (true) or not (false).
32552

32553 **B.47.2 Example URI**

32554 /DRLCResURI

32555 **B.47.3 Resource Type**

32556 The resource type (rt) is defined as: ['oic.r.energy.drlc'].

32557 **B.47.4 Swagger2.0 Definition**

```
32558 {
32559   "swagger": "2.0",
32560   "info": {
32561     "title": "Demand Response Load Control (DRLC).",
32562     "version": "v1.1.0-20160519",
32563     "license": {
32564       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
32565       "x-description": "Redistribution and use in source and binary forms, with or without
32566 modification, are permitted provided that the following conditions are met:\n      1.
32567 Redistributions of source code must retain the above copyright notice, this list of conditions and
32568 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
32569 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
32570 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
32571 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
32572 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
32573 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
32574 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
32575 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
32576 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
32577 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
32578 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
32579 OF SUCH DAMAGE.\n"
32580     }
32581   },
32582   "schemes": ["http"],
32583   "consumes": ["application/json"],
32584   "produces": ["application/json"],
32585   "paths": {
32586     "/DRLCResURI" : {
32587       "get": {
32588         "description": "This resource describes any to be applied or currently being applied DRLC
32589 signal.\nThe DRType is the ApplianceLoadReductionType defined in Zigbee/HA Smart Energy Profile
32590 2.0.\nStart is a string containing an ISO8601 encoded start time.\nThe duration value is in
32591 minutes.\nOverride indicates whether the consumer has overridden the request (true) or not
32592 (false).\nProvides the current DRLC action that is being applied.\n",
32593         "parameters": [
32594           { "$ref": "#/parameters/interface" }
32595         ],
32596         "responses": {
32597           "200": {
32598             "description": "",
32599             "x-example":
32600               {
32601                 "rt": ["oic.r.energy.drlc"],
32602                 "id": "unique_example_id",
32603                 "DRType": 1,
32604                 "start": "2015-01-09T16:45Z",
32605                 "duration": 10,
32606                 "override": false
32607               }
32608           },
32609           "schema": { "$ref": "#/definitions/DRLC" }
32610         }
32611       }
32612     },
32613     "put": {
32614       "description": "Provides the DRLC action to be applied to the device or updates an existing
32615 action.\n",
32616       "parameters": [
32617         { "$ref": "#/parameters/interface" },
32618         {
32619           "name": "body",
```

```

32620         "in": "body",
32621         "required": true,
32622         "schema": { "$ref": "#/definitions/DRLC" },
32623         "x-example":
32624         {
32625             "rt": ["oic.r.energy.drlc"],
32626             "id": "unique_example_id",
32627             "DRType": 1,
32628             "start": "2015-01-09T16:45Z",
32629             "duration": 10
32630         }
32631     },
32632 ],
32633     "responses": {
32634         "200": {
32635             "description": "Indicates that the target DRLC resource was changed.\n\nThe new
32636 resource attributes are provided in the response.\n\n",
32637             "x-example":
32638             {
32639                 "DRType": 1,
32640                 "id": "unique_example_id",
32641                 "start": "2015-01-09T17:00Z",
32642                 "duration": 15,
32643                 "override": false
32644             }
32645         },
32646         "schema": { "$ref": "#/definitions/DRLC" }
32647     },
32648     "201": {
32649         "description": "Indicates successful creation of the DRLC resource with the
32650 attributes provided.\n\nThe response includes the URI of the created resource.\n\n",
32651         "x-example":
32652         {
32653             "ResURI": "/MyDevice/MyDRLCURI"
32654         }
32655     },
32656     "schema": { "$ref": "#/definitions/CreateResponse" }
32657 }
32658 }
32659 }
32660 }
32661 },
32662 "parameters": {
32663     "interface": {
32664         "in": "query",
32665         "name": "if",
32666         "type": "string",
32667         "enum": ["oic.if.b", "oic.if.baseline"]
32668     }
32669 },
32670 "definitions": {
32671     "DRLC": {
32672         "properties": {
32673             "rt": {
32674                 {
32675                     "description": "Resource Type",
32676                     "items": {
32677                         "maxLength": 64,
32678                         "type": "string"
32679                     },
32680                     "minItems": 1,
32681                     "readOnly": true,
32682                     "type": "array"
32683                 },
32684             },
32685             "step": {
32686                 {
32687                     "anyOf": [
32688                         {
32689                             "type": "integer"
32690                         }

```

```

32691         {
32692             "type": "number"
32693         }
32694     ],
32695     "description": "Step value across the defined range",
32696     "readOnly": true
32697 },
32698
32699 "start" :
32700     {
32701         "description": "The start time for the application of DR",
32702         "type": "string"
32703     },
32704
32705 "precision" :
32706     {
32707         "description": "Accuracy granularity of the exposed value",
32708         "readOnly": true,
32709         "type": "number"
32710     },
32711
32712 "value" :
32713     {
32714         "anyOf": [
32715             {
32716                 "type": "array"
32717             },
32718             {
32719                 "type": "string"
32720             },
32721             {
32722                 "type": "boolean"
32723             },
32724             {
32725                 "type": "integer"
32726             },
32727             {
32728                 "type": "number"
32729             },
32730             {
32731                 "type": "object"
32732             }
32733         ],
32734         "description": "The value sensed or actuated by this Resource"
32735     },
32736
32737 "n" :
32738     {
32739         "description": "Friendly name of the resource",
32740         "maxLength": 64,
32741         "readOnly": true,
32742         "type": "string"
32743     },
32744
32745 "duration" :
32746     {
32747         "description": "The duration of the to be applied DR type",
32748         "type": "integer"
32749     },
32750
32751 "range" :
32752     {
32753         "description": "The valid range for the value Property",
32754         "items": {
32755             "anyOf": [
32756                 {
32757                     "type": "number"
32758                 },
32759                 {
32760                     "type": "integer"
32761                 }

```

```

32762     ]
32763     },
32764     "maxItems": 2,
32765     "minItems": 2,
32766     "readOnly": true,
32767     "type": "array"
32768   },
32769
32770   "override" :
32771   {
32772     "description": "Whether the consumer has overridden the application of DR",
32773     "type": "boolean"
32774   },
32775
32776   "DRType" :
32777   {
32778     "description": "The to be applied demand-response type",
32779     "type": "integer"
32780   },
32781
32782   "id" :
32783   {
32784     "description": "Instance ID of this specific resource",
32785     "maxLength": 64,
32786     "readOnly": true,
32787     "type": "string"
32788   },
32789
32790   "if" :
32791   {
32792     "description": "The interface set supported by this resource",
32793     "items": {
32794       "enum": [
32795         "oic.if.baseline",
32796         "oic.if.ll",
32797         "oic.if.b",
32798         "oic.if.lb",
32799         "oic.if.rw",
32800         "oic.if.r",
32801         "oic.if.a",
32802         "oic.if.s"
32803       ],
32804       "type": "string"
32805     },
32806     "minItems": 1,
32807     "readOnly": true,
32808     "type": "array"
32809   }
32810 },
32811 "type" : "object"
32812 , "required": ["DRType"]
32813 }
32814 }
32815 ,
32816 "CreateResponse" : {
32817   "properties": {
32818     "ResURI" :
32819     {
32820       "type": "string"
32821     }
32822   }
32823 },
32824 "type" : "object"
32825 }
32826 }
32827 }
32828

```

Table 331 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
ResURI	string		Read Write	
DRType	integer	Yes	Read Write	The to be applied demand-response type
override	boolean	No	Read Write	Whether the consumer has overridden the application of DR
rt	array: see schema	No	Read Only	Resource Type
n	string	No	Read Only	Friendly name of the resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
if	array: see schema	No	Read Only	The interface set supported by this resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
start	string	No	Read Write	The start time for the application of DR
id	string	No	Read Only	Instance ID of this specific resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
range	array: see schema	No	Read Only	The valid range for the value Property
duration	integer	No	Read Write	The duration of the to be applied DR type

32831 **B.47.6 CRUDN behaviour**

32832 **Table 332 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/DRLCResURI	put	get			observe

32833 **B.48 Eco Mode**

32834 **B.48.1 Introduction**

32835 This resource specifies the supported and currently active Eco Mode of a Device
 32836 The Resource uses the existing schema for Mode (oic.r.mode) with a restriction that the
 32837 population of supportedmodes and modes Properties is restricted to the set of values given
 32838 below:
 32839 "disabled","enabled","notsupported"
 32840 The adminforced Property indicates that the value has been set by another party (e.g. via some
 32841 offboard Smart Energy interaction)
 32842

32843 **B.48.2 Example URI**

32844 /EcomodeResURI

32845 **B.48.3 Resource Type**

32846 The resource type (rt) is defined as: ['oic.r.ecomode'].

32847 **B.48.4 Swagger2.0 Definition**

```

32848 {
32849   "swagger": "2.0",
32850   "info": {
32851     "title": "Eco Mode",
32852     "version": "OCF-v1.0.0-20160620",
32853     "license": {
32854       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
32855       "x-description": "Redistribution and use in source and binary forms, with or without
32856 modification, are permitted provided that the following conditions are met:\n      1.
32857 Redistributions of source code must retain the above copyright notice, this list of conditions and
32858 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
32859 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
32860 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
32861 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
32862 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
32863 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
32864 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
32865 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
32866 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
32867 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
32868 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
32869 OF SUCH DAMAGE.\n"
32870     }
32871   },
32872   "schemes": ["http"],
32873   "consumes": ["application/json"],
32874   "produces": ["application/json"],
32875   "paths": {
32876     "/EcomodeResURI" : {
32877       "get": {
32878         "description": "This resource specifies the supported and currently active Eco Mode of a
32879 Device\nThe Resource uses the existing schema for Mode (oic.r.mode) with a restriction that the
32880 population of supportedmodes and modes Properties is restricted to the set of values given
32881 below:\n\n\"disabled\\\", \"enabled\\\", \"notsupported\\\"\n\nThe adminforced Property indicates that the
32882 value has been set by another party (e.g. via some offboard Smart Energy interaction)\n",
32883         "parameters": [
32884           { "$ref": "#/parameters/interface" }
32885         ],
32886         "responses": {
  
```

```

32887         "200": {
32888             "description" : "",
32889             "x-example":
32890             {
32891                 "rt":          ["oic.r.ecomode"],
32892                 "id":          "unique_example_id",
32893                 "supportedModes": ["disabled","enabled"],
32894                 "modes": ["disabled"],
32895                 "adminforced": false
32896             }
32897         },
32898         "schema": { "$ref": "#/definitions/ecomode" }
32899     }
32900 },
32901 "post": {
32902     "description": "",
32903     "parameters": [
32904         { "$ref": "#/parameters/interface" },
32905         {
32906             "name": "body",
32907             "in": "body",
32908             "required": true,
32909             "schema": { "$ref": "#/definitions/ecomode-update" },
32910             "x-example":
32911             {
32912                 "id":          "unique_example_id",
32913                 "modes": ["enabled"]
32914             }
32915         }
32916     ],
32917     "responses": {
32918         "200": {
32919             "description" : "",
32920             "x-example":
32921             {
32922                 "id":          "unique_example_id",
32923                 "modes": ["enabled"]
32924             }
32925         },
32926         "schema": { "$ref": "#/definitions/ecomode-update" }
32927     }
32928 }
32929 },
32930 },
32931 },
32932 },
32933 "parameters": {
32934     "interface" : {
32935         "in" : "query",
32936         "name" : "if",
32937         "type" : "string",
32938         "enum" : ["oic.if.a", "oic.if.baseline"]
32939     }
32940 },
32941 "definitions": {
32942     "ecomode" : {
32943         "properties": {
32944             "rt" :
32945             {
32946                 "description": "Resource Type",
32947                 "items": {
32948                     "maxLength": 64,
32949                     "type": "string"
32950                 },
32951                 "minItems": 1,
32952                 "readOnly": true,
32953                 "type": "array"
32954             },
32955             "modes" :
32956             {
32957

```

```

32958     "description": "Array of the currently active mode(s)",
32959     "items": {
32960         "type": "string"
32961     },
32962     "type": "array"
32963 },
32964
32965 "step" :
32966     {
32967         "anyOf": [
32968             {
32969                 "type": "integer"
32970             },
32971             {
32972                 "type": "number"
32973             }
32974         ],
32975         "description": "Step value across the defined range",
32976         "readOnly": true
32977     },
32978
32979 "precision" :
32980     {
32981         "description": "Accuracy granularity of the exposed value",
32982         "readOnly": true,
32983         "type": "number"
32984     },
32985
32986 "value" :
32987     {
32988         "anyOf": [
32989             {
32990                 "type": "array"
32991             },
32992             {
32993                 "type": "string"
32994             },
32995             {
32996                 "type": "boolean"
32997             },
32998             {
32999                 "type": "integer"
33000             },
33001             {
33002                 "type": "number"
33003             },
33004             {
33005                 "type": "object"
33006             }
33007         ],
33008         "description": "The value sensed or actuated by this Resource"
33009     },
33010
33011 "n" :
33012     {
33013         "description": "Friendly name of the resource",
33014         "maxLength": 64,
33015         "readOnly": true,
33016         "type": "string"
33017     },
33018
33019 "supportedModes" :
33020     {
33021         "description": "Array of possible modes the device supports.",
33022         "items": {
33023             "type": "string"
33024         },
33025         "readOnly": true,
33026         "type": "array"
33027     },
33028

```



```

33029     "range" :
33030     {
33031         "description": "The valid range for the value Property",
33032         "items": {
33033             "anyOf": [
33034                 {
33035                     "type": "number"
33036                 },
33037                 {
33038                     "type": "integer"
33039                 }
33040             ]
33041         },
33042         "maxItems": 2,
33043         "minItems": 2,
33044         "readOnly": true,
33045         "type": "array"
33046     },
33047     "id" :
33048     {
33049         "description": "Instance ID of this specific resource",
33050         "maxLength": 64,
33051         "readOnly": true,
33052         "type": "string"
33053     },
33054     "adminforced" :
33055     {
33056         "description": "Indicator that the current mode of operation has been forced by admin
33057 action.",
33058         "readOnly": true,
33059         "type": "boolean"
33060     },
33061     "if" :
33062     {
33063         "description": "The interface set supported by this resource",
33064         "items": {
33065             "enum": [
33066                 "oic.if.baseline",
33067                 "oic.if.ll",
33068                 "oic.if.b",
33069                 "oic.if.lb",
33070                 "oic.if.rw",
33071                 "oic.if.r",
33072                 "oic.if.a",
33073                 "oic.if.s"
33074             ],
33075             "type": "string"
33076         },
33077         "minItems": 1,
33078         "readOnly": true,
33079         "type": "array"
33080     }
33081 },
33082 "type" : "object"
33083 , "required": ["supportedModes", "modes"]
33084 }
33085 ,
33086 "ecomode-update" : {
33087     "properties": {
33088         "rt" :
33089         {
33090             "description": "Resource Type",
33091             "items": {
33092                 "maxLength": 64,
33093                 "type": "string"
33094             },
33095             "minItems": 1,

```

```

33100         "readOnly": true,
33101         "type": "array"
33102     },
33103
33104     "modes" :
33105     {
33106         "description": "Desired mode",
33107         "items": {
33108             "type": "string"
33109         },
33110         "type": "array"
33111     },
33112
33113     "precision" :
33114     {
33115         "description": "Accuracy granularity of the exposed value",
33116         "readOnly": true,
33117         "type": "number"
33118     },
33119
33120     "value" :
33121     {
33122         "anyOf": [
33123             {
33124                 "type": "array"
33125             },
33126             {
33127                 "type": "string"
33128             },
33129             {
33130                 "type": "boolean"
33131             },
33132             {
33133                 "type": "integer"
33134             },
33135             {
33136                 "type": "number"
33137             },
33138             {
33139                 "type": "object"
33140             }
33141         ],
33142         "description": "The value sensed or actuated by this Resource"
33143     },
33144
33145     "n" :
33146     {
33147         "description": "Friendly name of the resource",
33148         "maxLength": 64,
33149         "readOnly": true,
33150         "type": "string"
33151     },
33152
33153     "range" :
33154     {
33155         "description": "The valid range for the value Property",
33156         "items": {
33157             "anyOf": [
33158                 {
33159                     "type": "number"
33160                 },
33161                 {
33162                     "type": "integer"
33163                 }
33164             ]
33165         },
33166         "maxItems": 2,
33167         "minItems": 2,
33168         "readOnly": true,
33169         "type": "array"
33170     },

```

```

33171
33172     "step" :
33173     {
33174         "anyOf": [
33175             {
33176                 "type": "integer"
33177             },
33178             {
33179                 "type": "number"
33180             }
33181         ],
33182         "description": "Step value across the defined range",
33183         "readOnly": true
33184     },
33185
33186     "id" :
33187     {
33188         "description": "Instance ID of this specific resource",
33189         "maxLength": 64,
33190         "readOnly": true,
33191         "type": "string"
33192     },
33193
33194     "if" :
33195     {
33196         "description": "The interface set supported by this resource",
33197         "items": {
33198             "enum": [
33199                 "oic.if.baseline",
33200                 "oic.if.ll",
33201                 "oic.if.b",
33202                 "oic.if.lb",
33203                 "oic.if.rw",
33204                 "oic.if.r",
33205                 "oic.if.a",
33206                 "oic.if.s"
33207             ],
33208             "type": "string"
33209         },
33210         "minItems": 1,
33211         "readOnly": true,
33212         "type": "array"
33213     }
33214
33215     },
33216     "type" : "object"
33217     , "required": ["modes"]
33218 }
33219 }
33220 }
33221

```

33222 B.48.5 Property Definition

33223 **Table 333 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
n	string	No	Read Only	Friendly name of the resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
modes	array: see schema	Yes	Read Write	Desired mode

if	array: schema	see	No	Read Only	The interface set supported by this resource
range	array: schema	see	No	Read Only	The valid range for the value Property
precision	number		No	Read Only	Accuracy granularity of the exposed value
step	multiple types: see schema		No	Read Only	Step value across the defined range
rt	array: schema	see	No	Read Only	Resource Type
id	string		No	Read Only	Instance ID of this specific resource
n	string		No	Read Only	Friendly name of the resource
value	multiple types: see schema		No	Read Write	The value sensed or actuated by this Resource
modes	array: schema	see	Yes	Read Write	Array of the currently active mode(s)
supportedModes	array: schema	see	Yes	Read Only	Array of possible modes the device supports.
if	array: schema	see	No	Read Only	The interface set supported by this resource
range	array: schema	see	No	Read Only	The valid range for the value Property
precision	number		No	Read Only	Accuracy granularity of the exposed value
adminforced	boolean		No	Read Only	Indicator that the current mode of operation has

				been forced by admin action.
step	multiple types: see schema	No	Read Only	Step value across the defined range
rt	array: see schema	No	Read Only	Resource Type
id	string	No	Read Only	Instance ID of this specific resource

33224 **B.48.6 CRUDN behaviour**

33225 **Table 334 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/EcomodeResURI		get	post		observe

33226 **B.49 Energy**

33227 **B.49.1 Introduction**

33228 This resource describes the attributes associated with electrical energy. This can be used for
 33229 either rated (read-only), desired (read-write) or measured (read-only) energy. The voltage is in
 33230 Volts (V), current in Amps (A), and frequency in Hertz (Hz).
 33231

33232 **B.49.2 Example URI**

33233 /EnergyResURI

33234 **B.49.3 Resource Type**

33235 The resource type (rt) is defined as: ['oic.r.energy.electrical'].

33236 **B.49.4 Swagger2.0 Definition**

```

33237 {
33238   "swagger": "2.0",
33239   "info": {
33240     "title": "Energy",
33241     "version": "v1.1.0-20170815",
33242     "license": {
33243       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
33244       "x-description": "Redistribution and use in source and binary forms, with or without
33245 modification, are permitted provided that the following conditions are met:\n      1.
33246 Redistributions of source code must retain the above copyright notice, this list of conditions and
33247 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
33248 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
33249 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
33250 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
33251 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
33252 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
33253 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
33254 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
33255 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
33256 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
33257 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
33258 OF SUCH DAMAGE.\n"
33259     }
33260   },
33261   "schemes": ["http"],
33262   "consumes": ["application/json"],
33263   "produces": ["application/json"],
33264   "paths": {

```

```

33265     "/EnergyResURI" : {
33266         "get": {
33267             "description": "This resource describes the attributes associated with electrical energy.
33268 This can be used for either rated (read-only), desired (read-write) or measured (read-only) energy.
33269 The voltage is in Volts (V), current in Amps (A), and frequency in Hertz (Hz).\nRetrieves the
33270 current energy.\n",
33271             "parameters": [
33272                 {"$ref": "#/parameters/interface-all"}
33273             ],
33274             "responses": {
33275                 "200": {
33276                     "description": "",
33277                     "x-example":
33278                         {
33279                             "rt": ["oic.r.energy.electrical"],
33280                             "id": "unique_example_id",
33281                             "voltage": 120.0,
33282                             "current": 5.0,
33283                             "frequency": 60.0
33284                         }
33285                 },
33286                 "schema": { "$ref": "#/definitions/Energy" }
33287             }
33288         },
33289     },
33290     "post": {
33291         "description": "Sets the desired energy values\n",
33292         "parameters": [
33293             {"$ref": "#/parameters/interface-update"},
33294             {
33295                 "name": "body",
33296                 "in": "body",
33297                 "required": true,
33298                 "schema": { "$ref": "#/definitions/EnergyUpdate" },
33299                 "x-example":
33300                     {
33301                         "id": "unique_example_id",
33302                         "desiredvoltage": 130.0,
33303                         "desiredcurrent": 6.0
33304                     }
33305             }
33306         ],
33307         "responses": {
33308             "200": {
33309                 "description": "",
33310                 "x-example":
33311                     {
33312                         "id": "unique_example_id",
33313                         "desiredvoltage": 130.0,
33314                         "desiredcurrent": 6.0
33315                     }
33316             }
33317         }
33318     },
33319 },
33320 },
33321 "parameters": {
33322     "interface-update" : {
33323         "in" : "query",
33324         "name" : "if",
33325         "type" : "string",
33326         "enum" : ["oic.if.rw", "oic.if.baseline"]
33327     },
33328     "interface-all" : {
33329         "in" : "query",
33330         "name" : "if",
33331         "type" : "string",
33332         "enum" : ["oic.if.r", "oic.if.rw", "oic.if.s", "oic.if.baseline"]
33333     }
33334 },
33335 "definitions": {

```

```

33336 "Energy" : {
33337   "properties": {
33338     "rt" :
33339       {
33340         "description": "Resource Type",
33341         "items": {
33342           "maxLength": 64,
33343           "type": "string"
33344         },
33345         "minItems": 1,
33346         "readOnly": true,
33347         "type": "array"
33348       },
33349     "precision" :
33350       {
33351         "description": "Accuracy granularity of the exposed value",
33352         "readOnly": true,
33353         "type": "number"
33354       },
33355     "value" :
33356       {
33357         "anyOf": [
33358           {
33359             "type": "array"
33360           },
33361           {
33362             "type": "string"
33363           },
33364           {
33365             "type": "boolean"
33366           },
33367           {
33368             "type": "integer"
33369           },
33370           {
33371             "type": "number"
33372           },
33373           {
33374             "type": "object"
33375           }
33376         ],
33377         "description": "The value sensed or actuated by this Resource"
33378       },
33379     "desiredcurrent" :
33380       {
33381         "description": "The desired electric current in Amps (A).",
33382         "type": "number"
33383       },
33384     "current" :
33385       {
33386         "description": "The electric current in Amps (A).",
33387         "readOnly": true,
33388         "type": "number"
33389       },
33390     "range" :
33391       {
33392         "description": "The valid range for the value Property",
33393         "items": {
33394           "anyOf": [
33395             {
33396               "type": "number"
33397             },
33398             {
33399               "type": "integer"
33400             }
33401           ]
33402         }
33403       }
33404     ]
33405   }
33406 }

```

```

33407     },
33408     "maxItems": 2,
33409     "minItems": 2,
33410     "readOnly": true,
33411     "type": "array"
33412 },
33413
33414 "frequency" :
33415     {
33416     "description": "The electric frequency in Hertz (Hz).",
33417     "readOnly": true,
33418     "type": "number"
33419     },
33420
33421 "voltage" :
33422     {
33423     "description": "The electric voltage in Volts (V).",
33424     "readOnly": true,
33425     "type": "number"
33426     },
33427
33428 "step" :
33429     {
33430     "anyOf": [
33431     {
33432     "type": "integer"
33433     },
33434     {
33435     "type": "number"
33436     }
33437     ],
33438     "description": "Step value across the defined range",
33439     "readOnly": true
33440     },
33441
33442 "n" :
33443     {
33444     "description": "Friendly name of the resource",
33445     "maxLength": 64,
33446     "readOnly": true,
33447     "type": "string"
33448     },
33449
33450 "desiredfrequency" :
33451     {
33452     "description": "The desired electric frequency in Hertz (Hz).",
33453     "type": "number"
33454     },
33455
33456 "id" :
33457     {
33458     "description": "Instance ID of this specific resource",
33459     "maxLength": 64,
33460     "readOnly": true,
33461     "type": "string"
33462     },
33463
33464 "desiredvoltage" :
33465     {
33466     "description": "The desired electric voltage in Volts (V).",
33467     "type": "number"
33468     },
33469
33470 "if" :
33471     {
33472     "description": "The interface set supported by this resource",
33473     "items": {
33474     "enum": [
33475     "oic.if.baseline",
33476     "oic.if.ll",
33477     "oic.if.b",

```



```

33478         "oic.if.lb",
33479         "oic.if.rw",
33480         "oic.if.r",
33481         "oic.if.a",
33482         "oic.if.s"
33483     ],
33484     "type": "string"
33485 },
33486 "minItems": 1,
33487 "readOnly": true,
33488 "type": "array"
33489 }
33490
33491 }
33492 , "type" : "object"
33493 , "required": ["voltage", "current", "frequency"]
33494 }
33495 ,
33496 "EnergyUpdate" : {
33497     "properties": {
33498         "rt" :
33499         {
33500             "description": "Resource Type",
33501             "items": {
33502                 "maxLength": 64,
33503                 "type": "string"
33504             },
33505             "minItems": 1,
33506             "readOnly": true,
33507             "type": "array"
33508         },
33509
33510         "precision" :
33511         {
33512             "description": "Accuracy granularity of the exposed value",
33513             "readOnly": true,
33514             "type": "number"
33515         },
33516
33517         "value" :
33518         {
33519             "anyOf": [
33520                 {
33521                     "type": "array"
33522                 },
33523                 {
33524                     "type": "string"
33525                 },
33526                 {
33527                     "type": "boolean"
33528                 },
33529                 {
33530                     "type": "integer"
33531                 },
33532                 {
33533                     "type": "number"
33534                 },
33535                 {
33536                     "type": "object"
33537                 }
33538             ],
33539             "description": "The value sensed or actuated by this Resource"
33540         },
33541
33542         "n" :
33543         {
33544             "description": "Friendly name of the resource",
33545             "maxLength": 64,
33546             "readOnly": true,
33547             "type": "string"
33548         },

```

```

33549
33550     "range" :
33551     {
33552         "description": "The valid range for the value Property",
33553         "items": {
33554             "anyOf": [
33555                 {
33556                     "type": "number"
33557                 },
33558                 {
33559                     "type": "integer"
33560                 }
33561             ]
33562         },
33563         "maxItems": 2,
33564         "minItems": 2,
33565         "readOnly": true,
33566         "type": "array"
33567     },
33568
33569     "step" :
33570     {
33571         "anyOf": [
33572             {
33573                 "type": "integer"
33574             },
33575             {
33576                 "type": "number"
33577             }
33578         ],
33579         "description": "Step value across the defined range",
33580         "readOnly": true
33581     },
33582
33583     "desiredcurrent" :
33584     {
33585         "description": "The desired electric current in Amps (A).",
33586         "type": "number"
33587     },
33588
33589     "desiredfrequency" :
33590     {
33591         "description": "The desired electric frequency in Hertz (Hz).",
33592         "type": "number"
33593     },
33594
33595     "id" :
33596     {
33597         "description": "Instance ID of this specific resource",
33598         "maxLength": 64,
33599         "readOnly": true,
33600         "type": "string"
33601     },
33602
33603     "desiredvoltage" :
33604     {
33605         "description": "The desired electric voltage in Volts (V).",
33606         "type": "number"
33607     },
33608
33609     "if" :
33610     {
33611         "description": "The interface set supported by this resource",
33612         "items": {
33613             "enum": [
33614                 "oic.if.baseline",
33615                 "oic.if.ll",
33616                 "oic.if.b",
33617                 "oic.if.lb",
33618                 "oic.if.rw",
33619                 "oic.if.r",

```

```

33620         "oic.if.a",
33621         "oic.if.s"
33622     ],
33623     "type": "string"
33624 },
33625 "minItems": 1,
33626 "readOnly": true,
33627 "type": "array"
33628 }
33629 }
33630 },
33631 "anyOf" :
33632 [
33633 {
33634     "required": [
33635         "desiredvoltage"
33636     ]
33637 },
33638 {
33639     "required": [
33640         "desiredcurrent"
33641     ]
33642 },
33643 {
33644     "required": [
33645         "desiredfrequency"
33646     ]
33647 }
33648 ]
33649 },
33650 "type" : "object"
33651 }
33652 }
33653 }
33654

```

B.49.5 Property Definition

Table 335 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
desiredfrequency	number	Yes	Read Write	The desired electric frequency in Hertz (Hz).
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
desiredvoltage	number	No	Read Write	The desired electric voltage in Volts (V).
range	array: see schema	No	Read Only	The valid range for the value Property

step	multiple types: see schema	No	Read Only	Step value across the defined range
rt	array: see schema	No	Read Only	Resource Type
desiredcurrent	number	No	Read Write	The desired electric current in Amps (A).
n	string	No	Read Only	Friendly name of the resource
if	array: see schema	No	Read Only	The interface set supported by this resource
id	string	No	Read Only	Instance ID of this specific resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
desiredfrequency	number	No	Read Write	The desired electric frequency in Hertz (Hz).
frequency	number	Yes	Read Only	The electric frequency in Hertz (Hz).
voltage	number	Yes	Read Only	The electric voltage in Volts (V).
range	array: see schema	No	Read Only	The valid range for the value Property
n	string	No	Read Only	Friendly name of the resource
desiredcurrent	number	No	Read Write	The desired electric current in Amps (A).
if	array: see schema	No	Read Only	The interface set supported by this resource
precision	number	No	Read Only	

				Accuracy granularity of the exposed value
current	number	Yes	Read Only	The electric current in Amps (A).
step	multiple types: see schema	No	Read Only	Step value across the defined range
rt	array: see schema	No	Read Only	Resource Type
desiredvoltage	number	No	Read Write	The desired electric voltage in Volts (V).
id	string	No	Read Only	Instance ID of this specific resource

33657 **B.49.6 CRUDN behaviour**

33658 **Table 336 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/EnergyResURI		get	post		observe

33659 **B.50 Energy Consumption**

33660 **B.50.1 Introduction**

33661 This resource describes the energy consumed by the device since power up (the energy value is
33662 in Watt Hours [Wh])
33663 and the instantaneous power draw of the device (the power value is in Watts [W]) at the time the
33664 resource was queried.
33665 The power value is in Watts [W].
33666 The energy value is in Watt Hours [Wh].
33667

33668 **B.50.2 Example URI**

33669 /EnergyConsumptionResURI

33670 **B.50.3 Resource Type**

33671 The resource type (rt) is defined as: ['oic.r.energy.consumption'].

33672 **B.50.4 Swagger2.0 Definition**

```

33673 {
33674   "swagger": "2.0",
33675   "info": {
33676     "title": "Energy Consumption",
33677     "version": "v1.1.0-20160519",
33678     "license": {
33679       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
33680       "x-description": "Redistribution and use in source and binary forms, with or without
33681 modification, are permitted provided that the following conditions are met:\n      1.
33682 Redistributions of source code must retain the above copyright notice, this list of conditions and
33683 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
33684 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
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```

```

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33692 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
33693 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
33694 OF SUCH DAMAGE.\n"
33695 }
33696 },
33697 "schemes": ["http"],
33698 "consumes": ["application/json"],
33699 "produces": ["application/json"],
33700 "paths": {
33701   "/EnergyConsumptionResURI" : {
33702     "get": {
33703       "description": "This resource describes the energy consumed by the device since power up
33704 (the energy value is in Watt Hours [Wh]) \nand the instantaneous power draw of the device (the
33705 power value is in Watts [W]) at the time the resource was queried.\nThe power value is in Watts
33706 [W].\nThe energy value is in Watt Hours [Wh].\nProvides the current power draw and cumulative
33707 energy usage.\n",
33708       "parameters": [
33709         {"$ref": "#/parameters/interface"}
33710       ],
33711       "responses": {
33712         "200": {
33713           "description": "",
33714           "x-example":
33715             {
33716               "rt": ["oic.r.energy.consumption"],
33717               "id": "unique_example_id",
33718               "power": 2000.1,
33719               "energy": 3500.4
33720             }
33721         },
33722         "schema": { "$ref": "#/definitions/Consumption" }
33723       }
33724     }
33725   }
33726 },
33727 },
33728 "parameters": {
33729   "interface" : {
33730     "in" : "query",
33731     "name" : "if",
33732     "type" : "string",
33733     "enum" : ["oic.if.s", "oic.if.baseline"]
33734   }
33735 },
33736 "definitions": {
33737   "Consumption" : {
33738     "properties": {
33739       "rt" :
33740         {
33741           "description": "Resource Type",
33742           "items": {
33743             "maxLength": 64,
33744             "type": "string"
33745           },
33746           "minItems": 1,
33747           "readOnly": true,
33748           "type": "array"
33749         },
33750       "power" :
33751         {
33752           "description": "Instantaneous Power",
33753           "readOnly": true,
33754           "type": "number"
33755         }
33756     },

```

```

33757
33758 "energy" :
33759     {
33760         "description": "Energy consumed",
33761         "readOnly": true,
33762         "type": "number"
33763     },
33764
33765 "precision" :
33766     {
33767         "description": "Accuracy granularity of the exposed value",
33768         "readOnly": true,
33769         "type": "number"
33770     },
33771
33772 "value" :
33773     {
33774         "anyOf": [
33775             {
33776                 "type": "array"
33777             },
33778             {
33779                 "type": "string"
33780             },
33781             {
33782                 "type": "boolean"
33783             },
33784             {
33785                 "type": "integer"
33786             },
33787             {
33788                 "type": "number"
33789             },
33790             {
33791                 "type": "object"
33792             }
33793         ],
33794         "description": "The value sensed or actuated by this Resource"
33795     },
33796
33797 "n" :
33798     {
33799         "description": "Friendly name of the resource",
33800         "maxLength": 64,
33801         "readOnly": true,
33802         "type": "string"
33803     },
33804
33805 "range" :
33806     {
33807         "description": "The valid range for the value Property",
33808         "items": {
33809             "anyOf": [
33810                 {
33811                     "type": "number"
33812                 },
33813                 {
33814                     "type": "integer"
33815                 }
33816             ]
33817         },
33818         "maxItems": 2,
33819         "minItems": 2,
33820         "readOnly": true,
33821         "type": "array"
33822     },
33823
33824 "step" :
33825     {
33826         "anyOf": [
33827

```

```

33828         "type": "integer"
33829     },
33830     {
33831         "type": "number"
33832     }
33833 ],
33834 "description": "Step value across the defined range",
33835 "readOnly": true
33836 },
33837
33838 "id" :
33839     {
33840         "description": "Instance ID of this specific resource",
33841         "maxLength": 64,
33842         "readOnly": true,
33843         "type": "string"
33844     },
33845
33846 "if" :
33847     {
33848         "description": "The interface set supported by this resource",
33849         "items": {
33850             "enum": [
33851                 "oic.if.baseline",
33852                 "oic.if.ll",
33853                 "oic.if.b",
33854                 "oic.if.lb",
33855                 "oic.if.rw",
33856                 "oic.if.r",
33857                 "oic.if.a",
33858                 "oic.if.s"
33859             ],
33860             "type": "string"
33861         },
33862         "minItems": 1,
33863         "readOnly": true,
33864         "type": "array"
33865     }
33866 }
33867
33868 , "type" : "object"
33869 , "required": ["power", "energy"]
33870 }
33871 }
33872 }
33873

```

33874 B.50.5 Property Definition

33875 **Table 337 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
n	string	No	Read Only	Friendly name of the resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
step	multiple types: see schema	No	Read Only	Step value across the defined range

range	array: schema see	No	Read Only	The valid range for the value Property
power	number	Yes	Read Only	Instantaneous Power
id	string	No	Read Only	Instance ID of this specific resource
if	array: schema see	No	Read Only	The interface set supported by this resource
energy	number	Yes	Read Only	Energy consumed
precision	number	No	Read Only	Accuracy granularity of the exposed value

33876 **B.50.6 CRUDN behaviour**

33877 **Table 338 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/EnergyConsumptionResURI		get			observe

33878 **B.51 Energy Generation**

33879 **B.51.1 Introduction**

33880 This resource describes the attributes associated with energy generation
 33881 energygenerated is a number that provides the energy generated in Watt-hour(Wh).
 33882

33883 **B.51.2 Example URI**

33884 /EnergyGenerationResURI

33885 **B.51.3 Resource Type**

33886 The resource type (rt) is defined as: ['oic.r.energy.generation'].

33887 **B.51.4 Swagger2.0 Definition**

```

33888 {
33889   "swagger": "2.0",
33890   "info": {
33891     "title": "Energy Generation",
33892     "version": "v1.1.0-20170815",
33893     "license": {
33894       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
33895       "x-description": "Redistribution and use in source and binary forms, with or without
33896 modification, are permitted provided that the following conditions are met:\n      1.
33897 Redistributions of source code must retain the above copyright notice, this list of conditions and
33898 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
33899 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
33900 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
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```

```

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33907 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
33908 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
33909 OF SUCH DAMAGE.\n"
33910 }
33911 },
33912 "schemes": ["http"],
33913 "consumes": ["application/json"],
33914 "produces": ["application/json"],
33915 "paths": {
33916   "/EnergyGenerationResURI" : {
33917     "get": {
33918       "description": "This resource describes the attributes associated with energy
33919 generation\nenergygenerated is a number that provides the energy generated in Watt-
33920 hour(Wh).\nRetrieves the current energy generation.\n",
33921       "parameters": [
33922         {"$ref": "#/parameters/interface"}
33923       ],
33924       "responses": {
33925         "200": {
33926           "description": "",
33927           "x-example":
33928             {
33929               "rt": ["oic.r.energy.generation"],
33930               "id": "unique_example_id",
33931               "energygenerated": 3000.00
33932             }
33933           ,
33934           "schema": {"$ref": "#/definitions/EnergyGeneration" }
33935         }
33936       }
33937     }
33938   },
33939 "parameters": {
33940   "interface" : {
33941     "in" : "query",
33942     "name" : "if",
33943     "type" : "string",
33944     "enum" : ["oic.if.s", "oic.if.baseline"]
33945   }
33946 },
33947 "definitions": {
33948   "EnergyGeneration" : {
33949     "properties": {
33950       "rt" :
33951         {
33952           "description": "Resource Type",
33953           "items": {
33954             "maxLength": 64,
33955             "type": "string"
33956           },
33957           "minItems": 1,
33958           "readOnly": true,
33959           "type": "array"
33960         },
33961       "energygenerated" :
33962         {
33963           "description": "The energy generated in Watt-hour(Wh).",
33964           "readOnly": true,
33965           "type": "number"
33966         },
33967       "precision" :
33968         {
33969           "description": "Accuracy granularity of the exposed value",
33970           "readOnly": true,
33971           "type": "number"
33972         }
33973     }
33974   }

```

```

33975     },
33976
33977     "value" :
33978     {
33979         "anyOf": [
33980             {
33981                 "type": "array"
33982             },
33983             {
33984                 "type": "string"
33985             },
33986             {
33987                 "type": "boolean"
33988             },
33989             {
33990                 "type": "integer"
33991             },
33992             {
33993                 "type": "number"
33994             },
33995             {
33996                 "type": "object"
33997             }
33998         ],
33999         "description": "The value sensed or actuated by this Resource"
34000     },
34001
34002     "n" :
34003     {
34004         "description": "Friendly name of the resource",
34005         "maxLength": 64,
34006         "readOnly": true,
34007         "type": "string"
34008     },
34009
34010     "range" :
34011     {
34012         "description": "The valid range for the value Property",
34013         "items": {
34014             "anyOf": [
34015                 {
34016                     "type": "number"
34017                 },
34018                 {
34019                     "type": "integer"
34020                 }
34021             ]
34022         },
34023         "maxItems": 2,
34024         "minItems": 2,
34025         "readOnly": true,
34026         "type": "array"
34027     },
34028
34029     "step" :
34030     {
34031         "anyOf": [
34032             {
34033                 "type": "integer"
34034             },
34035             {
34036                 "type": "number"
34037             }
34038         ],
34039         "description": "Step value across the defined range",
34040         "readOnly": true
34041     },
34042
34043     "id" :
34044     {
34045         "description": "Instance ID of this specific resource",

```

```

34046         "maxLength": 64,
34047         "readOnly": true,
34048         "type": "string"
34049     },
34050
34051     "if" :
34052     {
34053         "description": "The interface set supported by this resource",
34054         "items": {
34055             "enum": [
34056                 "oic.if.baseline",
34057                 "oic.if.ll",
34058                 "oic.if.b",
34059                 "oic.if.lb",
34060                 "oic.if.rw",
34061                 "oic.if.r",
34062                 "oic.if.a",
34063                 "oic.if.s"
34064             ],
34065             "type": "string"
34066         },
34067         "minItems": 1,
34068         "readOnly": true,
34069         "type": "array"
34070     }
34071
34072     }
34073     , "type" : "object"
34074     , "required": ["energygenerated"]
34075 }
34076 }
34077 }
34078

```

B.51.5 Property Definition

Table 339 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
n	string	No	Read Only	Friendly name of the resource
energygenerated	number	Yes	Read Only	The energy generated in Watt-hour(Wh).
range	array: see schema	No	Read Only	The valid range for the value Property
id	string	No	Read Only	Instance ID of this specific resource

rt	array: see schema	No	Read Only	Resource Type
step	multiple types: see schema	No	Read Only	Step value across the defined range
if	array: see schema	No	Read Only	The interface set supported by this resource

34081 **B.51.6 CRUDN behaviour**

34082 **Table 340 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/EnergyGenerationResURI		get			observe

34083 **B.52 Energy Overload/Circuit Breaker**

34084 **B.52.1 Introduction**

34085 This resource describes whether an energy overload detector/circuit breaker
34086 is currently tripped.

34087 The value is a boolean.

34088 A value of 'true' means that energy overload has been tripped.

34089 A value of 'false' means that energy overload has not been tripped.

34090

34091 **B.52.2 Example URI**

34092 /EnergyOverloadResURI

34093 **B.52.3 Resource Type**

34094 The resource type (rt) is defined as: ['oic.r.energy.overload'].

34095 **B.52.4 Swagger2.0 Definition**

```

34096 {
34097   "swagger": "2.0",
34098   "info": {
34099     "title": "Energy Overload/Circuit Breaker",
34100     "version": "v1.1.0-20160519",
34101     "license": {
34102       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
34103       "x-description": "Redistribution and use in source and binary forms, with or without
34104 modification, are permitted provided that the following conditions are met:\n      1.
34105 Redistributions of source code must retain the above copyright notice, this list of conditions and
34106 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
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34108 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
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34115 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
34116 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
34117 OF SUCH DAMAGE.\n"
34118     }
34119   },
34120   "schemes": ["http"],
34121   "consumes": ["application/json"],
34122   "produces": ["application/json"],
34123   "paths": {

```

```

34124     "/EnergyOverloadResURI" : {
34125         "get": {
34126             "description": "This resource describes whether an energy overload detector/circuit
34127 breaker\n is currently tripped.\nThe value is a boolean.\nA value of 'true' means that energy
34128 overload has been tripped.\nA value of 'false' means that energy overload has not been tripped.\n",
34129             "parameters": [
34130                 {"$ref": "#/parameters/interface"}
34131             ],
34132             "responses": {
34133                 "200": {
34134                     "description": "",
34135                     "x-example":
34136                     {
34137                         "rt": ["oic.r.energy.overload"],
34138                         "id": "unique_example_id",
34139                         "value": true
34140                     }
34141                 },
34142                 "schema": { "$ref": "#/definitions/EnergyOverload" }
34143             }
34144         }
34145     }
34146 },
34147 "parameters": {
34148     "interface" : {
34149         "in" : "query",
34150         "name" : "if",
34151         "type" : "string",
34152         "enum" : ["oic.if.s", "oic.if.baseline"]
34153     }
34154 },
34155 "definitions": {
34156     "EnergyOverload" : {
34157         "properties": {
34158             "rt" :
34159             {
34160                 "description": "Resource Type",
34161                 "items": {
34162                     "maxLength": 64,
34163                     "type": "string"
34164                 },
34165                 "minItems": 1,
34166                 "readOnly": true,
34167                 "type": "array"
34168             },
34169             "precision" :
34170             {
34171                 "description": "Accuracy granularity of the exposed value",
34172                 "readOnly": true,
34173                 "type": "number"
34174             },
34175             "value" :
34176             {
34177                 "description": "true = sensed, false = not sensed.",
34178                 "readOnly": true,
34179                 "type": "boolean"
34180             },
34181             "n" :
34182             {
34183                 "description": "Friendly name of the resource",
34184                 "maxLength": 64,
34185                 "readOnly": true,
34186                 "type": "string"
34187             },
34188             "range" :
34189             {
34190

```

```

34195     "description": "The valid range for the value Property",
34196     "items": {
34197         "anyOf": [
34198             {
34199                 "type": "number"
34200             },
34201             {
34202                 "type": "integer"
34203             }
34204         ]
34205     },
34206     "maxItems": 2,
34207     "minItems": 2,
34208     "readOnly": true,
34209     "type": "array"
34210 },
34211 "step" :
34212     {
34213         "anyOf": [
34214             {
34215                 "type": "integer"
34216             },
34217             {
34218                 "type": "number"
34219             }
34220         ],
34221     },
34222     "description": "Step value across the defined range",
34223     "readOnly": true
34224 },
34225 "id" :
34226     {
34227         "description": "Instance ID of this specific resource",
34228         "maxLength": 64,
34229         "readOnly": true,
34230         "type": "string"
34231     },
34232 },
34233 "if" :
34234     {
34235         "description": "The interface set supported by this resource",
34236         "items": {
34237             "enum": [
34238                 "oic.if.baseline",
34239                 "oic.if.ll",
34240                 "oic.if.b",
34241                 "oic.if.lb",
34242                 "oic.if.rw",
34243                 "oic.if.r",
34244                 "oic.if.a",
34245                 "oic.if.s"
34246             ],
34247             "type": "string"
34248         },
34249         "minItems": 1,
34250         "readOnly": true,
34251         "type": "array"
34252     }
34253 },
34254     },
34255     },
34256     "type" : "object"
34257     , "required": ["value"]
34258 }
34259 }
34260 }
34261

```

34262

B.52.5 Property Definition

34263

Table 341 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema	No	Read Only	Step value across the defined range
precision	number	No	Read Only	Accuracy granularity of the exposed value
range	array: see schema	No	Read Only	The valid range for the value Property
if	array: see schema	No	Read Only	The interface set supported by this resource
id	string	No	Read Only	Instance ID of this specific resource
rt	array: see schema	No	Read Only	Resource Type
n	string	No	Read Only	Friendly name of the resource
value	boolean	Yes	Read Only	true = sensed, false = not sensed.

34264

B.52.6 CRUDN behaviour

34265

Table 342 The CRUDN operations of the resource

Resource	Create	Read	Update	Delete	Notify
/EnergyOverloadResURI		get			observe

34266

B.53 Energy Usage

34267

B.53.1 Introduction

34268

This resource describes a cumulative time-based energy usage query..

34269

The resource is a composite resource being made up as a collection of:

34270

TimePeriod Resource

34271

EnergyConsumption Resource

34272

34273

B.53.2 Example URI

34274

/EnergyUsageResURI

34275

B.53.3 Resource Type

34276

The resource type (rt) is defined as: ['oic.r.energy.usage'].

34277 **B.53.4 Swagger2.0 Definition**

```
34278 {
34279   "swagger": "2.0",
34280   "info": {
34281     "title": "Energy Usage",
34282     "version": "v1.1.0-20160519",
34283     "license": {
34284       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
34285       "x-description": "Redistribution and use in source and binary forms, with or without
34286 modification, are permitted provided that the following conditions are met:\n      1.
34287 Redistributions of source code must retain the above copyright notice, this list of conditions and
34288 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
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34297 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
34298 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
34299 OF SUCH DAMAGE.\n"
34300   }
34301 },
34302 "schemes": ["http"],
34303 "consumes": ["application/json"],
34304 "produces": ["application/json"],
34305 "paths": {
34306   "/EnergyUsageResURI" : {
34307     "get": {
34308       "description": "This resource describes a cumulative time-based energy usage query..\nThe
34309 resource is a composite resource being made up as a collection of:\n TimePeriod Resource\n
34310 EnergyConsumption Resource\nRetrieves the energy usage information as a composite of consumption
34311 over time.\n",
34312       "parameters": [
34313         {"$ref": "#/parameters/interface"}
34314       ],
34315       "responses": {
34316         "200": {
34317           "description": "",
34318           "x-example":
34319             {
34320               "rt": ["oic.r.energy.usage"],
34321               "id": "unique_example_id",
34322               "resources": [
34323                 {
34324                   "href": "/TimeIntervalResURI",
34325                   "rel": "contains",
34326                   "rt": ["oic.r.time.period"],
34327                   "if": ["oic.if.a"],
34328                   "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
34329                 },
34330                 {
34331                   "href": "/EnergyConsumptionResURI",
34332                   "rel": "contains",
34333                   "rt": ["oic.r.energy.consumption"],
34334                   "if": ["oic.if.s"],
34335                   "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
34336                 }
34337               ]
34338             }
34339         }
34340       },
34341       "schema": { "$ref": "#/definitions/Usage" }
34342     }
34343   }
34344 },
34345 },
34346 "parameters": {
```

```

34347     "interface" : {
34348         "in" : "query",
34349         "name" : "if",
34350         "type" : "string",
34351         "enum" : ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
34352     }
34353 },
34354 "definitions": {
34355     "Usage" : {
34356         "properties": {
34357             "rt" :
34358                 {
34359                     "description": "Resource Type",
34360                     "items": {
34361                         "maxLength": 64,
34362                         "type": "string"
34363                     },
34364                     "minItems": 1,
34365                     "readOnly": true,
34366                     "type": "array"
34367                 },
34368
34369         "precision" :
34370             {
34371                 "description": "Accuracy granularity of the exposed value",
34372                 "readOnly": true,
34373                 "type": "number"
34374             },
34375
34376         "value" :
34377             {
34378                 "anyOf": [
34379                     {
34380                         "type": "array"
34381                     },
34382                     {
34383                         "type": "string"
34384                     },
34385                     {
34386                         "type": "boolean"
34387                     },
34388                     {
34389                         "type": "integer"
34390                     },
34391                     {
34392                         "type": "number"
34393                     },
34394                     {
34395                         "type": "object"
34396                     }
34397                 ],
34398                 "description": "The value sensed or actuated by this Resource"
34399             },
34400
34401         "n" :
34402             {
34403                 "description": "Friendly name of the resource",
34404                 "maxLength": 64,
34405                 "readOnly": true,
34406                 "type": "string"
34407             },
34408
34409         "range" :
34410             {
34411                 "description": "The valid range for the value Property",
34412                 "items": {
34413                     "anyOf": [
34414                         {
34415                             "type": "number"
34416                         },
34417                     ]

```

```

34418         "type": "integer"
34419     }
34420 ]
34421 },
34422 "maxItems": 2,
34423 "minItems": 2,
34424 "readOnly": true,
34425 "type": "array"
34426 },
34427
34428 "step" :
34429 {
34430     "anyOf": [
34431         {
34432             "type": "integer"
34433         },
34434         {
34435             "type": "number"
34436         }
34437     ],
34438     "description": "Step value across the defined range",
34439     "readOnly": true
34440 },
34441
34442 "id" :
34443 {
34444     "description": "Instance ID of this specific resource",
34445     "maxLength": 64,
34446     "readOnly": true,
34447     "type": "string"
34448 },
34449
34450 "resources" :
34451 {
34452     "items": {
34453         "properties": {
34454             "anchor": {
34455                 "description": "This is used to override the context URI e.g. override the URI of
the containing collection",
34456                 "format": "uri",
34457                 "maxLength": 256,
34458                 "type": "string"
34459             },
34460             "di": {
34461                 "description": "An identifier formatted according to IETF RFC 4122.",
34462                 "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
34463 9]{12}$",
34464                 "type": "string"
34465             },
34466             "eps": {
34467                 "description": "the Endpoint information of the target Resource",
34468                 "items": {
34469                     "properties": {
34470                         "ep": {
34471                             "description": "URI with Transport Protocol Suites + Endpoint Locator as
34472 specified in 10.2.1",
34473                             "format": "uri",
34474                             "type": "string"
34475                         },
34476                         "pri": {
34477                             "description": "The priority among multiple Endpoints as specified in
34478 10.2.3",
34479                             "minimum": 1,
34480                             "type": "integer"
34481                         }
34482                     },
34483                     "type": "object"
34484                 },
34485                 "type": "array"
34486             },
34487             "href": {

```

```

34489         "description": "This is the target URI, it can be specified as a Relative Reference
34490 or fully-qualified URI. Relative Reference should be used along with the di parameter to make it
34491 unique.",
34492         "format": "uri",
34493         "maxLength": 256,
34494         "type": "string"
34495     },
34496     "if": {
34497         "description": "The interface set supported by this resource",
34498         "items": {
34499             "enum": [
34500                 "oic.if.baseline",
34501                 "oic.if.ll",
34502                 "oic.if.b",
34503                 "oic.if.rw",
34504                 "oic.if.r",
34505                 "oic.if.a",
34506                 "oic.if.s"
34507             ],
34508             "type": "string"
34509         },
34510         "minItems": 1,
34511         "type": "array"
34512     },
34513     "ins": {
34514         "description": "The instance identifier for this web link in an array of web links
34515 - used in collections",
34516         "oneOf": [
34517             {
34518                 "description": "An ordinal number that is not repeated - must be unique in the
34519 collection context",
34520                 "type": "integer"
34521             },
34522             {
34523                 "description": "Any unique string including a URI",
34524                 "format": "uri",
34525                 "maxLength": 256,
34526                 "type": "string"
34527             },
34528             {
34529                 "description": "An identifier formatted according to IETF RFC 4122.",
34530                 "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-
34531 F0-9]{12}$",
34532                 "type": "string"
34533             }
34534         ]
34535     },
34536     "P": {
34537         "description": "Specifies the framework policies on the Resource referenced by the
34538 target URI",
34539         "properties": {
34540             "bm": {
34541                 "description": "Specifies the framework policies on the Resource referenced by
34542 the target URI for e.g. observable and discoverable",
34543                 "type": "integer"
34544             }
34545         },
34546         "required": [
34547             "bm"
34548         ],
34549         "type": "object"
34550     },
34551     "rel": {
34552         "description": "The relation of the target URI referenced by the link to the
34553 context URI",
34554         "oneOf": [
34555             {
34556                 "default": [
34557                     "hosts"
34558                 ],
34559                 "items": {

```

```

34560         "maxLength": 64,
34561         "type": "string"
34562     },
34563     "minItems": 1,
34564     "type": "array"
34565 },
34566 {
34567     "default": "hosts",
34568     "maxLength": 64,
34569     "type": "string"
34570 }
34571 ]
34572 },
34573 "rt": {
34574     "description": "Resource Type",
34575     "items": {
34576         "maxLength": 64,
34577         "type": "string"
34578     },
34579     "minItems": 1,
34580     "type": "array"
34581 },
34582 "title": {
34583     "description": "A title for the link relation. Can be used by the UI to provide a
34584 context",
34585     "maxLength": 64,
34586     "type": "string"
34587 },
34588 "type": {
34589     "default": "application/cbor",
34590     "description": "A hint at the representation of the resource referenced by the
34591 target URI. This represents the media types that are used for both accepting and emitting",
34592     "items": {
34593         "maxLength": 64,
34594         "type": "string"
34595     },
34596     "minItems": 1,
34597     "type": "array"
34598 }
34599 },
34600 "required": [
34601     "href",
34602     "rt",
34603     "if"
34604 ],
34605 "type": "object"
34606 },
34607 "maxItems": 2,
34608 "minItems": 2,
34609 "type": "array"
34610 },
34611 "if" :
34612 {
34613     {
34614         "description": "The interface set supported by this resource",
34615         "items": {
34616             "enum": [
34617                 "oic.if.baseline",
34618                 "oic.if.ll",
34619                 "oic.if.b",
34620                 "oic.if.lb",
34621                 "oic.if.rw",
34622                 "oic.if.r",
34623                 "oic.if.a",
34624                 "oic.if.s"
34625             ],
34626             "type": "string"
34627         },
34628         "minItems": 1,
34629         "readOnly": true,
34630         "type": "array"

```

```

34631     }
34632     }
34633     },
34634     "type" : "object"
34635     , "required": ["resources"]
34636   }
34637 }
34638 }
34639

```

34640 **B.53.5 Property Definition**

34641 **Table 343 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
precision	number	No	Read Only	Accuracy granularity of the exposed value
resources	array: see schema	Yes	Read Write	
range	array: see schema	No	Read Only	The valid range for the value Property
if	array: see schema	No	Read Only	The interface set supported by this resource
rt	array: see schema	No	Read Only	Resource Type
step	multiple types: see schema	No	Read Only	Step value across the defined range
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
id	string	No	Read Only	Instance ID of this specific resource
n	string	No	Read Only	Friendly name of the resource

34642 **B.53.6 CRUDN behaviour**

34643 **Table 344 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/EnergyUsageResURI		get			observe

34644 **B.54 Foaming**

34645 **B.54.1 Introduction**

34646 This resource describes the attributes associated with foaming. The foam strength of the liquid is
34647 represented as an integer.

34648 The foam strength is an integer, the range of which may be enforced by the presence of a range
34649 Property defined in the baseresource.

34650

34651 **B.54.2 Example URI**

34652 /FoamingResURI

34653 **B.54.3 Resource Type**

34654 The resource type (rt) is defined as: ['oic.r.foaming'].

34655 **B.54.4 Swagger2.0 Definition**

```
34656 {
34657   "swagger": "2.0",
34658   "info": {
34659     "title": "Foaming",
34660     "version": "v1.1.0-20170815",
34661     "license": {
34662       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
34663       "x-description": "Redistribution and use in source and binary forms, with or without
34664 modification, are permitted provided that the following conditions are met:\n      1.
34665 Redistributions of source code must retain the above copyright notice, this list of conditions and
34666 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
34667 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
34668 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
34669 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
34670 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
34671 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
34672 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
34673 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
34674 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND
34675 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
34676 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
34677 OF SUCH DAMAGE.\n"
34678     }
34679   },
34680   "schemes": ["http"],
34681   "consumes": ["application/json"],
34682   "produces": ["application/json"],
34683   "paths": {
34684     "/FoamingResURI" : {
34685       "get": {
34686         "description": "This resource describes the attributes associated with foaming. The foam
34687 strength of the liquid is represented as an integer.\nThe foam strength is an integer, the range of
34688 which may be enforced by the presence of a range Property defined in the baseresource.\nRetrieves
34689 the state of foaming.\n",
34690         "parameters": [
34691           {"$ref": "#/parameters/interface"}
34692         ],
34693         "responses": {
34694           "200": {
34695             "description": "",
34696             "x-example":
34697               {
34698                 "rt": ["oic.r.foaming"],
34699                 "id": "unique_example_id",
34700                 "foamstrength": 50,
34701                 "range": [0,100]
34702               }
34703           },
34704           "schema": { "$ref": "#/definitions/Foaming" }
34705         }
34706       }
34707     }
34708   }
34709 }
```

```

34707     },
34708     "post": {
34709         "description": "Sets foaming value\n",
34710         "parameters": [
34711             { "$ref": "#/parameters/interface" },
34712             {
34713                 "name": "body",
34714                 "in": "body",
34715                 "required": true,
34716                 "schema": { "$ref": "#/definitions/Foaming" },
34717                 "x-example":
34718                 {
34719                     "id": "unique_example_id",
34720                     "foamstrength": 50
34721                 }
34722             }
34723         ],
34724         "responses": {
34725             "200": {
34726                 "description": "",
34727                 "x-example":
34728                 {
34729                     "id": "unique_example_id",
34730                     "foamstrength": 50
34731                 }
34732             },
34733             "schema": { "$ref": "#/definitions/Foaming" }
34734         }
34735     }
34736 },
34737 },
34738 },
34739 "parameters": {
34740     "interface": {
34741         "in": "query",
34742         "name": "if",
34743         "type": "string",
34744         "enum": ["oic.if.rw", "oic.if.baseline"]
34745     }
34746 },
34747 "definitions": {
34748     "Foaming": {
34749         "properties": {
34750             "rt": {
34751                 "description": "Resource Type",
34752                 "items": {
34753                     "maxLength": 64,
34754                     "type": "string"
34755                 },
34756                 "minItems": 1,
34757                 "readOnly": true,
34758                 "type": "array"
34759             },
34760             "foamstrength": {
34761                 "description": "The desired foaminess of the liquid.",
34762                 "type": "integer"
34763             },
34764             "precision": {
34765                 "description": "Accuracy granularity of the exposed value",
34766                 "readOnly": true,
34767                 "type": "number"
34768             }
34769         },
34770         "value": {
34771             "anyOf": [
34772

```



```

34778         {
34779             "type": "array"
34780         },
34781         {
34782             "type": "string"
34783         },
34784         {
34785             "type": "boolean"
34786         },
34787         {
34788             "type": "integer"
34789         },
34790         {
34791             "type": "number"
34792         },
34793         {
34794             "type": "object"
34795         }
34796     ],
34797     "description": "The value sensed or actuated by this Resource"
34798 },
34799
34800 "n" :
34801     {
34802         "description": "Friendly name of the resource",
34803         "maxLength": 64,
34804         "readOnly": true,
34805         "type": "string"
34806     },
34807
34808 "range" :
34809     {
34810         "description": "The valid range for the value Property",
34811         "items": {
34812             "anyOf": [
34813                 {
34814                     "type": "number"
34815                 },
34816                 {
34817                     "type": "integer"
34818                 }
34819             ]
34820         },
34821         "maxItems": 2,
34822         "minItems": 2,
34823         "readOnly": true,
34824         "type": "array"
34825     },
34826
34827 "step" :
34828     {
34829         "anyOf": [
34830             {
34831                 "type": "integer"
34832             },
34833             {
34834                 "type": "number"
34835             }
34836         ],
34837         "description": "Step value across the defined range",
34838         "readOnly": true
34839     },
34840
34841 "id" :
34842     {
34843         "description": "Instance ID of this specific resource",
34844         "maxLength": 64,
34845         "readOnly": true,
34846         "type": "string"
34847     },
34848

```

```

34849     "if" :
34850     {
34851       "description": "The interface set supported by this resource",
34852       "items": {
34853         "enum": [
34854           "oic.if.baseline",
34855           "oic.if.ll",
34856           "oic.if.b",
34857           "oic.if.lb",
34858           "oic.if.rw",
34859           "oic.if.r",
34860           "oic.if.a",
34861           "oic.if.s"
34862         ],
34863         "type": "string"
34864       },
34865       "minItems": 1,
34866       "readOnly": true,
34867       "type": "array"
34868     }
34869   },
34870   "type" : "object"
34871 }, "required": ["foamstrength"]
34872 }
34873 }
34874 }
34875 }
34876 }

```

B.54.5 Property Definition

Table 345 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
precision	number	No	Read Only	Accuracy granularity of the exposed value
if	array: see schema	No	Read Only	The interface set supported by this resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
rt	array: see schema	No	Read Only	Resource Type
n	string	No	Read Only	Friendly name of the resource
range	array: see schema	No	Read Only	The valid range for the value Property
step	multiple types: see schema	No	Read Only	Step value across the defined range
foamstrength	integer	Yes	Read Write	

				The desired foaminess of the liquid.
id	string	No	Read Only	Instance ID of this specific resource

34879 **B.54.6 CRUDN behaviour**

34880 **Table 346 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/FoamingResURI		get	post		observe

34881 **B.55 Generic Sensor**

34882 **B.55.1 Introduction**

34883 This resource describes whether some value or property or entity has been sensed or not.

34884 The value is a boolean.

34885 A value of 'true' means that the target has been sensed.

34886 A value of 'false' means that the target has not been sensed.

34887

34888 **B.55.2 Example URI**

34889 /GenericSensorResURI

34890 **B.55.3 Resource Type**

34891 The resource type (rt) is defined as: ['oic.r.sensor'].

34892 **B.55.4 Swagger2.0 Definition**

```

34893 {
34894   "swagger": "2.0",
34895   "info": {
34896     "title": "Generic Sensor",
34897     "version": "v1.1.0-20160519",
34898     "license": {
34899       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
34900       "x-description": "Redistribution and use in source and binary forms, with or without
34901 modification, are permitted provided that the following conditions are met:\n      1.
34902 Redistributions of source code must retain the above copyright notice, this list of conditions and
34903 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
34904 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
34905 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
34906 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
34907 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
34908 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
34909 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
34910 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
34911 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
34912 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
34913 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
34914 OF SUCH DAMAGE.\n"
34915     }
34916   },
34917   "schemes": ["http"],
34918   "consumes": ["application/json"],
34919   "produces": ["application/json"],
34920   "paths": {
34921     "/GenericSensorResURI" : {
34922       "get": {
34923         "description": "This resource describes whether some value or property or entity has been
34924 sensed or not.\nThe value is a boolean.\nA value of 'true' means that the target has been
34925 sensed.\nA value of 'false' means that the target has not been sensed.\n",

```

```

34926     "parameters": [
34927         {"$ref": "#/parameters/interface"}
34928     ],
34929     "responses": {
34930         "200": {
34931             "description": "",
34932             "x-example":
34933                 {
34934                     "rt": ["oic.r.sensor"],
34935                     "id": "unique_example_id",
34936                     "value": true
34937                 }
34938             ,
34939             "schema": { "$ref": "#/definitions/Sensor" }
34940         }
34941     }
34942 },
34943 },
34944 },
34945 "parameters": {
34946     "interface": {
34947         "in": "query",
34948         "name": "if",
34949         "type": "string",
34950         "enum": ["oic.if.s", "oic.if.baseline"]
34951     }
34952 },
34953 "definitions": {
34954     "Sensor": {
34955         "properties": {
34956             "rt":
34957                 {
34958                     "description": "Resource Type",
34959                     "items": {
34960                         "maxLength": 64,
34961                         "type": "string"
34962                     },
34963                     "minItems": 1,
34964                     "readOnly": true,
34965                     "type": "array"
34966                 },
34967             "precision":
34968                 {
34969                     "description": "Accuracy granularity of the exposed value",
34970                     "readOnly": true,
34971                     "type": "number"
34972                 },
34973             "value":
34974                 {
34975                     "description": "true = sensed, false = not sensed.",
34976                     "readOnly": true,
34977                     "type": "boolean"
34978                 },
34979             "n":
34980                 {
34981                     "description": "Friendly name of the resource",
34982                     "maxLength": 64,
34983                     "readOnly": true,
34984                     "type": "string"
34985                 },
34986             "range":
34987                 {
34988                     "description": "The valid range for the value Property",
34989                     "items": {
34990                         "anyOf": [
34991                             {
34992                                 "type": "number"
34993                             }
34994                         ]
34995                     }
34996                 }

```

```

34997         },
34998         {
34999             "type": "integer"
35000         }
35001     ]
35002 },
35003 "maxItems": 2,
35004 "minItems": 2,
35005 "readOnly": true,
35006 "type": "array"
35007 },
35008
35009 "step" :
35010 {
35011     "anyOf": [
35012         {
35013             "type": "integer"
35014         },
35015         {
35016             "type": "number"
35017         }
35018     ],
35019     "description": "Step value across the defined range",
35020     "readOnly": true
35021 },
35022
35023 "id" :
35024 {
35025     "description": "Instance ID of this specific resource",
35026     "maxLength": 64,
35027     "readOnly": true,
35028     "type": "string"
35029 },
35030
35031 "if" :
35032 {
35033     "description": "The interface set supported by this resource",
35034     "items": {
35035         "enum": [
35036             "oic.if.baseline",
35037             "oic.if.ll",
35038             "oic.if.b",
35039             "oic.if.lb",
35040             "oic.if.rw",
35041             "oic.if.r",
35042             "oic.if.a",
35043             "oic.if.s"
35044         ],
35045         "type": "string"
35046     },
35047     "minItems": 1,
35048     "readOnly": true,
35049     "type": "array"
35050 }
35051 }
35052 }
35053 , "type" : "object"
35054 }
35055 }
35056 }
35057

```

B.55.5 Property Definition

Table 347 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
precision	number		Read Only	

				Accuracy granularity of the exposed value
rt	array: see schema		Read Only	Resource Type
n	string		Read Only	Friendly name of the resource
id	string		Read Only	Instance ID of this specific resource
range	array: see schema		Read Only	The valid range for the value Property
step	multiple types: see schema		Read Only	Step value across the defined range
value	boolean		Read Only	true = sensed, false = not sensed.
if	array: see schema		Read Only	The interface set supported by this resource

35060 **B.55.6 CRUDN behaviour**

35061 **Table 348 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/GenericSensorResURI		get			observe

35062 **B.56 Geolocation**

35063 **B.56.1 Introduction**

35064 This resource describes the properties associated with the current geolocation coordinate.

35065 Geolocation is a geolocation coordinate data.

35066 Latitude is a device's current Latitude coordinate (degrees).

35067 Longitude is a device's current Longitude coordinate (degrees).

35068 Altitude is a device's current Altitude position (metres).

35069 Accuracy is the accuracy level of the latitude and longitude coordinates (metres).

35070 altitudeAccuracy is the accuracy level of the altitude coordinates (metres).

35071 heading is a direction of travel of device (degree).

35072 speed is a device's current velocity (metres per second).

35073

35074 **B.56.2 Example URI**

35075 /GeolocationResURI

35076 **B.56.3 Resource Type**

35077 The resource type (rt) is defined as: ['oic.r.sensor.geolocation'].

35078 **B.56.4 Swagger2.0 Definition**

```
35079 {
35080   "swagger": "2.0",
35081   "info": {
35082     "title": "Geolocation",
35083     "version": "v1.1.0-20160519",
35084     "license": {
35085       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
35086       "x-description": "Redistribution and use in source and binary forms, with or without
35087 modification, are permitted provided that the following conditions are met:\n      1.
35088 Redistributions of source code must retain the above copyright notice, this list of conditions and
35089 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
35090 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
35091 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
35092 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
35093 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
35094 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
35095 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
35096 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
35097 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND
35098 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
35099 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
35100 OF SUCH DAMAGE.\n"
35101   }
35102 },
35103 "schemes": ["http"],
35104 "consumes": ["application/json"],
35105 "produces": ["application/json"],
35106 "paths": {
35107   "/GeolocationResURI" : {
35108     "get": {
35109       "description": "This resource describes the properties associated with the current
35110 geolocation coordinate.\nGeolocation is a geolocation coordinate data.\nLatitude is a device's
35111 current Latitude coordinate (degrees).\nLongitude is a device's current Longitude coordinate
35112 (degrees).\nAltitude is a device's current Altitude position (metres).\nAccuracy is the accuracy
35113 level of the latitude and longitude coordinates (metres).\naltitudeAccuracy is the accuracy level
35114 of the altitude coordinates (metres).\nheading is a direction of travel of device (degree).\nspeed
35115 is a device's current velocity (metres per second).\nRetrieves the current geolocation
35116 coordinates.\n",
35117       "parameters": [
35118         {"$ref": "#/parameters/interface"}
35119       ],
35120       "responses": {
35121         "200": {
35122           "description": "",
35123           "x-example":
35124             {
35125               "rt": ["oic.r.sensor.geolocation"],
35126               "id": "unique_example_id",
35127               "latitude": 55.070859,
35128               "longitude": -3.60512,
35129               "alt": 12.07,
35130               "accuracy": 65.0,
35131               "altitudeAccuracy": 0.0,
35132               "heading": 90.0,
35133               "speed": 0.0
35134             }
35135         },
35136         "schema": { "$ref": "#/definitions/Geolocation" }
35137       }
35138     }
35139   }
35140 },
35141 },
35142 "parameters": {
35143   "interface" : {
35144     "in" : "query",
35145     "name" : "if",
35146     "type" : "string",
35147     "enum" : ["oic.if.s", "oic.if.baseline"]
35148   }
35149 }
```

```

35148     }
35149   },
35150   "definitions": {
35151     "Geolocation" : {
35152       "properties": {
35153         "rt" :
35154           {
35155             "description": "Resource Type",
35156             "items": {
35157               "maxLength": 64,
35158               "type": "string"
35159             },
35160             "minItems": 1,
35161             "readOnly": true,
35162             "type": "array"
35163           },
35164         "step" :
35165           {
35166             "anyOf": [
35167               {
35168                 "type": "integer"
35169               },
35170               {
35171                 "type": "number"
35172               }
35173             ],
35174             "description": "Step value across the defined range",
35175             "readOnly": true
35176           },
35177         "precision" :
35178           {
35179             "description": "Accuracy granularity of the exposed value",
35180             "readOnly": true,
35181             "type": "number"
35182           },
35183         "longitude" :
35184           {
35185             "description": "Device's Current Longitude coordinate (degrees)",
35186             "readOnly": true,
35187             "type": "number"
35188           },
35189         "heading" :
35190           {
35191             "description": "Direction of travel of device (degree)",
35192             "maximum": 360,
35193             "minimum": 0,
35194             "readOnly": true,
35195             "type": "number"
35196           },
35197         "range" :
35198           {
35199             "description": "The valid range for the value Property",
35200             "items": {
35201               "anyOf": [
35202                 {
35203                   "type": "number"
35204                 },
35205                 {
35206                   "type": "integer"
35207                 }
35208               ]
35209             },
35210             "maxItems": 2,
35211             "minItems": 2,
35212             "readOnly": true,
35213             "type": "array"
35214           }
35215       }
35216     }
35217   }
35218 }

```



```

35219     },
35220
35221     "n" :
35222     {
35223         "description": "Friendly name of the resource",
35224         "maxLength": 64,
35225         "readOnly": true,
35226         "type": "string"
35227     },
35228
35229     "value" :
35230     {
35231         "anyOf": [
35232             {
35233                 "type": "array"
35234             },
35235             {
35236                 "type": "string"
35237             },
35238             {
35239                 "type": "boolean"
35240             },
35241             {
35242                 "type": "integer"
35243             },
35244             {
35245                 "type": "number"
35246             },
35247             {
35248                 "type": "object"
35249             }
35250         ],
35251         "description": "The value sensed or actuated by this Resource"
35252     },
35253
35254     "latitude" :
35255     {
35256         "description": "Device's Current Latitude coordinate (degrees)",
35257         "readOnly": true,
35258         "type": "number"
35259     },
35260
35261     "altitudeAccuracy" :
35262     {
35263         "description": "The accuracy level of the altitude coordinates (metres)",
35264         "minimum": 0,
35265         "readOnly": true,
35266         "type": "number"
35267     },
35268
35269     "alt" :
35270     {
35271         "description": "The current height of the position (metres)",
35272         "minimum": 0,
35273         "readOnly": true,
35274         "type": "number"
35275     },
35276
35277     "accuracy" :
35278     {
35279         "description": "The accuracy level of the latitude and longitude coordinates (metres)",
35280         "minimum": 0,
35281         "readOnly": true,
35282         "type": "number"
35283     },
35284
35285     "speed" :
35286     {
35287         "description": "Device's current velocity (metres per second)",
35288         "minimum": 0,
35289         "readOnly": true,

```

```

35290         "type": "number"
35291     },
35292
35293     "id" :
35294     {
35295         "description": "Instance ID of this specific resource",
35296         "maxLength": 64,
35297         "readOnly": true,
35298         "type": "string"
35299     },
35300
35301     "if" :
35302     {
35303         "description": "The interface set supported by this resource",
35304         "items": {
35305             "enum": [
35306                 "oic.if.baseline",
35307                 "oic.if.ll",
35308                 "oic.if.b",
35309                 "oic.if.lb",
35310                 "oic.if.rw",
35311                 "oic.if.r",
35312                 "oic.if.a",
35313                 "oic.if.s"
35314             ],
35315             "type": "string"
35316         },
35317         "minItems": 1,
35318         "readOnly": true,
35319         "type": "array"
35320     }
35321
35322     }, "type" : "object"
35323     , "required": ["latitude", "longitude", "alt"]
35324 }
35325 }
35326 }
35327 }
35328

```

35329 B.56.5 Property Definition

35330 **Table 349 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema	No	Read Only	Step value across the defined range
precision	number	No	Read Only	Accuracy granularity of the exposed value
speed	number	No	Read Only	Device's current velocity (metres per second)
heading	number	No	Read Only	Direction of travel of device (degree)
n	string	No	Read Only	Friendly name of the resource
accuracy	number	No	Read Only	

				The accuracy level of the latitude and longitude coordinates (metres)
range	array: see schema	No	Read Only	The valid range for the value Property
altitudeAccuracy	number	No	Read Only	The accuracy level of the altitude coordinates (metres)
if	array: see schema	No	Read Only	The interface set supported by this resource
longitude	number	Yes	Read Only	Device's Current Longitude coordinate (degrees)
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
latitude	number	Yes	Read Only	Device's Current Latitude coordinate (degrees)
id	string	No	Read Only	Instance ID of this specific resource
rt	array: see schema	No	Read Only	Resource Type
alt	number	Yes	Read Only	The current height of the position (metres)

35331

B.56.6 CRUDN behaviour

35332

Table 350 The CRUDN operations of the resource

Resource	Create	Read	Update	Delete	Notify
/GeolocationResURI		get			observe

35333 **B.57 Glass Break Sensor**

35334 **B.57.1 Introduction**

35335 This resource describes a glass break sensor.
35336 The value is a boolean.
35337 A value of 'true' means that glass break has been sensed.
35338 A value of 'false' means that glass break not been sensed.
35339

35340 **B.57.2 Example URI**

35341 /GlassBreakResURI

35342 **B.57.3 Resource Type**

35343 The resource type (rt) is defined as: ['oic.r.sensor.glassbreak'].

35344 **B.57.4 Swagger2.0 Definition**

```
35345 {  
35346   "swagger": "2.0",  
35347   "info": {  
35348     "title": "Glass Break Sensor",  
35349     "version": "v1.1.0-20160519",  
35350     "license": {  
35351       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
35352       "x-description": "Redistribution and use in source and binary forms, with or without  
35353 modification, are permitted provided that the following conditions are met:\n      1.  
35354 Redistributions of source code must retain the above copyright notice, this list of conditions and  
35355 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
35356 copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
35357 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open  
35358 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT  
35359 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR  
35360 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity  
35361 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,  
35362 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS  
35363 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND  
35364 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR  
35365 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY  
35366 OF SUCH DAMAGE.\n\n"}  
35367   },  
35368   "schemes": ["http"],  
35369   "consumes": ["application/json"],  
35370   "produces": ["application/json"],  
35371   "paths": {  
35372     "/GlassBreakResURI" : {  
35373       "get": {  
35374         "description": "This resource describes a glass break sensor.\nThe value is a boolean.\nA  
35375 value of 'true' means that glass break has been sensed.\nA value of 'false' means that glass break  
35376 not been sensed.\n",  
35377         "parameters": [  
35378           {"$ref": "#/parameters/interface"}  
35379         ],  
35380         "responses": {  
35381           "200": {  
35382             "description": "",  
35383             "x-example":  
35384               {  
35385                 "rt": ["oic.r.sensor.glassbreak"],  
35386                 "id": "unique_example_id",  
35387                 "value": true  
35388               }  
35389             },  
35390           },  
35391           "schema": { "$ref": "#/definitions/GlassBreak" }  
35392         }  
35393       }  
35394     }  
35395   }
```

```

35396 },
35397 "parameters": {
35398   "interface" : {
35399     "in" : "query",
35400     "name" : "if",
35401     "type" : "string",
35402     "enum" : ["oic.if.s", "oic.if.baseline"]
35403   }
35404 },
35405 "definitions": {
35406   "GlassBreak" : {
35407     "properties": {
35408       "rt" :
35409         {
35410           "description": "Resource Type",
35411           "items": {
35412             "maxLength": 64,
35413             "type": "string"
35414           },
35415           "minItems": 1,
35416           "readOnly": true,
35417           "type": "array"
35418         },
35419       "precision" :
35420         {
35421           "description": "Accuracy granularity of the exposed value",
35422           "readOnly": true,
35423           "type": "number"
35424         },
35425       "value" :
35426         {
35427           "description": "true = sensed, false = not sensed.",
35428           "readOnly": true,
35429           "type": "boolean"
35430         },
35431       "n" :
35432         {
35433           "description": "Friendly name of the resource",
35434           "maxLength": 64,
35435           "readOnly": true,
35436           "type": "string"
35437         },
35438       "range" :
35439         {
35440           "description": "The valid range for the value Property",
35441           "items": {
35442             "anyOf": [
35443               {
35444                 "type": "number"
35445               },
35446               {
35447                 "type": "integer"
35448               }
35449             ]
35450           },
35451           "maxItems": 2,
35452           "minItems": 2,
35453           "readOnly": true,
35454           "type": "array"
35455         },
35456       "step" :
35457         {
35458           "anyOf": [
35459             {
35460               "type": "integer"
35461             }
35462           ],

```

```

35467         {
35468             "type": "number"
35469         }
35470     ],
35471     "description": "Step value across the defined range",
35472     "readOnly": true
35473 },
35474
35475 "id" :
35476     {
35477         "description": "Instance ID of this specific resource",
35478         "maxLength": 64,
35479         "readOnly": true,
35480         "type": "string"
35481     },
35482
35483 "if" :
35484     {
35485         "description": "The interface set supported by this resource",
35486         "items": {
35487             "enum": [
35488                 "oic.if.baseline",
35489                 "oic.if.ll",
35490                 "oic.if.b",
35491                 "oic.if.lb",
35492                 "oic.if.rw",
35493                 "oic.if.r",
35494                 "oic.if.a",
35495                 "oic.if.s"
35496             ],
35497             "type": "string"
35498         },
35499         "minItems": 1,
35500         "readOnly": true,
35501         "type": "array"
35502     }
35503
35504     },
35505     "type" : "object"
35506     , "required": ["value"]
35507 }
35508 }
35509 }
35510

```

B.57.5 Property Definition

Table 351 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema	No	Read Only	The interface set supported by this resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
rt	array: see schema	No	Read Only	Resource Type
range	array: see schema	No	Read Only	The valid range for the value Property
id	string	No	Read Only	

				Instance ID of this specific resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
value	boolean	Yes	Read Only	true = sensed, false = not sensed.
n	string	No	Read Only	Friendly name of the resource

35513 **B.57.6 CRUDN behaviour**

35514 **Table 352 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/GlassBreakResURI		get			observe

35515 **B.58 Glucose**

35516 **B.58.1 Introduction**

35517 This resource describes the properties associated with a person's Glucose level.

35518 The unit is a single value that is one of mg/dL, mmol/L.

35519 If the unit Property is missing the default is milligrams per decilitre [mg/dL].

35520 The glucose and unit Properties are read-only values that are provided by the server.

35521 When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.

35522

35523 **B.58.2 Example URI**

35524 /GlucoseResURI

35525 **B.58.3 Resource Type**

35526 The resource type (rt) is defined as: ['oic.r.glucose'].

35527 **B.58.4 Swagger2.0 Definition**

```

35528 {
35529   "swagger": "2.0",
35530   "info": {
35531     "title": "Glucose",
35532     "version": "v1.1.0-20160519",
35533     "license": {
35534       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
35535       "x-description": "Redistribution and use in source and binary forms, with or without
35536 modification, are permitted provided that the following conditions are met:\n      1.
35537 Redistributions of source code must retain the above copyright notice, this list of conditions and
35538 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
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35547 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
35548 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
35549 OF SUCH DAMAGE.\n"
35550   }

```

```

35551     },
35552     "schemes": ["http"],
35553     "consumes": ["application/json"],
35554     "produces": ["application/json"],
35555     "paths": {
35556         "/GlucoseResURI" : {
35557             "get": {
35558                 "description": "This resource describes the properties associated with a person's Glucose
35559 level.\nThe unit is a single value that is one of mg/dL, mmol/L.\nIf the unit Property is missing
35560 the default is milligrams per decilitre [mg/dL].\nThe glucose and unit Properties are read-only
35561 values that are provided by the server.\nWhen range (from oic.r.baseresource) is omitted the
35562 default is 0 to +MAXFLOAT.\nRetrieves glucose level of a person.\n",
35563                 "parameters": [
35564                     { "$ref": "#/parameters/interface" }
35565                 ],
35566                 "responses": {
35567                     "200": {
35568                         "description": "",
35569                         "x-example":
35570                             {
35571                                 "rt": ["oic.r.glucose"],
35572                                 "id": "unique_example_id",
35573                                 "glucose": 90,
35574                                 "units": "mg/dL"
35575                             }
35576                         ,
35577                         "schema": { "$ref": "#/definitions/Glucose" }
35578                     }
35579                 }
35580             }
35581         }
35582     },
35583     "parameters": {
35584         "interface" : {
35585             "in" : "query",
35586             "name" : "if",
35587             "type" : "string",
35588             "enum" : ["oic.if.s", "oic.if.baseline"]
35589         }
35590     },
35591     "definitions": {
35592         "Glucose" : {
35593             "properties": {
35594                 "rt" :
35595                     {
35596                         "description": "Resource Type",
35597                         "items": {
35598                             "maxLength": 64,
35599                             "type": "string"
35600                         },
35601                         "minItems": 1,
35602                         "readOnly": true,
35603                         "type": "array"
35604                     },
35605                 "precision" :
35606                     {
35607                         "description": "Accuracy granularity of the exposed value",
35608                         "readOnly": true,
35609                         "type": "number"
35610                     },
35611                 "value" :
35612                     {
35613                         "anyOf": [
35614                             {
35615                                 "type": "array"
35616                             },
35617                             {
35618                                 "type": "string"
35619                             }
35620                         ]
35621                     }

```



```

35622         {
35623             "type": "boolean"
35624         },
35625         {
35626             "type": "integer"
35627         },
35628         {
35629             "type": "number"
35630         },
35631         {
35632             "type": "object"
35633         }
35634     ],
35635     "description": "The value sensed or actuated by this Resource"
35636 },
35637
35638 "n" :
35639     {
35640         "description": "Friendly name of the resource",
35641         "maxLength": 64,
35642         "readOnly": true,
35643         "type": "string"
35644     },
35645
35646 "units" :
35647     {
35648         "description": "Glucose unit",
35649         "enum": [
35650             "mg/dL",
35651             "mmol/L"
35652         ],
35653         "readOnly": true,
35654         "type": "string"
35655     },
35656
35657 "range" :
35658     {
35659         "description": "The valid range for the value Property",
35660         "items": {
35661             "anyOf": [
35662                 {
35663                     "type": "number"
35664                 },
35665                 {
35666                     "type": "integer"
35667                 }
35668             ]
35669         },
35670         "maxItems": 2,
35671         "minItems": 2,
35672         "readOnly": true,
35673         "type": "array"
35674     },
35675
35676 "step" :
35677     {
35678         "anyOf": [
35679             {
35680                 "type": "integer"
35681             },
35682             {
35683                 "type": "number"
35684             }
35685         ],
35686         "description": "Step value across the defined range",
35687         "readOnly": true
35688     },
35689
35690 "glucose" :
35691     {
35692         "description": "A measurement of glucose concentration in the blood",

```

```

35693     "minimum": 0,
35694     "readOnly": true,
35695     "type": "number"
35696 },
35697
35698   "id" :
35699     {
35700     "description": "Instance ID of this specific resource",
35701     "maxLength": 64,
35702     "readOnly": true,
35703     "type": "string"
35704   },
35705
35706   "if" :
35707     {
35708     "description": "The interface set supported by this resource",
35709     "items": {
35710       "enum": [
35711         "oic.if.baseline",
35712         "oic.if.ll",
35713         "oic.if.b",
35714         "oic.if.lb",
35715         "oic.if.rw",
35716         "oic.if.r",
35717         "oic.if.a",
35718         "oic.if.s"
35719       ],
35720       "type": "string"
35721     },
35722     "minItems": 1,
35723     "readOnly": true,
35724     "type": "array"
35725   }
35726
35727   }
35728   , "type" : "object"
35729   , "required": ["glucose"]
35730 }
35731 }
35732 }
35733

```

35734 B.58.5 Property Definition

35735 **Table 353 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
units	string	No	Read Only	Glucose unit
id	string	No	Read Only	Instance ID of this specific resource
glucose	number	Yes	Read Only	A measurement of glucose concentration in the blood
rt	array: see schema	No	Read Only	Resource Type
n	string	No	Read Only	Friendly name of the resource
step	multiple types: see schema	No	Read Only	

				Step value across the defined range
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
range	array: see schema	No	Read Only	The valid range for the value Property
if	array: see schema	No	Read Only	The interface set supported by this resource
precision	number	No	Read Only	Accuracy granularity of the exposed value

35736 **B.58.6 CRUDN behaviour**

35737 **Table 354 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/GlucoseResURI		get			observe

35738 **B.59 Context Carbohydrates for Glucose Meter**

35739 **B.59.1 Introduction**

35740 This resource describes the properties associated with a context carbohydrates.
 35741 The carb property has a default unit of grams[g].
 35742 The carb and meal properties are read-only values that are provided by the server.
 35743 When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.
 35744

35745 **B.59.2 Example URI**

35746 /GlucoseCarbResURI

35747 **B.59.3 Resource Type**

35748 The resource type (rt) is defined as: ['oic.r.glucose.carb'].

35749 **B.59.4 Swagger2.0 Definition**

```

35750 {
35751   "swagger": "2.0",
35752   "info": {
35753     "title": "Context Carbohydrates for Glucose Meter",
35754     "version": "v1.1.0-20160519",
35755     "license": {
35756       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
35757       "x-description": "Redistribution and use in source and binary forms, with or without
35758 modification, are permitted provided that the following conditions are met:\n
35759 1. Redistributions of source code must retain the above copyright notice, this list of conditions and
35760 the following disclaimer.\n
35761 2. Redistributions in binary form must reproduce the above
35762 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
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35764 THIS SOFTWARE IS PROVIDED BY THE Open
35765 Connectivity Foundation, INC. \ "AS IS\ " AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
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```

```

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35768 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n          HOWEVER CAUSED AND
35769 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
35770 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
35771 OF SUCH DAMAGE.\n"
35772 }
35773 },
35774 "schemes": ["http"],
35775 "consumes": ["application/json"],
35776 "produces": ["application/json"],
35777 "paths": {
35778   "/GlucoseCarbResURI" : {
35779     "get": {
35780       "description": "This resource describes the properties associated with a context
35781 carbohydrates.\nThe carb property has a default unit of grams[g].\nThe carb and meal properties are
35782 read-only values that are provided by the server.\nWhen range (from oic.r.baseresource) is omitted
35783 the default is 0 to +MAXFLOAT.\nRetrieves Context Carbohydrates for Glucose Meter.\n",
35784       "parameters": [
35785         { "$ref": "#/parameters/interface" }
35786       ],
35787       "responses": {
35788         "200": {
35789           "description": "",
35790           "x-example":
35791             {
35792               "rt": ["oic.r.glucose.carb"],
35793               "id": "unique_example_id",
35794               "carb": 100,
35795               "meal": "breakfast"
35796             }
35797         },
35798         "schema": { "$ref": "#/definitions/GlucoseCarb" }
35799       }
35800     }
35801   }
35802 },
35803 },
35804 "parameters": {
35805   "interface" : {
35806     "in" : "query",
35807     "name" : "if",
35808     "type" : "string",
35809     "enum" : ["oic.if.s", "oic.if.baseline"]
35810   }
35811 },
35812 "definitions": {
35813   "GlucoseCarb" : {
35814     "properties": {
35815       "rt" :
35816         {
35817           "description": "Resource Type",
35818           "items": {
35819             "maxLength": 64,
35820             "type": "string"
35821           },
35822           "minItems": 1,
35823           "readOnly": true,
35824           "type": "array"
35825         },
35826       "step" :
35827         {
35828           "anyOf": [
35829             {
35830               "type": "integer"
35831             },
35832             {
35833               "type": "number"
35834             }
35835           ]
35836         }

```

```

35837     "description": "Step value across the defined range",
35838     "readOnly": true
35839   },
35840
35841   "id" :
35842     {
35843       "description": "Instance ID of this specific resource",
35844       "maxLength": 64,
35845       "readOnly": true,
35846       "type": "string"
35847     },
35848
35849   "precision" :
35850     {
35851       "description": "Accuracy granularity of the exposed value",
35852       "readOnly": true,
35853       "type": "number"
35854     },
35855
35856   "value" :
35857     {
35858       "anyOf": [
35859         {
35860           "type": "array"
35861         },
35862         {
35863           "type": "string"
35864         },
35865         {
35866           "type": "boolean"
35867         },
35868         {
35869           "type": "integer"
35870         },
35871         {
35872           "type": "number"
35873         },
35874         {
35875           "type": "object"
35876         }
35877       ],
35878       "description": "The value sensed or actuated by this Resource"
35879     },
35880
35881   "n" :
35882     {
35883       "description": "Friendly name of the resource",
35884       "maxLength": 64,
35885       "readOnly": true,
35886       "type": "string"
35887     },
35888
35889   "range" :
35890     {
35891       "description": "The valid range for the value Property",
35892       "items": {
35893         "anyOf": [
35894           {
35895             "type": "number"
35896           },
35897           {
35898             "type": "integer"
35899           }
35900         ]
35901       },
35902       "maxItems": 2,
35903       "minItems": 2,
35904       "readOnly": true,
35905       "type": "array"
35906     },
35907

```

```

35908     "carb" :
35909     {
35910         "description": "The amount of carbohydrates undertaken in grams",
35911         "readOnly": true,
35912         "type": "number"
35913     },
35914
35915     "meal" :
35916     {
35917         "description": "Recorded time of carbohydrates intake",
35918         "enum": [
35919             "breakfast",
35920             "lunch",
35921             "dinner",
35922             "snack",
35923             "drink",
35924             "supper",
35925             "brunch",
35926             "undetermined",
35927             "other",
35928             "no_entry",
35929             "no_ingestion"
35930         ],
35931         "readOnly": true,
35932         "type": "string"
35933     },
35934
35935     "if" :
35936     {
35937         "description": "The interface set supported by this resource",
35938         "items": {
35939             "enum": [
35940                 "oic.if.baseline",
35941                 "oic.if.ll",
35942                 "oic.if.b",
35943                 "oic.if.lb",
35944                 "oic.if.rw",
35945                 "oic.if.r",
35946                 "oic.if.a",
35947                 "oic.if.s"
35948             ],
35949             "type": "string"
35950         },
35951         "minItems": 1,
35952         "readOnly": true,
35953         "type": "array"
35954     }
35955
35956     },
35957     "type" : "object"
35958     , "required": ["carb", "meal"]
35959 }
35960 }
35961 }
35962

```

B.59.5 Property Definition

Table 355 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
id	string	No	Read Only	Instance ID of this specific resource
if	array: see schema	No	Read Only	The interface set supported by this resource

precision	number	No	Read Only	Accuracy granularity of the exposed value
carb	number	Yes	Read Only	The amount of carbohydrates undertaken in grams
step	multiple types: see schema	No	Read Only	Step value across the defined range
rt	array: see schema	No	Read Only	Resource Type
range	array: see schema	No	Read Only	The valid range for the value Property
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
n	string	No	Read Only	Friendly name of the resource
meal	string	Yes	Read Only	Recorded time of carbohydrates intake

35965 **B.59.6 CRUDN behaviour**

35966 **Table 356 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/GlucoseCarbResURI		get			observe

35967 **B.60 Exercise for Glucose Meter**

35968 **B.60.1 Introduction**

35969 This resource describes the properties associated with glucose exercise.
 35970 The exercise property has a default unit of percentage[%].
 35971 The exercise property is a read-only value that is provided by the server.
 35972

35973 **B.60.2 Example URI**

35974 /ExerciseResURI

35975 **B.60.3 Resource Type**

35976 The resource type (rt) is defined as: ['oic.r.glucose.exercise'].

35977 **B.60.4 Swagger2.0 Definition**

```
35978 {
35979   "swagger": "2.0",
35980   "info": {
35981     "title": "Exercise for Glucose Meter",
```

```

35982     "version": "v1.1.0-20160519",
35983     "license": {
35984         "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
35985         "x-description": "Redistribution and use in source and binary forms, with or without
35986 modification, are permitted provided that the following conditions are met:\n      1.
35987 Redistributions of source code must retain the above copyright notice, this list of conditions and
35988 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
35989 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
35990 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
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35997 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
35998 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
35999 OF SUCH DAMAGE.\n"
36000     },
36001 },
36002 "schemes": ["http"],
36003 "consumes": ["application/json"],
36004 "produces": ["application/json"],
36005 "paths": {
36006     "/ExerciseResURI" : {
36007         "get": {
36008             "description": "This resource describes the properties associated with glucose
36009 exercise.\nThe exercise property has a default unit of percentage[%].\nThe exercise property is a
36010 read-only value that is provided by the server.\nRetrieves the level of exercise undertaken in
36011 percentage.\n",
36012             "parameters": [
36013                 { "$ref": "#/parameters/interface" }
36014             ],
36015             "responses": {
36016                 "200": {
36017                     "description": "",
36018                     "x-example":
36019                     {
36020                         "rt": ["oic.r.glucose.exercise"],
36021                         "id": "unique_example_id",
36022                         "exercise": 30
36023                     }
36024                 },
36025                 "schema": { "$ref": "#/definitions/Exercise" }
36026             }
36027         }
36028     }
36029 },
36030 },
36031 "parameters": {
36032     "interface" : {
36033         "in" : "query",
36034         "name" : "if",
36035         "type" : "string",
36036         "enum" : ["oic.if.s", "oic.if.baseline"]
36037     }
36038 },
36039 "definitions": {
36040     "Exercise" : {
36041         "properties": {
36042             "rt" :
36043             {
36044                 "description": "Resource Type",
36045                 "items": {
36046                     "maxLength": 64,
36047                     "type": "string"
36048                 },
36049                 "minItems": 1,
36050                 "readOnly": true,
36051                 "type": "array"
36052             }
36053         }
36054     }
36055 }

```



```

36053
36054     "precision" :
36055         {
36056             "description": "Accuracy granularity of the exposed value",
36057             "readOnly": true,
36058             "type": "number"
36059         },
36060
36061     "value" :
36062         {
36063             "anyOf": [
36064                 {
36065                     "type": "array"
36066                 },
36067                 {
36068                     "type": "string"
36069                 },
36070                 {
36071                     "type": "boolean"
36072                 },
36073                 {
36074                     "type": "integer"
36075                 },
36076                 {
36077                     "type": "number"
36078                 },
36079                 {
36080                     "type": "object"
36081                 }
36082             ],
36083             "description": "The value sensed or actuated by this Resource"
36084         },
36085
36086     "n" :
36087         {
36088             "description": "Friendly name of the resource",
36089             "maxLength": 64,
36090             "readOnly": true,
36091             "type": "string"
36092         },
36093
36094     "range" :
36095         {
36096             "description": "The valid range for the value Property",
36097             "items": {
36098                 "anyOf": [
36099                     {
36100                         "type": "number"
36101                     },
36102                     {
36103                         "type": "integer"
36104                     }
36105                 ]
36106             },
36107             "maxItems": 2,
36108             "minItems": 2,
36109             "readOnly": true,
36110             "type": "array"
36111         },
36112
36113     "step" :
36114         {
36115             "anyOf": [
36116                 {
36117                     "type": "integer"
36118                 },
36119                 {
36120                     "type": "number"
36121                 }
36122             ],
36123             "description": "Step value across the defined range",

```

```

36124         "readOnly": true
36125     },
36126
36127     "id" :
36128     {
36129         "description": "Instance ID of this specific resource",
36130         "maxLength": 64,
36131         "readOnly": true,
36132         "type": "string"
36133     },
36134
36135     "exercise" :
36136     {
36137         "description": "The level of exercise undertaken in percentage",
36138         "maximum": 100,
36139         "minimum": 0,
36140         "readOnly": true,
36141         "type": "number"
36142     },
36143
36144     "if" :
36145     {
36146         "description": "The interface set supported by this resource",
36147         "items": {
36148             "enum": [
36149                 "oic.if.baseline",
36150                 "oic.if.ll",
36151                 "oic.if.b",
36152                 "oic.if.lb",
36153                 "oic.if.rw",
36154                 "oic.if.r",
36155                 "oic.if.a",
36156                 "oic.if.s"
36157             ],
36158             "type": "string"
36159         },
36160         "minItems": 1,
36161         "readOnly": true,
36162         "type": "array"
36163     }
36164 }
36165 },
36166 "type" : "object"
36167 , "required": ["exercise"]
36168 }
36169 }
36170 }
36171

```

36172 B.60.5 Property Definition

36173 **Table 357 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
precision	number	No	Read Only	Accuracy granularity of the exposed value
rt	array: see schema	No	Read Only	Resource Type
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
exercise	number	Yes	Read Only	

				The level of exercise undertaken in percentage
if	array: see schema	No	Read Only	The interface set supported by this resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
range	array: see schema	No	Read Only	The valid range for the value Property
n	string	No	Read Only	Friendly name of the resource
id	string	No	Read Only	Instance ID of this specific resource

36174 **B.60.6 CRUDN behaviour**

36175 **Table 358 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/ExerciseResURI		get			observe

36176 **B.61 Haemoglobin Bound to Glucose A1c Form (HbA1c) for Glucose Meter**

36177 **B.61.1 Introduction**

36178 This resource describes the properties associated with a person's Hba1c level.

36179 The unit is a single value that is percentage [%].

36180 The hba1c Property is a read-only value that is provided by the server.

36181

36182 **B.61.2 Example URI**

36183 /GlucoseHbA1cResURI

36184 **B.61.3 Resource Type**

36185 The resource type (rt) is defined as: ['oic.r.glucose.hba1c'].

36186 **B.61.4 Swagger2.0 Definition**

```

36187 {
36188   "swagger": "2.0",
36189   "info": {
36190     "title": "Hemoglobin Bound to Glucose A1c Form (HbA1c) for Glucose Meter",
36191     "version": "v1.1.0-20160519",
36192     "license": {
36193       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
36194       "x-description": "Redistribution and use in source and binary forms, with or without
36195 modification, are permitted provided that the following conditions are met:\n      1.
36196 Redistributions of source code must retain the above copyright notice, this list of conditions and
36197 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
36198 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
36199 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
36200 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT

```

```

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36202 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n          IN NO EVENT SHALL THE Open Connectivity
36203 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
36204 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
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36206 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
36207 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
36208 OF SUCH DAMAGE.\n"
36209 }
36210 },
36211 "schemes": ["http"],
36212 "consumes": ["application/json"],
36213 "produces": ["application/json"],
36214 "paths": {
36215   "/GlucoseHbAlcResURI" : {
36216     "get": {
36217       "description": "This resource describes the properties associated with a person's HbA1c
36218 level.\nThe unit is a single value that is percentage [%].\nThe hba1c Property is a read-only value
36219 that is provided by the server.\nRetrieves Hemoglobin Bound to Glucose Alc Form (HbA1c) for Glucose
36220 Meter.\n",
36221     "parameters": [
36222       { "$ref": "#/parameters/interface" }
36223     ],
36224     "responses": {
36225       "200": {
36226         "description": "",
36227         "x-example":
36228           {
36229             "rt": ["oic.r.glucose.hba1c"],
36230             "id": "unique_example_id",
36231             "hba1c": 5
36232           }
36233         ,
36234         "schema": { "$ref": "#/definitions/HbA1c" }
36235       }
36236     }
36237   }
36238 },
36239 },
36240 "parameters": {
36241   "interface" : {
36242     "in" : "query",
36243     "name" : "if",
36244     "type" : "string",
36245     "enum" : ["oic.if.s", "oic.if.baseline"]
36246   }
36247 },
36248 "definitions": {
36249   "HbA1c" : {
36250     "properties": {
36251       "rt" :
36252         {
36253           "description": "Resource Type",
36254           "items": {
36255             "maxLength": 64,
36256             "type": "string"
36257           },
36258           "minItems": 1,
36259           "readOnly": true,
36260           "type": "array"
36261         },
36262       "hba1c" :
36263         {
36264           "description": "Current HbA1c measurement in percentage",
36265           "maximum": 100,
36266           "minimum": 0,
36267           "readOnly": true,
36268           "type": "number"
36269         }
36270     },
36271

```

```

36272     "value" :
36273     {
36274         "anyOf": [
36275             {
36276                 "type": "array"
36277             },
36278             {
36279                 "type": "string"
36280             },
36281             {
36282                 "type": "boolean"
36283             },
36284             {
36285                 "type": "integer"
36286             },
36287             {
36288                 "type": "number"
36289             },
36290             {
36291                 "type": "object"
36292             }
36293         ],
36294         "description": "The value sensed or actuated by this Resource"
36295     },
36296     "n" :
36297     {
36298         "description": "Friendly name of the resource",
36299         "maxLength": 64,
36300         "readOnly": true,
36301         "type": "string"
36302     },
36303     "range" :
36304     {
36305         "description": "The valid range for the value Property",
36306         "items": {
36307             "anyOf": [
36308                 {
36309                     "type": "number"
36310                 },
36311                 {
36312                     "type": "integer"
36313                 }
36314             ]
36315         },
36316         "maxItems": 2,
36317         "minItems": 2,
36318         "readOnly": true,
36319         "type": "array"
36320     },
36321     "precision" :
36322     {
36323         "description": "Accuracy granularity of the exposed value",
36324         "readOnly": true,
36325         "type": "number"
36326     },
36327     "step" :
36328     {
36329         "anyOf": [
36330             {
36331                 "type": "integer"
36332             },
36333             {
36334                 "type": "number"
36335             }
36336         ],
36337         "description": "Step value across the defined range",
36338         "readOnly": true
36339     }
36340 }
36341 }
36342 }

```

```

36343     },
36344
36345     "id" :
36346     {
36347         "description": "Instance ID of this specific resource",
36348         "maxLength": 64,
36349         "readOnly": true,
36350         "type": "string"
36351     },
36352
36353     "if" :
36354     {
36355         "description": "The interface set supported by this resource",
36356         "items": {
36357             "enum": [
36358                 "oic.if.baseline",
36359                 "oic.if.ll",
36360                 "oic.if.b",
36361                 "oic.if.lb",
36362                 "oic.if.rw",
36363                 "oic.if.r",
36364                 "oic.if.a",
36365                 "oic.if.s"
36366             ],
36367             "type": "string"
36368         },
36369         "minItems": 1,
36370         "readOnly": true,
36371         "type": "array"
36372     }
36373
36374     },
36375     "type" : "object"
36376     , "required": ["hbalc"]
36377 }
36378 }
36379 }
36380

```

36381 B.61.5 Property Definition

36382 **Table 359 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema	No	Read Only	Step value across the defined range
if	array: see schema	No	Read Only	The interface set supported by this resource
id	string	No	Read Only	Instance ID of this specific resource
rt	array: see schema	No	Read Only	Resource Type
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
range	array: see schema	No	Read Only	

				The valid range for the value Property
precision	number	No	Read Only	Accuracy granularity of the exposed value
n	string	No	Read Only	Friendly name of the resource
hba1c	number	Yes	Read Only	Current HbA1c measurement in percentage

36383 **B.61.6 CRUDN behaviour**

36384 **Table 360 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/GlucoseHbA1cResURI		get			observe

36385 **B.62 Context Health for Glucose Meter**

36386 **B.62.1 Introduction**

36387 This resource describes the properties associated with context health.
 36388 The health Property is a read-only value that is provided by the server where
 36389 minor and major are related to the general health or the level of illness of the person;
 36390 menses refers to the female menstrual cycle;
 36391 stress refers to physiological or psychological stress.

36393 **B.62.2 Example URI**

36394 /GlucoseHealthResURI

36395 **B.62.3 Resource Type**

36396 The resource type (rt) is defined as: ['oic.r.glucose.health'].

36397 **B.62.4 Swagger2.0 Definition**

```

36398 {
36399   "swagger": "2.0",
36400   "info": {
36401     "title": "Context Health for Glucose Meter",
36402     "version": "v1.1.0-20160519",
36403     "license": {
36404       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
36405       "x-description": "Redistribution and use in source and binary forms, with or without
36406 modification, are permitted provided that the following conditions are met:\n      1.
36407 Redistributions of source code must retain the above copyright notice, this list of conditions and
36408 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
36409 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
36410 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
36411 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
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36414 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
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36417 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
36418 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
36419 OF SUCH DAMAGE.\n"
36420   }
  }
```

```

36421     },
36422     "schemes": ["http"],
36423     "consumes": ["application/json"],
36424     "produces": ["application/json"],
36425     "paths": {
36426         "/GlucoseHealthResURI" : {
36427             "get": {
36428                 "description": "This resource describes the properties associated with context health.\nThe
36429 health Property is a read-only value that is provided by the server where\nminor and major are
36430 related to the general health or the level of illness of the person;\nmenses refers to the female
36431 menstrual cycle;\nstress refers to physiological or psychological stress.\nRetrieves Context Health
36432 for Glucose Meter.\n",
36433                 "parameters": [
36434                     { "$ref": "#/parameters/interface" }
36435                 ],
36436                 "responses": {
36437                     "200": {
36438                         "description": "",
36439                         "x-example":
36440                             {
36441                                 "rt": ["oic.r.glucose.health"],
36442                                 "id": "unique_example_id",
36443                                 "health": "major"
36444                             }
36445                         ,
36446                         "schema": { "$ref": "#/definitions/GlucoseHealth" }
36447                     }
36448                 }
36449             }
36450         }
36451     },
36452     "parameters": {
36453         "interface" : {
36454             "in" : "query",
36455             "name" : "if",
36456             "type" : "string",
36457             "enum" : ["oic.if.s", "oic.if.baseline"]
36458         }
36459     },
36460     "definitions": {
36461         "GlucoseHealth" : {
36462             "properties": {
36463                 "rt" :
36464                     {
36465                         "description": "Resource Type",
36466                         "items": {
36467                             "maxLength": 64,
36468                             "type": "string"
36469                         },
36470                         "minItems": 1,
36471                         "readOnly": true,
36472                         "type": "array"
36473                     },
36474                 "precision" :
36475                     {
36476                         "description": "Accuracy granularity of the exposed value",
36477                         "readOnly": true,
36478                         "type": "number"
36479                     },
36480                 "value" :
36481                     {
36482                         "anyOf": [
36483                             {
36484                                 "type": "array"
36485                             },
36486                             {
36487                                 "type": "string"
36488                             }
36489                         ],
36490                     }
36491             }

```



```

36492         "type": "boolean"
36493     },
36494     {
36495         "type": "integer"
36496     },
36497     {
36498         "type": "number"
36499     },
36500     {
36501         "type": "object"
36502     }
36503 ],
36504 "description": "The value sensed or actuated by this Resource"
36505 },
36506
36507 "n" :
36508     {
36509         "description": "Friendly name of the resource",
36510         "maxLength": 64,
36511         "readOnly": true,
36512         "type": "string"
36513     },
36514
36515 "range" :
36516     {
36517         "description": "The valid range for the value Property",
36518         "items": {
36519             "anyOf": [
36520                 {
36521                     "type": "number"
36522                 },
36523                 {
36524                     "type": "integer"
36525                 }
36526             ]
36527         },
36528         "maxItems": 2,
36529         "minItems": 2,
36530         "readOnly": true,
36531         "type": "array"
36532     },
36533
36534 "health" :
36535     {
36536         "description": "The various levels of health a person feels when taking a glucose.",
36537         "enum": [
36538             "minor",
36539             "major",
36540             "menses",
36541             "stress",
36542             "none"
36543         ],
36544         "readOnly": true,
36545         "type": "string"
36546     },
36547
36548 "step" :
36549     {
36550         "anyOf": [
36551             {
36552                 "type": "integer"
36553             },
36554             {
36555                 "type": "number"
36556             }
36557         ],
36558         "description": "Step value across the defined range",
36559         "readOnly": true
36560     },
36561
36562 "id" :

```

```

36563     {
36564         "description": "Instance ID of this specific resource",
36565         "maxLength": 64,
36566         "readOnly": true,
36567         "type": "string"
36568     },
36569
36570     "if" :
36571     {
36572         "description": "The interface set supported by this resource",
36573         "items": {
36574             "enum": [
36575                 "oic.if.baseline",
36576                 "oic.if.ll",
36577                 "oic.if.b",
36578                 "oic.if.lb",
36579                 "oic.if.rw",
36580                 "oic.if.r",
36581                 "oic.if.a",
36582                 "oic.if.s"
36583             ],
36584             "type": "string"
36585         },
36586         "minItems": 1,
36587         "readOnly": true,
36588         "type": "array"
36589     }
36590
36591     },
36592     "type" : "object"
36593     , "required": ["health"]
36594 }
36595 }
36596 }
36597

```

B.62.5 Property Definition

Table 361 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
n	string	No	Read Only	Friendly name of the resource
rt	array: see schema	No	Read Only	Resource Type
id	string	No	Read Only	Instance ID of this specific resource
health	string	Yes	Read Only	The various levels of health a person feels when taking a glucose.
if	array: see schema	No	Read Only	The interface set supported by this resource
precision	number	No	Read Only	Accuracy granularity of the exposed value

value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
range	array: see schema	No	Read Only	The valid range for the value Property

36600 **B.62.6 CRUDN behaviour**

36601 **Table 362 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/GlucoseHealthResURI		get			observe

36602 **B.63 Context Meal for Glucose Meter**

36603 **B.63.1 Introduction**

36604 This resource describes the properties associated with context meal.
36605 Pre-prandial means pre-meal.
36606 Postprandial means post-meal.
36607 Fasting means the effect of long-term absence of food intake (overnight).
36608 The meal Property is a read-only value that is provided by the server.
36609

36610 **B.63.2 Example URI**

36611 /GlucoseMealResURI

36612 **B.63.3 Resource Type**

36613 The resource type (rt) is defined as: ['oic.r.glucose.meal'].

36614 **B.63.4 Swagger2.0 Definition**

```

36615 {
36616   "swagger": "2.0",
36617   "info": {
36618     "title": "Context Meal for Glucose Meter",
36619     "version": "v1.1.0-20160519",
36620     "license": {
36621       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
36622       "x-description": "Redistribution and use in source and binary forms, with or without
36623 modification, are permitted provided that the following conditions are met:\n      1.
36624 Redistributions of source code must retain the above copyright notice, this list of conditions and
36625 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
36626 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
36627 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
36628 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
36629 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
36630 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
36631 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
36632 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
36633 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND
36634 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
36635 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
36636 OF SUCH DAMAGE.\n"
36637   }
36638 },

```

```

36639     "schemes": ["http"],
36640     "consumes": ["application/json"],
36641     "produces": ["application/json"],
36642     "paths": {
36643         "/GlucoseMealResURI" : {
36644             "get": {
36645                 "description": "This resource describes the properties associated with context
36646 meal.\nPreprandial means pre-meal.\nPostprandial means post-meal.\nFasting meanse the effect of
36647 long-term absence of food intake (overnight).\nThe meal Property is a read-only value that is
36648 provided by the server.\nRetrieves Context Meal for Glucose Meter.\n",
36649                 "parameters": [
36650                     {"$ref": "#/parameters/interface"}
36651                 ],
36652                 "responses": {
36653                     "200": {
36654                         "description": "",
36655                         "x-example":
36656                             {
36657                                 "rt": ["oic.r.glucose.meal"],
36658                                 "id": "unique_example_id",
36659                                 "meal": "preprandial"
36660                             }
36661                         ,
36662                         "schema": { "$ref": "#/definitions/GlucoseMeal" }
36663                     }
36664                 }
36665             }
36666         }
36667     },
36668     "parameters": {
36669         "interface" : {
36670             "in" : "query",
36671             "name" : "if",
36672             "type" : "string",
36673             "enum" : ["oic.if.s", "oic.if.baseline"]
36674         }
36675     },
36676     "definitions": {
36677         "GlucoseMeal" : {
36678             "properties": {
36679                 "rt" :
36680                     {
36681                         "description": "Resource Type",
36682                         "items": {
36683                             "maxLength": 64,
36684                             "type": "string"
36685                         },
36686                         "minItems": 1,
36687                         "readOnly": true,
36688                         "type": "array"
36689                     },
36690                 "step" :
36691                     {
36692                         "anyOf": [
36693                             {
36694                                 "type": "integer"
36695                             },
36696                             {
36697                                 "type": "number"
36698                             }
36699                         ],
36700                         "description": "Step value across the defined range",
36701                         "readOnly": true
36702                     },
36703                 "precision" :
36704                     {
36705                         "description": "Accuracy granularity of the exposed value",
36706                         "readOnly": true,
36707                         "type": "number"
36708                     }
36709             }

```

```

36710     },
36711     "value" :
36712     {
36713         "anyOf": [
36714             {
36715                 "type": "array"
36716             },
36717             {
36718                 "type": "string"
36719             },
36720             {
36721                 "type": "boolean"
36722             },
36723             {
36724                 "type": "integer"
36725             },
36726             {
36727                 "type": "number"
36728             },
36729             {
36730                 "type": "object"
36731             }
36732         ],
36733         "description": "The value sensed or actuated by this Resource"
36734     },
36735     "n" :
36736     {
36737         "description": "Friendly name of the resource",
36738         "maxLength": 64,
36739         "readOnly": true,
36740         "type": "string"
36741     },
36742     "range" :
36743     {
36744         "description": "The valid range for the value Property",
36745         "items": {
36746             "anyOf": [
36747                 {
36748                     "type": "number"
36749                 },
36750                 {
36751                     "type": "integer"
36752                 }
36753             ]
36754         },
36755         "maxItems": 2,
36756         "minItems": 2,
36757         "readOnly": true,
36758         "type": "array"
36759     },
36760     "id" :
36761     {
36762         "description": "Instance ID of this specific resource",
36763         "maxLength": 64,
36764         "readOnly": true,
36765         "type": "string"
36766     },
36767     "meal" :
36768     {
36769         "description": "Time of day when the measurement is taken.",
36770         "enum": [
36771             "preprandial",
36772             "postprandial",
36773             "fasting",
36774             "bedtime",
36775             "casual"
36776         ]
36777     }
36778 }
36779
36780

```

```

36781     ],
36782     "readOnly": true,
36783     "type": "string"
36784   },
36785
36786   "if" :
36787     {
36788     "description": "The interface set supported by this resource",
36789     "items": {
36790       "enum": [
36791         "oic.if.baseline",
36792         "oic.if.ll",
36793         "oic.if.b",
36794         "oic.if.lb",
36795         "oic.if.rw",
36796         "oic.if.r",
36797         "oic.if.a",
36798         "oic.if.s"
36799       ],
36800       "type": "string"
36801     },
36802     "minItems": 1,
36803     "readOnly": true,
36804     "type": "array"
36805   }
36806
36807   }
36808   , "type" : "object"
36809   , "required": ["meal"]
36810 }
36811 }
36812 }
36813

```

B.63.5 Property Definition

Table 363 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema	No	Read Only	Step value across the defined range
range	array: see schema	No	Read Only	The valid range for the value Property
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
rt	array: see schema	No	Read Only	Resource Type
n	string	No	Read Only	Friendly name of the resource
id	string	No	Read Only	Instance ID of this specific resource
if	array: see schema	No	Read Only	

				The interface set supported by this resource
meal	string	Yes	Read Only	Time of day when the measurement is taken.
precision	number	No	Read Only	Accuracy granularity of the exposed value

36816 **B.63.6 CRUDN behaviour**

36817 **Table 364 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/GlucoseMealResURI		get			observe

36818 **B.64 Context Medication for Glucose Meter**

36819 **B.64.1 Introduction**

36820 This resource describes the properties associated with context medication.
36821 The unit is a single value that is one of mg and mL
36822 The medication property has a default unit of milligrams[mg].
36823 The medication, unit and regimen Properties are read-only values that are provided by the
36824 server.
36825 When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.
36826

36827 **B.64.2 Example URI**

36828 /GlucoseMedicationResURI

36829 **B.64.3 Resource Type**

36830 The resource type (rt) is defined as: ['oic.r.glucose.medication'].

36831 **B.64.4 Swagger2.0 Definition**

```

36832 {
36833   "swagger": "2.0",
36834   "info": {
36835     "title": "Context Medication for Glucose Meter",
36836     "version": "v1.1.0-20160519",
36837     "license": {
36838       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
36839       "x-description": "Redistribution and use in source and binary forms, with or without
36840 modification, are permitted provided that the following conditions are met:\n      1.
36841 Redistributions of source code must retain the above copyright notice, this list of conditions and
36842 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
36843 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
36844 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
36845 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
36846 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
36847 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
36848 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
36849 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
36850 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND
36851 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
36852 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
36853 OF SUCH DAMAGE.\n"
36854   }
36855 },

```

```

36856     "schemes": ["http"],
36857     "consumes": ["application/json"],
36858     "produces": ["application/json"],
36859     "paths": {
36860         "/GlucoseMedicationResURI" : {
36861             "get": {
36862                 "description": "This resource describes the properties associated with context
36863 medication.\nThe unit is a single value that is one of mg and mL.\nThe medication property has a
36864 default unit of milligrams[mg].\nThe medication, unit and regimen Properties are read-only values
36865 that are provided by the server.\nWhen range (from oic.r.baseresource) is omitted the default is 0
36866 to +MAXFLOAT.\nRetrieves Context Medication for Glucose Meter.\n",
36867                 "parameters": [
36868                     {"$ref": "#/parameters/interface"}
36869                 ],
36870                 "responses": {
36871                     "200": {
36872                         "description": "",
36873                         "x-example":
36874                             {
36875                                 "rt": ["oic.r.glucose.medication"],
36876                                 "id": "unique_example_id",
36877                                 "medication": 100,
36878                                 "units": "mg",
36879                                 "regimen": "rapidacting"
36880                             }
36881                         ,
36882                         "schema": { "$ref": "#/definitions/GlucoseMedication" }
36883                     }
36884                 }
36885             }
36886         }
36887     },
36888     "parameters": {
36889         "interface" : {
36890             "in" : "query",
36891             "name" : "if",
36892             "type" : "string",
36893             "enum" : ["oic.if.s", "oic.if.baseline"]
36894         }
36895     },
36896     "definitions": {
36897         "GlucoseMedication" : {
36898             "properties": {
36899                 "rt" :
36900                     {
36901                         "description": "Resource Type",
36902                         "items": {
36903                             "maxLength": 64,
36904                             "type": "string"
36905                         },
36906                         "minItems": 1,
36907                         "readOnly": true,
36908                         "type": "array"
36909                     },
36910                 "regimen" :
36911                     {
36912                         "description": "Medication regimen",
36913                         "enum": [
36914                             "rapidacting",
36915                             "shortacting",
36916                             "intermediateacting",
36917                             "longacting",
36918                             "premix"
36919                         ],
36920                         "readOnly": true,
36921                         "type": "string"
36922                     },
36923                 "medication" :
36924                     {
36925

```



```

36927     "description": "The level of medication undertaken",
36928     "readOnly": true,
36929     "type": "number"
36930 },
36931
36932     "precision" :
36933     {
36934         "description": "Accuracy granularity of the exposed value",
36935         "readOnly": true,
36936         "type": "number"
36937     },
36938
36939     "value" :
36940     {
36941         "anyOf": [
36942             {
36943                 "type": "array"
36944             },
36945             {
36946                 "type": "string"
36947             },
36948             {
36949                 "type": "boolean"
36950             },
36951             {
36952                 "type": "integer"
36953             },
36954             {
36955                 "type": "number"
36956             },
36957             {
36958                 "type": "object"
36959             }
36960         ],
36961         "description": "The value sensed or actuated by this Resource"
36962     },
36963
36964     "n" :
36965     {
36966         "description": "Friendly name of the resource",
36967         "maxLength": 64,
36968         "readOnly": true,
36969         "type": "string"
36970     },
36971
36972     "units" :
36973     {
36974         "description": "Current exercise movement type measurement",
36975         "enum": [
36976             "mg",
36977             "mL"
36978         ],
36979         "readOnly": true,
36980         "type": "string"
36981     },
36982
36983     "range" :
36984     {
36985         "description": "The valid range for the value Property",
36986         "items": {
36987             "anyOf": [
36988                 {
36989                     "type": "number"
36990                 },
36991                 {
36992                     "type": "integer"
36993                 }
36994             ]
36995         },
36996         "maxItems": 2,
36997         "minItems": 2,

```

```

36998         "readOnly": true,
36999         "type": "array"
37000     },
37001
37002     "step" :
37003     {
37004         "anyOf": [
37005             {
37006                 "type": "integer"
37007             },
37008             {
37009                 "type": "number"
37010             }
37011         ],
37012         "description": "Step value across the defined range",
37013         "readOnly": true
37014     },
37015
37016     "id" :
37017     {
37018         "description": "Instance ID of this specific resource",
37019         "maxLength": 64,
37020         "readOnly": true,
37021         "type": "string"
37022     },
37023
37024     "if" :
37025     {
37026         "description": "The interface set supported by this resource",
37027         "items": {
37028             "enum": [
37029                 "oic.if.baseline",
37030                 "oic.if.ll",
37031                 "oic.if.b",
37032                 "oic.if.lb",
37033                 "oic.if.rw",
37034                 "oic.if.r",
37035                 "oic.if.a",
37036                 "oic.if.s"
37037             ],
37038             "type": "string"
37039         },
37040         "minItems": 1,
37041         "readOnly": true,
37042         "type": "array"
37043     }
37044
37045     }
37046     , "type" : "object"
37047     , "required": ["medication"]
37048 }
37049 }
37050 }
37051

```

37052 B.64.5 Property Definition

37053 **Table 365 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
n	string	No	Read Only	Friendly name of the resource
range	array: see schema	No	Read Only	The valid range for the value Property
regimen	string	No	Read Only	

				Medication regimen
if	array: see schema	No	Read Only	The interface set supported by this resource
rt	array: see schema	No	Read Only	Resource Type
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
units	string	No	Read Only	Current exercise movement type measurement
precision	number	No	Read Only	Accuracy granularity of the exposed value
medication	number	Yes	Read Only	The level of medication undertaken
step	multiple types: see schema	No	Read Only	Step value across the defined range
id	string	No	Read Only	Instance ID of this specific resource

37054 **B.64.6 CRUDN behaviour**

37055 **Table 366 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/GlucoseMedicationResURI		get			observe

37056 **B.65 Glucose Meter Atomic Measurement**

37057 **B.65.1 Introduction**

37058 This resource describes the properties associated with glucose meter.
 37059 The resource is an atomic measurement of glucose (oic.r.glucose), context carbohydrates
 37060 (oic.r.glucose.carb), context exercise (oic.r.glucose.exercise), Hemoglobin Bound to Glucose
 37061 A1c Form (HbA1c) (oic.r.glucose.hba1c), context health (oic.r.glucose.health), context meal
 37062 (oic.r.glucose.meal), context medication (oic.r.glucose.medication), context sample location
 37063 (oic.r.glucose.samplelocation), context tester (oic.r.glucose.testers), observed time
 37064 (oic.r.time.stamp), and user ID (oic.r.userid).
 37065

37066 **B.65.2 Example URI**

37067 /GlucoseMeterAMResURI

37068 **B.65.3 Resource Type**

37069 The resource type (rt) is defined as: ['oic.r.glucosemeter-am']

37070 **B.65.4 Swagger2.0 Definition**

```
37071 {
37072   "swagger": "2.0",
37073   "info": {
37074     "title": "Glucose Meter Atomic Measurement Linked List Representation",
37075     "version": "v1.1.0-20160519",
37076     "license": {
37077       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
37078       "x-description": "Redistribution and use in source and binary forms, with or without
37079 modification, are permitted provided that the following conditions are met:\n      1.
37080 Redistributions of source code must retain the above copyright notice, this list of conditions and
37081 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
37082 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
37083 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
37084 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
37085 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
37086 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
37087 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
37088 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
37089 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
37090 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
37091 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
37092 OF SUCH DAMAGE.\n"
37093     }
37094   },
37095   "schemes": ["http"],
37096   "consumes": ["application/json"],
37097   "produces": ["application/json"],
37098   "paths": {
37099     "/GlucoseMeterAMResURI?if=oic.if.ll" : {
37100       "get": {
37101         "description": "This resource describes the properties associated with glucose meter.\nThe
37102 resource is an atomic measurement of glucose (oic.r.glucose), context carbohydrates
37103 (oic.r.glucose.carb), context exercise (oic.r.glucose.exercise), Hemoglobin Bound to Glucose Alc
37104 Form (HbAlc) (oic.r.glucose.hbaldc), context health (oic.r.glucose.health), context meal
37105 (oic.r.glucose.meal), context medication (oic.r.glucose.medication), context sample location
37106 (oic.r.glucose.samplelocation), context tester (oic.r.glucose.tester), observed time
37107 (oic.r.time.stamp), and user ID (oic.r.userid).\nRetrieves the current glucose.\n",
37108         "parameters": [
37109           {"$ref": "#/parameters/interface-ll"}
37110         ],
37111         "responses": {
37112           "200": {
37113             "description": "",
37114             "x-example":
37115               [
37116                 {
37117                   "href": "/myGlucoseResURI",
37118                   "rt": ["oic.r.glucose"],
37119                   "if": ["oic.if.s", "oic.if.baseline"]
37120                 },
37121                 {
37122                   "href": "/myHbAlcResURI",
37123                   "rt": ["oic.r.glucose.hbaldc"],
37124                   "if": ["oic.if.s", "oic.if.baseline"]
37125                 }
37126               ]
37127           },
37128           "schema": { "$ref": "#/definitions/links" }
37129         }
37130       }
37131     }
37132   },
37133   "/GlucoseMeterAMResURI?if=oic.if.b" : {
37134     "get": {
37135       "description": "This resource describes the properties associated with glucose meter.\nThe
```

```

37136 resource is an atomic measurement of glucose (oic.r.glucose), context carbohydrates
37137 (oic.r.glucose.carb), context exercise (oic.r.glucose.exercise), Hemoglobin Bound to Glucose Alc
37138 Form (HbAlc) (oic.r.glucose.hbald), context health (oic.r.glucose.health), context meal
37139 (oic.r.glucose.meal), context medication (oic.r.glucose.medication), context sample location
37140 (oic.r.glucose.samplelocation), context tester (oic.r.glucose.tester), observed time
37141 (oic.r.time.stamp), and user ID (oic.r.userid).\nRetrieves the current glucose.\n",
37142 "parameters": [
37143   {"$ref": "#/parameters/interface-b"}
37144 ],
37145 "responses": {
37146   "200": {
37147     "description": "",
37148     "x-example":
37149       [
37150         {
37151           "href": "/myGlucoseResURI",
37152           "rep":
37153             {
37154               "glucose": 100,
37155               "units": "mg/dL"
37156             }
37157         },
37158         {
37159           "href": "/myHbAlcResURI",
37160           "rep":
37161             {
37162               "hbald": 5
37163             }
37164         }
37165       ]
37166     ,
37167     "schema": { "$ref": "#/definitions/batch-retrieve" }
37168   }
37169 }
37170 },
37171 },
37172 "/GlucoseMeterAMResURI?if=oic.if.baseline" : {
37173   "get": {
37174     "description": "This resource describes the properties associated with glucose meter.\nThe
37175 resource is an atomic measurement of glucose (oic.r.glucose), context carbohydrates
37176 (oic.r.glucose.carb), context exercise (oic.r.glucose.exercise), Hemoglobin Bound to Glucose Alc
37177 Form (HbAlc) (oic.r.glucose.hbald), context health (oic.r.glucose.health), context meal
37178 (oic.r.glucose.meal), context medication (oic.r.glucose.medication), context sample location
37179 (oic.r.glucose.samplelocation), context tester (oic.r.glucose.tester), observed time
37180 (oic.r.time.stamp), and user ID (oic.r.userid).\nRetrieves the current glucose.\n",
37181     "parameters": [
37182       {"$ref": "#/parameters/interface-baseline"}
37183     ],
37184     "responses": {
37185       "200": {
37186         "description": "",
37187         "x-example":
37188           {
37189             "rt": ["oic.r.glucosemeter-am", "oic.wk.atomicmeasurement"],
37190             "if": ["oic.if.b", "oic.if.ll", "oic.if.baseline"],
37191             "rts": ["oic.r.glucose", "oic.r.glucose.hbald"],
37192             "rts-m": ["oic.r.glucose"],
37193             "links": [
37194               {
37195                 "href": "/myGlucoseResURI",
37196                 "rt": ["oic.r.glucose"],
37197                 "if": ["oic.if.s", "oic.if.baseline"]
37198               },
37199               {
37200                 "href": "/myHbAlcResURI",
37201                 "rt": ["oic.r.glucose.hbald"],
37202                 "if": ["oic.if.s", "oic.if.baseline"]
37203               }
37204             ]
37205           }
37206     },

```

```

37207         "schema": { "$ref": "#/definitions/baseline" }
37208     }
37209 }
37210 }
37211 },
37212 },
37213 "parameters": {
37214     "interface-ll" : {
37215         "in" : "query",
37216         "name" : "if",
37217         "type" : "string",
37218         "enum" : ["oic.if.ll"]
37219     },
37220     "interface-b" : {
37221         "in" : "query",
37222         "name" : "if",
37223         "type" : "string",
37224         "enum" : ["oic.if.b"]
37225     },
37226     "interface-baseline" : {
37227         "in" : "query",
37228         "name" : "if",
37229         "type" : "string",
37230         "enum" : ["oic.if.baseline"]
37231     },
37232     "interface-all" : {
37233         "in" : "query",
37234         "name" : "if",
37235         "type" : "string",
37236         "enum" : ["oic.if.b", "oic.if.ll", "oic.if.baseline"]
37237     }
37238 },
37239 "definitions": {
37240     "links" : {
37241         "type" :
37242             "array"
37243     },
37244     "items" :
37245         {
37246             "$ref": "#/definitions/oic.oic-link"
37247         }
37248     }
37249 },
37250 "batch-retrieve" : {
37251     "title" :
37252         "Collection Batch Retrieve Format"
37253     },
37254     "minItems" :
37255         1
37256     },
37257     "items" :
37258         {
37259             "additionalProperties": true,
37260             "properties": {
37261                 "href": {
37262                     "description": "URI of the target resource relative assuming the collection URI as
37263 anchor",
37264                     "type": "string"
37265                 },
37266                 "rep": {
37267                     "oneOf": [
37268                         {
37269                             "description": "The response payload from a single resource",
37270                             "type": "object"
37271                         },
37272                         {
37273                             "description": " The response payload from a collection (batch) resource",
37274                             "type": "array"
37275                         }
37276                     ]
37277                 }
37278             }
37279         }
37280     }
37281 }

```

```

37278     }
37279     },
37280     "required": [
37281         "href",
37282         "rep"
37283     ],
37284     "type": "object"
37285 }
37286
37287 , "type" :
37288     "array"
37289
37290 }
37291
37292 , "baseline" : {
37293     "properties": {
37294         "rt" :
37295             {
37296                 "items": {
37297                     "enum": [
37298                         "oic.r.glucosemeter-am",
37299                         "oic.wk.atomicmeasurement"
37300                     ]
37301                 },
37302                 "maxItems": 2,
37303                 "minItems": 2,
37304                 "type": "array",
37305                 "uniqueItems": true
37306             },
37307
37308     "links" :
37309         {
37310             "description": "A set of simple or individual OIC Links.",
37311             "items": {
37312                 "properties": {
37313                     "anchor": {
37314                         "description": "This is used to override the context URI e.g. override the URI of
37315 the containing collection.",
37316                         "format": "uri",
37317                         "maxLength": 256,
37318                         "type": "string"
37319                     },
37320                     "di": {
37321                         "description": "The Device ID formatted according to IETF RFC 4122.",
37322                         "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
37323 9]{12}$",
37324                         "type": "string"
37325                     },
37326                     "eps": {
37327                         "description": "the Endpoint information of the target Resource",
37328                         "items": {
37329                             "properties": {
37330                                 "ep": {
37331                                     "description": "Transport Protocol Suite + Endpoint Locator",
37332                                     "format": "uri",
37333                                     "type": "string"
37334                                 },
37335                                 "pri": {
37336                                     "description": "The priority among multiple Endpoints",
37337                                     "minimum": 1,
37338                                     "type": "integer"
37339                                 }
37340                             },
37341                             "type": "object"
37342                         },
37343                         "type": "array"
37344                     },
37345                     "href": {
37346                         "description": "This is the target URI, it can be specified as a Relative Reference
37347 or fully-qualified URI.",
37348                         "format": "uri",

```

```

37349         "maxLength": 256,
37350         "type": "string"
37351     },
37352     "if": {
37353         "description": "The interface set supported by this resource",
37354         "items": {
37355             "enum": [
37356                 "oic.if.baseline",
37357                 "oic.if.ll",
37358                 "oic.if.b",
37359                 "oic.if.rw",
37360                 "oic.if.r",
37361                 "oic.if.a",
37362                 "oic.if.s"
37363             ],
37364             "type": "string"
37365         },
37366         "minItems": 1,
37367         "type": "array"
37368     },
37369     "ins": {
37370         "description": "The instance identifier for this web link in an array of web links
- used in collections",
37371         "type": "integer"
37372     },
37373     "p": {
37374         "description": "Specifies the framework policies on the Resource referenced by the
target URI",
37375         "properties": {
37376             "bm": {
37377                 "description": "Specifies the framework policies on the Resource referenced by
the target URI for e.g. observable and discoverable",
37378                 "type": "integer"
37379             }
37380         },
37381         "required": [
37382             "bm"
37383         ],
37384         "type": "object"
37385     },
37386     "rel": {
37387         "description": "The relation of the target URI referenced by the link to the
context URI",
37388         "oneOf": [
37389             {
37390                 "default": [
37391                     "hosts"
37392                 ],
37393                 "items": {
37394                     "maxLength": 64,
37395                     "type": "string"
37396                 },
37397                 "minItems": 1,
37398                 "type": "array"
37399             },
37400             {
37401                 "default": "hosts",
37402                 "maxLength": 64,
37403                 "type": "string"
37404             }
37405         ]
37406     },
37407     "rt": {
37408         "description": "Resource Type of the Resource",
37409         "items": {
37410             "maxLength": 64,
37411             "type": "string"
37412         },
37413         "minItems": 1,
37414         "type": "array"
37415     },
37416 }

```



```

37420         "title": {
37421             "description": "A title for the link relation. Can be used by the UI to provide a
37422 context.",
37423             "maxLength": 64,
37424             "type": "string"
37425         },
37426         "type": {
37427             "default": "application/cbor",
37428             "description": "A hint at the representation of the resource referenced by the
37429 target URI. This represents the media types that are used for both accepting and emitting.",
37430             "items": {
37431                 "maxLength": 64,
37432                 "type": "string"
37433             },
37434             "minItems": 1,
37435             "type": "array"
37436         }
37437     },
37438     "required": [
37439         "href",
37440         "rt",
37441         "if"
37442     ],
37443     "type": "object"
37444 },
37445 "type": "array"
37446 },
37447
37448 "n" :
37449 {
37450     "description": "Friendly name of the resource",
37451     "maxLength": 64,
37452     "readOnly": true,
37453     "type": "string"
37454 },
37455
37456 "rts" :
37457 {
37458     "description": "This contains all possible resource types for this atomic measurement.",
37459     "items": {
37460         "enum": [
37461             "oic.r.glucose",
37462             "oic.r.glucose.carb",
37463             "oic.r.glucose.exercise",
37464             "oic.r.glucose.hbabc",
37465             "oic.r.glucose.health",
37466             "oic.r.glucose.meal",
37467             "oic.r.glucose.medications",
37468             "oic.r.glucose.samplelocation",
37469             "oic.r.glucose.tester",
37470             "oic.r.time.observed",
37471             "oic.r.userid"
37472         ]
37473     },
37474     "minItems": 1,
37475     "type": "array",
37476     "uniqueItems": true
37477 },
37478
37479 "id" :
37480 {
37481     "description": "Instance ID of this specific resource",
37482     "maxLength": 64,
37483     "readOnly": true,
37484     "type": "string"
37485 },
37486
37487 "rts-m" :
37488 {
37489     "description": "This contains all mandatory resource types for this atomic measurement.",
37490     "items": {

```

```

37491         "enum": [
37492             "oic.r.glucose"
37493         ]
37494     },
37495     "maxItems": 1,
37496     "minItems": 1,
37497     "type": "array",
37498     "uniqueItems": true
37499 },
37500
37501 "if" :
37502     {
37503     "description": "The interface set supported by this resource",
37504     "items": {
37505         "enum": [
37506             "oic.if.baseline",
37507             "oic.if.ll",
37508             "oic.if.b",
37509             "oic.if.lb",
37510             "oic.if.rw",
37511             "oic.if.r",
37512             "oic.if.a",
37513             "oic.if.s"
37514         ],
37515         "type": "string"
37516     },
37517     "minItems": 1,
37518     "readOnly": true,
37519     "type": "array"
37520     }
37521
37522     }
37523     , "type" : "object"
37524     , "required": ["rts-m"]
37525     }
37526     , "oic.oic-link" :
37527     {
37528     "properties": {
37529         "anchor": {
37530             "description": "This is used to override the context URI e.g. override the URI of the
37531 containing collection.",
37532             "format": "uri",
37533             "maxLength": 256,
37534             "type": "string"
37535         },
37536         "di": {
37537             "description": "The Device ID formatted according to IETF RFC 4122.",
37538             "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
37539 9]{12}$",
37540             "type": "string"
37541         },
37542         "eps": {
37543             "description": "the Endpoint information of the target Resource",
37544             "items": {
37545                 "properties": {
37546                     "ep": {
37547                         "description": "Transport Protocol Suite + Endpoint Locator",
37548                         "format": "uri",
37549                         "type": "string"
37550                     },
37551                     "pri": {
37552                         "description": "The priority among multiple Endpoints",
37553                         "minimum": 1,
37554                         "type": "integer"
37555                     }
37556                 },
37557                 "type": "object"
37558             },
37559             "type": "array"
37560         },
37561         "href": {

```

```

37562         "description": "This is the target URI, it can be specified as a Relative Reference or
37563 fully-qualified URI.",
37564         "format": "uri",
37565         "maxLength": 256,
37566         "type": "string"
37567     },
37568     "if": {
37569         "description": "The interface set supported by this resource",
37570         "items": {
37571             "enum": [
37572                 "oic.if.baseline",
37573                 "oic.if.ll",
37574                 "oic.if.b",
37575                 "oic.if.rw",
37576                 "oic.if.r",
37577                 "oic.if.a",
37578                 "oic.if.s"
37579             ],
37580             "type": "string"
37581         },
37582         "minItems": 1,
37583         "type": "array"
37584     },
37585     "ins": {
37586         "description": "The instance identifier for this web link in an array of web links - used
37587 in collections",
37588         "type": "integer"
37589     },
37590     "p": {
37591         "description": "Specifies the framework policies on the Resource referenced by the target
37592 URI",
37593         "properties": {
37594             "bm": {
37595                 "description": "Specifies the framework policies on the Resource referenced by the
37596 target URI for e.g. observable and discoverable",
37597                 "type": "integer"
37598             }
37599         },
37600         "required": [
37601             "bm"
37602         ],
37603         "type": "object"
37604     },
37605     "rel": {
37606         "description": "The relation of the target URI referenced by the link to the context
37607 URI",
37608         "oneOf": [
37609             {
37610                 "default": [
37611                     "hosts"
37612                 ],
37613                 "items": {
37614                     "maxLength": 64,
37615                     "type": "string"
37616                 },
37617                 "minItems": 1,
37618                 "type": "array"
37619             },
37620             {
37621                 "default": "hosts",
37622                 "maxLength": 64,
37623                 "type": "string"
37624             }
37625         ]
37626     },
37627     "rt": {
37628         "description": "Resource Type of the Resource",
37629         "items": {
37630             "maxLength": 64,
37631             "type": "string"
37632         },

```

```

37633         "minItems": 1,
37634         "type": "array"
37635     },
37636     "title": {
37637         "description": "A title for the link relation. Can be used by the UI to provide a
37638 context.",
37639         "maxLength": 64,
37640         "type": "string"
37641     },
37642     "type": {
37643         "default": "application/cbor",
37644         "description": "A hint at the representation of the resource referenced by the target
37645 URI. This represents the media types that are used for both accepting and emitting.",
37646         "items": {
37647             "maxLength": 64,
37648             "type": "string"
37649         },
37650         "minItems": 1,
37651         "type": "array"
37652     }
37653 },
37654 "required": [
37655     "href",
37656     "rt",
37657     "if"
37658 ],
37659 "type": "object"
37660 }
37661 }
37662 }
37663 }
37664

```

37665 B.65.5 Property Definition

37666 **Table 367 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
rep	multiple types: see schema	Yes	Read Write	
href	string	Yes	Read Write	URI of the target resource relative assuming the collection URI as anchor
links	array: see schema	No	Read Write	A set of simple or individual OIC Links.
rt	array: see schema	No	Read Write	
id	string	No	Read Only	Instance ID of this specific resource
n	string	No	Read Only	Friendly name of the resource
rts	array: see schema	No	Read Write	This contains all possible resource types

				for this atomic measurement.
rts-m	array: schema see	Yes	Read Write	This contains all mandatory resource types for this atomic measurement.
if	array: schema see	No	Read Only	The interface set supported by this resource
di	string	No	Read Write	The Device ID formatted according to IETF RFC 4122.
rel	multiple types: see schema	No	Read Write	The relation of the target URI referenced by the link to the context URI
if	array: schema see	Yes	Read Write	The interface set supported by this resource
href	string	Yes	Read Write	This is the target URI, it can be specified as a Relative Reference or fully-qualified URI.
eps	array: schema see	No	Read Write	the Endpoint information of the target Resource
rt	array: schema see	Yes	Read Write	Resource Type of the Resource
type	array: schema see	No	Read Write	A hint at the representation of the resource referenced by the target URI. This represents the media types that are used for both accepting and emitting.

p	object: schema	see	No	Read Write	Specifies the framework policies on the Resource referenced by the target URI
anchor	string		No	Read Write	This is used to override the context URI e.g. override the URI of the containing collection.
title	string		No	Read Write	A title for the link relation. Can be used by the UI to provide a context.
ins	integer		No	Read Write	The instance identifier for this web link in an array of web links - used in collections

37667 **B.65.6 CRUDN behaviour**

37668 **Table 368 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/GlucoseMeterAMResURI		get			observe

37669 **B.66 Context Sample Location for Glucose Meter**

37670 **B.66.1 Introduction**

37671 This resource describes the properties associated with context Sample Location.
 37672 AST means Alternative Site Test specifying that the location of test performed was from an
 37673 alternative site on the body.

37674 The samplelocation Property is a read-only value that is provided by the server.

37675

37676 **B.66.2 Example URI**

37677 /GlucoseSampleLocationResURI

37678 **B.66.3 Resource Type**

37679 The resource type (rt) is defined as: ['oic.r.glucose.samplelocation'].

37680 **B.66.4 Swagger2.0 Definition**

```

37681 {
37682   "swagger": "2.0",
37683   "info": {
37684     "title": "Context Sample Location for Glucose Meter",
37685     "version": "v1.1.0-20160519",
37686     "license": {
37687       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
37688       "x-description": "Redistribution and use in source and binary forms, with or without
  
```

```

37689 modification, are permitted provided that the following conditions are met:\n      1.
37690 Redistributions of source code must retain the above copyright notice, this list of conditions and
37691 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
37692 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
37693 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
37694 Connectivity Foundation, INC. \ "AS IS\ " AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
37695 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
37696 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
37697 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
37698 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
37699 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
37700 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
37701 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
37702 OF SUCH DAMAGE.\n"
37703 }
37704 },
37705 "schemes": ["http"],
37706 "consumes": ["application/json"],
37707 "produces": ["application/json"],
37708 "paths": {
37709   "/GlucoseSampleLocationResURI" : {
37710     "get": {
37711       "description": "This resource describes the properties associated with context Sample
37712 Location.\nAST means Alternative Site Test specifying that the location of test performed was from
37713 an alternative site on the body.\nThe samplelocation Property is a read-only value that is provided
37714 by the server.\nRetrieves Context Sample Location for Glucose Meter.\n",
37715       "parameters": [
37716         { "$ref": "#/parameters/interface" }
37717       ],
37718       "responses": {
37719         "200": {
37720           "description": "",
37721           "x-example":
37722             {
37723               "rt": ["oic.r.glucose.samplelocation"],
37724               "id": "unique_example_id",
37725               "samplelocation": "finger"
37726             }
37727           ,
37728           "schema": { "$ref": "#/definitions/GlucoseSampleLocation" }
37729         }
37730       }
37731     }
37732   }
37733 },
37734 "parameters": {
37735   "interface" : {
37736     "in" : "query",
37737     "name" : "if",
37738     "type" : "string",
37739     "enum" : ["oic.if.s", "oic.if.baseline"]
37740   }
37741 },
37742 "definitions": {
37743   "GlucoseSampleLocation" : {
37744     "properties": {
37745       "rt" :
37746         {
37747           "description": "Resource Type",
37748           "items": {
37749             "maxLength": 64,
37750             "type": "string"
37751           },
37752           "minItems": 1,
37753           "readOnly": true,
37754           "type": "array"
37755         },
37756       "precision" :
37757         {
37758           "description": "Accuracy granularity of the exposed value",

```

```

37760         "readOnly": true,
37761         "type": "number"
37762     },
37763
37764     "value" :
37765     {
37766         "anyOf": [
37767             {
37768                 "type": "array"
37769             },
37770             {
37771                 "type": "string"
37772             },
37773             {
37774                 "type": "boolean"
37775             },
37776             {
37777                 "type": "integer"
37778             },
37779             {
37780                 "type": "number"
37781             },
37782             {
37783                 "type": "object"
37784             }
37785         ],
37786         "description": "The value sensed or actuated by this Resource"
37787     },
37788
37789     "n" :
37790     {
37791         "description": "Friendly name of the resource",
37792         "maxLength": 64,
37793         "readOnly": true,
37794         "type": "string"
37795     },
37796
37797     "range" :
37798     {
37799         "description": "The valid range for the value Property",
37800         "items": {
37801             "anyOf": [
37802                 {
37803                     "type": "number"
37804                 },
37805                 {
37806                     "type": "integer"
37807                 }
37808             ]
37809         },
37810         "maxItems": 2,
37811         "minItems": 2,
37812         "readOnly": true,
37813         "type": "array"
37814     },
37815
37816     "samplelocation" :
37817     {
37818         "description": "The possible blood locations where the blood sample may be taken.",
37819         "enum": [
37820             "finger",
37821             "ast",
37822             "earlobe",
37823             "ctrlsolution"
37824         ],
37825         "readOnly": true,
37826         "type": "string"
37827     },
37828
37829     "step" :
37830     {

```



```

37831     "anyOf": [
37832         {
37833             "type": "integer"
37834         },
37835         {
37836             "type": "number"
37837         }
37838     ],
37839     "description": "Step value across the defined range",
37840     "readOnly": true
37841 },
37842
37843     "id" :
37844     {
37845         "description": "Instance ID of this specific resource",
37846         "maxLength": 64,
37847         "readOnly": true,
37848         "type": "string"
37849     },
37850
37851     "if" :
37852     {
37853         "description": "The interface set supported by this resource",
37854         "items": {
37855             "enum": [
37856                 "oic.if.baseline",
37857                 "oic.if.ll",
37858                 "oic.if.b",
37859                 "oic.if.lb",
37860                 "oic.if.rw",
37861                 "oic.if.r",
37862                 "oic.if.a",
37863                 "oic.if.s"
37864             ],
37865             "type": "string"
37866         },
37867         "minItems": 1,
37868         "readOnly": true,
37869         "type": "array"
37870     }
37871 }
37872 },
37873 "type" : "object"
37874 , "required": ["samplelocation"]
37875 }
37876 }
37877 }
37878

```

37879 B.66.5 Property Definition

37880 **Table 369 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema	No	Read Only	The interface set supported by this resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
id	string	No	Read Only	Instance ID of this specific resource

step	multiple types: see schema	No	Read Only	Step value across the defined range
rt	array: see schema	No	Read Only	Resource Type
range	array: see schema	No	Read Only	The valid range for the value Property
precision	number	No	Read Only	Accuracy granularity of the exposed value
n	string	No	Read Only	Friendly name of the resource
samplelocation	string	Yes	Read Only	The possible blood locations where the blood sample may be taken.

37881 **B.66.6 CRUDN behaviour**

37882 **Table 370 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/GlucoseSampleLocationResURI		get			observe

37883 **B.67 Context Tester for Glucose Meter**

37884 **B.67.1 Introduction**

37885 This resource describes the properties associated with context Tester.
 37886 The tester Property is a read-only value that is provided by the server where especially
 37887 hcp stands for HealthCare Professional.
 37888

37889 **B.67.2 Example URI**

37890 /GlucoseTesterResURI

37891 **B.67.3 Resource Type**

37892 The resource type (rt) is defined as: ['oic.r.glucose.tester'].

37893 **B.67.4 Swagger2.0 Definition**

```

37894 {
37895   "swagger": "2.0",
37896   "info": {
37897     "title": "Context Tester for Glucose Meter",
37898     "version": "v1.1.0-20160519",
37899     "license": {
37900       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
37901       "x-description": "Redistribution and use in source and binary forms, with or without
37902 modification, are permitted provided that the following conditions are met:\n      1.
37903 Redistributions of source code must retain the above copyright notice, this list of conditions and
37904 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
37905 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
37906 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
37907 Connectivity Foundation, INC. \ "AS IS\ " AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT

```

```

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37911 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
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37913 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
37914 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
37915 OF SUCH DAMAGE.\n"
37916 }
37917 },
37918 "schemes": ["http"],
37919 "consumes": ["application/json"],
37920 "produces": ["application/json"],
37921 "paths": {
37922   "/GlucoseTesterResURI" : {
37923     "get": {
37924       "description": "This resource describes the properties associated with context Tester.\nThe
37925 tester Property is a read-only value that is provided by the server where especially\nhcp stands
37926 for HealthCare Professional.\nRetrieves Context Tester for Glucose Meter.\n",
37927       "parameters": [
37928         {"$ref": "#/parameters/interface"}
37929       ],
37930       "responses": {
37931         "200": {
37932           "description": "",
37933           "x-example":
37934             {
37935               "rt": ["oic.r.glucose.Tester"],
37936               "id": "unique_example_id",
37937               "tester": "self"
37938             }
37939           ,
37940           "schema": { "$ref": "#/definitions/GlucoseTester" }
37941         }
37942       }
37943     }
37944   }
37945 },
37946 "parameters": {
37947   "interface" : {
37948     "in" : "query",
37949     "name" : "if",
37950     "type" : "string",
37951     "enum" : ["oic.if.s", "oic.if.baseline"]
37952   }
37953 },
37954 "definitions": {
37955   "GlucoseTester" : {
37956     "properties": {
37957       "rt" :
37958         {
37959           "description": "Resource Type",
37960           "items": {
37961             "maxLength": 64,
37962             "type": "string"
37963           },
37964           "minItems": 1,
37965           "readOnly": true,
37966           "type": "array"
37967         },
37968       "tester" :
37969         {
37970           "description": "The possible cases of testers who may perform the blood sugar
37971 measurement.",
37972           "enum": [
37973             "self",
37974             "hcp",
37975             "lab"
37976           ],
37977           "readOnly": true,

```

```

37979     "type": "string"
37980   },
37981
37982   "precision" :
37983     {
37984     "description": "Accuracy granularity of the exposed value",
37985     "readOnly": true,
37986     "type": "number"
37987   },
37988
37989   "value" :
37990     {
37991     "anyOf": [
37992       {
37993         "type": "array"
37994       },
37995       {
37996         "type": "string"
37997       },
37998       {
37999         "type": "boolean"
38000       },
38001       {
38002         "type": "integer"
38003       },
38004       {
38005         "type": "number"
38006       },
38007       {
38008         "type": "object"
38009       }
38010     ],
38011     "description": "The value sensed or actuated by this Resource"
38012   },
38013
38014   "n" :
38015     {
38016     "description": "Friendly name of the resource",
38017     "maxLength": 64,
38018     "readOnly": true,
38019     "type": "string"
38020   },
38021
38022   "range" :
38023     {
38024     "description": "The valid range for the value Property",
38025     "items": {
38026       "anyOf": [
38027         {
38028           "type": "number"
38029         },
38030         {
38031           "type": "integer"
38032         }
38033       ]
38034     },
38035     "maxItems": 2,
38036     "minItems": 2,
38037     "readOnly": true,
38038     "type": "array"
38039   },
38040
38041   "step" :
38042     {
38043     "anyOf": [
38044       {
38045         "type": "integer"
38046       },
38047       {
38048         "type": "number"
38049       }

```

```

38050     ],
38051     "description": "Step value across the defined range",
38052     "readOnly": true
38053   },
38054
38055   "id" :
38056     {
38057     "description": "Instance ID of this specific resource",
38058     "maxLength": 64,
38059     "readOnly": true,
38060     "type": "string"
38061   },
38062
38063   "if" :
38064     {
38065     "description": "The interface set supported by this resource",
38066     "items": {
38067       "enum": [
38068         "oic.if.baseline",
38069         "oic.if.ll",
38070         "oic.if.b",
38071         "oic.if.lb",
38072         "oic.if.rw",
38073         "oic.if.r",
38074         "oic.if.a",
38075         "oic.if.s"
38076       ],
38077       "type": "string"
38078     },
38079     "minItems": 1,
38080     "readOnly": true,
38081     "type": "array"
38082   }
38083
38084   }
38085   , "type" : "object"
38086   , "required": ["tester"]
38087 }
38088 }
38089 }
38090

```

38091 B.67.5 Property Definition

38092 **Table 371 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
tester	string	Yes	Read Only	The possible cases of testers who may perform the blood sugar measurement.
range	array: see schema	No	Read Only	The valid range for the value Property
step	multiple types: see schema	No	Read Only	Step value across the defined range
precision	number	No	Read Only	Accuracy granularity of the exposed value

value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
rt	array: see schema	No	Read Only	Resource Type
n	string	No	Read Only	Friendly name of the resource
id	string	No	Read Only	Instance ID of this specific resource
if	array: see schema	No	Read Only	The interface set supported by this resource

38093 **B.67.6 CRUDN behaviour**

38094 **Table 372 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/GlucoseTesterResURI		get			observe

38095 **B.68 Grinder**

38096 **B.68.1 Introduction**

38097 This resource describes the attributes associated with a grinder. The coarseness of the grounds
38098 is an integer. The higher the value, the less coarse. remaining is a percentage that represents
38099 the unground material left.

38100

38101 **B.68.2 Example URI**

38102 /GrinderResURI

38103 **B.68.3 Resource Type**

38104 The resource type (rt) is defined as: ['oic.r.grinder'].

38105 **B.68.4 Swagger2.0 Definition**

```
38106 {
38107   "swagger": "2.0",
38108   "info": {
38109     "title": "Grinder",
38110     "version": "v1.1.0-20170815",
38111     "license": {
38112       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
38113       "x-description": "Redistribution and use in source and binary forms, with or without
38114 modification, are permitted provided that the following conditions are met:\n      1.
38115 Redistributions of source code must retain the above copyright notice, this list of conditions and
38116 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
38117 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
38118 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
38119 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
38120 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
38121 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
38122 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
38123 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
38124 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
38125 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
```

```

38126 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
38127 OF SUCH DAMAGE.\n"
38128 }
38129 },
38130 "schemes": ["http"],
38131 "consumes": ["application/json"],
38132 "produces": ["application/json"],
38133 "paths": {
38134   "/GrinderResURI" : {
38135     "get": {
38136       "description": "This resource describes the attributes associated with a grinder. The
38137 coarseness of the grounds is an integer. The higher the value, the less coarse. remaining is a
38138 percentage that represents the unground material left.\nRetrieves the state of a grinder.\n",
38139       "parameters": [
38140         { "$ref": "#/parameters/interface" }
38141       ],
38142       "responses": {
38143         "200": {
38144           "description": "",
38145           "x-example":
38146             {
38147               "rt": ["oic.r.grinder"],
38148               "id": "unique_example_id",
38149               "coarseness": 10,
38150               "remaining": 50
38151             }
38152         },
38153         "schema": { "$ref": "#/definitions/Grinder" }
38154       }
38155     },
38156   },
38157   "post": {
38158     "description": "Sets grinding values\n",
38159     "parameters": [
38160       { "$ref": "#/parameters/interface" },
38161       {
38162         "name": "body",
38163         "in": "body",
38164         "required": true,
38165         "schema": { "$ref": "#/definitions/GrinderUpdate" },
38166         "x-example":
38167           {
38168             "id": "unique_example_id",
38169             "coarseness": 10
38170           }
38171       }
38172     ],
38173     "responses": {
38174       "200": {
38175         "description": "",
38176         "x-example":
38177           {
38178             "id": "unique_example_id",
38179             "coarseness": 10
38180           }
38181       },
38182       "schema": { "$ref": "#/definitions/GrinderUpdate" }
38183     }
38184   }
38185 }
38186 },
38187 },
38188 "parameters": {
38189   "interface" : {
38190     "in" : "query",
38191     "name" : "if",
38192     "type" : "string",
38193     "enum" : ["oic.if.rw", "oic.if.baseline"]
38194   }
38195 },
38196 "definitions": {

```

```

38197 "Grinder" : {
38198   "properties": {
38199     "coarseness" :
38200     {
38201       "description": "The desired coarseness when grinding.",
38202       "type": "integer"
38203     },
38204
38205     "rt" :
38206     {
38207       "description": "Resource Type",
38208       "items": {
38209         "maxLength": 64,
38210         "type": "string"
38211       },
38212       "minItems": 1,
38213       "readOnly": true,
38214       "type": "array"
38215     },
38216
38217     "remaining" :
38218     {
38219       "description": "The percentage of unground material left.",
38220       "maximum": 100,
38221       "minimum": 0,
38222       "readOnly": true,
38223       "type": "integer"
38224     },
38225
38226     "precision" :
38227     {
38228       "description": "Accuracy granularity of the exposed value",
38229       "readOnly": true,
38230       "type": "number"
38231     },
38232
38233     "value" :
38234     {
38235       "anyOf": [
38236         {
38237           "type": "array"
38238         },
38239         {
38240           "type": "string"
38241         },
38242         {
38243           "type": "boolean"
38244         },
38245         {
38246           "type": "integer"
38247         },
38248         {
38249           "type": "number"
38250         },
38251         {
38252           "type": "object"
38253         }
38254       ],
38255       "description": "The value sensed or actuated by this Resource"
38256     },
38257
38258     "n" :
38259     {
38260       "description": "Friendly name of the resource",
38261       "maxLength": 64,
38262       "readOnly": true,
38263       "type": "string"
38264     },
38265
38266     "range" :
38267     {

```



```

38268         "description": "The valid range for the value Property",
38269         "items": {
38270             "anyOf": [
38271                 {
38272                     "type": "number"
38273                 },
38274                 {
38275                     "type": "integer"
38276                 }
38277             ]
38278         },
38279         "maxItems": 2,
38280         "minItems": 2,
38281         "readOnly": true,
38282         "type": "array"
38283     },
38284     "step" :
38285     {
38286         "anyOf": [
38287             {
38288                 "type": "integer"
38289             },
38290             {
38291                 "type": "number"
38292             }
38293         ],
38294         "description": "Step value across the defined range",
38295         "readOnly": true
38296     },
38297 },
38298 "id" :
38299     {
38300         "description": "Instance ID of this specific resource",
38301         "maxLength": 64,
38302         "readOnly": true,
38303         "type": "string"
38304     },
38305 },
38306 "if" :
38307     {
38308         "description": "The interface set supported by this resource",
38309         "items": {
38310             "enum": [
38311                 "oic.if.baseline",
38312                 "oic.if.ll",
38313                 "oic.if.b",
38314                 "oic.if.lb",
38315                 "oic.if.rw",
38316                 "oic.if.r",
38317                 "oic.if.a",
38318                 "oic.if.s"
38319             ],
38320             "type": "string"
38321         },
38322     },
38323     "minItems": 1,
38324     "readOnly": true,
38325     "type": "array"
38326 }
38327
38328 }
38329 , "type" : "object"
38330 , "required": ["coarseness"]
38331 }
38332 ,
38333 "GrinderUpdate" : {
38334     "properties": {
38335         "coarseness" :
38336         {
38337             "description": "The desired coarseness when grinding.",
38338             "type": "integer"

```

```

38339     },
38340
38341     "rt" :
38342     {
38343         "description": "Resource Type",
38344         "items": {
38345             "maxLength": 64,
38346             "type": "string"
38347         },
38348         "minItems": 1,
38349         "readOnly": true,
38350         "type": "array"
38351     },
38352
38353     "precision" :
38354     {
38355         "description": "Accuracy granularity of the exposed value",
38356         "readOnly": true,
38357         "type": "number"
38358     },
38359
38360     "value" :
38361     {
38362         "anyOf": [
38363             {
38364                 "type": "array"
38365             },
38366             {
38367                 "type": "string"
38368             },
38369             {
38370                 "type": "boolean"
38371             },
38372             {
38373                 "type": "integer"
38374             },
38375             {
38376                 "type": "number"
38377             },
38378             {
38379                 "type": "object"
38380             }
38381         ],
38382         "description": "The value sensed or actuated by this Resource"
38383     },
38384
38385     "n" :
38386     {
38387         "description": "Friendly name of the resource",
38388         "maxLength": 64,
38389         "readOnly": true,
38390         "type": "string"
38391     },
38392
38393     "range" :
38394     {
38395         "description": "The valid range for the value Property",
38396         "items": {
38397             "anyOf": [
38398                 {
38399                     "type": "number"
38400                 },
38401                 {
38402                     "type": "integer"
38403                 }
38404             ]
38405         },
38406         "maxItems": 2,
38407         "minItems": 2,
38408         "readOnly": true,
38409         "type": "array"

```

```

38410 },
38411
38412 "step" :
38413 {
38414   "anyOf": [
38415     {
38416       "type": "integer"
38417     },
38418     {
38419       "type": "number"
38420     }
38421   ],
38422   "description": "Step value across the defined range",
38423   "readOnly": true
38424 },
38425
38426 "id" :
38427 {
38428   "description": "Instance ID of this specific resource",
38429   "maxLength": 64,
38430   "readOnly": true,
38431   "type": "string"
38432 },
38433
38434 "if" :
38435 {
38436   "description": "The interface set supported by this resource",
38437   "items": {
38438     "enum": [
38439       "oic.if.baseline",
38440       "oic.if.ll",
38441       "oic.if.b",
38442       "oic.if.lb",
38443       "oic.if.rw",
38444       "oic.if.r",
38445       "oic.if.a",
38446       "oic.if.s"
38447     ],
38448     "type": "string"
38449   },
38450   "minItems": 1,
38451   "readOnly": true,
38452   "type": "array"
38453 }
38454
38455 },
38456 "type" : "object"
38457 , "required": ["coarseness"]
38458 }
38459 }
38460 }
38461

```

38462 B.68.5 Property Definition

38463 **Table 373 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
precision	number	No	Read Only	Accuracy granularity of the exposed value
n	string	No	Read Only	Friendly name of the resource
if	array: see schema	No	Read Only	

				The interface set supported by this resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
range	array: see schema	No	Read Only	The valid range for the value Property
coarseness	integer	Yes	Read Write	The desired coarseness when grinding.
id	string	No	Read Only	Instance ID of this specific resource
rt	array: see schema	No	Read Only	Resource Type
step	multiple types: see schema	No	Read Only	Step value across the defined range
remaining	integer	No	Read Only	The percentage of unground material left.
precision	number	No	Read Only	Accuracy granularity of the exposed value
n	string	No	Read Only	Friendly name of the resource
if	array: see schema	No	Read Only	The interface set supported by this resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
range	array: see schema	No	Read Only	The valid range for the value Property
coarseness	integer	Yes	Read Write	The desired coarseness when grinding.
id	string	No	Read Only	

				Instance ID of this specific resource
rt	array: see schema	No	Read Only	Resource Type
step	multiple types: see schema	No	Read Only	Step value across the defined range

38464 **B.68.6 CRUDN behaviour**

38465 **Table 374 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/GrinderResURI		get	post		observe

38466 **B.69 Heart Rate Zone**

38467 **B.69.1 Introduction**

38468 This resource describes a measured heart rate by the current Zone using the Zoladz method
 38469 The Zoladz method defines Zones based on maximum heart rate; Zone 1 is the lowest, Zone 5 is
 38470 the highest.

38471 The heartRateZone is an enumeration containing one of: "Zone1", "Zone2", "Zone3", "Zone4",
 38472 "Zone5".

38473

38474 **B.69.2 Example URI**

38475 /HeartRateZoneResURI

38476 **B.69.3 Resource Type**

38477 The resource type (rt) is defined as: ['oic.r.sensor.heart.zone'].

38478 **B.69.4 Swagger2.0 Definition**

```

38479 {
38480   "swagger": "2.0",
38481   "info": {
38482     "title": "Heart Rate Zone",
38483     "version": "v1.1.0-20160519",
38484     "license": {
38485       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
38486       "x-description": "Redistribution and use in source and binary forms, with or without
38487 modification, are permitted provided that the following conditions are met:\n      1.
38488 Redistributions of source code must retain the above copyright notice, this list of conditions and
38489 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
38490 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
38491 other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open
38492 Connectivity Foundation, INC. \ "AS IS\ " AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
38493 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
38494 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
38495 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
38496 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
38497 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
38498 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
38499 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
38500 OF SUCH DAMAGE.\n"
38501   }
38502 },
38503 "schemes": ["http"],
38504 "consumes": ["application/json"],
38505 "produces": ["application/json"],
38506 "paths": {
38507   "/HeartRateZoneResURI" : {

```

```

38508     "get": {
38509         "description": "This resource describes a measured heart rate by the current Zone using the
38510 Zoladz method\nThe Zoladz method defines Zones based on maximum heart rate; Zone 1 is the lowest,
38511 Zone 5 is the highest.\nThe heartRateZone is an enumeration containing one of: \"Zone1\",
38512 \"Zone2\", \"Zone3\", \"Zone4\", \"Zone5\".\n",
38513         "parameters": [
38514             {"$ref": "#/parameters/interface"}
38515         ],
38516         "responses": {
38517             "200": {
38518                 "description": "",
38519                 "x-example":
38520                 {
38521                     "rt": ["oic.r.sensor.heart.zone"],
38522                     "id": "unique_example_id",
38523                     "heartRateZone": "Zone3"
38524                 }
38525             },
38526             "schema": { "$ref": "#/definitions/heartRateZone" }
38527         }
38528     }
38529 }
38530 }
38531 },
38532 "parameters": {
38533     "interface" : {
38534         "in" : "query",
38535         "name" : "if",
38536         "type" : "string",
38537         "enum" : ["oic.if.s", "oic.if.baseline"]
38538     }
38539 },
38540 "definitions": {
38541     "heartRateZone" : {
38542         "properties": {
38543             "rt" :
38544             {
38545                 "description": "Resource Type",
38546                 "items": {
38547                     "maxLength": 64,
38548                     "type": "string"
38549                 },
38550                 "minItems": 1,
38551                 "readOnly": true,
38552                 "type": "array"
38553             },
38554             "step" :
38555             {
38556                 "anyOf": [
38557                     {
38558                         "type": "integer"
38559                     },
38560                     {
38561                         "type": "number"
38562                     }
38563                 ],
38564                 "description": "Step value across the defined range",
38565                 "readOnly": true
38566             },
38567             "precision" :
38568             {
38569                 "description": "Accuracy granularity of the exposed value",
38570                 "readOnly": true,
38571                 "type": "number"
38572             },
38573             "value" :
38574             {
38575                 "anyOf": [

```

```

38579         {
38580             "type": "array"
38581         },
38582         {
38583             "type": "string"
38584         },
38585         {
38586             "type": "boolean"
38587         },
38588         {
38589             "type": "integer"
38590         },
38591         {
38592             "type": "number"
38593         },
38594         {
38595             "type": "object"
38596         }
38597     ],
38598     "description": "The value sensed or actuated by this Resource"
38599 },
38600
38601 "n" :
38602     {
38603         "description": "Friendly name of the resource",
38604         "maxLength": 64,
38605         "readOnly": true,
38606         "type": "string"
38607     },
38608
38609 "range" :
38610     {
38611         "description": "The valid range for the value Property",
38612         "items": {
38613             "anyOf": [
38614                 {
38615                     "type": "number"
38616                 },
38617                 {
38618                     "type": "integer"
38619                 }
38620             ]
38621         },
38622         "maxItems": 2,
38623         "minItems": 2,
38624         "readOnly": true,
38625         "type": "array"
38626     },
38627
38628 "id" :
38629     {
38630         "description": "Instance ID of this specific resource",
38631         "maxLength": 64,
38632         "readOnly": true,
38633         "type": "string"
38634     },
38635
38636 "heartRateZone" :
38637     {
38638         "description": "Current heart rate zone based on the Zoladz system.",
38639         "enum": [
38640             "Zone1",
38641             "Zone2",
38642             "Zone3",
38643             "Zone4",
38644             "Zone5"
38645         ],
38646         "readOnly": true,
38647         "type": "string"
38648     },
38649

```

```

38650     "if" :
38651     {
38652         "description": "The interface set supported by this resource",
38653         "items": {
38654             "enum": [
38655                 "oic.if.baseline",
38656                 "oic.if.ll",
38657                 "oic.if.b",
38658                 "oic.if.lb",
38659                 "oic.if.rw",
38660                 "oic.if.r",
38661                 "oic.if.a",
38662                 "oic.if.s"
38663             ],
38664             "type": "string"
38665         },
38666         "minItems": 1,
38667         "readOnly": true,
38668         "type": "array"
38669     }
38670 }
38671 }
38672 , "type" : "object"
38673 , "required": ["heartRateZone"]
38674 }
38675 }
38676 }
38677

```

38678 B.69.5 Property Definition

38679 **Table 375 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema	No	Read Only	The interface set supported by this resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
id	string	No	Read Only	Instance ID of this specific resource
rt	array: see schema	No	Read Only	Resource Type
heartRateZone	string	Yes	Read Only	Current heart rate zone based on the Zoladz system.
range	array: see schema	No	Read Only	The valid range for the value Property
step	multiple types: see schema	No	Read Only	Step value across the defined range
n	string	No	Read Only	

				Friendly name of the resource
precision	number	No	Read Only	Accuracy granularity of the exposed value

38680 **B.69.6 CRUDN behaviour**

38681 **Table 376 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/HeartRateZoneResURI		get			observe

38682 **B.70 Heating Zone**

38683 **B.70.1 Introduction**

38684 This Resource provides information about the status of a heating zone of a Cook-Top.
 38685 It describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the device
 38686 implements pot recognition).
 38687 maxheatinglevel defines the max level for the heating zone
 38688 heatinglevel is the current heating level of the zone. For each element the value range is from 0
 38689 (indication that the zone is not heating) to maxheatinglevel,
 38690

38691 **B.70.2 Example URI**

38692 /HeatingZoneResURI

38693 **B.70.3 Resource Type**

38694 The resource type (rt) is defined as: ['oic.r.heatingzone'].

38695 **B.70.4 Swagger2.0 Definition**

```

38696 {
38697   "swagger": "2.0",
38698   "info": {
38699     "title": "Heating Zone",
38700     "version": "OCF1.0-20160722",
38701     "license": {
38702       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
38703       "x-description": "Redistribution and use in source and binary forms, with or without
38704 modification, are permitted provided that the following conditions are met:\n      1.
38705 Redistributions of source code must retain the above copyright notice, this list of conditions and
38706 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
38707 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
38708 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
38709 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
38710 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
38711 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
38712 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
38713 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
38714 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
38715 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
38716 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
38717 OF SUCH DAMAGE.\n"
38718     }
38719   },
38720   "schemes": ["http"],
38721   "consumes": ["application/json"],
38722   "produces": ["application/json"],
38723   "paths": {
38724     "/HeatingZoneResURI" : {
38725       "get": {
38726         "description": "This Resource provides information about the status of a heating zone of a
38727 Cook-Top.\nIt describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the
  
```

```

38728 device implements pot recognition).\nmaxheatinglevel defines the max level for the heating
38729 zone\nheatinglevel is the current heating level of the zone\n For each element the value range is
38730 from 0 (indication that the zone is not heating) to maxheatinglevel,\nRetrieves the current heating
38731 zone information.\n",
38732     "parameters": [
38733         {"$ref": "#/parameters/interface"}
38734     ],
38735     "responses": {
38736         "200": {
38737             "description": "",
38738             "x-example":
38739                 {
38740                     "rt": ["oic.r.heatingzone"],
38741                     "id": "unique_example_id",
38742                     "maxheatinglevel": 6,
38743                     "heatinglevel": 0
38744                 }
38745             ,
38746             "schema": { "$ref": "#/definitions/HeatingZone" }
38747         }
38748     }
38749 }
38750 },
38751 },
38752 "parameters": {
38753     "interface" : {
38754         "in" : "query",
38755         "name" : "if",
38756         "type" : "string",
38757         "enum" : ["oic.if.s", "oic.if.baseline"]
38758     }
38759 },
38760 "definitions": {
38761     "HeatingZone" : {
38762         "properties": {
38763             "rt" :
38764                 {
38765                     "description": "Resource Type",
38766                     "items": {
38767                         "maxLength": 64,
38768                         "type": "string"
38769                     },
38770                     "minItems": 1,
38771                     "readOnly": true,
38772                     "type": "array"
38773                 },
38774             "step" :
38775                 {
38776                     "anyOf": [
38777                         {
38778                             "type": "integer"
38779                         },
38780                         {
38781                             "type": "number"
38782                         }
38783                     ],
38784                     "description": "Step value across the defined range",
38785                     "readOnly": true
38786                 },
38787             "id" :
38788                 {
38789                     "description": "Instance ID of this specific resource",
38790                     "maxLength": 64,
38791                     "readOnly": true,
38792                     "type": "string"
38793                 },
38794             "precision" :
38795                 {
38796

```

```

38799     "description": "Accuracy granularity of the exposed value",
38800     "readOnly": true,
38801     "type": "number"
38802 },
38803
38804 "value" :
38805     {
38806     "anyOf": [
38807         {
38808             "type": "array"
38809         },
38810         {
38811             "type": "string"
38812         },
38813         {
38814             "type": "boolean"
38815         },
38816         {
38817             "type": "integer"
38818         },
38819         {
38820             "type": "number"
38821         },
38822         {
38823             "type": "object"
38824         }
38825     ],
38826     "description": "The value sensed or actuated by this Resource"
38827 },
38828
38829 "n" :
38830     {
38831     "description": "Friendly name of the resource",
38832     "maxLength": 64,
38833     "readOnly": true,
38834     "type": "string"
38835     },
38836
38837 "range" :
38838     {
38839     "description": "The valid range for the value Property",
38840     "items": {
38841         "anyOf": [
38842             {
38843                 "type": "number"
38844             },
38845             {
38846                 "type": "integer"
38847             }
38848         ]
38849     },
38850     "maxItems": 2,
38851     "minItems": 2,
38852     "readOnly": true,
38853     "type": "array"
38854     },
38855
38856 "heatinglevel" :
38857     {
38858     "description": "Current heating level for the zone indicated.",
38859     "readOnly": true,
38860     "type": "integer"
38861     },
38862
38863 "maxheatinglevel" :
38864     {
38865     "description": "Maximum heating level for the zone indicated.",
38866     "readOnly": true,
38867     "type": "integer"
38868     },
38869

```

```

38870     "if" :
38871     {
38872         "description": "The interface set supported by this resource",
38873         "items": {
38874             "enum": [
38875                 "oic.if.baseline",
38876                 "oic.if.ll",
38877                 "oic.if.b",
38878                 "oic.if.lb",
38879                 "oic.if.rw",
38880                 "oic.if.r",
38881                 "oic.if.a",
38882                 "oic.if.s"
38883             ],
38884             "type": "string"
38885         },
38886         "minItems": 1,
38887         "readOnly": true,
38888         "type": "array"
38889     }
38890     },
38891     },
38892     "type" : "object"
38893     , "required": ["maxheatinglevel", "heatinglevel"]
38894 }
38895 }
38896 }
38897 }

```

38898 B.70.5 Property Definition

38899 **Table 377 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
id	string	No	Read Only	Instance ID of this specific resource
maxheatinglevel	integer	Yes	Read Only	Maximum heating level for the zone indicated.
step	multiple types: see schema	No	Read Only	Step value across the defined range
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
heatinglevel	integer	Yes	Read Only	Current heating level for the zone indicated.
range	array: see schema	No	Read Only	

				The valid range for the value Property
if	array: see schema	No	Read Only	The interface set supported by this resource
rt	array: see schema	No	Read Only	Resource Type
n	string	No	Read Only	Friendly name of the resource

38900 **B.70.6 CRUDN behaviour**

38901 **Table 378 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/HeatingZoneResURI		get			observe

38902 **B.71 Heating Zone Collection**

38903 **B.71.1 Introduction**

38904 This Resource provides information about the status of the heating zones of a Cook-Top.
 38905 It describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the device
 38906 implements pot recognition).

38907 The resource is a collection of instances of oic.r.heatingzone detailing the individual cooktop
 38908 zones

38909

38910 **B.71.2 Example URI**

38911 /HeatingZoneResURI

38912 **B.71.3 Resource Type**

38913 The resource type (rt) is defined as: ['oic.r.heatingzonecollection', 'oic.wk.col'].

38914 **B.71.4 Swagger2.0 Definition**

```

38915 {
38916   "swagger": "2.0",
38917   "info": {
38918     "title": "Heating Zone Collection",
38919     "version": "OCF1.0-20160722",
38920     "license": {
38921       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
38922       "x-description": "Redistribution and use in source and binary forms, with or without
38923 modification, are permitted provided that the following conditions are met:\n      1.
38924 Redistributions of source code must retain the above copyright notice, this list of conditions and
38925 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
38926 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
38927 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
38928 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
38929 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
38930 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
38931 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
38932 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
38933 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
38934 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
38935 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
38936 OF SUCH DAMAGE.\n"
38937   }
38938 },
38939   "schemes": ["http"],

```

```

38940     "consumes": ["application/json"],
38941     "produces": ["application/json"],
38942     "paths": {
38943         "/HeatingZoneResURI?if=oic.if.ll" : {
38944             "get": {
38945                 "description": "This Resource provides information about the status of the heating zones of
38946 a Cook-Top.\nIt describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the
38947 device implements pot recognition).\nThe resource is a collection of instances of oic.r.heatingzone
38948 detailing the individual cooktop zones\n",
38949                 "parameters": [
38950                     {"$ref": "#/parameters/interface-ll"}
38951                 ],
38952                 "responses": {
38953                     "200": {
38954                         "description": "",
38955                         "x-example":
38956                             [
38957                                 {"href": "/myZone1ResURI", "rt": ["oic.r.heatingzone"], "if": ["oic.if.s"],
38958 "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
38959                                 {"href": "/myZone2ResURI", "rt": ["oic.r.heatingzone"], "if": ["oic.if.s"],
38960 "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
38961                                 {"href": "/myZone3ResURI", "rt": ["oic.r.heatingzone"], "if": ["oic.if.s"],
38962 "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
38963                                 {"href": "/myZone4ResURI", "rt": ["oic.r.heatingzone"], "if": ["oic.if.s"],
38964 "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
38965                             ]
38966                 },
38967                 "schema": {"$ref": "#/definitions/HeatingZone-ll"}
38968             }
38969         }
38970     },
38971 },
38972 "/HeatingZoneResURI?if=oic.if.baseline" : {
38973     "get": {
38974         "description": "This Resource provides information about the status of the heating zones of
38975 a Cook-Top.\nIt describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the
38976 device implements pot recognition).\nThe resource is a collection of instances of oic.r.heatingzone
38977 detailing the individual cooktop zones\nRetrieves the current heating zone information.\n",
38978         "parameters": [
38979             {"$ref": "#/parameters/interface-baseline"}
38980         ],
38981         "responses": {
38982             "200": {
38983                 "description": "",
38984                 "x-example":
38985                     {
38986                         "rt": ["oic.r.heatingzonecollection", "oic.wk.col"],
38987                         "id": "unique_example_id",
38988                         "links": [
38989                             {"href": "/myZone1ResURI", "rt": ["oic.r.heatingzone"], "if":
38990 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
38991                             {"href": "/myZone2ResURI", "rt": ["oic.r.heatingzone"], "if":
38992 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
38993                             {"href": "/myZone3ResURI", "rt": ["oic.r.heatingzone"], "if":
38994 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
38995                             {"href": "/myZone4ResURI", "rt": ["oic.r.heatingzone"], "if":
38996 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
38997                         ]
38998                     }
38999                 },
39000                 "schema": {"$ref": "#/definitions/HeatingZone"}
39001             }
39002         }
39003     }
39004 },
39005 },
39006 "parameters": {
39007     "interface-ll" : {
39008         "in" : "query",
39009         "name" : "if",
39010         "type" : "string",

```

```

39011     "enum" : ["oic.if.ll"]
39012   },
39013   "interface-baseline" : {
39014     "in" : "query",
39015     "name" : "if",
39016     "type" : "string",
39017     "enum" : ["oic.if.baseline"]
39018   },
39019   "interface-all" : {
39020     "in" : "query",
39021     "name" : "if",
39022     "type" : "string",
39023     "enum" : ["oic.if.ll", "oic.if.baseline"]
39024   }
39025 },
39026 "definitions": {
39027   "HeatingZone-ll" : {
39028     "title" :
39029       "Heating Zone Collection Link List Schema (auto merged)"
39030
39031     , "items" :
39032       {
39033         "$ref": "#/definitions/oic.oic-link"
39034       }
39035
39036     , "type" :
39037       "array"
39038
39039   }
39040
39041   "HeatingZone" : {
39042     "properties": {
39043       "rt" :
39044         {
39045           "items": {
39046             "enum": [
39047               "oic.r.heatingzonecollection",
39048               "oic.wk.col"
39049             ],
39050             "type": "string"
39051           },
39052           "maxItems": 2,
39053           "minItems": 2,
39054           "type": "array",
39055           "uniqueItems": true
39056         },
39057
39058     "links" :
39059       {
39060         "description": "A set of simple or individual OIC Links.",
39061         "items": {
39062           "properties": {
39063             "anchor": {
39064               "description": "This is used to override the context URI e.g. override the URI of
39065 the containing collection.",
39066               "format": "uri",
39067               "maxLength": 256,
39068               "type": "string"
39069             },
39070             "di": {
39071               "description": "The Device ID formatted according to IETF RFC 4122.",
39072               "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
39073 9]{12}$",
39074               "type": "string"
39075             },
39076             "eps": {
39077               "description": "the Endpoint information of the target Resource",
39078               "items": {
39079                 "properties": {
39080                   "ep": {
39081                     "description": "Transport Protocol Suite + Endpoint Locator",

```

```

39082         "format": "uri",
39083         "type": "string"
39084     },
39085     "pri": {
39086         "description": "The priority among multiple Endpoints",
39087         "minimum": 1,
39088         "type": "integer"
39089     }
39090 },
39091 "type": "object"
39092 },
39093 "type": "array"
39094 },
39095 "href": {
39096     "description": "This is the target URI, it can be specified as a Relative Reference
39097 or fully-qualified URI.",
39098     "format": "uri",
39099     "maxLength": 256,
39100     "type": "string"
39101 },
39102 "if": {
39103     "description": "The interface set supported by this resource",
39104     "items": {
39105         "enum": [
39106             "oic.if.baseline",
39107             "oic.if.ll",
39108             "oic.if.b",
39109             "oic.if.rw",
39110             "oic.if.r",
39111             "oic.if.a",
39112             "oic.if.s"
39113         ],
39114         "type": "string"
39115     },
39116     "minItems": 1,
39117     "type": "array"
39118 },
39119 "ins": {
39120     "description": "The instance identifier for this web link in an array of web links
39121 - used in collections",
39122     "type": "integer"
39123 },
39124 "p": {
39125     "description": "Specifies the framework policies on the Resource referenced by the
39126 target URI",
39127     "properties": {
39128         "bm": {
39129             "description": "Specifies the framework policies on the Resource referenced by
39130 the target URI for e.g. observable and discoverable",
39131             "type": "integer"
39132         }
39133     },
39134     "required": [
39135         "bm"
39136     ],
39137     "type": "object"
39138 },
39139 "rel": {
39140     "description": "The relation of the target URI referenced by the link to the
39141 context URI",
39142     "oneOf": [
39143         {
39144             "default": [
39145                 "hosts"
39146             ],
39147             "items": {
39148                 "maxLength": 64,
39149                 "type": "string"
39150             },
39151             "minItems": 1,
39152             "type": "array"

```



```

39153         },
39154         {
39155             "default": "hosts",
39156             "maxLength": 64,
39157             "type": "string"
39158         }
39159     ]
39160 },
39161 "rt": {
39162     "description": "Resource Type of the Resource",
39163     "items": {
39164         "maxLength": 64,
39165         "type": "string"
39166     },
39167     "minItems": 1,
39168     "type": "array"
39169 },
39170 "title": {
39171     "description": "A title for the link relation. Can be used by the UI to provide a
39172 context.",
39173     "maxLength": 64,
39174     "type": "string"
39175 },
39176 "type": {
39177     "default": "application/cbor",
39178     "description": "A hint at the representation of the resource referenced by the
39179 target URI. This represents the media types that are used for both accepting and emitting.",
39180     "items": {
39181         "maxLength": 64,
39182         "type": "string"
39183     },
39184     "minItems": 1,
39185     "type": "array"
39186 }
39187 },
39188 "required": [
39189     "href",
39190     "rt",
39191     "if"
39192 ],
39193 "type": "object"
39194 },
39195 "type": "array"
39196 },
39197 "n" :
39198 {
39199     "description": "Friendly name of the resource",
39200     "maxLength": 64,
39201     "readOnly": true,
39202     "type": "string"
39203 },
39204 },
39205 "rts" :
39206 {
39207     "items": {
39208         "anyOf": [
39209             {
39210                 "enum": [
39211                     "oic.r.heatingzone",
39212                     "oic.r.value.conditional"
39213                 ],
39214                 "type": "string"
39215             },
39216             {
39217                 "enum": [
39218                     "oic.r.heatingzone"
39219                 ],
39220                 "type": "string"
39221             }
39222         ]
39223     }

```

```

39224     },
39225     "maxItems": 2,
39226     "minItems": 1,
39227     "type": "array",
39228     "uniqueItems": true
39229   },
39230
39231   "id" :
39232     {
39233     "description": "Instance ID of this specific resource",
39234     "maxLength": 64,
39235     "readOnly": true,
39236     "type": "string"
39237   },
39238
39239   "if" :
39240     {
39241     "description": "The interface set supported by this resource",
39242     "items": {
39243       "enum": [
39244         "oic.if.baseline",
39245         "oic.if.ll",
39246         "oic.if.b",
39247         "oic.if.lb",
39248         "oic.if.rw",
39249         "oic.if.r",
39250         "oic.if.a",
39251         "oic.if.s"
39252       ],
39253       "type": "string"
39254     },
39255     "minItems": 1,
39256     "readOnly": true,
39257     "type": "array"
39258   }
39259 }
39260 },
39261 "type" : "object"
39262 }
39263 , "oic.collection.links.arrayoflinks" :
39264 {
39265   "properties": {
39266     "links": {
39267       "description": "A set of simple or individual OIC Links.",
39268       "items": {
39269         "properties": {
39270           "anchor": {
39271             "description": "This is used to override the context URI e.g. override the URI of
39272 the containing collection.",
39273             "format": "uri",
39274             "maxLength": 256,
39275             "type": "string"
39276           },
39277           "di": {
39278             "description": "The Device ID formatted according to IETF RFC 4122.",
39279             "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
39280 9]{12}$",
39281             "type": "string"
39282           },
39283           "eps": {
39284             "description": "the Endpoint information of the target Resource",
39285             "items": {
39286               "properties": {
39287                 "ep": {
39288                   "description": "Transport Protocol Suite + Endpoint Locator",
39289                   "format": "uri",
39290                   "type": "string"
39291                 },
39292                 "pri": {
39293                   "description": "The priority among multiple Endpoints",
39294                   "minimum": 1,

```

```

39295         "type": "integer"
39296     }
39297 },
39298     "type": "object"
39299 },
39300     "type": "array"
39301 },
39302     "href": {
39303         "description": "This is the target URI, it can be specified as a Relative Reference
39304 or fully-qualified URI.",
39305         "format": "uri",
39306         "maxLength": 256,
39307         "type": "string"
39308     },
39309     "if": {
39310         "description": "The interface set supported by this resource",
39311         "items": {
39312             "enum": [
39313                 "oic.if.baseline",
39314                 "oic.if.ll",
39315                 "oic.if.b",
39316                 "oic.if.rw",
39317                 "oic.if.r",
39318                 "oic.if.a",
39319                 "oic.if.s"
39320             ],
39321             "type": "string"
39322         },
39323         "minItems": 1,
39324         "type": "array"
39325     },
39326     "ins": {
39327         "description": "The instance identifier for this web link in an array of web links
39328 - used in collections",
39329         "type": "integer"
39330     },
39331     "p": {
39332         "description": "Specifies the framework policies on the Resource referenced by the
39333 target URI",
39334         "properties": {
39335             "bm": {
39336                 "description": "Specifies the framework policies on the Resource referenced by
39337 the target URI for e.g. observable and discoverable",
39338                 "type": "integer"
39339             }
39340         },
39341         "required": [
39342             "bm"
39343         ],
39344         "type": "object"
39345     },
39346     "rel": {
39347         "description": "The relation of the target URI referenced by the link to the
39348 context URI",
39349         "oneOf": [
39350             {
39351                 "default": [
39352                     "hosts"
39353                 ],
39354                 "items": {
39355                     "maxLength": 64,
39356                     "type": "string"
39357                 },
39358                 "minItems": 1,
39359                 "type": "array"
39360             },
39361             {
39362                 "default": "hosts",
39363                 "maxLength": 64,
39364                 "type": "string"
39365             }
39366         ]
39367     }

```

```

39366     ]
39367   },
39368   "rt": {
39369     "description": "Resource Type of the Resource",
39370     "items": {
39371       "maxLength": 64,
39372       "type": "string"
39373     },
39374     "minItems": 1,
39375     "type": "array"
39376   },
39377   "title": {
39378     "description": "A title for the link relation. Can be used by the UI to provide a
39379 context.",
39380     "maxLength": 64,
39381     "type": "string"
39382   },
39383   "type": {
39384     "default": "application/cbor",
39385     "description": "A hint at the representation of the resource referenced by the
39386 target URI. This represents the media types that are used for both accepting and emitting.",
39387     "items": {
39388       "maxLength": 64,
39389       "type": "string"
39390     },
39391     "minItems": 1,
39392     "type": "array"
39393   }
39394 },
39395 "required": [
39396   "href",
39397   "rt",
39398   "if"
39399 ],
39400 "type": "object"
39401 },
39402 "type": "array"
39403 }
39404 }
39405 }
39406
39407 , "heatingzonecollection-ll" :
39408 {
39409   "items": {
39410     "$ref": "#/definitions/oic.oic-link"
39411   },
39412   "type": "array"
39413 }
39414
39415 , "oic.core" :
39416 {
39417   "properties": {
39418     "id": {
39419       "description": "Instance ID of this specific resource",
39420       "maxLength": 64,
39421       "readOnly": true,
39422       "type": "string"
39423     },
39424     "if": {
39425       "description": "The interface set supported by this resource",
39426       "items": {
39427         "enum": [
39428           "oic.if.baseline",
39429           "oic.if.ll",
39430           "oic.if.b",
39431           "oic.if.lb",
39432           "oic.if.rw",
39433           "oic.if.r",
39434           "oic.if.a",
39435           "oic.if.s"
39436         ],

```

```

39437         "type": "string"
39438     },
39439     "minItems": 1,
39440     "readOnly": true,
39441     "type": "array"
39442 },
39443 "n": {
39444     "description": "Friendly name of the resource",
39445     "maxLength": 64,
39446     "readOnly": true,
39447     "type": "string"
39448 },
39449 "rt": {
39450     "description": "Resource Type",
39451     "items": {
39452         "maxLength": 64,
39453         "type": "string"
39454     },
39455     "minItems": 1,
39456     "readOnly": true,
39457     "type": "array"
39458 }
39459 },
39460 "type": "object"
39461 }
39462
39463 ,"oic.r.heatingzonecollection" :
39464 {
39465     "properties": {
39466         "rt": {
39467             "items": {
39468                 "enum": [
39469                     "oic.r.heatingzonecollection",
39470                     "oic.wk.col"
39471                 ],
39472                 "type": "string"
39473             },
39474             "maxItems": 2,
39475             "minItems": 2,
39476             "type": "array",
39477             "uniqueItems": true
39478         },
39479         "rts": {
39480             "items": {
39481                 "anyOf": [
39482                     {
39483                         "enum": [
39484                             "oic.r.heatingzone",
39485                             "oic.r.value.conditional"
39486                         ],
39487                         "type": "string"
39488                     },
39489                     {
39490                         "enum": [
39491                             "oic.r.heatingzone"
39492                         ],
39493                         "type": "string"
39494                     }
39495                 ]
39496             },
39497             "maxItems": 2,
39498             "minItems": 1,
39499             "type": "array",
39500             "uniqueItems": true
39501         }
39502     },
39503     "type": "object"
39504 }
39505
39506 ,"oic.collection.properties" :
39507 {

```

```

39508         "description": "A collection is a set of links along with additional properties to describe
39509 the collection itself",
39510         "properties": {
39511             "rts": {
39512                 "$ref": "#/definitions/oic.core/properties/rt",
39513                 "description": "The list of allowable resource types (for Target and anchors) in links
39514 included in the collection"
39515             }
39516         },
39517         "type": "object"
39518     }
39519
39520     , "oic.oic-link" :
39521     {
39522         "properties": {
39523             "anchor": {
39524                 "description": "This is used to override the context URI e.g. override the URI of the
39525 containing collection.",
39526                 "format": "uri",
39527                 "maxLength": 256,
39528                 "type": "string"
39529             },
39530             "di": {
39531                 "description": "The Device ID formatted according to IETF RFC 4122.",
39532                 "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
39533 9]{12}$",
39534                 "type": "string"
39535             },
39536             "eps": {
39537                 "description": "the Endpoint information of the target Resource",
39538                 "items": {
39539                     "properties": {
39540                         "ep": {
39541                             "description": "Transport Protocol Suite + Endpoint Locator",
39542                             "format": "uri",
39543                             "type": "string"
39544                         },
39545                         "pri": {
39546                             "description": "The priority among multiple Endpoints",
39547                             "minimum": 1,
39548                             "type": "integer"
39549                         }
39550                     },
39551                     "type": "object"
39552                 },
39553                 "type": "array"
39554             },
39555             "href": {
39556                 "description": "This is the target URI, it can be specified as a Relative Reference or
39557 fully-qualified URI.",
39558                 "format": "uri",
39559                 "maxLength": 256,
39560                 "type": "string"
39561             },
39562             "if": {
39563                 "description": "The interface set supported by this resource",
39564                 "items": {
39565                     "enum": [
39566                         "oic.if.baseline",
39567                         "oic.if.ll",
39568                         "oic.if.b",
39569                         "oic.if.rw",
39570                         "oic.if.r",
39571                         "oic.if.a",
39572                         "oic.if.s"
39573                     ],
39574                     "type": "string"
39575                 },
39576                 "minItems": 1,
39577                 "type": "array"
39578             },

```

```

39579     "ins": {
39580         "description": "The instance identifier for this web link in an array of web links - used
39581 in collections",
39582         "type": "integer"
39583     },
39584     "p": {
39585         "description": "Specifies the framework policies on the Resource referenced by the target
39586 URI",
39587         "properties": {
39588             "bm": {
39589                 "description": "Specifies the framework policies on the Resource referenced by the
39590 target URI for e.g. observable and discoverable",
39591                 "type": "integer"
39592             }
39593         },
39594         "required": [
39595             "bm"
39596         ],
39597         "type": "object"
39598     },
39599     "rel": {
39600         "description": "The relation of the target URI referenced by the link to the context
39601 URI",
39602         "oneOf": [
39603             {
39604                 "default": [
39605                     "hosts"
39606                 ],
39607                 "items": {
39608                     "maxLength": 64,
39609                     "type": "string"
39610                 },
39611                 "minItems": 1,
39612                 "type": "array"
39613             },
39614             {
39615                 "default": "hosts",
39616                 "maxLength": 64,
39617                 "type": "string"
39618             }
39619         ]
39620     },
39621     "rt": {
39622         "description": "Resource Type of the Resource",
39623         "items": {
39624             "maxLength": 64,
39625             "type": "string"
39626         },
39627         "minItems": 1,
39628         "type": "array"
39629     },
39630     "title": {
39631         "description": "A title for the link relation. Can be used by the UI to provide a
39632 context.",
39633         "maxLength": 64,
39634         "type": "string"
39635     },
39636     "type": {
39637         "default": "application/cbor",
39638         "description": "A hint at the representation of the resource referenced by the target
39639 URI. This represents the media types that are used for both accepting and emitting.",
39640         "items": {
39641             "maxLength": 64,
39642             "type": "string"
39643         },
39644         "minItems": 1,
39645         "type": "array"
39646     }
39647 },
39648 "required": [
39649     "href",

```

```

39650     "rt",
39651     "if"
39652   ],
39653   "type": "object"
39654 }
39655 }
39656 }
39657 }
39658 }

```

B.71.5 Property Definition

Table 379 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
rts	multiple types: see schema		Read Write	The list of allowable resource types (for Target and anchors) in links included in the collection
links	array: see schema	No	Read Write	A set of simple or individual OIC Links.
rts	array: see schema		Read Write	
rt	array: see schema		Read Write	
type	array: see schema	No	Read Write	A hint at the representation of the resource referenced by the target URI. This represents the media types that are used for both accepting and emitting.
anchor	string	No	Read Write	This is used to override the context URI e.g. override the URI of the containing collection.
rt	array: see schema	Yes	Read Write	Resource Type of the Resource
title	string	No	Read Write	A title for the link relation. Can be used by the UI to provide a context.
di	string	No	Read Write	

				The Device ID formatted according to IETF RFC 4122.
p	object: schema see	No	Read Write	Specifies the framework policies on the Resource referenced by the target URI
ins	integer	No	Read Write	The instance identifier for this web link in an array of web links - used in collections
rel	multiple types: see schema	No	Read Write	The relation of the target URI referenced by the link to the context URI
href	string	Yes	Read Write	This is the target URI, it can be specified as a Relative Reference or fully-qualified URI.
if	array: schema see	Yes	Read Write	The interface set supported by this resource
eps	array: schema see	No	Read Write	the Endpoint information of the target Resource
id	string		Read Only	Instance ID of this specific resource
rt	array: schema see		Read Only	Resource Type
n	string		Read Only	Friendly name of the resource
if	array: schema see		Read Only	The interface set supported by this resource
id	string	No	Read Only	

				Instance ID of this specific resource
n	string	No	Read Only	Friendly name of the resource
if	array: see schema	Yes	Read Only	The interface set supported by this resource
links	array: see schema	No	Read Write	A set of simple or individual OIC Links.
rts	array: see schema	No	Read Write	
rt	array: see schema	Yes	Read Write	

39661 **B.71.6 CRUDN behaviour**

39662 **Table 380 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/HeatingZoneResURI		get			observe

39663 **B.72 Height**

39664 **B.72.1 Introduction**

39665 This resource describes the properties associated with height of an object's physical size.

39666 The unit is a single value that is one of m, cm, ft or in.

39667 If the unit Property is missing the default is meters [m].

39668 The unit Property is a read-only value that is provided by the server.

39669 When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.

39670

39671 **B.72.2 Example URI**

39672 /HeightResURI

39673 **B.72.3 Resource Type**

39674 The resource type (rt) is defined as: ['oic.r.height'].

39675 **B.72.4 Swagger2.0 Definition**

```

39676 {
39677   "swagger": "2.0",
39678   "info": {
39679     "title": "Height",
39680     "version": "v1.1.0-20160519",
39681     "license": {
39682       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
39683       "x-description": "Redistribution and use in source and binary forms, with or without
39684 modification, are permitted provided that the following conditions are met:\n      1.
39685 Redistributions of source code must retain the above copyright notice, this list of conditions and
39686 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
39687 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
39688 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
39689 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
39690 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
39691 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
39692 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
39693 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS

```

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39694 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n          HOWEVER CAUSED AND
39695 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
39696 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
39697 OF SUCH DAMAGE.\n"
39698 }
39699 },
39700 "schemes": ["http"],
39701 "consumes": ["application/json"],
39702 "produces": ["application/json"],
39703 "paths": {
39704   "/HeightResURI" : {
39705     "get": {
39706       "description": "This resource describes the properties associated with height of an
39707 object's physical size.\nThe unit is a single value that is one of m, cm, ft or in.\nIf the unit
39708 Property is missing the default is meters [m].\nThe unit Property is a read-only value that is
39709 provided by the server.\nWhen range (from oic.r.baseresource) is omitted the default is 0 to
39710 +MAXFLOAT.\nRetrieves height of an object.\n",
39711       "parameters": [
39712         { "$ref": "#/parameters/interface" }
39713       ],
39714       "responses": {
39715         "200": {
39716           "description": "",
39717           "x-example":
39718             {
39719               "rt": ["oic.r.height"],
39720               "id": "unique_example_id",
39721               "height": 1.8,
39722               "units": "m"
39723             }
39724           ,
39725           "schema": { "$ref": "#/definitions/Height" }
39726         }
39727       }
39728     },
39729     "post": {
39730       "description": "Sets the Height.\n",
39731       "parameters": [
39732         { "$ref": "#/parameters/interface" },
39733         {
39734           "name": "body",
39735           "in": "body",
39736           "required": true,
39737           "schema": { "$ref": "#/definitions/Height" },
39738           "x-example":
39739             {
39740               "id": "unique_example_id",
39741               "height": 1.8,
39742               "units": "m"
39743             }
39744         }
39745       ],
39746       "responses": {
39747         "200": {
39748           "description": "Indicates that the height was successfully changed.\nThe new height
39749 is provided in the response.\n",
39750           "x-example":
39751             {
39752               "id": "unique_example_id",
39753               "height": 1.8,
39754               "units": "m"
39755             }
39756           ,
39757           "schema": { "$ref": "#/definitions/Height" }
39758         },
39759         "403": {
39760           "description": "Indicates that OCF client sent an invalid property value to the
39761 server.\nThe server responds with the current resource representation.\n",
39762           "x-example":
39763             {
39764               "id": "unique_example_id",

```

```

39765         "height": 1.8,
39766         "units": "m"
39767     }
39768     ,
39769     "schema": { "$ref": "#/definitions/Height" }
39770 }
39771 }
39772 }
39773 }
39774 },
39775 "parameters": {
39776     "interface" : {
39777         "in" : "query",
39778         "name" : "if",
39779         "type" : "string",
39780         "enum" : ["oic.if.a", "oic.if.baseline"]
39781     }
39782 },
39783 "definitions": {
39784     "Height" : {
39785         "properties": {
39786             "rt" :
39787                 {
39788                     "description": "Resource Type",
39789                     "items": {
39790                         "maxLength": 64,
39791                         "type": "string"
39792                     },
39793                     "minItems": 1,
39794                     "readOnly": true,
39795                     "type": "array"
39796                 },
39797             "precision" :
39798                 {
39799                     "description": "Accuracy granularity of the exposed value",
39800                     "readOnly": true,
39801                     "type": "number"
39802                 },
39803             "value" :
39804                 {
39805                     "anyOf": [
39806                         {
39807                             "type": "array"
39808                         },
39809                         {
39810                             "type": "string"
39811                         },
39812                         {
39813                             "type": "boolean"
39814                         },
39815                         {
39816                             "type": "integer"
39817                         },
39818                         {
39819                             "type": "number"
39820                         },
39821                         {
39822                             "type": "object"
39823                         }
39824                     ],
39825                     "description": "The value sensed or actuated by this Resource"
39826                 },
39827             "n" :
39828                 {
39829                     "description": "Friendly name of the resource",
39830                     "maxLength": 64,
39831                     "readOnly": true,
39832                     "type": "string"
39833                 }
39834             }
39835         }

```

```

39836     },
39837
39838     "units" :
39839     {
39840         "description": "Height unit",
39841         "enum": [
39842             "m",
39843             "cm",
39844             "ft",
39845             "in"
39846         ],
39847         "readOnly": true,
39848         "type": "string"
39849     },
39850
39851     "range" :
39852     {
39853         "description": "The valid range for the value Property",
39854         "items": {
39855             "anyOf": [
39856                 {
39857                     "type": "number"
39858                 },
39859                 {
39860                     "type": "integer"
39861                 }
39862             ]
39863         },
39864         "maxItems": 2,
39865         "minItems": 2,
39866         "readOnly": true,
39867         "type": "array"
39868     },
39869
39870     "step" :
39871     {
39872         "anyOf": [
39873             {
39874                 "type": "integer"
39875             },
39876             {
39877                 "type": "number"
39878             }
39879         ],
39880         "description": "Step value across the defined range",
39881         "readOnly": true
39882     },
39883
39884     "height" :
39885     {
39886         "description": "Height of an object",
39887         "minimum": 0,
39888         "type": "number"
39889     },
39890
39891     "id" :
39892     {
39893         "description": "Instance ID of this specific resource",
39894         "maxLength": 64,
39895         "readOnly": true,
39896         "type": "string"
39897     },
39898
39899     "if" :
39900     {
39901         "description": "The interface set supported by this resource",
39902         "items": {
39903             "enum": [
39904                 "oic.if.baseline",
39905                 "oic.if.ll",
39906                 "oic.if.b",

```

```

39907         "oic.if.lb",
39908         "oic.if.rw",
39909         "oic.if.r",
39910         "oic.if.a",
39911         "oic.if.s"
39912     ],
39913     "type": "string"
39914 },
39915 "minItems": 1,
39916 "readOnly": true,
39917 "type": "array"
39918 }
39919
39920 }
39921 , "type" : "object"
39922 , "required": ["height"]
39923 }
39924 }
39925 }
39926

```

39927 B.72.5 Property Definition

39928 **Table 381 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
units	string	No	Read Only	Height unit
range	array: see schema	No	Read Only	The valid range for the value Property
id	string	No	Read Only	Instance ID of this specific resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
rt	array: see schema	No	Read Only	Resource Type
if	array: see schema	No	Read Only	The interface set supported by this resource
height	number	Yes	Read Write	Height of an object
step	multiple types: see schema	No	Read Only	Step value across the defined range
n	string	No	Read Only	Friendly name of the resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource

39929 **B.72.6 CRUDN behaviour**

39930 **Table 382 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/HeightResURI		get	post		observe

39931 **B.73 Humidity**

39932 **B.73.1 Introduction**

39933 This resource describes a sensed or desired humidity.
 39934 The value humidity is an integer describing the percentage measured relative humidity.
 39935 The value desiredHumidity is an integer showing the desired target relative humidity.
 39936

39937 **B.73.2 Example URI**

39938 /HumidityResURI

39939 **B.73.3 Resource Type**

39940 The resource type (rt) is defined as: ['oic.r.humidity'].

39941 **B.73.4 Swagger2.0 Definition**

```

39942 {
39943   "swagger": "2.0",
39944   "info": {
39945     "title": "Humidity",
39946     "version": "v1.1.0-20160519",
39947     "license": {
39948       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
39949       "x-description": "Redistribution and use in source and binary forms, with or without
39950 modification, are permitted provided that the following conditions are met:\n      1.
39951 Redistributions of source code must retain the above copyright notice, this list of conditions and
39952 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
39953 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
39954 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
39955 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
39956 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
39957 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
39958 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
39959 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
39960 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND
39961 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
39962 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
39963 OF SUCH DAMAGE.\n"
39964     }
39965   },
39966   "schemes": ["http"],
39967   "consumes": ["application/json"],
39968   "produces": ["application/json"],
39969   "paths": {
39970     "/HumidityResURI" : {
39971       "get": {
39972         "description": "This resource describes a sensed or desired humidity.\nThe value humidity
39973 is an integer describing the percentage measured relative humidity.\nThe value desiredHumidity is
39974 an integer showing the desired target relative humidity.\nRetrieves the current (relative) humidity
39975 level.\n",
39976         "parameters": [
39977           {"$ref": "#/parameters/interface"}
39978         ],
39979         "responses": {
39980           "200": {
39981             "description": "",
39982             "x-example":
39983               {
39984                 "rt": ["oic.r.humidity"],
39985                 "id": "unique_example_id",

```

```

39986         "humidity": 40,
39987         "desiredHumidity": 40
39988     }
39989     ,
39990     "schema": { "$ref": "#/definitions/Humidity" }
39991 }
39992 },
39993 },
39994 "post": {
39995     "description": "Sets the desired relative humidity level.\n",
39996     "parameters": [
39997         { "$ref": "#/parameters/interface" },
39998         {
39999             "name": "body",
40000             "in": "body",
40001             "required": true,
40002             "schema": { "$ref": "#/definitions/HumidityUpdate" },
40003             "x-example":
40004                 {
40005                     "id": "unique_example_id",
40006                     "desiredHumidity": 45
40007                 }
40008         }
40009     ],
40010     "responses": {
40011         "200": {
40012             "description": "Indicates that the relative humidity level was changed.\nThe new
40013 relative humidity level is provided in the response.\n",
40014             "x-example":
40015                 {
40016                     "id": "unique_example_id",
40017                     "desiredHumidity": 45
40018                 }
40019             ,
40020             "schema": { "$ref": "#/definitions/HumidityUpdate" }
40021         }
40022     }
40023 },
40024 },
40025 },
40026 "parameters": {
40027     "interface": {
40028         "in": "query",
40029         "name": "if",
40030         "type": "string",
40031         "enum": ["oic.if.a", "oic.if.s", "oic.if.baseline"]
40032     }
40033 },
40034 "definitions": {
40035     "Humidity": {
40036         "properties": {
40037             "rt":
40038                 {
40039                     "description": "Resource Type",
40040                     "items": {
40041                         "maxLength": 64,
40042                         "type": "string"
40043                     },
40044                     "minItems": 1,
40045                     "readOnly": true,
40046                     "type": "array"
40047                 },
40048             "desiredHumidity":
40049                 {
40050                     "description": "Desired value for Humidity",
40051                     "maximum": 100,
40052                     "minimum": 0,
40053                     "type": "integer"
40054                 }
40055         },
40056     }

```



```

40057     "precision" :
40058         {
40059             "description": "Accuracy granularity of the exposed value",
40060             "readOnly": true,
40061             "type": "number"
40062         },
40063
40064     "value" :
40065         {
40066             "anyOf": [
40067                 {
40068                     "type": "array"
40069                 },
40070                 {
40071                     "type": "string"
40072                 },
40073                 {
40074                     "type": "boolean"
40075                 },
40076                 {
40077                     "type": "integer"
40078                 },
40079                 {
40080                     "type": "number"
40081                 },
40082                 {
40083                     "type": "object"
40084                 }
40085             ],
40086             "description": "The value sensed or actuated by this Resource"
40087         },
40088
40089     "n" :
40090         {
40091             "description": "Friendly name of the resource",
40092             "maxLength": 64,
40093             "readOnly": true,
40094             "type": "string"
40095         },
40096
40097     "range" :
40098         {
40099             "description": "The valid range for the value Property",
40100             "items": {
40101                 "anyOf": [
40102                     {
40103                         "type": "number"
40104                     },
40105                     {
40106                         "type": "integer"
40107                     }
40108                 ]
40109             },
40110             "maxItems": 2,
40111             "minItems": 2,
40112             "readOnly": true,
40113             "type": "array"
40114         },
40115
40116     "step" :
40117         {
40118             "anyOf": [
40119                 {
40120                     "type": "integer"
40121                 },
40122                 {
40123                     "type": "number"
40124                 }
40125             ],
40126             "description": "Step value across the defined range",
40127             "readOnly": true

```

```

40128     },
40129
40130     "humidity" :
40131     {
40132         "description": "Current sensed value for Humidity",
40133         "maximum": 100,
40134         "minimum": 0,
40135         "readOnly": true,
40136         "type": "integer"
40137     },
40138
40139     "id" :
40140     {
40141         "description": "Instance ID of this specific resource",
40142         "maxLength": 64,
40143         "readOnly": true,
40144         "type": "string"
40145     },
40146
40147     "if" :
40148     {
40149         "description": "The interface set supported by this resource",
40150         "items": {
40151             "enum": [
40152                 "oic.if.baseline",
40153                 "oic.if.ll",
40154                 "oic.if.b",
40155                 "oic.if.lb",
40156                 "oic.if.rw",
40157                 "oic.if.r",
40158                 "oic.if.a",
40159                 "oic.if.s"
40160             ],
40161             "type": "string"
40162         },
40163         "minItems": 1,
40164         "readOnly": true,
40165         "type": "array"
40166     }
40167
40168     },
40169     "type" : "object"
40170 },
40171 "required": ["humidity"]
40172 }
40173
40174 "HumidityUpdate" : {
40175     "properties": {
40176         "rt" :
40177         {
40178             "description": "Resource Type",
40179             "items": {
40180                 "maxLength": 64,
40181                 "type": "string"
40182             },
40183             "minItems": 1,
40184             "readOnly": true,
40185             "type": "array"
40186         },
40187
40188         "desiredHumidity" :
40189         {
40190             "description": "Desired value for Humidity",
40191             "maximum": 100,
40192             "minimum": 0,
40193             "type": "integer"
40194         },
40195
40196         "precision" :
40197         {
40198             "description": "Accuracy granularity of the exposed value",
40199             "readOnly": true,

```

```

40199     "type": "number"
40200   },
40201
40202   "value" :
40203     {
40204       "anyOf": [
40205         {
40206           "type": "array"
40207         },
40208         {
40209           "type": "string"
40210         },
40211         {
40212           "type": "boolean"
40213         },
40214         {
40215           "type": "integer"
40216         },
40217         {
40218           "type": "number"
40219         },
40220         {
40221           "type": "object"
40222         }
40223       ],
40224       "description": "The value sensed or actuated by this Resource"
40225     },
40226
40227   "n" :
40228     {
40229       "description": "Friendly name of the resource",
40230       "maxLength": 64,
40231       "readOnly": true,
40232       "type": "string"
40233     },
40234
40235   "range" :
40236     {
40237       "description": "The valid range for the value Property",
40238       "items": {
40239         "anyOf": [
40240           {
40241             "type": "number"
40242           },
40243           {
40244             "type": "integer"
40245           }
40246         ]
40247       },
40248       "maxItems": 2,
40249       "minItems": 2,
40250       "readOnly": true,
40251       "type": "array"
40252     },
40253
40254   "step" :
40255     {
40256       "anyOf": [
40257         {
40258           "type": "integer"
40259         },
40260         {
40261           "type": "number"
40262         }
40263       ],
40264       "description": "Step value across the defined range",
40265       "readOnly": true
40266     },
40267
40268   "id" :
40269     {

```

```

40270     "description": "Instance ID of this specific resource",
40271     "maxLength": 64,
40272     "readOnly": true,
40273     "type": "string"
40274 },
40275
40276 "if" :
40277     {
40278     "description": "The interface set supported by this resource",
40279     "items": {
40280         "enum": [
40281             "oic.if.baseline",
40282             "oic.if.ll",
40283             "oic.if.b",
40284             "oic.if.lb",
40285             "oic.if.rw",
40286             "oic.if.r",
40287             "oic.if.a",
40288             "oic.if.s"
40289         ],
40290         "type": "string"
40291     },
40292     "minItems": 1,
40293     "readOnly": true,
40294     "type": "array"
40295     }
40296 }
40297
40298 , "type" : "object"
40299 }
40300 }
40301 }
40302

```

40303 B.73.5 Property Definition

40304 **Table 383 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
range	array: see schema	No	Read Only	The valid range for the value Property
rt	array: see schema	No	Read Only	Resource Type
desiredHumidity	integer	No	Read Write	Desired value for Humidity
id	string	No	Read Only	Instance ID of this specific resource
if	array: see schema	No	Read Only	The interface set supported by this resource
precision	number	No	Read Only	

				Accuracy granularity of the exposed value
n	string	No	Read Only	Friendly name of the resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
humidity	integer	Yes	Read Only	Current sensed value for Humidity
value	multiple types: see schema		Read Write	The value sensed or actuated by this Resource
range	array: see schema		Read Only	The valid range for the value Property
rt	array: see schema		Read Only	Resource Type
desiredHumidity	integer		Read Write	Desired value for Humidity
id	string		Read Only	Instance ID of this specific resource
if	array: see schema		Read Only	The interface set supported by this resource
precision	number		Read Only	Accuracy granularity of the exposed value
n	string		Read Only	Friendly name of the resource
step	multiple types: see schema		Read Only	Step value across the defined range

40305

B.73.6 CRUDN behaviour

40306

Table 384 The CRUDN operations of the resource

Resource	Create	Read	Update	Delete	Notify
/HumidityResURI		get	post		observe

40307 **B.74 Ice Maker**

40308 **B.74.1 Introduction**

40309 This resource describes the operational state of an Ice Maker.
40310 The status is a string containing a value from the set of possible ice maker statuses.
40311 The possible statuses are defined by the enumeration [on, off, full]
40312 A status of 'on' means that the Ice Maker is operating.
40313 A status of 'off' means that the Ice Maker is not operating.
40314 A status of 'full' means that the ice collection bin is full (Ice Maker is operating).
40315

40316 **B.74.2 Example URI**

40317 /IceMakerResURI

40318 **B.74.3 Resource Type**

40319 The resource type (rt) is defined as: ['oic.r.icemaker'].

40320 **B.74.4 Swagger2.0 Definition**

```
40321 {  
40322   "swagger": "2.0",  
40323   "info": {  
40324     "title": "Ice Maker",  
40325     "version": "v1.1.0-20160519",  
40326     "license": {  
40327       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
40328       "x-description": "Redistribution and use in source and binary forms, with or without  
40329 modification, are permitted provided that the following conditions are met:\n      1.  
40330 Redistributions of source code must retain the above copyright notice, this list of conditions and  
40331 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
40332 copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
40333 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open  
40334 Connectivity Foundation, INC. \\\nAS IS\\n AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT  
40335 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR  
40336 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity  
40337 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,  
40338 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS  
40339 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND  
40340 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR  
40341 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY  
40342 OF SUCH DAMAGE.\n\n"}  
40343   },  
40344   },  
40345   "schemes": ["http"],  
40346   "consumes": ["application/json"],  
40347   "produces": ["application/json"],  
40348   "paths": {  
40349     "/IceMakerResURI" : {  
40350       "get": {  
40351         "description": "This resource describes an the operational state of an Ice Maker.\n\nThe  
40352 status is a string containing a value from the set of possible ice maker statuses.\n\nThe possible  
40353 statuses are defined by the enumeration [on, off, full]\n\nA status of 'on' means that the Ice Maker  
40354 is operating.\n\nA status of 'off' means that the Ice Maker is not operating.\n\nA status of 'full'  
40355 means that the ice collection bin is full (Ice Maker is operating).\n\nRetrieves the current Ice  
40356 Maker status.\n\n",  
40357         "parameters": [  
40358           { "$ref": "#/parameters/interface" }  
40359         ],  
40360         "responses": {  
40361           "200": {  
40362             "description": "",  
40363             "x-example":  
40364               {  
40365                 "rt": ["oic.r.icemaker"],  
40366                 "id": "unique_example_id",  
40367                 "status": "on"  
40368               }  
40369           }  
40370         }  
40371       }  
40372     }  
40373   }  
40374 }
```

```

40369         '
40370         "schema": { "$ref": "#/definitions/IceMaker" }
40371     }
40372 }
40373 },
40374 "post": {
40375     "description": "Sets the desired Ice Maker status.\nOnly valid settings for status in a
40376 Post shall be [on,off].\n",
40377     "parameters": [
40378         { "$ref": "#/parameters/interface" },
40379         {
40380             "name": "body",
40381             "in": "body",
40382             "required": true,
40383             "schema": { "$ref": "#/definitions/IceMakerUpdate" },
40384             "x-example":
40385                 {
40386                     "id": "unique_example_id",
40387                     "status": "off"
40388                 }
40389         }
40390     ],
40391     "responses": {
40392         "200": {
40393             "description": "Indicates that the Ice Maker status was changed.\nThe new status is
40394 provided in the response.\n",
40395             "x-example":
40396                 {
40397                     "id": "unique_example_id",
40398                     "status": "off"
40399                 }
40400             ,
40401             "schema": { "$ref": "#/definitions/IceMakerUpdate" }
40402         },
40403         "403": {
40404             "description": "This response is generated by the OIC Server when the client
40405 sends:\n An update with an invalid property value for status.\nThe server responds with the
40406 current resource representation.\n",
40407             "x-example":
40408                 {
40409                     "id": "unique_example_id",
40410                     "status": "off"
40411                 }
40412             ,
40413             "schema": { "$ref": "#/definitions/IceMakerUpdate" }
40414         }
40415     }
40416 }
40417 },
40418 },
40419 "parameters": {
40420     "interface" : {
40421         "in" : "query",
40422         "name" : "if",
40423         "type" : "string",
40424         "enum" : ["oic.if.a", "oic.if.baseline"]
40425     }
40426 },
40427 "definitions": {
40428     "IceMaker" : {
40429         "properties": {
40430             "rt" :
40431                 {
40432                     "description": "Resource Type",
40433                     "items": {
40434                         "maxLength": 64,
40435                         "type": "string"
40436                     },
40437                     "minItems": 1,
40438                     "readOnly": true,
40439                     "type": "array"

```

```

40440     },
40441
40442     "status" :
40443     {
40444         "description": "Status of the Ice Maker",
40445         "enum": [
40446             "on",
40447             "off",
40448             "full"
40449         ],
40450         "type": "string"
40451     },
40452
40453     "precision" :
40454     {
40455         "description": "Accuracy granularity of the exposed value",
40456         "readOnly": true,
40457         "type": "number"
40458     },
40459
40460     "value" :
40461     {
40462         "anyOf": [
40463             {
40464                 "type": "array"
40465             },
40466             {
40467                 "type": "string"
40468             },
40469             {
40470                 "type": "boolean"
40471             },
40472             {
40473                 "type": "integer"
40474             },
40475             {
40476                 "type": "number"
40477             },
40478             {
40479                 "type": "object"
40480             }
40481         ],
40482         "description": "The value sensed or actuated by this Resource"
40483     },
40484
40485     "n" :
40486     {
40487         "description": "Friendly name of the resource",
40488         "maxLength": 64,
40489         "readOnly": true,
40490         "type": "string"
40491     },
40492
40493     "range" :
40494     {
40495         "description": "The valid range for the value Property",
40496         "items": {
40497             "anyOf": [
40498                 {
40499                     "type": "number"
40500                 },
40501                 {
40502                     "type": "integer"
40503                 }
40504             ]
40505         },
40506         "maxItems": 2,
40507         "minItems": 2,
40508         "readOnly": true,
40509         "type": "array"
40510     },

```



```

40511
40512     "step" :
40513     {
40514         "anyOf": [
40515             {
40516                 "type": "integer"
40517             },
40518             {
40519                 "type": "number"
40520             }
40521         ],
40522         "description": "Step value across the defined range",
40523         "readOnly": true
40524     },
40525
40526     "id" :
40527     {
40528         "description": "Instance ID of this specific resource",
40529         "maxLength": 64,
40530         "readOnly": true,
40531         "type": "string"
40532     },
40533
40534     "if" :
40535     {
40536         "description": "The interface set supported by this resource",
40537         "items": {
40538             "enum": [
40539                 "oic.if.baseline",
40540                 "oic.if.ll",
40541                 "oic.if.b",
40542                 "oic.if.lb",
40543                 "oic.if.rw",
40544                 "oic.if.r",
40545                 "oic.if.a",
40546                 "oic.if.s"
40547             ],
40548             "type": "string"
40549         },
40550         "minItems": 1,
40551         "readOnly": true,
40552         "type": "array"
40553     }
40554
40555     },
40556     "type" : "object"
40557 , "required": ["status"]
40558 }
40559 ,
40560 "IceMakerUpdate" : {
40561     "properties": {
40562         "rt" :
40563         {
40564             "description": "Resource Type",
40565             "items": {
40566                 "maxLength": 64,
40567                 "type": "string"
40568             },
40569             "minItems": 1,
40570             "readOnly": true,
40571             "type": "array"
40572         },
40573
40574         "status" :
40575         {
40576             "description": "Set the status of the Ice Maker",
40577             "enum": [
40578                 "on",
40579                 "off"
40580             ]
40581         },

```

```

40582
40583     "precision" :
40584         {
40585             "description": "Accuracy granularity of the exposed value",
40586             "readOnly": true,
40587             "type": "number"
40588         },
40589
40590     "value" :
40591         {
40592             "anyOf": [
40593                 {
40594                     "type": "array"
40595                 },
40596                 {
40597                     "type": "string"
40598                 },
40599                 {
40600                     "type": "boolean"
40601                 },
40602                 {
40603                     "type": "integer"
40604                 },
40605                 {
40606                     "type": "number"
40607                 },
40608                 {
40609                     "type": "object"
40610                 }
40611             ],
40612             "description": "The value sensed or actuated by this Resource"
40613         },
40614
40615     "n" :
40616         {
40617             "description": "Friendly name of the resource",
40618             "maxLength": 64,
40619             "readOnly": true,
40620             "type": "string"
40621         },
40622
40623     "range" :
40624         {
40625             "description": "The valid range for the value Property",
40626             "items": {
40627                 "anyOf": [
40628                     {
40629                         "type": "number"
40630                     },
40631                     {
40632                         "type": "integer"
40633                     }
40634                 ]
40635             },
40636             "maxItems": 2,
40637             "minItems": 2,
40638             "readOnly": true,
40639             "type": "array"
40640         },
40641
40642     "step" :
40643         {
40644             "anyOf": [
40645                 {
40646                     "type": "integer"
40647                 },
40648                 {
40649                     "type": "number"
40650                 }
40651             ],
40652             "description": "Step value across the defined range",

```

```

40653     "readOnly": true
40654   },
40655   "id" :
40656     {
40657       "description": "Instance ID of this specific resource",
40658       "maxLength": 64,
40659       "readOnly": true,
40660       "type": "string"
40661     },
40662   "if" :
40663     {
40664       "description": "The interface set supported by this resource",
40665       "items": {
40666         "enum": [
40667           "oic.if.baseline",
40668           "oic.if.ll",
40669           "oic.if.b",
40670           "oic.if.lb",
40671           "oic.if.rw",
40672           "oic.if.r",
40673           "oic.if.a",
40674           "oic.if.s"
40675         ],
40676         "type": "string"
40677       },
40678       "minItems": 1,
40679       "readOnly": true,
40680       "type": "array"
40681     }
40682   },
40683   "type" : "object"
40684   , "required": ["status"]
40685 }
40686 }
40687 }
40688 }
40689 }
40690 }
40691 }

```

B.74.5 Property Definition

Table 385 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
id	string	No	Read Only	Instance ID of this specific resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
n	string	No	Read Only	Friendly name of the resource
status	multiple types: see schema	Yes	Read Write	

				Set the status of the Ice Maker
range	array: schema see	No	Read Only	The valid range for the value Property
precision	number	No	Read Only	Accuracy granularity of the exposed value
if	array: schema see	No	Read Only	The interface set supported by this resource
rt	array: schema see	No	Read Only	Resource Type
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
id	string	No	Read Only	Instance ID of this specific resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
n	string	No	Read Only	Friendly name of the resource
status	string	Yes	Read Write	Status of the Ice Maker
range	array: schema see	No	Read Only	The valid range for the value Property
precision	number	No	Read Only	Accuracy granularity of the exposed value
if	array: schema see	No	Read Only	The interface set supported by this resource

40694

B.74.6 CRUDN behaviour

40695

Table 386 The CRUDN operations of the resource

Resource	Create	Read	Update	Delete	Notify
/IceMakerResURI		get	post		observe

40696 **B.75 Illuminance Sensor**

40697 **B.75.1 Introduction**

40698 This resource describes an illuminance sensor.
40699 Illuminance is a float and represents the sensed luminous flux per unit area in lux.
40700

40701 **B.75.2 Example URI**

40702 /IlluminanceSensorResURI

40703 **B.75.3 Resource Type**

40704 The resource type (rt) is defined as: ['oic.r.sensor.illuminance'].

40705 **B.75.4 Swagger2.0 Definition**

```

40706 {
40707   "swagger": "2.0",
40708   "info": {
40709     "title": "Illuminance Sensor",
40710     "version": "v1.1.0-20160519",
40711     "license": {
40712       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
40713       "x-description": "Redistribution and use in source and binary forms, with or without
40714 modification, are permitted provided that the following conditions are met:\n      1.
40715 Redistributions of source code must retain the above copyright notice, this list of conditions and
40716 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
40717 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
40718 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
40719 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
40720 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
40721 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
40722 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
40723 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
40724 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
40725 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
40726 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
40727 OF SUCH DAMAGE.\n"
40728     }
40729   },
40730   "schemes": ["http"],
40731   "consumes": ["application/json"],
40732   "produces": ["application/json"],
40733   "paths": {
40734     "/IlluminanceSensorResURI" : {
40735       "get": {
40736         "description": "This resource describes an illuminance sensor.\nIlluminance is a float and
40737 represents the sensed luminous flux per unit area in lux.\n",
40738         "parameters": [
40739           {"$ref": "#/parameters/interface"}
40740         ],
40741         "responses": {
40742           "200": {
40743             "description": "",
40744             "x-example":
40745               {
40746                 "rt": ["oic.r.sensor.illuminance"],
40747                 "id": "unique_example_id",
40748                 "illuminance": 450.0
40749               }
40750           },
40751           "schema": { "$ref": "#/definitions/Illuminance" }
40752         }
40753       }
40754     }
40755   },
40756   "parameters": {
40757     "interface" : {

```

```

40759     "in" : "query",
40760     "name" : "if",
40761     "type" : "string",
40762     "enum" : ["oic.if.s", "oic.if.baseline"]
40763   }
40764 },
40765 "definitions": {
40766   "Illuminance" : {
40767     "properties": {
40768       "rt" :
40769         {
40770           "description": "Resource Type",
40771           "items": {
40772             "maxLength": 64,
40773             "type": "string"
40774           },
40775           "minItems": 1,
40776           "readOnly": true,
40777           "type": "array"
40778         },
40779     "precision" :
40780       {
40781         "description": "Accuracy granularity of the exposed value",
40782         "readOnly": true,
40783         "type": "number"
40784       },
40785     "value" :
40786       {
40787         "anyOf": [
40788           {
40789             "type": "array"
40790           },
40791           {
40792             "type": "string"
40793           },
40794           {
40795             "type": "boolean"
40796           },
40797           {
40798             "type": "integer"
40799           },
40800           {
40801             "type": "number"
40802           },
40803           {
40804             "type": "object"
40805           }
40806         ],
40807         "description": "The value sensed or actuated by this Resource"
40808       },
40809     "n" :
40810       {
40811         "description": "Friendly name of the resource",
40812         "maxLength": 64,
40813         "readOnly": true,
40814         "type": "string"
40815       },
40816     "illuminance" :
40817       {
40818         "description": "Sensed luminous flux per unit area in lux.",
40819         "readOnly": true,
40820         "type": "number"
40821       },
40822     "range" :
40823       {
40824         "description": "The valid range for the value Property",

```

```

40830     "items": {
40831         "anyOf": [
40832             {
40833                 "type": "number"
40834             },
40835             {
40836                 "type": "integer"
40837             }
40838         ]
40839     },
40840     "maxItems": 2,
40841     "minItems": 2,
40842     "readOnly": true,
40843     "type": "array"
40844 },
40845
40846 "step" :
40847     {
40848         "anyOf": [
40849             {
40850                 "type": "integer"
40851             },
40852             {
40853                 "type": "number"
40854             }
40855         ],
40856         "description": "Step value across the defined range",
40857         "readOnly": true
40858     },
40859
40860 "id" :
40861     {
40862         "description": "Instance ID of this specific resource",
40863         "maxLength": 64,
40864         "readOnly": true,
40865         "type": "string"
40866     },
40867
40868 "if" :
40869     {
40870         "description": "The interface set supported by this resource",
40871         "items": {
40872             "enum": [
40873                 "oic.if.baseline",
40874                 "oic.if.ll",
40875                 "oic.if.b",
40876                 "oic.if.lb",
40877                 "oic.if.rw",
40878                 "oic.if.r",
40879                 "oic.if.a",
40880                 "oic.if.s"
40881             ],
40882             "type": "string"
40883         },
40884         "minItems": 1,
40885         "readOnly": true,
40886         "type": "array"
40887     }
40888
40889     }
40890     , "type" : "object"
40891     , "required": ["illuminance"]
40892 }
40893 }
40894 }
40895

```

40896

B.75.5 Property Definition

40897

Table 387 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
illuminance	number	Yes	Read Only	Sensed luminous flux per unit area in lux.
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
n	string	No	Read Only	Friendly name of the resource
rt	array: see schema	No	Read Only	Resource Type
range	array: see schema	No	Read Only	The valid range for the value Property
if	array: see schema	No	Read Only	The interface set supported by this resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
id	string	No	Read Only	Instance ID of this specific resource

40898

B.75.6 CRUDN behaviour

40899

Table 388 The CRUDN operations of the resource

Resource	Create	Read	Update	Delete	Notify
/IlluminanceSensorResURI		get			observe

40900

B.76 Liquid Level

40901

B.76.1 Introduction

40902 This resource describes the attributes associated with liquid level. The current level and desired
 40903 level are defined in terms of a percentage. The behaviour of when the currentlevel and
 40904 desiredlevel are not equal is determined by the device manufacturer.
 40905

40906

B.76.2 Example URI

40907

/LiquidLevelResURI

40908 **B.76.3 Resource Type**

40909 The resource type (rt) is defined as: ['oic.r.liquid.level'].

40910 **B.76.4 Swagger2.0 Definition**

```
40911 {
40912   "swagger": "2.0",
40913   "info": {
40914     "title": "Liquid Level",
40915     "version": "v1.1.0-20160519",
40916     "license": {
40917       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
40918       "x-description": "Redistribution and use in source and binary forms, with or without
40919 modification, are permitted provided that the following conditions are met:\n      1.
40920 Redistributions of source code must retain the above copyright notice, this list of conditions and
40921 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
40922 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
40923 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
40924 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
40925 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
40926 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
40927 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
40928 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
40929 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
40930 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
40931 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
40932 OF SUCH DAMAGE.\n"
40933     }
40934   },
40935   "schemes": ["http"],
40936   "consumes": ["application/json"],
40937   "produces": ["application/json"],
40938   "paths": {
40939     "/LiquidLevelResURI" : {
40940       "get": {
40941         "description": "This resource describes the attributes associated with liquid level. The
40942 current level and desired level are defined in terms of a percentage. The behaviour of when the
40943 currentlevel and desiredlevel are not equal is determined by the device manufacturer.\nRetrieves
40944 the state of liquid level.\n",
40945         "parameters": [
40946           { "$ref": "#/parameters/interface" }
40947         ],
40948         "responses": {
40949           "200": {
40950             "description": "",
40951             "x-example":
40952             {
40953               "rt": ["oic.r.liquid.level"],
40954               "id": "unique_example_id",
40955               "currentlevel": 60,
40956               "desiredlevel": 80
40957             }
40958           },
40959           "schema": { "$ref": "#/definitions/LiquidLevel" }
40960         }
40961       }
40962     },
40963     "post": {
40964       "description": "Sets liquid level values\n",
40965       "parameters": [
40966         { "$ref": "#/parameters/interface" },
40967         {
40968           "name": "body",
40969           "in": "body",
40970           "required": true,
40971           "schema": { "$ref": "#/definitions/LiquidLevelUpdate" },
40972           "x-example":
40973           {
40974             "id": "unique_example_id",
40975             "desiredlevel": 80
40976           }
40977         }
40978       ]
40979     }
40980   }
40981 }
```

```

40977     }
40978   ],
40979   "responses": {
40980     "200": {
40981       "description": "",
40982       "x-example":
40983         {
40984           "id": "unique_example_id",
40985           "desiredlevel": 80
40986         }
40987     },
40988     "schema": { "$ref": "#/definitions/LiquidLevelUpdate" }
40989   }
40990 }
40991 }
40992 }
40993 },
40994 "parameters": {
40995   "interface": {
40996     "in": "query",
40997     "name": "if",
40998     "type": "string",
40999     "enum": ["oic.if.rw", "oic.if.r", "oic.if.baseline"]
41000   }
41001 },
41002 "definitions": {
41003   "LiquidLevel": {
41004     "properties": {
41005       "rt":
41006         {
41007           "description": "Resource Type",
41008           "items": {
41009             "maxLength": 64,
41010             "type": "string"
41011           },
41012           "minItems": 1,
41013           "readOnly": true,
41014           "type": "array"
41015         },
41016       "currentlevel":
41017         {
41018           "description": "The current level of the liquid in percentage.",
41019           "maximum": 100,
41020           "minimum": 0,
41021           "readOnly": true,
41022           "type": "integer"
41023         },
41024       "precision":
41025         {
41026           "description": "Accuracy granularity of the exposed value",
41027           "readOnly": true,
41028           "type": "number"
41029         },
41030       "value":
41031         {
41032           "anyOf": [
41033             {
41034               "type": "array"
41035             },
41036             {
41037               "type": "string"
41038             },
41039             {
41040               "type": "boolean"
41041             },
41042             {
41043               "type": "integer"
41044             }
41045           ]
41046         }
41047     }

```

```

41048         {
41049             "type": "number"
41050         },
41051         {
41052             "type": "object"
41053         }
41054     ],
41055     "description": "The value sensed or actuated by this Resource"
41056 },
41057
41058 "n" :
41059     {
41060         "description": "Friendly name of the resource",
41061         "maxLength": 64,
41062         "readOnly": true,
41063         "type": "string"
41064     },
41065
41066 "range" :
41067     {
41068         "description": "The valid range for the value Property",
41069         "items": {
41070             "anyOf": [
41071                 {
41072                     "type": "number"
41073                 },
41074                 {
41075                     "type": "integer"
41076                 }
41077             ]
41078         },
41079         "maxItems": 2,
41080         "minItems": 2,
41081         "readOnly": true,
41082         "type": "array"
41083     },
41084
41085 "step" :
41086     {
41087         "anyOf": [
41088             {
41089                 "type": "integer"
41090             },
41091             {
41092                 "type": "number"
41093             }
41094         ],
41095         "description": "Step value across the defined range",
41096         "readOnly": true
41097     },
41098
41099 "desiredlevel" :
41100     {
41101         "description": "The desired level of the liquid in percentage.",
41102         "maximum": 100,
41103         "minimum": 0,
41104         "type": "integer"
41105     },
41106
41107 "id" :
41108     {
41109         "description": "Instance ID of this specific resource",
41110         "maxLength": 64,
41111         "readOnly": true,
41112         "type": "string"
41113     },
41114
41115 "if" :
41116     {
41117         "description": "The interface set supported by this resource",
41118         "items": {

```

```

41119         "enum": [
41120             "oic.if.baseline",
41121             "oic.if.ll",
41122             "oic.if.b",
41123             "oic.if.lb",
41124             "oic.if.rw",
41125             "oic.if.r",
41126             "oic.if.a",
41127             "oic.if.s"
41128         ],
41129         "type": "string"
41130     },
41131     "minItems": 1,
41132     "readOnly": true,
41133     "type": "array"
41134 }
41135 }
41136 },
41137 "type" : "object"
41138 , "required": ["currentlevel"]
41139 }
41140 ,
41141 "LiquidLevelUpdate" : {
41142     "properties": {
41143         "rt" :
41144             {
41145                 "description": "Resource Type",
41146                 "items": {
41147                     "maxLength": 64,
41148                     "type": "string"
41149                 },
41150                 "minItems": 1,
41151                 "readOnly": true,
41152                 "type": "array"
41153             },
41154     "precision" :
41155         {
41156             "description": "Accuracy granularity of the exposed value",
41157             "readOnly": true,
41158             "type": "number"
41159         },
41160     "value" :
41161         {
41162             "anyOf": [
41163                 {
41164                     "type": "array"
41165                 },
41166                 {
41167                     "type": "string"
41168                 },
41169                 {
41170                     "type": "boolean"
41171                 },
41172                 {
41173                     "type": "integer"
41174                 },
41175                 {
41176                     "type": "number"
41177                 },
41178                 {
41179                     "type": "object"
41180                 }
41181             ],
41182             "description": "The value sensed or actuated by this Resource"
41183         },
41184     "n" :
41185         {
41186             "description": "Friendly name of the resource",

```

```

41190         "maxLength": 64,
41191         "readOnly": true,
41192         "type": "string"
41193     },
41194     "range" :
41195     {
41196         "description": "The valid range for the value Property",
41197         "items": {
41198             "anyOf": [
41199                 {
41200                     "type": "number"
41201                 },
41202                 {
41203                     "type": "integer"
41204                 }
41205             ]
41206         },
41207         "maxItems": 2,
41208         "minItems": 2,
41209         "readOnly": true,
41210         "type": "array"
41211     },
41212 },
41213     "step" :
41214     {
41215         "anyOf": [
41216             {
41217                 "type": "integer"
41218             },
41219             {
41220                 "type": "number"
41221             }
41222         ],
41223         "description": "Step value across the defined range",
41224         "readOnly": true
41225     },
41226 },
41227     "desiredlevel" :
41228     {
41229         "description": "The desired level of the liquid in percentage.",
41230         "maximum": 100,
41231         "minimum": 0,
41232         "type": "integer"
41233     },
41234 },
41235     "id" :
41236     {
41237         "description": "Instance ID of this specific resource",
41238         "maxLength": 64,
41239         "readOnly": true,
41240         "type": "string"
41241     },
41242 },
41243     "if" :
41244     {
41245         "description": "The interface set supported by this resource",
41246         "items": {
41247             "enum": [
41248                 "oic.if.baseline",
41249                 "oic.if.ll",
41250                 "oic.if.b",
41251                 "oic.if.lb",
41252                 "oic.if.rw",
41253                 "oic.if.r",
41254                 "oic.if.a",
41255                 "oic.if.s"
41256             ],
41257             "type": "string"
41258         },
41259     },
41260     "minItems": 1,

```

```

41261         "readOnly": true,
41262         "type": "array"
41263     }
41264 }
41265 }
41266     , "type" : "object"
41267     , "required": ["desiredlevel"]
41268 }
41269 }
41270 }
41271

```

B.76.5 Property Definition

Table 389 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
step	multiple types: see schema	No	Read Only	Step value across the defined range
desiredlevel	integer	No	Read Write	The desired level of the liquid in percentage.
n	string	No	Read Only	Friendly name of the resource
currentlevel	integer	Yes	Read Only	The current level of the liquid in percentage.
if	array: see schema	No	Read Only	The interface set supported by this resource
id	string	No	Read Only	Instance ID of this specific resource
range	array: see schema	No	Read Only	The valid range for the value Property
rt	array: see schema	No	Read Only	Resource Type
value	multiple types: see schema	No	Read Write	

				The value sensed or actuated by this Resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
desiredlevel	integer	Yes	Read Write	The desired level of the liquid in percentage.
n	string	No	Read Only	Friendly name of the resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
if	array: see schema	No	Read Only	The interface set supported by this resource
id	string	No	Read Only	Instance ID of this specific resource
range	array: see schema	No	Read Only	The valid range for the value Property

41274 **B.76.6 CRUDN behaviour**

41275 **Table 390 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/LiquidLevelResURI		get	post		observe

41276 **B.77 Lock Code**

41277 **B.77.1 Introduction**

41278 Resource describing a lock code.
 41279 The lockCodeList is an array of possible codes that may be associated with a lock.
 41280 These are all presented as strings.
 41281

41282 **B.77.2 Example URI**

41283 /LockCodeResURI

41284 **B.77.3 Resource Type**

41285 The resource type (rt) is defined as: ['oic.r.lock.code'].

41286 **B.77.4 Swagger2.0 Definition**

```
41287 {
41288   "swagger": "2.0",
41289   "info": {
41290     "title": "Lock Code",
```

```

41291     "version": "v1.1.0-20160519",
41292     "license": {
41293         "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
41294         "x-description": "Redistribution and use in source and binary forms, with or without
41295 modification, are permitted provided that the following conditions are met:\n      1.
41296 Redistributions of source code must retain the above copyright notice, this list of conditions and
41297 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
41298 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
41299 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
41300 Connectivity Foundation, INC. \ "AS IS\ " AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
41301 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
41302 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
41303 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
41304 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
41305 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
41306 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
41307 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
41308 OF SUCH DAMAGE.\n"
41309     }
41310 },
41311 "schemes": ["http"],
41312 "consumes": ["application/json"],
41313 "produces": ["application/json"],
41314 "paths": {
41315     "/LockCodeResURI" : {
41316         "get": {
41317             "description": "Resource describing a lock code.\nThe lockCodeList is an array of possible
41318 codes that may be associated with a lock.\nThese are all presented as strings.\nRetrieves the
41319 current lock code values.\n",
41320             "parameters": [
41321                 {"$ref": "#/parameters/interface"}
41322             ],
41323             "responses": {
41324                 "200": {
41325                     "description": "",
41326                     "x-example":
41327                     {
41328                         "rt": ["oic.r.lock.code"],
41329                         "id": "unique_example_id",
41330                         "lockCodeList": ["012345","112233"]
41331                     }
41332                 },
41333                 "schema": { "$ref": "#/definitions/LockCode" }
41334             }
41335         }
41336     },
41337     "post": {
41338         "description": "Updates the current lock code values.\n",
41339         "parameters": [
41340             {"$ref": "#/parameters/interface"},
41341             {
41342                 "name": "body",
41343                 "in": "body",
41344                 "required": true,
41345                 "schema": { "$ref": "#/definitions/LockCode" },
41346                 "x-example":
41347                 {
41348                     "id": "unique_example_id",
41349                     "lockCodeList": ["543210","332211"]
41350                 }
41351             }
41352         ],
41353         "responses": {
41354             "200": {
41355                 "description": "",
41356                 "x-example":
41357                 {
41358                     "id": "unique_example_id",
41359                     "lockCodeList": ["543210","332211"]
41360                 }
41361             },

```



```

41362         "schema": { "$ref": "#/definitions/LockCode" }
41363     }
41364 }
41365 }
41366 },
41367 },
41368 "parameters": {
41369     "interface" : {
41370         "in" : "query",
41371         "name" : "if",
41372         "type" : "string",
41373         "enum" : ["oic.if.a", "oic.if.baseline"]
41374     }
41375 },
41376 "definitions": {
41377     "LockCode" : {
41378         "properties": {
41379             "rt" :
41380                 {
41381                     "description": "Resource Type",
41382                     "items": {
41383                         "maxLength": 64,
41384                         "type": "string"
41385                     },
41386                     "minItems": 1,
41387                     "readOnly": true,
41388                     "type": "array"
41389                 },
41390             "precision" :
41391                 {
41392                     "description": "Accuracy granularity of the exposed value",
41393                     "readOnly": true,
41394                     "type": "number"
41395                 },
41396             "value" :
41397                 {
41398                     "anyOf": [
41399                         {
41400                             "type": "array"
41401                         },
41402                         {
41403                             "type": "string"
41404                         },
41405                         {
41406                             "type": "boolean"
41407                         },
41408                         {
41409                             "type": "integer"
41410                         },
41411                         {
41412                             "type": "number"
41413                         },
41414                         {
41415                             "type": "object"
41416                         }
41417                     ],
41418                     "description": "The value sensed or actuated by this Resource"
41419                 },
41420             "n" :
41421                 {
41422                     "description": "Friendly name of the resource",
41423                     "maxLength": 64,
41424                     "readOnly": true,
41425                     "type": "string"
41426                 },
41427             "range" :
41428                 {
41429

```

```

41433     "description": "The valid range for the value Property",
41434     "items": {
41435         "anyOf": [
41436             {
41437                 "type": "number"
41438             },
41439             {
41440                 "type": "integer"
41441             }
41442         ]
41443     },
41444     "maxItems": 2,
41445     "minItems": 2,
41446     "readOnly": true,
41447     "type": "array"
41448 },
41449
41450 "step" :
41451     {
41452         "anyOf": [
41453             {
41454                 "type": "integer"
41455             },
41456             {
41457                 "type": "number"
41458             }
41459         ],
41460         "description": "Step value across the defined range",
41461         "readOnly": true
41462     },
41463
41464 "lockCodeList" :
41465     {
41466         "items": {
41467             "description": "Value for the lock code",
41468             "type": "string"
41469         },
41470         "type": "array"
41471     },
41472
41473 "id" :
41474     {
41475         "description": "Instance ID of this specific resource",
41476         "maxLength": 64,
41477         "readOnly": true,
41478         "type": "string"
41479     },
41480
41481 "if" :
41482     {
41483         "description": "The interface set supported by this resource",
41484         "items": {
41485             "enum": [
41486                 "oic.if.baseline",
41487                 "oic.if.ll",
41488                 "oic.if.b",
41489                 "oic.if.lb",
41490                 "oic.if.rw",
41491                 "oic.if.r",
41492                 "oic.if.a",
41493                 "oic.if.s"
41494             ],
41495             "type": "string"
41496         },
41497         "minItems": 1,
41498         "readOnly": true,
41499         "type": "array"
41500     }
41501 }
41502 }
41503 , "type" : "object"

```

```

41504     , "required": ["lockCodeList"]
41505     }
41506   }
41507 }
41508

```

B.77.5 Property Definition

Table 391 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
lockCodeList	array: see schema	Yes	Read Write	
step	multiple types: see schema	No	Read Only	Step value across the defined range
range	array: see schema	No	Read Only	The valid range for the value Property
id	string	No	Read Only	Instance ID of this specific resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
rt	array: see schema	No	Read Only	Resource Type
precision	number	No	Read Only	Accuracy granularity of the exposed value
n	string	No	Read Only	Friendly name of the resource
if	array: see schema	No	Read Only	The interface set supported by this resource

B.77.6 CRUDN behaviour

Table 392 The CRUDN operations of the resource

Resource	Create	Read	Update	Delete	Notify
/LockCodeResURI		get	post		observe

B.78 Lock

B.78.1 Introduction

Resource describing a lock.

For the type of lockState, the value 'Locked' indicates that the door is Locked.

The value 'Unlocked' indicates that the door is Unlocked.

41519 **B.78.2 Example URI**

41520 /LockStatusResURI

41521 **B.78.3 Resource Type**

41522 The resource type (rt) is defined as: ['oic.r.lock.status'].

41523 **B.78.4 Swagger2.0 Definition**

```
41524 {
41525   "swagger": "2.0",
41526   "info": {
41527     "title": "Lock",
41528     "version": "v1.1.0-20160519",
41529     "license": {
41530       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
41531       "x-description": "Redistribution and use in source and binary forms, with or without
41532 modification, are permitted provided that the following conditions are met:\n      1.
41533 Redistributions of source code must retain the above copyright notice, this list of conditions and
41534 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
41535 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
41536 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
41537 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
41538 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
41539 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
41540 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
41541 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
41542 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
41543 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
41544 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
41545 OF SUCH DAMAGE.\n"
41546     }
41547   },
41548   "schemes": ["http"],
41549   "consumes": ["application/json"],
41550   "produces": ["application/json"],
41551   "paths": {
41552     "/LockStatusResURI" : {
41553       "get": {
41554         "description": "Resource describing a lock.\nFor the type of lockState, the value 'Locked'
41555 indicates that the door is Locked.\nThe value 'Unlocked' indicates that the door is
41556 Unlocked.\nRetrieves the state of the lock.\n",
41557         "parameters": [
41558           { "$ref": "#/parameters/interface" }
41559         ],
41560         "responses": {
41561           "200": {
41562             "description": "",
41563             "x-example":
41564               {
41565                 "rt": ["oic.r.lock.status"],
41566                 "id": "unique_example_id",
41567                 "lockState": "Locked"
41568               }
41569             ,
41570             "schema": { "$ref": "#/definitions/Lock" }
41571           }
41572         }
41573       },
41574       "post": {
41575         "description": "Sets the current lock state.\n",
41576         "parameters": [
41577           { "$ref": "#/parameters/interface" },
41578           {
41579             "name": "body",
41580             "in": "body",
41581             "required": true,
41582             "schema": { "$ref": "#/definitions/Lock" },
41583             "x-example":
41584               {
41585                 "id": "unique_example_id",
```

```

41586         "lockState": "Unlocked"
41587     }
41588 }
41589 ],
41590 "responses": {
41591     "200": {
41592         "description" : "",
41593         "x-example":
41594             {
41595                 "id": "unique_example_id",
41596                 "lockState": "Unlocked"
41597             }
41598         ,
41599         "schema": { "$ref": "#/definitions/Lock" }
41600     },
41601     "403": {
41602         "description" : "This response is generated by the OIC Server when the client
41603 sends:\n An update with an invalid property value for lockState.\nThe server responds with the
41604 current resource representation.\n",
41605         "x-example":
41606             {
41607                 "lockState": "Unlocked"
41608             }
41609         ,
41610         "schema": { "$ref": "#/definitions/Lock" }
41611     }
41612 }
41613 }
41614 },
41615 },
41616 "parameters": {
41617     "interface" : {
41618         "in" : "query",
41619         "name" : "if",
41620         "type" : "string",
41621         "enum" : ["oic.if.a", "oic.if.baseline"]
41622     }
41623 },
41624 "definitions": {
41625     "Lock" : {
41626         "properties": {
41627             "rt" :
41628                 {
41629                     "description": "Resource Type",
41630                     "items": {
41631                         "maxLength": 64,
41632                         "type": "string"
41633                     },
41634                     "minItems": 1,
41635                     "readOnly": true,
41636                     "type": "array"
41637                 },
41638             "precision" :
41639                 {
41640                     "description": "Accuracy granularity of the exposed value",
41641                     "readOnly": true,
41642                     "type": "number"
41643                 },
41644             "value" :
41645                 {
41646                     "anyOf": [
41647                         {
41648                             "type": "array"
41649                         },
41650                         {
41651                             "type": "string"
41652                         },
41653                         {
41654                             "type": "boolean"
41655                         }
41656                     ]
41657                 }
41658             }
41659     }
41660 }

```

```

41657         },
41658         {
41659             "type": "integer"
41660         },
41661         {
41662             "type": "number"
41663         },
41664         {
41665             "type": "object"
41666         }
41667     ],
41668     "description": "The value sensed or actuated by this Resource"
41669 },
41670
41671 "n" :
41672     {
41673         "description": "Friendly name of the resource",
41674         "maxLength": 64,
41675         "readOnly": true,
41676         "type": "string"
41677     },
41678
41679 "lockState" :
41680     {
41681         "description": "State of the lock.",
41682         "enum": [
41683             "Locked",
41684             "Unlocked"
41685         ],
41686         "type": "string"
41687     },
41688
41689 "range" :
41690     {
41691         "description": "The valid range for the value Property",
41692         "items": {
41693             "anyOf": [
41694                 {
41695                     "type": "number"
41696                 },
41697                 {
41698                     "type": "integer"
41699                 }
41700             ]
41701         },
41702         "maxItems": 2,
41703         "minItems": 2,
41704         "readOnly": true,
41705         "type": "array"
41706     },
41707
41708 "step" :
41709     {
41710         "anyOf": [
41711             {
41712                 "type": "integer"
41713             },
41714             {
41715                 "type": "number"
41716             }
41717         ],
41718         "description": "Step value across the defined range",
41719         "readOnly": true
41720     },
41721
41722 "id" :
41723     {
41724         "description": "Instance ID of this specific resource",
41725         "maxLength": 64,
41726         "readOnly": true,
41727         "type": "string"

```

```

41728     },
41729
41730     "if" :
41731     {
41732         "description": "The interface set supported by this resource",
41733         "items": {
41734             "enum": [
41735                 "oic.if.baseline",
41736                 "oic.if.ll",
41737                 "oic.if.b",
41738                 "oic.if.lb",
41739                 "oic.if.rw",
41740                 "oic.if.r",
41741                 "oic.if.a",
41742                 "oic.if.s"
41743             ],
41744             "type": "string"
41745         },
41746         "minItems": 1,
41747         "readOnly": true,
41748         "type": "array"
41749     }
41750
41751     },
41752     "type" : "object"
41753     , "required": ["lockState"]
41754 }
41755 }
41756 }
41757

```

41758 **B.78.5 Property Definition**

41759 **Table 393 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
range	array: see schema	No	Read Only	The valid range for the value Property
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
rt	array: see schema	No	Read Only	Resource Type
lockState	string	Yes	Read Write	State of the lock.
n	string	No	Read Only	Friendly name of the resource
if	array: see schema	No	Read Only	The interface set supported by this resource
precision	number	No	Read Only	

				Accuracy granularity of the exposed value
id	string	No	Read Only	Instance ID of this specific resource

41760 **B.78.6 CRUDN behaviour**

41761 **Table 394 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/LockStatusResURI		get	post		observe

41762 **B.79 Magnetic Field Direction Sensor**

41763 **B.79.1 Introduction**

41764 This resource describes the direction of the Earth's magnetic field at the observer's current point
41765 in space.

41766 Typical use case includes measurement of compass readings on a personal device.

41767 The value is an array containing Hx, Hy, Hz (in that order) each of which are floats.

41768 Each of Hx, Hy and Hz are expressed in A/m (Amperes per metre)

41769

41770 **B.79.2 Example URI**

41771 /MagneticFieldDirectionResURI

41772 **B.79.3 Resource Type**

41773 The resource type (rt) is defined as: ['oic.r.sensor.magneticfielddirection'].

41774 **B.79.4 Swagger2.0 Definition**

```

41775 {
41776   "swagger": "2.0",
41777   "info": {
41778     "title": "Magnetic Field Direction Sensor",
41779     "version": "v1.1.0-20160519",
41780     "license": {
41781       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
41782       "x-description": "Redistribution and use in source and binary forms, with or without
41783 modification, are permitted provided that the following conditions are met:\n      1.
41784 Redistributions of source code must retain the above copyright notice, this list of conditions and
41785 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
41786 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
41787 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
41788 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
41789 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
41790 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
41791 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
41792 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
41793 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
41794 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
41795 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
41796 OF SUCH DAMAGE.\n"
41797     }
41798   },
41799   "schemes": ["http"],
41800   "consumes": ["application/json"],
41801   "produces": ["application/json"],
41802   "paths": {
41803     "/MagneticFieldDirectionResURI" : {
41804       "get": {
41805         "description": "This resource describes the direction of the Earth's magnetic field at the
41806 observer's current point in space.\nTypical use case includes measurement of compass readings on a

```



```

41807 personal device.\nThe value is an array containing Hx, Hy, Hz (in that order) each of which are
41808 floats.\nEach of Hx, Hy and Hz are expressed in A/m (Amperes per metre)\n",
41809     "parameters": [
41810         {"$ref": "#/parameters/interface"}
41811     ],
41812     "responses": {
41813         "200": {
41814             "description": "",
41815             "x-example":
41816                 {
41817                     "rt": ["oic.r.sensor.magneticfielddirection"],
41818                     "id": "unique_example_id",
41819                     "value": [100.0,15.0,90.0]
41820                 }
41821             ,
41822             "schema": { "$ref": "#/definitions/magneticFieldDirection" }
41823         }
41824     }
41825 }
41826 },
41827 },
41828 "parameters": {
41829     "interface" : {
41830         "in" : "query",
41831         "name" : "if",
41832         "type" : "string",
41833         "enum" : ["oic.if.s", "oic.if.baseline"]
41834     }
41835 },
41836 "definitions": {
41837     "magneticFieldDirection" : {
41838         "properties": {
41839             "rt" :
41840                 {
41841                     "description": "Resource Type",
41842                     "items": {
41843                         "maxLength": 64,
41844                         "type": "string"
41845                     },
41846                     "minItems": 1,
41847                     "readOnly": true,
41848                     "type": "array"
41849                 },
41850             "precision" :
41851                 {
41852                     "description": "Accuracy granularity of the exposed value",
41853                     "readOnly": true,
41854                     "type": "number"
41855                 },
41856             "value" :
41857                 {
41858                     "description": "Array containing Hx, Hy, Hz.",
41859                     "items": {
41860                         "type": "number"
41861                     },
41862                     "maxItems": 3,
41863                     "minItems": 3,
41864                     "readOnly": true,
41865                     "type": "array"
41866                 },
41867             "n" :
41868                 {
41869                     "description": "Friendly name of the resource",
41870                     "maxLength": 64,
41871                     "readOnly": true,
41872                     "type": "string"
41873                 }
41874             },
41875         }
41876     },
41877 }

```

```

41878     "range" :
41879         {
41880             "description": "The valid range for the value Property",
41881             "items": {
41882                 "anyOf": [
41883                     {
41884                         "type": "number"
41885                     },
41886                     {
41887                         "type": "integer"
41888                     }
41889                 ]
41890             },
41891             "maxItems": 2,
41892             "minItems": 2,
41893             "readOnly": true,
41894             "type": "array"
41895         },
41896     "step" :
41897         {
41898             "anyOf": [
41899                 {
41900                     "type": "integer"
41901                 },
41902                 {
41903                     "type": "number"
41904                 }
41905             ],
41906             "description": "Step value across the defined range",
41907             "readOnly": true
41908         },
41909     },
41910     "id" :
41911         {
41912             "description": "Instance ID of this specific resource",
41913             "maxLength": 64,
41914             "readOnly": true,
41915             "type": "string"
41916         },
41917     },
41918     "if" :
41919         {
41920             "description": "The interface set supported by this resource",
41921             "items": {
41922                 "enum": [
41923                     "oic.if.baseline",
41924                     "oic.if.ll",
41925                     "oic.if.b",
41926                     "oic.if.lb",
41927                     "oic.if.rw",
41928                     "oic.if.r",
41929                     "oic.if.a",
41930                     "oic.if.s"
41931                 ],
41932                 "type": "string"
41933             },
41934             "minItems": 1,
41935             "readOnly": true,
41936             "type": "array"
41937         }
41938     },
41939     },
41940     },
41941     "type" : "object"
41942     , "required": ["value"]
41943 }
41944 }
41945 }
41946

```

41947 **B.79.5 Property Definition**

41948 **Table 395 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
precision	number	No	Read Only	Accuracy granularity of the exposed value
n	string	No	Read Only	Friendly name of the resource
if	array: see schema	No	Read Only	The interface set supported by this resource
value	array: see schema	Yes	Read Only	Array containing Hx, Hy, Hz.
id	string	No	Read Only	Instance ID of this specific resource
rt	array: see schema	No	Read Only	Resource Type
step	multiple types: see schema	No	Read Only	Step value across the defined range
range	array: see schema	No	Read Only	The valid range for the value Property

41949 **B.79.6 CRUDN behaviour**

41950 **Table 396 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/MagneticFieldDirectionResURI		get			observe

41951 **B.80 Media**

41952 **B.80.1 Introduction**

41953 This resource specifies the media types that an OCF Server supports.
 41954 The resource is an array of media elements. Each element contains:
 41955 A URL at which the specified media type can be accessed.
 41956 A string array containing the definition of the media using SDP.
 41957 Each entry in the sdp array is an SDP line.
 41958 Each line shall follow the SDP description syntax as defined in the SDP specification.
 41959 The SDP specification can be found at <http://tools.ietf.org/html/rfc4566>.

41961 **B.80.2 Example URI**

41962 /MediaResURI

41963 **B.80.3 Resource Type**

41964 The resource type (rt) is defined as: ['oic.r.media'].

41965 **B.80.4 Swagger2.0 Definition**

```
41966 {
41967   "swagger": "2.0",
41968   "info": {
41969     "title": "Media",
41970     "version": "v1.1.0-20160519",
41971     "license": {
41972       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
41973       "x-description": "Redistribution and use in source and binary forms, with or without
41974 modification, are permitted provided that the following conditions are met:\n      1.
41975 Redistributions of source code must retain the above copyright notice, this list of conditions and
41976 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
41977 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
41978 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
41979 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
41980 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
41981 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
41982 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
41983 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
41984 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
41985 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
41986 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
41987 OF SUCH DAMAGE.\n"
41988     }
41989   },
41990   "schemes": ["http"],
41991   "consumes": ["application/json"],
41992   "produces": ["application/json"],
41993   "paths": {
41994     "/MediaResURI" : {
41995       "get": {
41996         "description": "This resource specifies the media types that an OCF Server supports.\nThe
41997 resource is an array of media elements. Each element contains:\n      A URL at which the specified
41998 media type can be accessed.\n      A string array containing the definition of the media using SDP.\n
41999 Each entry in the sdp array is an SDP line.\n      Each line shall follow the SDP description syntax
42000 as defined in the SDP specification.\nThe SDP specification can be found at
42001 http://tools.ietf.org/html/rfc4566.\nRetrieves the current media resource.\n",
42002         "parameters": [
42003           {"$ref": "#/parameters/interface"}
42004         ],
42005         "responses": {
42006           "200": {
42007             "description": "",
42008             "x-example":
42009             {
42010               "rt": ["oic.r.media"],
42011               "id": "unique_example_id",
42012               "media": [
42013                 {
42014                   "url": "some example url",
42015                   "sdp": [
42016                     "m=video 1 RTP/AVP 96",
42017                     "a=rtpmap:96 H264/9000",
42018                     "a=fmtp:96 profile-level-id=42A028;packetization-mode=1"
42019                   ]
42020                 },
42021                 {
42022                   "url": "some other example1 url",
42023                   "sdp": [
42024                     "m=audio 2 RTP/AVP 97",
42025                     "a=rtpmap:97 MP4A-LATM/90000"
42026                   ]
42027                 },
42028                 {
42029                   "url": "some other example2 url",
42030                   "sdp": [
42031                     "m=video 3 RTP/AVP 98",
```

```

42032             "a=rtpmap:98 jpeg/90000",
42033             "a=fmtp:98 sampling=YCbCr-4:2:0;width=256;height=256"
42034         ]
42035     }
42036 ]
42037 }
42038 ,
42039     "schema": { "$ref": "#/definitions/Media" }
42040 }
42041 }
42042 }
42043 }
42044 },
42045 "parameters": {
42046     "interface" : {
42047         "in" : "query",
42048         "name" : "if",
42049         "type" : "string",
42050         "enum" : ["oic.if.s", "oic.if.baseline"]
42051     }
42052 },
42053 "definitions": {
42054     "Media" : {
42055         "properties": {
42056             "rt" :
42057                 {
42058                     "description": "Resource Type",
42059                     "items": {
42060                         "maxLength": 64,
42061                         "type": "string"
42062                     },
42063                     "minItems": 1,
42064                     "readOnly": true,
42065                     "type": "array"
42066                 },
42067         "media" :
42068             {
42069                 "items": {
42070                     "properties": {
42071                         "sdp": {
42072                             "description": "Array of strings, one per SDP line",
42073                             "items": {
42074                                 "description": "SDP media or attribute line",
42075                                 "type": "string"
42076                             },
42077                         },
42078                         "type": "array"
42079                     },
42080                     "url": {
42081                         "description": "url for the media instance",
42082                         "type": "string"
42083                     }
42084                 },
42085                 "type": "object"
42086             },
42087         "type": "array"
42088     },
42089     "precision" :
42090         {
42091             "description": "Accuracy granularity of the exposed value",
42092             "readOnly": true,
42093             "type": "number"
42094         },
42095     "value" :
42096         {
42097             "anyOf": [
42098                 {
42099                     "type": "array"
42100                 }
42101             ],
42102         }

```

```

42103     {
42104         "type": "string"
42105     },
42106     {
42107         "type": "boolean"
42108     },
42109     {
42110         "type": "integer"
42111     },
42112     {
42113         "type": "number"
42114     },
42115     {
42116         "type": "object"
42117     }
42118 ],
42119 "description": "The value sensed or actuated by this Resource"
42120 },
42121
42122 "n" :
42123     {
42124         "description": "Friendly name of the resource",
42125         "maxLength": 64,
42126         "readOnly": true,
42127         "type": "string"
42128     },
42129
42130 "range" :
42131     {
42132         "description": "The valid range for the value Property",
42133         "items": {
42134             "anyOf": [
42135                 {
42136                     "type": "number"
42137                 },
42138                 {
42139                     "type": "integer"
42140                 }
42141             ]
42142         },
42143         "maxItems": 2,
42144         "minItems": 2,
42145         "readOnly": true,
42146         "type": "array"
42147     },
42148
42149 "step" :
42150     {
42151         "anyOf": [
42152             {
42153                 "type": "integer"
42154             },
42155             {
42156                 "type": "number"
42157             }
42158         ],
42159         "description": "Step value across the defined range",
42160         "readOnly": true
42161     },
42162
42163 "id" :
42164     {
42165         "description": "Instance ID of this specific resource",
42166         "maxLength": 64,
42167         "readOnly": true,
42168         "type": "string"
42169     },
42170
42171 "if" :
42172     {
42173         "description": "The interface set supported by this resource",

```

```

42174     "items": {
42175         "enum": [
42176             "oic.if.baseline",
42177             "oic.if.ll",
42178             "oic.if.b",
42179             "oic.if.lb",
42180             "oic.if.rw",
42181             "oic.if.r",
42182             "oic.if.a",
42183             "oic.if.s"
42184         ],
42185         "type": "string"
42186     },
42187     "minItems": 1,
42188     "readOnly": true,
42189     "type": "array"
42190 }
42191 }
42192 }
42193 , "type" : "object"
42194 , "required": ["media"]
42195 }
42196 }
42197 }
42198

```

42199 B.80.5 Property Definition

42200 **Table 397 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
range	array: see schema	No	Read Only	The valid range for the value Property
rt	array: see schema	No	Read Only	Resource Type
n	string	No	Read Only	Friendly name of the resource
if	array: see schema	No	Read Only	The interface set supported by this resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
step	multiple types: see schema	No	Read Only	Step value across the defined range
media	array: see schema	Yes	Read Write	
id	string	No	Read Only	

				Instance ID of this specific resource
--	--	--	--	---------------------------------------

42201 **B.80.6 CRUDN behaviour**

42202 **Table 398 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/MediaResURI		get			observe

42203 **B.81 Media Source**

42204 **B.81.1 Introduction**

42205 This resource defines a media source that exists on a device.
 42206 The source can be an input source or output source, this resource is agnostic of that.
 42207 The sourceName specifies a pre-defined media input or output (e.g. "HDMI", "DVI")
 42208 The sourceNumber is a numeric identifier to specify the instance (e.g. "PC", 1)
 42209 The sourceType is an enumeration defining whether the source is audio, video or both.
 42210 The status is a boolean that determines if the specific source instance is selected or not.
 42211 A status of true means that the source instance is selected.
 42212 A status of false means that the source instance is not selected.
 42213

42214 **B.81.2 Example URI**

42215 /mediaSourceResURI

42216 **B.81.3 Resource Type**

42217 The resource type (rt) is defined as: ['oic.r.mediasource'].

42218 **B.81.4 Swagger2.0 Definition**

```

42219 {
42220   "swagger": "2.0",
42221   "info": {
42222     "title": "Media Source",
42223     "version": "v1.1.0-20160519",
42224     "license": {
42225       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
42226       "x-description": "Redistribution and use in source and binary forms, with or without
42227 modification, are permitted provided that the following conditions are met:\n      1.
42228 Redistributions of source code must retain the above copyright notice, this list of conditions and
42229 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
42230 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
42231 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
42232 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
42233 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
42234 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
42235 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
42236 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
42237 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
42238 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
42239 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
42240 OF SUCH DAMAGE.\n"
42241     }
42242   },
42243   "schemes": ["http"],
42244   "consumes": ["application/json"],
42245   "produces": ["application/json"],
42246   "paths": {
42247     "/mediaSourceResURI" : {
42248       "get": {
42249         "description": "This resource defines a media source that exists on a device.\nThe source
42250 can be an input source or output source, this resource is agnostic of that.\nThe sourceName
42251 specifies a pre-defined media input or output (e.g.\HDMI\", \DVI\")\n\nThe sourceNumber is a
  
```



```

42252 numeric identifier to specify the instance (e.g. \"PC\", 1)\n\nThe sourceType is an enumeration
42253 defining whether the source is audio, video or both.\n\nThe status is a boolean that determines if
42254 the specific source instance is selected or not.\n\nA status of true means that the source
42255 instance is selected.\n\nA status of false means that the source instance is not selected.\n\n",
42256     "parameters": [
42257         { "$ref": "#/parameters/interface" }
42258     ],
42259     "responses": {
42260         "200": {
42261             "description": "",
42262             "x-example":
42263                 {
42264                     "rt": ["oic.r.mediasource"],
42265                     "id": "unique_example_id",
42266                     "sourceName": "HDMI-CEC",
42267                     "sourceNumber": "1",
42268                     "sourceType": "audioPlusVideo",
42269                     "status": true
42270                 }
42271             ,
42272             "schema": { "$ref": "#/definitions/mediaSource" }
42273         }
42274     }
42275 },
42276 "post": {
42277     "description": "Changes the status of the source.\n\nAllows changes of the sourceName and the
42278 status.\n\n",
42279     "parameters": [
42280         { "$ref": "#/parameters/interface" },
42281         {
42282             "name": "body",
42283             "in": "body",
42284             "required": true,
42285             "schema": { "$ref": "#/definitions/mediaSource" },
42286             "x-example":
42287                 {
42288                     "id": "unique_example_id",
42289                     "sourceName": "my new name",
42290                     "sourceNumber": "1",
42291                     "status": true
42292                 }
42293         }
42294     ],
42295     "responses": {
42296         "200": {
42297             "description": "",
42298             "x-example":
42299                 {
42300                     "id": "unique_example_id",
42301                     "sourceName": "my new name",
42302                     "sourceNumber": "1",
42303                     "status": true
42304                 }
42305             ,
42306             "schema": { "$ref": "#/definitions/mediaSource" }
42307         }
42308     }
42309 }
42310 },
42311 "parameters": {
42312     "interface": {
42313         "in": "query",
42314         "name": "if",
42315         "type": "string",
42316         "enum": ["oic.if.a", "oic.if.baseline"]
42317     }
42318 },
42319 "definitions": {
42320     "mediaSource": {
42321         "properties": {
42322

```

```

42323     "rt" :
42324         {
42325             "description": "Resource Type",
42326             "items": {
42327                 "maxLength": 64,
42328                 "type": "string"
42329             },
42330             "minItems": 1,
42331             "readOnly": true,
42332             "type": "array"
42333         },
42334
42335     "status" :
42336         {
42337             "description": "Specifies if the specific source instance is selected or not",
42338             "type": "boolean"
42339         },
42340
42341     "sourceType" :
42342         {
42343             "description": "Specifies the type of the source",
42344             "enum": [
42345                 "audioOnly",
42346                 "videoOnly",
42347                 "audioPlusVideo"
42348             ],
42349             "readOnly": true,
42350             "type": "string"
42351         },
42352
42353     "sourceName" :
42354         {
42355             "description": "Specifies a pre-defined media input or output",
42356             "type": "string"
42357         },
42358
42359     "precision" :
42360         {
42361             "description": "Accuracy granularity of the exposed value",
42362             "readOnly": true,
42363             "type": "number"
42364         },
42365
42366     "value" :
42367         {
42368             "anyOf": [
42369                 {
42370                     "type": "array"
42371                 },
42372                 {
42373                     "type": "string"
42374                 },
42375                 {
42376                     "type": "boolean"
42377                 },
42378                 {
42379                     "type": "integer"
42380                 },
42381                 {
42382                     "type": "number"
42383                 },
42384                 {
42385                     "type": "object"
42386                 }
42387             ],
42388             "description": "The value sensed or actuated by this Resource"
42389         },
42390
42391     "n" :
42392         {
42393             "description": "Friendly name of the resource",

```

```

42394         "maxLength": 64,
42395         "readOnly": true,
42396         "type": "string"
42397     },
42398
42399     "range" :
42400     {
42401         "description": "The valid range for the value Property",
42402         "items": {
42403             "anyOf": [
42404                 {
42405                     "type": "number"
42406                 },
42407                 {
42408                     "type": "integer"
42409                 }
42410             ]
42411         },
42412         "maxItems": 2,
42413         "minItems": 2,
42414         "readOnly": true,
42415         "type": "array"
42416     },
42417
42418     "step" :
42419     {
42420         "anyOf": [
42421             {
42422                 "type": "integer"
42423             },
42424             {
42425                 "type": "number"
42426             }
42427         ],
42428         "description": "Step value across the defined range",
42429         "readOnly": true
42430     },
42431
42432     "sourceNumber" :
42433     {
42434         "description": "Numeric identifier to specify the instance",
42435         "readOnly": true,
42436         "type": [
42437             "integer",
42438             "string"
42439         ]
42440     },
42441
42442     "id" :
42443     {
42444         "description": "Instance ID of this specific resource",
42445         "maxLength": 64,
42446         "readOnly": true,
42447         "type": "string"
42448     },
42449
42450     "if" :
42451     {
42452         "description": "The interface set supported by this resource",
42453         "items": {
42454             "enum": [
42455                 "oic.if.baseline",
42456                 "oic.if.ll",
42457                 "oic.if.b",
42458                 "oic.if.lb",
42459                 "oic.if.rw",
42460                 "oic.if.r",
42461                 "oic.if.a",
42462                 "oic.if.s"
42463             ],
42464             "type": "string"

```

```

42465     },
42466     "minItems": 1,
42467     "readOnly": true,
42468     "type": "array"
42469   }
42470
42471   }
42472   , "type" : "object"
42473   , "required": ["sourceName", "status"]
42474 }
42475 }
42476 }
42477

```

42478 B.81.5 Property Definition

42479 **Table 399** The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
precision	number	No	Read Only	Accuracy granularity of the exposed value
if	array: see schema	No	Read Only	The interface set supported by this resource
id	string	No	Read Only	Instance ID of this specific resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
status	boolean	Yes	Read Write	Specifies if the specific source instance is selected or not
sourceName	string	Yes	Read Write	Specifies a pre- defined media input or output
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
sourceType	string	No	Read Only	Specifies the type of the source
n	string	No	Read Only	Friendly name of the resource
sourceNumber	['integer', 'string']	No	Read Only	

				Numeric identifier to specify the instance
range	array: schema	see	No	Read Only
				The valid range for the value Property

42480 **B.81.6 CRUDN behaviour**

42481 **Table 400 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/mediaSourceResURI		get	post		observe

42482 **B.82 Media Source List**

42483 **B.82.1 Introduction**

42484 This resource provides the list of media sources available on the device.
 42485 The sources are an array of mediaSource(s) as separately defined.
 42486 The basic resource type oic.r.mediaSourceList does not provide any indications whether the
 42487 source is input or output.
 42488 Hence, two specializations of this resource exist.
 42489 When a device exposes input sources then an instance of this resource with a resource type of
 42490 oic.r.media.input is exposed.
 42491 When a device exposes output sources then an instance of this resource with a resource type of
 42492 oic.r.media.output is exposed.
 42493 A device that exposes both input and output media sources then exposes two instances of this
 42494 resource, one with a resource type or oic.r.media.input and one with a resource type of
 42495 oic.r.media.output
 42496

42497 **B.82.2 Example URI**

42498 /mediaSourceListResURI

42499 **B.82.3 Resource Type**

42500 The resource type (rt) is defined as: ['oic.r.mediasourcelist'].

42501 **B.82.4 Swagger2.0 Definition**

```

42502 {
42503   "swagger": "2.0",
42504   "info": {
42505     "title": "Media Source List",
42506     "version": "v1.1.0-20160519",
42507     "license": {
42508       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
42509       "x-description": "Redistribution and use in source and binary forms, with or without
42510 modification, are permitted provided that the following conditions are met:\n      1.
42511 Redistributions of source code must retain the above copyright notice, this list of conditions and
42512 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
42513 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
42514 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
42515 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
42516 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
42517 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
42518 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
42519 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
42520 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
42521 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
42522 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
42523 OF SUCH DAMAGE.\n"

```

```

42524     }
42525   },
42526   "schemes": ["http"],
42527   "consumes": ["application/json"],
42528   "produces": ["application/json"],
42529   "paths": {
42530     "/mediaSourceListResURI" : {
42531       "get": {
42532         "description": "This resource provides the list of media sources available on the
42533 device.\nThe sources are an array of mediaSource(s) as separately defined.\nThe basic resource type
42534 oic.r.mediaSourceList does not provide any indications whether the source is input or
42535 output.\nHence, two specializations of this resource exist.\nWhen a device exposes input sources
42536 then an instance of this resource with a resource type of oic.r.media.input is exposed.\nWhen a
42537 device exposes output sources then an instance of this resource with a resource type of
42538 oic.r.media.output is exposed.\nA device that exposes both input and output media sources then
42539 exposes two instances of this resource,\none with a resource type or oic.r.media.input and one with
42540 a resource type of oic.r.media.output\n",
42541       "parameters": [
42542         { "$ref": "#/parameters/interface" }
42543       ],
42544       "responses": {
42545         "200": {
42546           "description": "",
42547           "x-example":
42548             {
42549               "rt": ["oic.r.mediasourcelist"],
42550               "id": "unique_example_id",
42551               "sources": [
42552                 {
42553                   "sourceName": "HDMI-CEC",
42554                   "sourceNumber": "1",
42555                   "sourceType": "audioPlusVideo",
42556                   "status": true
42557                 },
42558                 {
42559                   "sourceName": "dualRCA",
42560                   "sourceNumber": "1",
42561                   "sourceType": "audioOnly",
42562                   "status": false
42563                 }
42564               ]
42565             }
42566         },
42567         "schema": { "$ref": "#/definitions/mediaSourceList" }
42568       }
42569     }
42570   },
42571   "post": {
42572     "description": "Changes the status of the source(s).\nAllows changes of the sourceName and
42573 the status.\n",
42574     "parameters": [
42575       { "$ref": "#/parameters/interface" },
42576       {
42577         "name": "body",
42578         "in": "body",
42579         "required": true,
42580         "schema": { "$ref": "#/definitions/mediaSourceList" },
42581         "x-example":
42582           {
42583             "id": "unique_example_id",
42584             "sources": [
42585               {
42586                 "sourceName": "my new name",
42587                 "sourceNumber": "1",
42588                 "status": true
42589               }
42590             ]
42591           }
42592       }
42593     ],
42594     "responses": {

```

```

42595         "200": {
42596             "description" : "",
42597             "x-example":
42598                 {
42599                     "id": "unique_example_id",
42600                     "sources": [
42601                         {
42602                             "sourceName": "my new name",
42603                             "sourceNumber": "1",
42604                             "status": true
42605                         }
42606                     ]
42607                 }
42608             ,
42609             "schema": { "$ref": "#/definitions/mediaSourceList" }
42610         }
42611     }
42612 }
42613 },
42614 },
42615 "parameters": {
42616     "interface" : {
42617         "in" : "query",
42618         "name" : "if",
42619         "type" : "string",
42620         "enum" : ["oic.if.a", "oic.if.baseline"]
42621     }
42622 },
42623 "definitions": {
42624     "mediaSourceList" : {
42625         "properties": {
42626             "rt" :
42627                 {
42628                     "description": "Resource Type",
42629                     "items": {
42630                         "maxLength": 64,
42631                         "type": "string"
42632                     },
42633                     "minItems": 1,
42634                     "readOnly": true,
42635                     "type": "array"
42636                 },
42637
42638             "precision" :
42639                 {
42640                     "description": "Accuracy granularity of the exposed value",
42641                     "readOnly": true,
42642                     "type": "number"
42643                 },
42644
42645             "value" :
42646                 {
42647                     "anyOf": [
42648                         {
42649                             "type": "array"
42650                         },
42651                         {
42652                             "type": "string"
42653                         },
42654                         {
42655                             "type": "boolean"
42656                         },
42657                         {
42658                             "type": "integer"
42659                         },
42660                         {
42661                             "type": "number"
42662                         },
42663                         {
42664                             "type": "object"
42665                     }

```

```

42666     ],
42667     "description": "The value sensed or actuated by this Resource"
42668   },
42669   "n" :
42670     {
42671       "description": "Friendly name of the resource",
42672       "maxLength": 64,
42673       "readOnly": true,
42674       "type": "string"
42675     },
42676   "sources" :
42677     {
42678       "items": {
42679         "oneOf": [
42680           {
42681             "properties": {
42682               "sourceName": {
42683                 "description": "Specifies a pre-defined media input or output",
42684                 "type": "string"
42685               },
42686             "sourceNumber": {
42687               "description": "Numeric identifier to specify the instance",
42688               "readOnly": true,
42689               "type": [
42690                 "integer",
42691                 "string"
42692               ]
42693             },
42694             "sourceType": {
42695               "description": "Specifies the type of the source",
42696               "enum": [
42697                 "audioOnly",
42698                 "videoOnly",
42699                 "audioPlusVideo"
42700               ],
42701               "readOnly": true,
42702               "type": "string"
42703             },
42704             "status": {
42705               "description": "Specifies if the specific source instance is selected or not",
42706               "type": "boolean"
42707             }
42708           }
42709         ]
42710       }
42711     },
42712   "type": "array"
42713 },
42714 "range" :
42715   {
42716     "description": "The valid range for the value Property",
42717     "items": {
42718       "anyOf": [
42719         {
42720           "type": "number"
42721         },
42722         {
42723           "type": "integer"
42724         }
42725       ]
42726     },
42727     "maxItems": 2,
42728     "minItems": 2,
42729     "readOnly": true,
42730     "type": "array"
42731   },
42732 "step" :

```



```

42737     {
42738     "anyOf": [
42739     {
42740     "type": "integer"
42741     },
42742     {
42743     "type": "number"
42744     }
42745     ],
42746     "description": "Step value across the defined range",
42747     "readOnly": true
42748   },
42749   "id" :
42750   {
42751     "description": "Instance ID of this specific resource",
42752     "maxLength": 64,
42753     "readOnly": true,
42754     "type": "string"
42755   },
42756   "if" :
42757   {
42758     "description": "The interface set supported by this resource",
42759     "items": {
42760       "enum": [
42761         "oic.if.baseline",
42762         "oic.if.ll",
42763         "oic.if.b",
42764         "oic.if.lb",
42765         "oic.if.rw",
42766         "oic.if.r",
42767         "oic.if.a",
42768         "oic.if.s"
42769       ],
42770       "type": "string"
42771     },
42772     "minItems": 1,
42773     "readOnly": true,
42774     "type": "array"
42775   }
42776   },
42777   "type" : "object"
42778   },
42779   "required": ["sources"]
42780 }
42781 }
42782 }
42783 }
42784 }
42785 }

```

42786 B.82.5 Property Definition

42787 **Table 401 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
rt	array: see schema	No	Read Only	Resource Type
n	string	No	Read Only	Friendly name of the resource
sources	array: see schema	Yes	Read Write	

range	array: see schema	No	Read Only	The valid range for the value Property
id	string	No	Read Only	Instance ID of this specific resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
if	array: see schema	No	Read Only	The interface set supported by this resource
step	multiple types: see schema	No	Read Only	Step value across the defined range

42788 **B.82.6 CRUDN behaviour**

42789 **Table 402 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/mediaSourceListResURI		get	post		observe

42790 **B.83 Media Source Input**

42791 **B.83.1 Introduction**

42792 This resource provides the list of input media sources available on the device.
42793 The sources are an array of mediaSource(s) as separately defined.
42794

42795 **B.83.2 Example URI**

42796 /mediaSourceInputResURI

42797 **B.83.3 Resource Type**

42798 The resource type (rt) is defined as: ['oic.r.media.input'].

42799 **B.83.4 Swagger2.0 Definition**

```
42800 {
42801   "swagger": "2.0",
42802   "info": {
42803     "title": "Media Source Input",
42804     "version": "v1.1.0-20160519",
42805     "license": {
42806       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
42807       "x-description": "Redistribution and use in source and binary forms, with or without
42808 modification, are permitted provided that the following conditions are met:\n      1.
42809 Redistributions of source code must retain the above copyright notice, this list of conditions and
42810 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
42811 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
42812 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
42813 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
42814 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
42815 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
42816 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
42817 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
42818 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
```

```

42819 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
42820 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
42821 OF SUCH DAMAGE.\n"
42822 }
42823 },
42824 "schemes": ["http"],
42825 "consumes": ["application/json"],
42826 "produces": ["application/json"],
42827 "paths": {
42828   "/mediaSourceInputResURI" : {
42829     "get": {
42830       "description": "This resource provides the list of input media sources available on the
42831 device.\nThe sources are an array of mediaSource(s) as separately defined.\n",
42832       "parameters": [
42833         {"$ref": "#/parameters/interface"}
42834       ],
42835       "responses": {
42836         "200": {
42837           "description": "",
42838           "x-example":
42839             {
42840               "rt": ["oic.r.media.input"],
42841               "id": "unique_example_id",
42842               "sources": [
42843                 {
42844                   "sourceName": "HDMI-CEC",
42845                   "sourceNumber": "1",
42846                   "sourceType": "audioPlusVideo",
42847                   "status": true
42848                 },
42849                 {
42850                   "sourceName": "dualRCA",
42851                   "sourceNumber": "1",
42852                   "sourceType": "audioOnly",
42853                   "status": false
42854                 }
42855               ]
42856             }
42857           ,
42858           "schema": { "$ref": "#/definitions/mediaSourceList" }
42859         }
42860       }
42861     },
42862     "post": {
42863       "description": "Changes the status of the source(s).\nAllows changes of the sourceName and
42864 the status.\n",
42865       "parameters": [
42866         {"$ref": "#/parameters/interface"},
42867         {
42868           "name": "body",
42869           "in": "body",
42870           "required": true,
42871           "schema": { "$ref": "#/definitions/mediaSourceList" },
42872           "x-example":
42873             {
42874               "id": "unique_example_id",
42875               "sources": [
42876                 {
42877                   "sourceName": "my new name",
42878                   "sourceNumber": "1",
42879                   "status": true
42880                 }
42881               ]
42882             }
42883         }
42884       ],
42885       "responses": {
42886         "200": {
42887           "description": "",
42888           "x-example":
42889             {

```

```

42890         "id": "unique_example_id",
42891         "sources": [
42892             {
42893                 "sourceName": "my new name",
42894                 "sourceNumber": "1",
42895                 "status": true
42896             }
42897         ]
42898     },
42899     ,
42900     "schema": { "$ref": "#/definitions/mediaSourceList" }
42901 }
42902 }
42903 }
42904 }
42905 },
42906 "parameters": {
42907     "interface" : {
42908         "in" : "query",
42909         "name" : "if",
42910         "type" : "string",
42911         "enum" : ["oic.if.a", "oic.if.baseline"]
42912     }
42913 },
42914 "definitions": {
42915     "mediaSourceList" : {
42916         "properties": {
42917             "rt" :
42918                 {
42919                     "description": "Resource Type",
42920                     "items": {
42921                         "maxLength": 64,
42922                         "type": "string"
42923                     },
42924                     "minItems": 1,
42925                     "readOnly": true,
42926                     "type": "array"
42927                 },
42928             "precision" :
42929                 {
42930                     "description": "Accuracy granularity of the exposed value",
42931                     "readOnly": true,
42932                     "type": "number"
42933                 },
42934             "value" :
42935                 {
42936                     "anyOf": [
42937                         {
42938                             "type": "array"
42939                         },
42940                         {
42941                             "type": "string"
42942                         },
42943                         {
42944                             "type": "boolean"
42945                         },
42946                         {
42947                             "type": "integer"
42948                         },
42949                         {
42950                             "type": "number"
42951                         },
42952                         {
42953                             "type": "object"
42954                         }
42955                     ],
42956                     "description": "The value sensed or actuated by this Resource"
42957                 },
42958             "description": "The value sensed or actuated by this Resource"
42959         },
42960     }

```

```

42961     "n" :
42962     {
42963         "description": "Friendly name of the resource",
42964         "maxLength": 64,
42965         "readOnly": true,
42966         "type": "string"
42967     },
42968
42969     "sources" :
42970     {
42971         "items": {
42972             "oneOf": [
42973                 {
42974                     "properties": {
42975                         "sourceName": {
42976                             "description": "Specifies a pre-defined media input or output",
42977                             "type": "string"
42978                         },
42979                         "sourceNumber": {
42980                             "description": "Numeric identifier to specify the instance",
42981                             "readOnly": true,
42982                             "type": [
42983                                 "integer",
42984                                 "string"
42985                             ]
42986                         },
42987                         "sourceType": {
42988                             "description": "Specifies the type of the source",
42989                             "enum": [
42990                                 "audioOnly",
42991                                 "videoOnly",
42992                                 "audioPlusVideo"
42993                             ],
42994                             "readOnly": true,
42995                             "type": "string"
42996                         },
42997                         "status": {
42998                             "description": "Specifies if the specific source instance is selected or not",
42999                             "type": "boolean"
43000                         }
43001                     }
43002                 }
43003             ]
43004         },
43005         "type": "array"
43006     },
43007
43008     "range" :
43009     {
43010         "description": "The valid range for the value Property",
43011         "items": {
43012             "anyOf": [
43013                 {
43014                     "type": "number"
43015                 },
43016                 {
43017                     "type": "integer"
43018                 }
43019             ]
43020         },
43021         "maxItems": 2,
43022         "minItems": 2,
43023         "readOnly": true,
43024         "type": "array"
43025     },
43026
43027     "step" :
43028     {
43029         "anyOf": [
43030             {
43031                 "type": "integer"

```

```

43032     },
43033     {
43034         "type": "number"
43035     }
43036 ],
43037 "description": "Step value across the defined range",
43038 "readOnly": true
43039 },
43040
43041 "id" :
43042     {
43043         "description": "Instance ID of this specific resource",
43044         "maxLength": 64,
43045         "readOnly": true,
43046         "type": "string"
43047     },
43048
43049 "if" :
43050     {
43051         "description": "The interface set supported by this resource",
43052         "items": {
43053             "enum": [
43054                 "oic.if.baseline",
43055                 "oic.if.ll",
43056                 "oic.if.b",
43057                 "oic.if.lb",
43058                 "oic.if.rw",
43059                 "oic.if.r",
43060                 "oic.if.a",
43061                 "oic.if.s"
43062             ],
43063             "type": "string"
43064         },
43065         "minItems": 1,
43066         "readOnly": true,
43067         "type": "array"
43068     }
43069
43070     }
43071     , "type" : "object"
43072     , "required": ["sources"]
43073 }
43074 }
43075 }
43076

```

43077 B.83.5 Property Definition

43078 **Table 403 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
id	string	No	Read Only	Instance ID of this specific resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
sources	array: see schema	Yes	Read Write	
n	string	No	Read Only	Friendly name of the resource
value	multiple types: see schema	No	Read Write	

				The value sensed or actuated by this Resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
range	array: see schema	No	Read Only	The valid range for the value Property
rt	array: see schema	No	Read Only	Resource Type
if	array: see schema	No	Read Only	The interface set supported by this resource

43079 **B.83.6 CRUDN behaviour**

43080 **Table 404 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/mediaSourceInputResURI		get	post		observe

43081 **B.84 Media Source Output**

43082 **B.84.1 Introduction**

43083 This resource provides the list of output media sources available on the device.
43084 The sources are an array of mediaSource(s) as separately defined.
43085

43086 **B.84.2 Example URI**

43087 /mediaSourceOutputResURI

43088 **B.84.3 Resource Type**

43089 The resource type (rt) is defined as: ['oic.r.media.output'].

43090 **B.84.4 Swagger2.0 Definition**

```
43091 {
43092   "swagger": "2.0",
43093   "info": {
43094     "title": "Media Source Output",
43095     "version": "v1.1.0-20160519",
43096     "license": {
43097       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
43098       "x-description": "Redistribution and use in source and binary forms, with or without
43099 modification, are permitted provided that the following conditions are met:\n      1.
43100 Redistributions of source code must retain the above copyright notice, this list of conditions and
43101 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
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43103 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
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43110 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
43111 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
43112 OF SUCH DAMAGE.\n"
```

```

43113     }
43114   },
43115   "schemes": ["http"],
43116   "consumes": ["application/json"],
43117   "produces": ["application/json"],
43118   "paths": {
43119     "/mediaSourceOutputResURI" : {
43120       "get": {
43121         "description": "This resource provides the list of output media sources available on the
43122 device.\nThe sources are an array of mediaSource(s) as separately defined.\n",
43123         "parameters": [
43124           { "$ref": "#/parameters/interface" }
43125         ],
43126         "responses": {
43127           "200": {
43128             "description": "",
43129             "x-example":
43130             {
43131               "rt": ["oic.r.media.output"],
43132               "id": "unique_example_id",
43133               "sources": [
43134                 {
43135                   "sourceName": "HDMI-CEC",
43136                   "sourceNumber": "1",
43137                   "sourceType": "audioPlusVideo",
43138                   "status": true
43139                 },
43140                 {
43141                   "sourceName": "dualRCA",
43142                   "sourceNumber": "1",
43143                   "sourceType": "audioOnly",
43144                   "status": false
43145                 }
43146               ]
43147             }
43148           },
43149           "schema": { "$ref": "#/definitions/mediaSourceList" }
43150         }
43151       }
43152     },
43153     "post": {
43154       "description": "Changes the status of the source(s).\nAllows changes of the sourceName and
43155 the status.\n",
43156       "parameters": [
43157         { "$ref": "#/parameters/interface" },
43158         {
43159           "name": "body",
43160           "in": "body",
43161           "required": true,
43162           "schema": { "$ref": "#/definitions/mediaSourceList" },
43163           "x-example":
43164           {
43165             "id": "unique_example_id",
43166             "sources": [
43167               {
43168                 "sourceName": "my new name",
43169                 "sourceNumber": "1",
43170                 "status": true
43171               }
43172             ]
43173           }
43174         }
43175       ],
43176       "responses": {
43177         "200": {
43178           "description": "",
43179           "x-example":
43180           {
43181             "id": "unique_example_id",
43182             "sources": [
43183               {

```



```

43184         "sourceName": "my new name",
43185         "sourceNumber": "1",
43186         "status": true
43187     }
43188     ]
43189     }
43190     ,
43191     "schema": { "$ref": "#/definitions/mediaSourceList" }
43192     }
43193     }
43194     }
43195     }
43196 },
43197 "parameters": {
43198     "interface" : {
43199         "in" : "query",
43200         "name" : "if",
43201         "type" : "string",
43202         "enum" : ["oic.if.a", "oic.if.baseline"]
43203     }
43204 },
43205 "definitions": {
43206     "mediaSourceList" : {
43207         "properties": {
43208             "rt" :
43209                 {
43210                     "description": "Resource Type",
43211                     "items": {
43212                         "maxLength": 64,
43213                         "type": "string"
43214                     },
43215                     "minItems": 1,
43216                     "readOnly": true,
43217                     "type": "array"
43218                 },
43219             "precision" :
43220                 {
43221                     "description": "Accuracy granularity of the exposed value",
43222                     "readOnly": true,
43223                     "type": "number"
43224                 },
43225             "value" :
43226                 {
43227                     "anyOf": [
43228                         {
43229                             "type": "array"
43230                         },
43231                         {
43232                             "type": "string"
43233                         },
43234                         {
43235                             "type": "boolean"
43236                         },
43237                         {
43238                             "type": "integer"
43239                         },
43240                         {
43241                             "type": "number"
43242                         },
43243                         {
43244                             "type": "object"
43245                         }
43246                     ],
43247                     "description": "The value sensed or actuated by this Resource"
43248                 },
43249             "n" :
43250                 {
43251                     "description": "Friendly name of the resource",

```

```

43255         "maxLength": 64,
43256         "readOnly": true,
43257         "type": "string"
43258     },
43259
43260     "sources" :
43261     {
43262         "items": {
43263             "oneOf": [
43264                 {
43265                     "properties": {
43266                         "sourceName": {
43267                             "description": "Specifies a pre-defined media input or output",
43268                             "type": "string"
43269                         },
43270                         "sourceNumber": {
43271                             "description": "Numeric identifier to specify the instance",
43272                             "readOnly": true,
43273                             "type": [
43274                                 "integer",
43275                                 "string"
43276                             ]
43277                         },
43278                         "sourceType": {
43279                             "description": "Specifies the type of the source",
43280                             "enum": [
43281                                 "audioOnly",
43282                                 "videoOnly",
43283                                 "audioPlusVideo"
43284                             ],
43285                             "readOnly": true,
43286                             "type": "string"
43287                         },
43288                         "status": {
43289                             "description": "Specifies if the specific source instance is selected or not",
43290                             "type": "boolean"
43291                         }
43292                     }
43293                 }
43294             ]
43295         },
43296         "type": "array"
43297     },
43298
43299     "range" :
43300     {
43301         "description": "The valid range for the value Property",
43302         "items": {
43303             "anyOf": [
43304                 {
43305                     "type": "number"
43306                 },
43307                 {
43308                     "type": "integer"
43309                 }
43310             ]
43311         },
43312         "maxItems": 2,
43313         "minItems": 2,
43314         "readOnly": true,
43315         "type": "array"
43316     },
43317
43318     "step" :
43319     {
43320         "anyOf": [
43321             {
43322                 "type": "integer"
43323             },
43324             {
43325                 "type": "number"

```

```

43326     }
43327   ],
43328   "description": "Step value across the defined range",
43329   "readOnly": true
43330 },
43331
43332 "id" :
43333   {
43334     "description": "Instance ID of this specific resource",
43335     "maxLength": 64,
43336     "readOnly": true,
43337     "type": "string"
43338   },
43339
43340 "if" :
43341   {
43342     "description": "The interface set supported by this resource",
43343     "items": {
43344       "enum": [
43345         "oic.if.baseline",
43346         "oic.if.ll",
43347         "oic.if.b",
43348         "oic.if.lb",
43349         "oic.if.rw",
43350         "oic.if.r",
43351         "oic.if.a",
43352         "oic.if.s"
43353       ],
43354       "type": "string"
43355     },
43356     "minItems": 1,
43357     "readOnly": true,
43358     "type": "array"
43359   }
43360
43361   },
43362   "type" : "object"
43363   , "required": ["sources"]
43364 }
43365 }
43366 }
43367

```

43368 B.84.5 Property Definition

43369 **Table 405 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
range	array: see schema	No	Read Only	The valid range for the value Property
rt	array: see schema	No	Read Only	Resource Type
precision	number	No	Read Only	Accuracy granularity of the exposed value
if	array: see schema	No	Read Only	The interface set supported by this resource
id	string	No	Read Only	Instance ID of this specific resource

value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
sources	array: see schema	Yes	Read Write	
step	multiple types: see schema	No	Read Only	Step value across the defined range
n	string	No	Read Only	Friendly name of the resource

43370 **B.84.6 CRUDN behaviour**

43371 **Table 406 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/mediaSourceOutputResURI		get	post		observe

43372 **B.85 Mode**

43373 **B.85.1 Introduction**

43374 This resource describes the modes of operation that a device can provide.
 43375 The mode can be read or set.
 43376 The supportedModes is an array of possible modes the device supports.
 43377 The modes are an array of the currently active mode(s).
 43378 Retrieves the current mode.
 43379

43380 **B.85.2 Example URI**

43381 /ModeResURI

43382 **B.85.3 Resource Type**

43383 The resource type (rt) is defined as: ['oic.r.mode'].

43384 **B.85.4 Swagger2.0 Definition**

```

43385 {
43386   "swagger": "2.0",
43387   "info": {
43388     "title": "Mode",
43389     "version": "v1.1.0-20160519",
43390     "license": {
43391       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
43392       "x-description": "Redistribution and use in source and binary forms, with or without
43393 modification, are permitted provided that the following conditions are met:\n      1.
43394 Redistributions of source code must retain the above copyright notice, this list of conditions and
43395 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
43396 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
43397 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
43398 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
43399 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
43400 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
43401 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
43402 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
43403 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND
43404 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
43405 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
43406 OF SUCH DAMAGE.\n"
43407     }
43408   }
  
```

```

43408     },
43409     "schemes": ["http"],
43410     "consumes": ["application/json"],
43411     "produces": ["application/json"],
43412     "paths": {
43413         "/ModeResURI" : {
43414             "get": {
43415                 "description": "This resource describes the modes of operation that a device can
43416 provide.\n\nThe mode can be read or set.\n\nThe supportedModes is an array of possible modes the device
43417 supports.\n\nThe modes are an array of the currently active mode(s).\n\nRetrieves the current mode.\n\n",
43418                 "parameters": [
43419                     { "$ref": "#/parameters/interface" }
43420                 ],
43421                 "responses": {
43422                     "200": {
43423                         "description": "",
43424                         "x-example":
43425                             {
43426                                 "rt": ["oic.r.mode"],
43427                                 "id": "unique_example_id",
43428                                 "supportedModes": ["active", "armedAway", "armedStay", "armedInstant"],
43429                                 "modes": ["active"]
43430                             }
43431                     },
43432                     "schema": { "$ref": "#/definitions/Mode" }
43433                 }
43434             }
43435         },
43436         "post": {
43437             "description": "Sets the desired mode.\n\n",
43438             "parameters": [
43439                 { "$ref": "#/parameters/interface" },
43440                 {
43441                     "name": "body",
43442                     "in": "body",
43443                     "required": true,
43444                     "schema": { "$ref": "#/definitions/ModeUpdate" },
43445                     "x-example":
43446                         {
43447                             "id": "unique_example_id",
43448                             "modes": ["armedAway"]
43449                         }
43450                 }
43451             ],
43452             "responses": {
43453                 "200": {
43454                     "description": "",
43455                     "x-example":
43456                         {
43457                             "id": "unique_example_id",
43458                             "modes": ["armedAway"]
43459                         }
43460                 },
43461                 "schema": { "$ref": "#/definitions/ModeUpdate" }
43462             },
43463                 "403": {
43464                     "description": "This response is generated by the OIC Server when the client
43465 sends:\n\n An update with an value for mode that is not found in supportedModes.\n\nThe server
43466 responds with the current resource representation.\n\n",
43467                     "x-example":
43468                         {
43469                             "id": "unique_example_id",
43470                             "supportedModes": ["active", "armedAway", "armedStay", "armedInstant"],
43471                             "modes": ["active"]
43472                         }
43473                 },
43474                 "schema": { "$ref": "#/definitions/Mode" }
43475             }
43476         }
43477     }
43478 }

```

```

43479 },
43480 "parameters": {
43481   "interface" : {
43482     "in" : "query",
43483     "name" : "if",
43484     "type" : "string",
43485     "enum" : ["oic.if.a", "oic.if.baseline"]
43486   }
43487 },
43488 "definitions": {
43489   "Mode" : {
43490     "properties": {
43491       "rt" :
43492         {
43493           "description": "Resource Type",
43494           "items": {
43495             "maxLength": 64,
43496             "type": "string"
43497           },
43498           "minItems": 1,
43499           "readOnly": true,
43500           "type": "array"
43501         },
43502
43503     "modes" :
43504       {
43505         "description": "Array of the currently active mode(s)",
43506         "items": {
43507           "type": "string"
43508         },
43509         "type": "array"
43510       },
43511
43512     "precision" :
43513       {
43514         "description": "Accuracy granularity of the exposed value",
43515         "readOnly": true,
43516         "type": "number"
43517       },
43518
43519     "value" :
43520       {
43521         "anyOf": [
43522           {
43523             "type": "array"
43524           },
43525           {
43526             "type": "string"
43527           },
43528           {
43529             "type": "boolean"
43530           },
43531           {
43532             "type": "integer"
43533           },
43534           {
43535             "type": "number"
43536           },
43537           {
43538             "type": "object"
43539           }
43540         ],
43541         "description": "The value sensed or actuated by this Resource"
43542       },
43543
43544     "n" :
43545       {
43546         "description": "Friendly name of the resource",
43547         "maxLength": 64,
43548         "readOnly": true,
43549         "type": "string"

```

```

43550     },
43551
43552     "supportedModes" :
43553     {
43554         "description": "Array of possible modes the device supports.",
43555         "items": {
43556             "type": "string"
43557         },
43558         "readOnly": true,
43559         "type": "array"
43560     },
43561
43562     "range" :
43563     {
43564         "description": "The valid range for the value Property",
43565         "items": {
43566             "anyOf": [
43567                 {
43568                     "type": "number"
43569                 },
43570                 {
43571                     "type": "integer"
43572                 }
43573             ]
43574         },
43575         "maxItems": 2,
43576         "minItems": 2,
43577         "readOnly": true,
43578         "type": "array"
43579     },
43580
43581     "step" :
43582     {
43583         "anyOf": [
43584             {
43585                 "type": "integer"
43586             },
43587             {
43588                 "type": "number"
43589             }
43590         ],
43591         "description": "Step value across the defined range",
43592         "readOnly": true
43593     },
43594
43595     "id" :
43596     {
43597         "description": "Instance ID of this specific resource",
43598         "maxLength": 64,
43599         "readOnly": true,
43600         "type": "string"
43601     },
43602
43603     "if" :
43604     {
43605         "description": "The interface set supported by this resource",
43606         "items": {
43607             "enum": [
43608                 "oic.if.baseline",
43609                 "oic.if.ll",
43610                 "oic.if.b",
43611                 "oic.if.lb",
43612                 "oic.if.rw",
43613                 "oic.if.r",
43614                 "oic.if.a",
43615                 "oic.if.s"
43616             ],
43617             "type": "string"
43618         },
43619         "minItems": 1,
43620         "readOnly": true,

```

```

43621         "type": "array"
43622     }
43623
43624     }
43625     , "type" : "object"
43626     , "required": ["supportedModes", "modes"]
43627 }
43628 ,
43629 "ModeUpdate" : {
43630     "properties": {
43631         "rt" :
43632             {
43633                 "description": "Resource Type",
43634                 "items": {
43635                     "maxLength": 64,
43636                     "type": "string"
43637                 },
43638                 "minItems": 1,
43639                 "readOnly": true,
43640                 "type": "array"
43641             },
43642
43643     "modes" :
43644         {
43645             "description": "Desired mode",
43646             "items": {
43647                 "type": "string"
43648             },
43649             "type": "array"
43650         },
43651
43652     "precision" :
43653         {
43654             "description": "Accuracy granularity of the exposed value",
43655             "readOnly": true,
43656             "type": "number"
43657         },
43658
43659     "value" :
43660         {
43661             "anyOf": [
43662                 {
43663                     "type": "array"
43664                 },
43665                 {
43666                     "type": "string"
43667                 },
43668                 {
43669                     "type": "boolean"
43670                 },
43671                 {
43672                     "type": "integer"
43673                 },
43674                 {
43675                     "type": "number"
43676                 },
43677                 {
43678                     "type": "object"
43679                 }
43680             ],
43681             "description": "The value sensed or actuated by this Resource"
43682         },
43683
43684     "n" :
43685         {
43686             "description": "Friendly name of the resource",
43687             "maxLength": 64,
43688             "readOnly": true,
43689             "type": "string"
43690         },
43691

```



```

43692     "range" :
43693     {
43694         "description": "The valid range for the value Property",
43695         "items": {
43696             "anyOf": [
43697                 {
43698                     "type": "number"
43699                 },
43700                 {
43701                     "type": "integer"
43702                 }
43703             ]
43704         },
43705         "maxItems": 2,
43706         "minItems": 2,
43707         "readOnly": true,
43708         "type": "array"
43709     },
43710     "step" :
43711     {
43712         "anyOf": [
43713             {
43714                 "type": "integer"
43715             },
43716             {
43717                 "type": "number"
43718             }
43719         ],
43720         "description": "Step value across the defined range",
43721         "readOnly": true
43722     },
43723     "id" :
43724     {
43725         "description": "Instance ID of this specific resource",
43726         "maxLength": 64,
43727         "readOnly": true,
43728         "type": "string"
43729     },
43730     "if" :
43731     {
43732         "description": "The interface set supported by this resource",
43733         "items": {
43734             "enum": [
43735                 "oic.if.baseline",
43736                 "oic.if.ll",
43737                 "oic.if.b",
43738                 "oic.if.lb",
43739                 "oic.if.rw",
43740                 "oic.if.r",
43741                 "oic.if.a",
43742                 "oic.if.s"
43743             ],
43744             "type": "string"
43745         },
43746         "minItems": 1,
43747         "readOnly": true,
43748         "type": "array"
43749     }
43750     , "required": ["modes"]
43751 }
43752 }
43753 }
43754 }
43755 }
43756 }
43757 }
43758 }
43759 }
43760 }

```

43761
43762

B.85.5 Property Definition

Table 407 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
modes	array: see schema	Yes	Read Write	Array of the currently active mode(s)
rt	array: see schema	No	Read Only	Resource Type
supportedModes	array: see schema	Yes	Read Only	Array of possible modes the device supports.
n	string	No	Read Only	Friendly name of the resource
if	array: see schema	No	Read Only	The interface set supported by this resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
range	array: see schema	No	Read Only	The valid range for the value Property
id	string	No	Read Only	Instance ID of this specific resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
modes	array: see schema	Yes	Read Write	Desired mode
rt	array: see schema	No	Read Only	Resource Type
n	string	No	Read Only	Friendly name of the resource

if	array: see schema	No	Read Only	The interface set supported by this resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
range	array: see schema	No	Read Only	The valid range for the value Property
id	string	No	Read Only	Instance ID of this specific resource
precision	number	No	Read Only	Accuracy granularity of the exposed value

CRUDN behaviour

Table 408 The CRUDN operations of the resource

Resource	Create	Read	Update	Delete	Notify
/ModeResURI		get	post		observe

B.86 Motion Sensor

B.86.1 Introduction

This resource describes whether motion has been sensed or not.
The value is a boolean.
A value of 'true' means that motion has been sensed.
A value of 'false' means that motion not been sensed.

B.86.2 Example URI

/MotionResURI

B.86.3 Resource Type

The resource type (rt) is defined as: ['oic.r.sensor.motion'].

B.86.4 Swagger2.0 Definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Motion Sensor",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n
1. Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n
2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n
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IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
```

```

43794 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
43795 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n          HOWEVER CAUSED AND
43796 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
43797 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
43798 OF SUCH DAMAGE.\n"
43799     }
43800   },
43801   "schemes": ["http"],
43802   "consumes": ["application/json"],
43803   "produces": ["application/json"],
43804   "paths": {
43805     "/MotionResURI" : {
43806       "get": {
43807         "description": "This resource describes whether motion has been sensed or not.\nThe value
43808 is a boolean.\nA value of 'true' means that motion has been sensed.\nA value of 'false' means that
43809 motion not been sensed.\n",
43810         "parameters": [
43811           { "$ref": "#/parameters/interface" }
43812         ],
43813         "responses": {
43814           "200": {
43815             "description": "",
43816             "x-example":
43817               {
43818                 "rt": ["oic.r.sensor.motion"],
43819                 "id": "unique_example_id",
43820                 "value": true
43821               }
43822             ,
43823             "schema": { "$ref": "#/definitions/Motion" }
43824           }
43825         }
43826       }
43827     }
43828   },
43829   "parameters": {
43830     "interface" : {
43831       "in" : "query",
43832       "name" : "if",
43833       "type" : "string",
43834       "enum" : ["oic.if.s", "oic.if.baseline"]
43835     }
43836   },
43837   "definitions": {
43838     "Motion" : {
43839       "properties": {
43840         "rt" :
43841           {
43842             "description": "Resource Type",
43843             "items": {
43844               "maxLength": 64,
43845               "type": "string"
43846             },
43847             "minItems": 1,
43848             "readOnly": true,
43849             "type": "array"
43850           },
43851         "precision" :
43852           {
43853             "description": "Accuracy granularity of the exposed value",
43854             "readOnly": true,
43855             "type": "number"
43856           },
43857         "value" :
43858           {
43859             "description": "true = sensed, false = not sensed.",
43860             "readOnly": true,
43861             "type": "boolean"
43862           }
43863       }
43864     }

```

```

43865
43866     "n" :
43867         {
43868             "description": "Friendly name of the resource",
43869             "maxLength": 64,
43870             "readOnly": true,
43871             "type": "string"
43872         },
43873
43874     "range" :
43875         {
43876             "description": "The valid range for the value Property",
43877             "items": {
43878                 "anyOf": [
43879                     {
43880                         "type": "number"
43881                     },
43882                     {
43883                         "type": "integer"
43884                     }
43885                 ]
43886             },
43887             "maxItems": 2,
43888             "minItems": 2,
43889             "readOnly": true,
43890             "type": "array"
43891         },
43892
43893     "step" :
43894         {
43895             "anyOf": [
43896                 {
43897                     "type": "integer"
43898                 },
43899                 {
43900                     "type": "number"
43901                 }
43902             ],
43903             "description": "Step value across the defined range",
43904             "readOnly": true
43905         },
43906
43907     "id" :
43908         {
43909             "description": "Instance ID of this specific resource",
43910             "maxLength": 64,
43911             "readOnly": true,
43912             "type": "string"
43913         },
43914
43915     "if" :
43916         {
43917             "description": "The interface set supported by this resource",
43918             "items": {
43919                 "enum": [
43920                     "oic.if.baseline",
43921                     "oic.if.ll",
43922                     "oic.if.b",
43923                     "oic.if.lb",
43924                     "oic.if.rw",
43925                     "oic.if.r",
43926                     "oic.if.a",
43927                     "oic.if.s"
43928                 ],
43929                 "type": "string"
43930             },
43931             "minItems": 1,
43932             "readOnly": true,
43933             "type": "array"
43934         }
43935

```

```

43936     }
43937     , "type" : "object"
43938     , "required" : ["value"]
43939   }
43940 }
43941 }
43942

```

43943 B.86.5 Property Definition

43944 **Table 409 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
value	boolean	Yes	Read Only	true = sensed, false = not sensed.
step	multiple types: see schema	No	Read Only	Step value across the defined range
range	array: see schema	No	Read Only	The valid range for the value Property
if	array: see schema	No	Read Only	The interface set supported by this resource
n	string	No	Read Only	Friendly name of the resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
id	string	No	Read Only	Instance ID of this specific resource

43945 B.86.6 CRUDN behaviour

43946 **Table 410 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/MotionResURI		get			observe

43947 B.87 Movement

43948 B.87.1 Introduction

43949 This resource specifies linear movement.

43950 The movementSettings is an array of strings containing possible movement values (e.g. spin,
43951 stop, left, right).

43952 The movement is the currently selected movement value.

43953 The movementModifier is a modifier to the movement value (e.g. "spin", "90")

43954

43955 **B.87.2 Example URI**

43956 /MovementResURI

43957 **B.87.3 Resource Type**

43958 The resource type (rt) is defined as: ['oic.r.movement.linear'].

43959 **B.87.4 Swagger2.0 Definition**

```
43960 {
43961   "swagger": "2.0",
43962   "info": {
43963     "title": "Movement",
43964     "version": "v1.1.0-20160519",
43965     "license": {
43966       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
43967       "x-description": "Redistribution and use in source and binary forms, with or without
43968 modification, are permitted provided that the following conditions are met:\n      1.
43969 Redistributions of source code must retain the above copyright notice, this list of conditions and
43970 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
43971 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
43972 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
43973 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
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43976 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
43977 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
43978 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
43979 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
43980 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
43981 OF SUCH DAMAGE.\n"
43982     }
43983   },
43984   "schemes": ["http"],
43985   "consumes": ["application/json"],
43986   "produces": ["application/json"],
43987   "paths": {
43988     "/MovementResURI" : {
43989       "get": {
43990         "description": "This resource specifies linear movement.\nThe movementSettings is an array
43991 of strings containing possible movement values (e.g. spin, stop, left, right).\nThe movement is the
43992 currently selected movement value.\nThe movementModifier is a modifier to the movement value (e.g.
43993 \\"spin\\", \\"90\\")\n",
43994         "parameters": [
43995           { "$ref": "#/parameters/interface" }
43996         ],
43997         "responses": {
43998           "200": {
43999             "description": "",
44000             "x-example":
44001               {
44002                 "rt": ["oic.r.movement.linear"],
44003                 "id": "unique_example_id",
44004                 "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
44005                 "movement": "rotate",
44006                 "movementModifier": "90"
44007               }
44008             ,
44009             "schema": { "$ref": "#/definitions/movement" }
44010           }
44011         }
44012       },
44013       "post": {
44014         "description": "Sets the current device movement\n",
44015         "parameters": [
44016           { "$ref": "#/parameters/interface" },
44017           {
44018             "name": "body",
44019             "in": "body",
44020             "required": true,
44021             "schema": { "$ref": "#/definitions/movement" },
```

```

44022         "x-example":
44023         {
44024             "id": "unique_example_id",
44025             "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
44026             "movement": "stop"
44027         }
44028     },
44029 ],
44030 "responses": {
44031     "200": {
44032         "description": "",
44033         "x-example":
44034         {
44035             "id": "unique_example_id",
44036             "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
44037             "movement": "stop"
44038         }
44039     },
44040     "schema": { "$ref": "#/definitions/movement" }
44041 }
44042 }
44043 }
44044 },
44045 },
44046 "parameters": {
44047     "interface": {
44048         "in": "query",
44049         "name": "if",
44050         "type": "string",
44051         "enum": ["oic.if.s", "oic.if.baseline"]
44052     }
44053 },
44054 "definitions": {
44055     "movement": {
44056         "properties": {
44057             "rt": {
44058                 {
44059                     "description": "Resource Type",
44060                     "items": {
44061                         "maxLength": 64,
44062                         "type": "string"
44063                     },
44064                     "minItems": 1,
44065                     "readOnly": true,
44066                     "type": "array"
44067                 },
44068             "movementSettings": {
44069                 {
44070                     "description": "array of possible movement values",
44071                     "items": {
44072                         "type": "string"
44073                     },
44074                     "readOnly": true,
44075                     "type": "array"
44076                 },
44077             "precision": {
44078                 {
44079                     "description": "Accuracy granularity of the exposed value",
44080                     "readOnly": true,
44081                     "type": "number"
44082                 },
44083             "value": {
44084                 {
44085                     "anyOf": [
44086                         {
44087                             "type": "array"
44088                         },
44089                     ],
44090                 },
44091             }
44092         }

```



```

44093         "type": "string"
44094     },
44095     {
44096         "type": "boolean"
44097     },
44098     {
44099         "type": "integer"
44100     },
44101     {
44102         "type": "number"
44103     },
44104     {
44105         "type": "object"
44106     }
44107 ],
44108 "description": "The value sensed or actuated by this Resource"
44109 },
44110
44111 "n" :
44112     {
44113         "description": "Friendly name of the resource",
44114         "maxLength": 64,
44115         "readOnly": true,
44116         "type": "string"
44117     },
44118
44119 "movementModifier" :
44120     {
44121         "description": "Modifier to the movement value (e.g. spin-90, left-20), units are device
44122 dependent",
44123         "type": "string"
44124     },
44125
44126 "range" :
44127     {
44128         "description": "The valid range for the value Property",
44129         "items": {
44130             "anyOf": [
44131                 {
44132                     "type": "number"
44133                 },
44134                 {
44135                     "type": "integer"
44136                 }
44137             ]
44138         },
44139         "maxItems": 2,
44140         "minItems": 2,
44141         "readOnly": true,
44142         "type": "array"
44143     },
44144
44145 "step" :
44146     {
44147         "anyOf": [
44148             {
44149                 "type": "integer"
44150             },
44151             {
44152                 "type": "number"
44153             }
44154         ],
44155         "description": "Step value across the defined range",
44156         "readOnly": true
44157     },
44158
44159 "if" :
44160     {
44161         "description": "The interface set supported by this resource",
44162         "items": {
44163             "enum": [

```

```

44164         "oic.if.baseline",
44165         "oic.if.ll",
44166         "oic.if.b",
44167         "oic.if.lb",
44168         "oic.if.rw",
44169         "oic.if.r",
44170         "oic.if.a",
44171         "oic.if.s"
44172     ],
44173     "type": "string"
44174 },
44175 "minItems": 1,
44176 "readOnly": true,
44177 "type": "array"
44178 },
44179
44180 "id" :
44181 {
44182     "description": "Instance ID of this specific resource",
44183     "maxLength": 64,
44184     "readOnly": true,
44185     "type": "string"
44186 },
44187
44188 "movement" :
44189 {
44190     "description": "Current movement value",
44191     "type": "string"
44192 }
44193
44194 }
44195 , "type" : "object"
44196 , "required": ["movementSettings", "movement"]
44197 }
44198 }
44199 }
44200

```

44201 B.87.5 Property Definition

44202 **Table 411** The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema	No	Read Only	The interface set supported by this resource
movementSettings	array: see schema	Yes	Read Only	array of possible movement values
rt	array: see schema	No	Read Only	Resource Type
precision	number	No	Read Only	Accuracy granularity of the exposed value
movementModifier	string	No	Read Write	Modifier to the movement value (e.g. spin-90, left-20), units are device dependent

movement	string	Yes	Read Write	Current movement value
id	string	No	Read Only	Instance ID of this specific resource
n	string	No	Read Only	Friendly name of the resource
range	array: see schema	No	Read Only	The valid range for the value Property
step	multiple types: see schema	No	Read Only	Step value across the defined range
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource

44203 **B.87.6 CRUDN behaviour**

44204 **Table 412 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/MovementResURI		get	post		observe

44205 **B.88 Night Mode**

44206 **B.88.1 Introduction**

44207 This resource describes a night mode on/off feature.
 44208 A nightMode value of 'true' means that the feature is on.
 44209 A nightMode value of 'false' means that the feature is off.
 44210

44211 **B.88.2 Example URI**

44212 /NightModeResURI

44213 **B.88.3 Resource Type**

44214 The resource type (rt) is defined as: ['oic.r.nightmode'].

44215 **B.88.4 Swagger2.0 Definition**

```

44216 {
44217   "swagger": "2.0",
44218   "info": {
44219     "title": "Night Mode",
44220     "version": "v1.1.0-20160519",
44221     "license": {
44222       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
44223       "x-description": "Redistribution and use in source and binary forms, with or without
44224 modification, are permitted provided that the following conditions are met:\n      1.
44225 Redistributions of source code must retain the above copyright notice, this list of conditions and
44226 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
44227 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
44228 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
44229 Connectivity Foundation, INC. \ "AS IS\ " AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT

```

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44231 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n IN NO EVENT SHALL THE Open Connectivity
44232 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
44233 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
44234 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n HOWEVER CAUSED AND
44235 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
44236 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
44237 OF SUCH DAMAGE.\n"

```

44238     }
44239   },
44240   "schemes": ["http"],
44241   "consumes": ["application/json"],
44242   "produces": ["application/json"],
44243   "paths": {
44244     "/NightModeResURI" : {
44245       "get": {
44246         "description": "This resource describes a night mode on/off feature.\nA nightMode value of
44247 'true' means that the feature is on.\nA nightMode value of 'false' means that the feature is
44248 off.\n",
44249         "parameters": [
44250           { "$ref": "#/parameters/interface" }
44251         ],
44252         "responses": {
44253           "200": {
44254             "description": "",
44255             "x-example":
44256               {
44257                 "rt": ["oic.r.nightmode"],
44258                 "id": "unique_example_id",
44259                 "nightMode": false
44260               }
44261             ,
44262             "schema": { "$ref": "#/definitions/NightMode" }
44263           }
44264         }
44265       },
44266       "post": {
44267         "description": "",
44268         "parameters": [
44269           { "$ref": "#/parameters/interface" },
44270           {
44271             "name": "body",
44272             "in": "body",
44273             "required": true,
44274             "schema": { "$ref": "#/definitions/NightMode" },
44275             "x-example":
44276               {
44277                 "id": "unique_example_id",
44278                 "nightMode": true
44279               }
44280           }
44281         ],
44282         "responses": {
44283           "200": {
44284             "description": "",
44285             "x-example":
44286               {
44287                 "id": "unique_example_id",
44288                 "nightMode": true
44289               }
44290             ,
44291             "schema": { "$ref": "#/definitions/NightMode" }
44292           }
44293         }
44294       }
44295     }
44296   },
44297   "parameters": {
44298     "interface" : {
44299       "in" : "query",
44300       "name" : "if",

```

```

44301     "type" : "string",
44302     "enum" : ["oic.if.a", "oic.if.baseline"]
44303   },
44304 },
44305 "definitions": {
44306   "NightMode" : {
44307     "properties": {
44308       "rt" :
44309         {
44310           "description": "Resource Type",
44311           "items": {
44312             "maxLength": 64,
44313             "type": "string"
44314           },
44315           "minItems": 1,
44316           "readOnly": true,
44317           "type": "array"
44318         },
44319     "precision" :
44320       {
44321         "description": "Accuracy granularity of the exposed value",
44322         "readOnly": true,
44323         "type": "number"
44324       },
44325     "value" :
44326       {
44327         "anyOf": [
44328           {
44329             "type": "array"
44330           },
44331           {
44332             "type": "string"
44333           },
44334           {
44335             "type": "boolean"
44336           },
44337           {
44338             "type": "integer"
44339           },
44340           {
44341             "type": "number"
44342           },
44343           {
44344             "type": "object"
44345           }
44346         ],
44347         "description": "The value sensed or actuated by this Resource"
44348       },
44349     "n" :
44350       {
44351         "description": "Friendly name of the resource",
44352         "maxLength": 64,
44353         "readOnly": true,
44354         "type": "string"
44355       },
44356     "range" :
44357       {
44358         "description": "The valid range for the value Property",
44359         "items": {
44360           "anyOf": [
44361             {
44362               "type": "number"
44363             },
44364             {
44365               "type": "integer"
44366             }
44367           ]
44368         }
44369       }
44370     ]
44371   ]

```

```

44372     },
44373     "maxItems": 2,
44374     "minItems": 2,
44375     "readOnly": true,
44376     "type": "array"
44377   },
44378
44379   "nightMode" :
44380     {
44381       "description": "Status of the Night Mode",
44382       "type": "boolean"
44383     },
44384
44385   "step" :
44386     {
44387       "anyOf": [
44388         {
44389           "type": "integer"
44390         },
44391         {
44392           "type": "number"
44393         }
44394       ],
44395       "description": "Step value across the defined range",
44396       "readOnly": true
44397     },
44398
44399   "id" :
44400     {
44401       "description": "Instance ID of this specific resource",
44402       "maxLength": 64,
44403       "readOnly": true,
44404       "type": "string"
44405     },
44406
44407   "if" :
44408     {
44409       "description": "The interface set supported by this resource",
44410       "items": {
44411         "enum": [
44412           "oic.if.baseline",
44413           "oic.if.ll",
44414           "oic.if.b",
44415           "oic.if.lb",
44416           "oic.if.rw",
44417           "oic.if.r",
44418           "oic.if.a",
44419           "oic.if.s"
44420         ],
44421         "type": "string"
44422       },
44423       "minItems": 1,
44424       "readOnly": true,
44425       "type": "array"
44426     }
44427
44428   }
44429   , "type" : "object"
44430   , "required": ["nightMode"]
44431 }
44432 }
44433 }
44434

```

44435 B.88.5 Property Definition

44436 Table 413 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
---------------	------------	-----------	-------------	-------------

range	array: see schema	No	Read Only	The valid range for the value Property
id	string	No	Read Only	Instance ID of this specific resource
if	array: see schema	No	Read Only	The interface set supported by this resource
n	string	No	Read Only	Friendly name of the resource
rt	array: see schema	No	Read Only	Resource Type
precision	number	No	Read Only	Accuracy granularity of the exposed value
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
nightMode	boolean	Yes	Read Write	Status of the Night Mode
step	multiple types: see schema	No	Read Only	Step value across the defined range

44437 **B.88.6 CRUDN behaviour**

44438 **Table 414 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/NightModeResURI		get	post		observe

44439 **B.89 Open Level**

44440 **B.89.1 Introduction**

44441 This resource describes how open or ajar an entity such as a window, door, blind or shutter is.
44442 The openLevel can be read (acting as a sensor).
44443 The openLevel can also be set (acting as an actuator).
44444 The openLevel is device dependent across the range provided.
44445 When range (from oic.r.baseresource) is omitted then 0 to 100 is assumed where 0 means
44446 closed, 100 means fully open.
44447 If a range is provided then the lower bound=closed, upper bound=open.
44448 If step (from oic.r.baseresource) is present then it represents the increment between possible
44449 values; if not provided 1 is assumed.
44450

44451 **B.89.2 Example URI**

44452 /OpenLevelResURI

44453 **B.89.3 Resource Type**

44454 The resource type (rt) is defined as: ['oic.r.openlevel'].

44455 **B.89.4 Swagger2.0 Definition**

```
44456 {
44457   "swagger": "2.0",
44458   "info": {
44459     "title": "Open Level",
44460     "version": "v1.1.0-20160519",
44461     "license": {
44462       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
44463       "x-description": "Redistribution and use in source and binary forms, with or without
44464 modification, are permitted provided that the following conditions are met:\n      1.
44465 Redistributions of source code must retain the above copyright notice, this list of conditions and
44466 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
44467 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
44468 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
44469 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
44470 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
44471 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
44472 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
44473 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
44474 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
44475 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
44476 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
44477 OF SUCH DAMAGE.\n"
44478     }
44479   },
44480   "schemes": ["http"],
44481   "consumes": ["application/json"],
44482   "produces": ["application/json"],
44483   "paths": {
44484     "/OpenLevelResURI" : {
44485       "get": {
44486         "description": "This resource describes how open or ajar an entity such as a window, door,
44487 blind or shutter is.\nThe openLevel can be read (acting as a sensor).\nThe openLevel can also be
44488 set (acting as an actuator).\nThe openLevel is device dependent across the range provided.\nWhen
44489 range (from oic.r.baseresource) is omitted then 0 to 100 is assumed where 0 means closed, 100 means
44490 fully open.\nIf a range is provided then the lower bound=closed, upper bound=open.\nIf step (from
44491 oic.r.baseresource) is present then it represents the increment between possible values; if not
44492 provided 1 is assumed.\nRetrieves the current openLevel.\n",
44493         "parameters": [
44494           { "$ref": "#/parameters/interface" }
44495         ],
44496         "responses": {
44497           "200": {
44498             "description": "",
44499             "x-example":
44500               {
44501                 "rt": ["oic.r.openlevel"],
44502                 "id": "unique_example_id",
44503                 "openLevel": 50,
44504                 "step": 2,
44505                 "range": [0,100]
44506               }
44507           },
44508           "schema": { "$ref": "#/definitions/OpenLevel" }
44509         }
44510       }
44511     },
44512     "post": {
44513       "description": "Sets the desired openLevel.\n",
44514       "parameters": [
44515         { "$ref": "#/parameters/interface" },
44516         {
44517           "name": "body",
```



```

44518         "in": "body",
44519         "required": true,
44520         "schema": { "$ref": "#/definitions/OpenLevel" },
44521         "x-example":
44522             {
44523                 "id": "unique_example_id",
44524                 "openLevel": 0
44525             }
44526     },
44527 ],
44528     "responses": {
44529         "200": {
44530             "description": "",
44531             "x-example":
44532                 {
44533                     "id": "unique_example_id",
44534                     "openLevel": 0
44535                 }
44536             ,
44537             "schema": { "$ref": "#/definitions/OpenLevel" }
44538         },
44539         "403": {
44540             "description": "This response is generated by the OIC Server when the client
44541 sends:\n An update with an out of range property value for openLevel.\nThe server responds with
44542 the current resource representation.\n",
44543             "x-example":
44544                 {
44545                     "id": "unique_example_id",
44546                     "openLevel": 50,
44547                     "step": 2,
44548                     "range": [0,100]
44549                 }
44550             ,
44551             "schema": { "$ref": "#/definitions/OpenLevel" }
44552         }
44553     }
44554 }
44555 },
44556 },
44557 "parameters": {
44558     "interface": {
44559         "in": "query",
44560         "name": "if",
44561         "type": "string",
44562         "enum": ["oic.if.a", "oic.if.baseline"]
44563     }
44564 },
44565 "definitions": {
44566     "OpenLevel": {
44567         "properties": {
44568             "rt":
44569                 {
44570                     "description": "Resource Type",
44571                     "items": {
44572                         "maxLength": 64,
44573                         "type": "string"
44574                     },
44575                     "minItems": 1,
44576                     "readOnly": true,
44577                     "type": "array"
44578                 },
44579             "openLevel":
44580                 {
44581                     "description": "How open or ajar the entity is",
44582                     "type": "integer"
44583                 },
44584             "precision":
44585                 {
44586                     "description": "Accuracy granularity of the exposed value",

```

```

44589         "readOnly": true,
44590         "type": "number"
44591     },
44592
44593     "value" :
44594     {
44595         "anyOf": [
44596             {
44597                 "type": "array"
44598             },
44599             {
44600                 "type": "string"
44601             },
44602             {
44603                 "type": "boolean"
44604             },
44605             {
44606                 "type": "integer"
44607             },
44608             {
44609                 "type": "number"
44610             },
44611             {
44612                 "type": "object"
44613             }
44614         ],
44615         "description": "The value sensed or actuated by this Resource"
44616     },
44617
44618     "n" :
44619     {
44620         "description": "Friendly name of the resource",
44621         "maxLength": 64,
44622         "readOnly": true,
44623         "type": "string"
44624     },
44625
44626     "range" :
44627     {
44628         "description": "The valid range for the value Property",
44629         "items": {
44630             "anyOf": [
44631                 {
44632                     "type": "number"
44633                 },
44634                 {
44635                     "type": "integer"
44636                 }
44637             ]
44638         },
44639         "maxItems": 2,
44640         "minItems": 2,
44641         "readOnly": true,
44642         "type": "array"
44643     },
44644
44645     "increment" :
44646     {
44647         "description": "Deprecated, use 'step' instead.",
44648         "readOnly": true,
44649         "type": "integer"
44650     },
44651
44652     "step" :
44653     {
44654         "anyOf": [
44655             {
44656                 "type": "integer"
44657             },
44658             {
44659                 "type": "number"

```

```

44660     }
44661   ],
44662   "description": "Step value across the defined range",
44663   "readOnly": true
44664 },
44665
44666 "id" :
44667   {
44668     "description": "Instance ID of this specific resource",
44669     "maxLength": 64,
44670     "readOnly": true,
44671     "type": "string"
44672   },
44673
44674 "if" :
44675   {
44676     "description": "The interface set supported by this resource",
44677     "items": {
44678       "enum": [
44679         "oic.if.baseline",
44680         "oic.if.ll",
44681         "oic.if.b",
44682         "oic.if.lb",
44683         "oic.if.rw",
44684         "oic.if.r",
44685         "oic.if.a",
44686         "oic.if.s"
44687       ],
44688       "type": "string"
44689     },
44690     "minItems": 1,
44691     "readOnly": true,
44692     "type": "array"
44693   }
44694
44695   },
44696   "type" : "object"
44697   , "required": ["openLevel"]
44698 }
44699 }
44700 }
44701

```

44702 B.89.5 Property Definition

44703 **Table 415 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
id	string	No	Read Only	Instance ID of this specific resource
n	string	No	Read Only	Friendly name of the resource
openLevel	integer	Yes	Read Write	How open or ajar the entity is
range	array: see schema	No	Read Only	The valid range for the value Property
precision	number	No	Read Only	Accuracy granularity of the exposed value

step	multiple types: see schema	No	Read Only	Step value across the defined range
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
rt	array: see schema	No	Read Only	Resource Type
increment	integer	No	Read Only	Deprecated, use 'step' instead.
if	array: see schema	No	Read Only	The interface set supported by this resource

44704 **B.89.6 CRUDN behaviour**

44705 **Table 416 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/OpenLevelResURI		get	post		observe

44706 **B.90 Operational State**

44707 **B.90.1 Introduction**

44708 This resource describes the operational and job states on a device.
44709 The states can be read or set, setting indicates a desired state.
44710 A device may reject an attempt to set a state that would result
44711 in adverse operational characteristics.
44712 The machineStates is an array of the possible operational states.
44713 The currentMachineState is the current state of operation of the device.
44714 The jobStates is an array of the possible job states.
44715 The currentJobState is the currently active jobState.
44716 The runningTime is the ISO8601 encoded elapsed time in the current operational state.
44717 The remainingTime is the ISO8601 encoded time till completion of the current operational state.
44718 The progressPercentage is the percentage completeness of the current jobState.
44719

44720 **B.90.2 Example URI**

44721 /OperationalStateResURI

44722 **B.90.3 Resource Type**

44723 The resource type (rt) is defined as: ['oic.r.operational.state'].

44724 **B.90.4 Swagger2.0 Definition**

```

44725 {
44726   "swagger": "2.0",
44727   "info": {
44728     "title": "Operational State",
44729     "version": "v1.1.0-20160519",
44730     "license": {
44731       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
44732       "x-description": "Redistribution and use in source and binary forms, with or without
44733 modification, are permitted provided that the following conditions are met:\n      1.
44734 Redistributions of source code must retain the above copyright notice, this list of conditions and

```

44735 the following disclaimer.\n 2. Redistributions in binary form must reproduce the above
44736 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
44737 other materials provided with the distribution.\n\n THIS SOFTWARE IS PROVIDED BY THE Open
44738 Connectivity Foundation, INC. \\"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
44739 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
44740 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n IN NO EVENT SHALL THE Open Connectivity
44741 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
44742 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
44743 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n HOWEVER CAUSED AND
44744 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
44745 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
44746 OF SUCH DAMAGE.\n"

```

44747     }
44748   },
44749   "schemes": ["http"],
44750   "consumes": ["application/json"],
44751   "produces": ["application/json"],
44752   "paths": {
44753     "/OperationalStateResURI" : {
44754       "get": {
44755         "description": "This resource describes the operational and job states on a device.\nThe
44756 states can be read or set, setting indicates a desired state.\nA device may reject an attempt to
44757 set a state that would result\nin adverse operational characteristics.\nThe machineStates is an
44758 array of the possible operational states.\nThe currentMachineState is the current state of
44759 operation of the device.\nThe jobStates is an array of the possible job states.\nThe
44760 currentJobState is the currently active jobState.\nThe runningTime is the ISO8601 encoded elapsed
44761 time in the current operational state.\nThe remainingTime is the ISO8601 encoded time till
44762 completion of the current operational state.\nThe progressPercentage is the percentage completeness
44763 of the current jobState.\nRetrieves the current operational and job states.\n",
44764     "parameters": [
44765       { "$ref": "#/parameters/interface" }
44766     ],
44767     "responses": {
44768       "200": {
44769         "description": "",
44770         "x-example":
44771           {
44772             "rt": ["oic.r.operational.state"],
44773             "id": "unique_example_id",
44774             "machineStates": ["pause", "stopped", "idle", "active"],
44775             "currentMachineState": "active",
44776             "jobStates": ["preWash", "wash", "rinse", "spin", "dry", "airDry",
44777 "wrinklePrevent"],
44778             "currentJobState": "rinse",
44779             "runningTime": "PT15M20S",
44780             "remainingTime": "PT10M40S",
44781             "progressPercentage": 75
44782           }
44783       },
44784       "schema": { "$ref": "#/definitions/Operation" }
44785     }
44786   }
44787 },
44788 "post": {
44789   "description": "Sets the desired operational or job state.\n",
44790   "parameters": [
44791     { "$ref": "#/parameters/interface" },
44792     {
44793       "name": "body",
44794       "in": "body",
44795       "required": true,
44796       "schema": { "$ref": "#/definitions/OperationUpdate" },
44797       "x-example":
44798         {
44799           "id": "unique_example_id",
44800           "currentMachineState": "pause",
44801           "currentJobState": "wash"
44802         }
44803     }
44804   ],
44805   "responses": {

```

```

44806         "200": {
44807             "description" : "",
44808             "x-example":
44809                 {
44810                     "id": "unique_example_id",
44811                     "currentMachineState": "pause",
44812                     "currentJobState": "wash"
44813                 }
44814             ,
44815             "schema": { "$ref": "#/definitions/OperationUpdate" }
44816         },
44817         "403": {
44818             "description" : "This response is generated by the OIC Server when the client
44819 sends:\n An update with an value for currentMachineState that is not found in machineStates.\n An
44820 update with an value for currentJobState that is not found in jobStates.\nThe server responds with
44821 the current resource representation.\n",
44822             "x-example":
44823                 {
44824                     "id": "unique_example_id",
44825                     "machineStates": ["pause", "stopped", "idle", "active"],
44826                     "currentMachineState": "active",
44827                     "jobStates": ["preWash", "wash", "rinse", "spin", "dry", "airDry",
44828 "wrinklePrevent"],
44829                     "currentJobState": "rinse",
44830                     "runningTime": "PT15M20S",
44831                     "remainingTime": "PT10M40S",
44832                     "progressPercentage": 75
44833                 }
44834             ,
44835             "schema": { "$ref": "#/definitions/Operation" }
44836         }
44837     }
44838 }
44839 },
44840 },
44841 "parameters": {
44842     "interface" : {
44843         "in" : "query",
44844         "name" : "if",
44845         "type" : "string",
44846         "enum" : ["oic.if.a", "oic.if.baseline"]
44847     }
44848 },
44849 "definitions": {
44850     "Operation" : {
44851         "properties": {
44852             "rt" :
44853                 {
44854                     "description": "Resource Type",
44855                     "items": {
44856                         "maxLength": 64,
44857                         "type": "string"
44858                     },
44859                     "minItems": 1,
44860                     "readOnly": true,
44861                     "type": "array"
44862                 },
44863             "currentMachineState" :
44864                 {
44865                     "description": "Current state of operation of the device.",
44866                     "type": "string"
44867                 },
44868             "currentJobState" :
44869                 {
44870                     "description": "Currently active jobState",
44871                     "type": "string"
44872                 },
44873             "machineStates" :

```

```

44877         {
44878         "description": "array of the possible operational states.",
44879         "items": {
44880             "type": "string"
44881         },
44882         "readOnly": true,
44883         "type": "array"
44884     },
44885
44886     "precision" :
44887     {
44888         "description": "Accuracy granularity of the exposed value",
44889         "readOnly": true,
44890         "type": "number"
44891     },
44892
44893     "value" :
44894     {
44895         "anyOf": [
44896             {
44897                 "type": "array"
44898             },
44899             {
44900                 "type": "string"
44901             },
44902             {
44903                 "type": "boolean"
44904             },
44905             {
44906                 "type": "integer"
44907             },
44908             {
44909                 "type": "number"
44910             },
44911             {
44912                 "type": "object"
44913             }
44914         ],
44915         "description": "The value sensed or actuated by this Resource"
44916     },
44917
44918     "n" :
44919     {
44920         "description": "Friendly name of the resource",
44921         "maxLength": 64,
44922         "readOnly": true,
44923         "type": "string"
44924     },
44925
44926     "runningTime" :
44927     {
44928         "description": "Elapsed time in the current operational state",
44929         "readOnly": true,
44930         "type": "string"
44931     },
44932
44933     "range" :
44934     {
44935         "description": "The valid range for the value Property",
44936         "items": {
44937             "anyOf": [
44938                 {
44939                     "type": "number"
44940                 },
44941                 {
44942                     "type": "integer"
44943                 }
44944             ]
44945         },
44946         "maxItems": 2,
44947         "minItems": 2,

```

```

44948         "readOnly": true,
44949         "type": "array"
44950     },
44951
44952     "remainingTime" :
44953     {
44954         "description": "Time till completion of the current operational state",
44955         "readOnly": true,
44956         "type": "string"
44957     },
44958
44959     "step" :
44960     {
44961         "anyOf": [
44962             {
44963                 "type": "integer"
44964             },
44965             {
44966                 "type": "number"
44967             }
44968         ],
44969         "description": "Step value across the defined range",
44970         "readOnly": true
44971     },
44972
44973     "progressPercentage" :
44974     {
44975         "description": "Percentage completeness of the current jobState",
44976         "maximum": 100,
44977         "minimum": 0,
44978         "readOnly": true,
44979         "type": "integer"
44980     },
44981
44982     "id" :
44983     {
44984         "description": "Instance ID of this specific resource",
44985         "maxLength": 64,
44986         "readOnly": true,
44987         "type": "string"
44988     },
44989
44990     "jobStates" :
44991     {
44992         "description": "array of the possible job states.",
44993         "items": {
44994             "type": "string"
44995         },
44996         "readOnly": true,
44997         "type": "array"
44998     },
44999
45000     "if" :
45001     {
45002         "description": "The interface set supported by this resource",
45003         "items": {
45004             "enum": [
45005                 "oic.if.baseline",
45006                 "oic.if.ll",
45007                 "oic.if.b",
45008                 "oic.if.lb",
45009                 "oic.if.rw",
45010                 "oic.if.r",
45011                 "oic.if.a",
45012                 "oic.if.s"
45013             ],
45014             "type": "string"
45015         },
45016         "minItems": 1,
45017         "readOnly": true,
45018         "type": "array"

```



```

45019     }
45020     }
45021     },
45022     "type": "object"
45023     , "required": ["machineStates", "currentMachineState"]
45024     }
45025     ,
45026     "OperationUpdate" : {
45027     "properties": {
45028     "rt" :
45029     {
45030     "description": "Resource Type",
45031     "items": {
45032     "maxLength": 64,
45033     "type": "string"
45034     },
45035     "minItems": 1,
45036     "readOnly": true,
45037     "type": "array"
45038     },
45039     "currentMachineState" :
45040     {
45041     "description": "Current state of operation of the device.",
45042     "type": "string"
45043     },
45044     "currentJobState" :
45045     {
45046     "description": "Currently active jobState",
45047     "type": "string"
45048     },
45049     "precision" :
45050     {
45051     "description": "Accuracy granularity of the exposed value",
45052     "readOnly": true,
45053     "type": "number"
45054     },
45055     "value" :
45056     {
45057     "anyOf": [
45058     {
45059     "type": "array"
45060     },
45061     {
45062     "type": "string"
45063     },
45064     {
45065     "type": "boolean"
45066     },
45067     {
45068     "type": "integer"
45069     },
45070     {
45071     "type": "number"
45072     },
45073     {
45074     "type": "object"
45075     }
45076     ],
45077     "description": "The value sensed or actuated by this Resource"
45078     },
45079     "n" :
45080     {
45081     "description": "Friendly name of the resource",
45082     "maxLength": 64,
45083     "readOnly": true,
45084     "type": "string"
45085     }
45086     }
45087     }
45088     }
45089     }

```

```

45090     },
45091
45092     "range" :
45093     {
45094         "description": "The valid range for the value Property",
45095         "items": {
45096             "anyOf": [
45097                 {
45098                     "type": "number"
45099                 },
45100                 {
45101                     "type": "integer"
45102                 }
45103             ]
45104         },
45105         "maxItems": 2,
45106         "minItems": 2,
45107         "readOnly": true,
45108         "type": "array"
45109     },
45110
45111     "step" :
45112     {
45113         "anyOf": [
45114             {
45115                 "type": "integer"
45116             },
45117             {
45118                 "type": "number"
45119             }
45120         ],
45121         "description": "Step value across the defined range",
45122         "readOnly": true
45123     },
45124
45125     "id" :
45126     {
45127         "description": "Instance ID of this specific resource",
45128         "maxLength": 64,
45129         "readOnly": true,
45130         "type": "string"
45131     },
45132
45133     "if" :
45134     {
45135         "description": "The interface set supported by this resource",
45136         "items": {
45137             "enum": [
45138                 "oic.if.baseline",
45139                 "oic.if.ll",
45140                 "oic.if.b",
45141                 "oic.if.lb",
45142                 "oic.if.rw",
45143                 "oic.if.r",
45144                 "oic.if.a",
45145                 "oic.if.s"
45146             ],
45147             "type": "string"
45148         },
45149         "minItems": 1,
45150         "readOnly": true,
45151         "type": "array"
45152     }
45153
45154     },
45155     "type" : "object"
45156 }
45157 }
45158 }
45159

```

Table 417 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema		Read Only	Resource Type
currentJobState	string		Read Write	Currently active jobState
n	string		Read Only	Friendly name of the resource
range	array: see schema		Read Only	The valid range for the value Property
step	multiple types: see schema		Read Only	Step value across the defined range
currentMachineState	string		Read Write	Current state of operation of the device.
precision	number		Read Only	Accuracy granularity of the exposed value
id	string		Read Only	Instance ID of this specific resource
if	array: see schema		Read Only	The interface set supported by this resource
value	multiple types: see schema		Read Write	The value sensed or actuated by this Resource
rt	array: see schema	No	Read Only	Resource Type
n	string	No	Read Only	Friendly name of the resource
range	array: see schema	No	Read Only	The valid range for the value Property
machineStates	array: see schema	Yes	Read Only	array of the possible

				operational states.
currentJobState	string	No	Read Write	Currently active jobState
jobStates	array: see schema	No	Read Only	array of the possible job states.
runningTime	string	No	Read Only	Elapsed time in the current operational state
remainingTime	string	No	Read Only	Time till completion of the current operational state
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
progressPercentage	integer	No	Read Only	Percentage completeness of the current jobState
step	multiple types: see schema	No	Read Only	Step value across the defined range
currentMachineState	string	Yes	Read Write	Current state of operation of the device.
precision	number	No	Read Only	Accuracy granularity of the exposed value
id	string	No	Read Only	Instance ID of this specific resource
if	array: see schema	No	Read Only	The interface set supported by this resource

45162 **B.90.6 CRUDN behaviour**

45163 **Table 418 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/OperationalStateResURI		get	post		observe

45164 **B.91 Optical RFID Station**

45165 **B.91.1 Introduction**

45166 The process represents the stage of the product in the product line which has an optical RFID
45167 tag on its body.

45168 Event is represented by a Boolean value set to "True" and "False" alarming the issue when
45169 additional action is requested for the tagged product.

45170 Actionrequest represent necessary actions like the isolation of the product, to send the product
45171 back to other specific line to modify or fix the issue.

45172

45173 **B.91.2 Example URI**

45174 /ORFIDStationResURI

45175 **B.91.3 Resource Type**

45176 The resource type (rt) is defined as: ['oic.r.orfid.station'].

45177 **B.91.4 Swagger2.0 Definition**

```

45178 {
45179   "swagger": "2.0",
45180   "info": {
45181     "title": "Optical RFID Station",
45182     "version": "Version 2018-01-30",
45183     "license": {
45184       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
45185       "x-description": "Redistribution and use in source and binary forms, with or without
45186 modification, are permitted provided that the following conditions are met:\n      1.
45187 Redistributions of source code must retain the above copyright notice, this list of conditions and
45188 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
45189 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
45190 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
45191 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
45192 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
45193 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
45194 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
45195 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
45196 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND
45197 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
45198 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
45199 OF SUCH DAMAGE.\n"
45200     }
45201   },
45202   "schemes": ["http"],
45203   "consumes": ["application/json"],
45204   "produces": ["application/json"],
45205   "paths": {
45206     "/ORFIDStationResURI" : {
45207       "get": {
45208         "description": "The process represents the stage of the product in the product line which
45209 has an optical RFID tag on its body.\nEvent is represented by a Boolean value set to \\"True\\" and
45210 \\"False\\" alarming the issue when additional action is requested for the tagged
45211 product.\nActionrequest represent necessary actions like the isolation of the product, to send the
45212 product back to other specific line to modify or fix the issue.\nRetrieves the station information
45213 from optical augmented RFID reader in smart factory environment.\n",
45214         "parameters": [
45215           {"$ref": "#/parameters/interface"}
45216         ],
45217         "responses": {

```

```

45218         "200": {
45219             "description" : "",
45220             "x-example":
45221                 {
45222                     "rt":
45223                         ["oic.r.orfid.station"],
45224                     "id":
45225                         "unique_example_id",
45226                     "process":
45227                         17,
45228                     "event":
45229                         true,
45230                     "actionrequest":
45231                         2
45232                 }
45233             ,
45234             "schema": { "$ref": "#/definitions/ORFID" }
45235         }
45236     },
45237     "post": {
45238         "description": "Sets necessary action in accordance with Tag Information\n",
45239         "parameters": [
45240             { "$ref": "#/parameters/interface" },
45241             {
45242                 "name": "body",
45243                 "in": "body",
45244                 "required": true,
45245                 "schema": { "$ref": "#/definitions/ORFID" },
45246                 "x-example":
45247                     {
45248                         "event":
45249                             false,
45250                         "actionrequest":
45251                             0
45252                     }
45253             }
45254         ],
45255         "responses": {
45256             "200": {
45257                 "description" : "",
45258                 "x-example":
45259                     {
45260                         "event":
45261                             false,
45262                         "actionrequest":
45263                             0
45264                     }
45265                 ,
45266                 "schema": { "$ref": "#/definitions/ORFID" }
45267             }
45268         }
45269     }
45270 },
45271 "parameters": {
45272     "interface" : {
45273         "in" : "query",
45274         "name" : "if",
45275         "type" : "string",
45276         "enum" : ["oic.if.rw", "oic.if.baseline"]
45277     }
45278 },
45279 "definitions": {
45280     "ORFID" : {
45281         "properties": {
45282             "rt" :
45283                 {
45284                     "description": "Resource Type",
45285                     "items": {
45286                         "maxLength": 64,
45287                         "type": "string"
45288                     },
45289                     "minItems": 1,
45290                     "readOnly": true,
45291                     "type": "array"
45292                 },
45293             "step" :
45294                 {

```

```

45289     "anyOf": [
45290         {
45291             "type": "integer"
45292         },
45293         {
45294             "type": "number"
45295         }
45296     ],
45297     "description": "Step value across the defined range",
45298     "readOnly": true
45299 },
45300
45301 "process" :
45302 {
45303     "description": "the process step that is being performed at this station",
45304     "readOnly": true,
45305     "type": "integer"
45306 },
45307
45308 "precision" :
45309 {
45310     "description": "Accuracy granularity of the exposed value",
45311     "readOnly": true,
45312     "type": "number"
45313 },
45314
45315 "value" :
45316 {
45317     "anyOf": [
45318         {
45319             "type": "array"
45320         },
45321         {
45322             "type": "string"
45323         },
45324         {
45325             "type": "boolean"
45326         },
45327         {
45328             "type": "integer"
45329         },
45330         {
45331             "type": "number"
45332         },
45333         {
45334             "type": "object"
45335         }
45336     ],
45337     "description": "The value sensed or actuated by this Resource"
45338 },
45339
45340 "n" :
45341 {
45342     "description": "Friendly name of the resource",
45343     "maxLength": 64,
45344     "readOnly": true,
45345     "type": "string"
45346 },
45347
45348 "actionrequest" :
45349 {
45350     "description": "the action request identifier",
45351     "type": "integer"
45352 },
45353
45354 "range" :
45355 {
45356     "description": "The valid range for the value Property",
45357     "items": {
45358         "anyOf": [
45359             {

```

```

45360         "type": "number"
45361     },
45362     {
45363         "type": "integer"
45364     }
45365     ],
45366 },
45367 "maxItems": 2,
45368 "minItems": 2,
45369 "readOnly": true,
45370 "type": "array"
45371 },
45372
45373 "id" :
45374     {
45375         "description": "Instance ID of this specific resource",
45376         "maxLength": 64,
45377         "readOnly": true,
45378         "type": "string"
45379     },
45380
45381 "event" :
45382     {
45383         "description": "when True, the action request should be applied to the product identified
45384 by the tagid",
45385         "type": "boolean"
45386     },
45387
45388 "if" :
45389     {
45390         "description": "The interface set supported by this resource",
45391         "items": {
45392             "enum": [
45393                 "oic.if.baseline",
45394                 "oic.if.ll",
45395                 "oic.if.b",
45396                 "oic.if.lb",
45397                 "oic.if.rw",
45398                 "oic.if.r",
45399                 "oic.if.a",
45400                 "oic.if.s"
45401             ],
45402             "type": "string"
45403         },
45404         "minItems": 1,
45405         "readOnly": true,
45406         "type": "array"
45407     }
45408 }
45409 },
45410 "type" : "object"
45411 , "required": ["event", "actionrequest"]
45412 }
45413 }
45414 }
45415

```

B.91.5 Property Definition

Table 419 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
precision	number	No	Read Only	Accuracy granularity of the exposed value
actionrequest	integer	Yes	Read Write	the action request identifier

range	array: see schema	No	Read Only	The valid range for the value Property
event	boolean	Yes	Read Write	when True, the action request should be applied to the product identified by the tagid
process	integer	No	Read Only	the process step that is being performed at this station
rt	array: see schema	No	Read Only	Resource Type
step	multiple types: see schema	No	Read Only	Step value across the defined range
if	array: see schema	No	Read Only	The interface set supported by this resource
id	string	No	Read Only	Instance ID of this specific resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
n	string	No	Read Only	Friendly name of the resource

45418 **B.91.6 CRUDN behaviour**

45419 **Table 420 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/ORFIDStationResURI		get	post		observe

45420 **B.92 Optical RFID Tag**

45421 **B.92.1 Introduction**

45422 The tagid is an integer showing the currently read optical augmented RFID tag's identity
45423 information.

45424

45425 **B.92.2 Example URI**

45426 /ORFIDTagResURI

45427 **B.92.3 Resource Type**

45428 The resource type (rt) is defined as: ['oic.r.orfid.tag'].

45429 **B.92.4 Swagger2.0 Definition**

```
45430 {
45431   "swagger": "2.0",
45432   "info": {
45433     "title": "Optical RFID Tag",
45434     "version": "Version 2018-01-30",
45435     "license": {
45436       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
45437       "x-description": "Redistribution and use in source and binary forms, with or without
45438 modification, are permitted provided that the following conditions are met:\n      1.
45439 Redistributions of source code must retain the above copyright notice, this list of conditions and
45440 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
45441 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
45442 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
45443 Connectivity Foundation, INC. \ "AS IS\ " AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
45444 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
45445 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
45446 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
45447 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
45448 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
45449 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
45450 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
45451 OF SUCH DAMAGE.\n"
45452     }
45453   },
45454   "schemes": ["http"],
45455   "consumes": ["application/json"],
45456   "produces": ["application/json"],
45457   "paths": {
45458     "/ORFIDTagResURI" : {
45459       "get": {
45460         "description": "The tagid is an integer showing the currently read optical augmented RFID
45461 tag's identity information.\nRetrieves the tag information from optical augmented RFID reader in
45462 smart factory environment.\n",
45463         "parameters": [
45464           { "$ref": "#/parameters/interface" }
45465         ],
45466         "responses": {
45467           "200": {
45468             "description": "",
45469             "x-example":
45470               {
45471                 "rt": ["oic.r.orfid.tag"],
45472                 "id": "unique_example_id",
45473                 "tagid": 10965742,
45474                 "reading" : true
45475               }
45476           },
45477           "schema": { "$ref": "#/definitions/ORFID" }
45478         }
45479       }
45480     }
45481   },
45482   "parameters": {
45483     "interface" : {
45484       "in" : "query",
45485       "name" : "if",
45486       "type" : "string",
45487       "enum" : ["oic.if.r", "oic.if.baseline"]
45488     }
45489   },
45490   "definitions": {
45491     "ORFID" : {
45492       "properties": {
45493         "rt" :
45494           {

```

```

45496     "description": "Resource Type",
45497     "items": {
45498         "maxLength": 64,
45499         "type": "string"
45500     },
45501     "minItems": 1,
45502     "readOnly": true,
45503     "type": "array"
45504 },
45505
45506 "tagid" :
45507     {
45508     "description": "the tag read by the reader",
45509     "readOnly": true,
45510     "type": "integer"
45511     },
45512
45513 "precision" :
45514     {
45515     "description": "Accuracy granularity of the exposed value",
45516     "readOnly": true,
45517     "type": "number"
45518     },
45519
45520 "value" :
45521     {
45522     "anyOf": [
45523         {
45524         "type": "array"
45525         },
45526         {
45527         "type": "string"
45528         },
45529         {
45530         "type": "boolean"
45531         },
45532         {
45533         "type": "integer"
45534         },
45535         {
45536         "type": "number"
45537         },
45538         {
45539         "type": "object"
45540         }
45541     ],
45542     "description": "The value sensed or actuated by this Resource"
45543     },
45544
45545 "n" :
45546     {
45547     "description": "Friendly name of the resource",
45548     "maxLength": 64,
45549     "readOnly": true,
45550     "type": "string"
45551     },
45552
45553 "range" :
45554     {
45555     "description": "The valid range for the value Property",
45556     "items": {
45557     "anyOf": [
45558         {
45559         "type": "number"
45560         },
45561         {
45562         "type": "integer"
45563         }
45564     ]
45565     },
45566     "maxItems": 2,

```

```

45567         "minItems": 2,
45568         "readOnly": true,
45569         "type": "array"
45570     },
45571     "step" :
45572     {
45573         "anyOf": [
45574         {
45575             "type": "integer"
45576         },
45577         {
45578             "type": "number"
45579         }
45580     ],
45581     "description": "Step value across the defined range",
45582     "readOnly": true
45583 },
45584 },
45585 "reading" :
45586 {
45587     "description": "true, the tagid is read e.g. being valid. false, the tagid is invalid",
45588     "readOnly": true,
45589     "type": "boolean"
45590 },
45591 },
45592 "id" :
45593 {
45594     "description": "Instance ID of this specific resource",
45595     "maxLength": 64,
45596     "readOnly": true,
45597     "type": "string"
45598 },
45599 },
45600 "if" :
45601 {
45602     "description": "The interface set supported by this resource",
45603     "items": {
45604         "enum": [
45605             "oic.if.baseline",
45606             "oic.if.ll",
45607             "oic.if.b",
45608             "oic.if.lb",
45609             "oic.if.rw",
45610             "oic.if.r",
45611             "oic.if.a",
45612             "oic.if.s"
45613         ],
45614         "type": "string"
45615     },
45616     "minItems": 1,
45617     "readOnly": true,
45618     "type": "array"
45619 },
45620 },
45621 },
45622 },
45623     "type" : "object"
45624     , "required": ["tagid", "reading"]
45625 }
45626 }
45627 }
45628

```

B.92.5 Property Definition

Table 421 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
Rt	array: see schema	No	Read Only	Resource Type

N	string	No	Read Only	Friendly name of the resource
Id	string	No	Read Only	Instance ID of this specific resource
If	array: see schema	No	Read Only	The interface set supported by this resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
reading	boolean	Yes	Read Only	true, the tagid is read e.g. being valid. false, the tagid is invalid
tagid	integer	Yes	Read Only	the tag read by the reader
range	array: see schema	No	Read Only	The valid range for the value Property
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
precision	number	No	Read Only	Accuracy granularity of the exposed value

45631 **B.92.6 CRUDN behaviour**

45632 **Table 422 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/ORFIDTagResURI		get			observe

45633

45634 **B.93 Power Source**

45635 **B.93.1 Introduction**

45636 This resource list the available power sources for the device.

45637 The list is read only and is informative only.

45638 If there is more than 1 power sources active, use multiple resources to indicate the active power sources.

45640 Retrieves the list of available power sources. If the power source is unknown use the value "unknown".

45642

45643 **B.93.2 Example URI**
45644 /PowerResourcesExampleResourceURI

45645 **B.93.3 Resource Type**

45646 The resource type (rt) is defined as: ['oic.r.powersource'].

45647 **B.93.4 Swagger2.0 Definition**

```
45648 {  
45649   "swagger": "2.0",  
45650   "info": {  
45651     "title": "PowerSource",  
45652     "version": "0.1",  
45653     "license": {  
45654       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
45655       "x-description": "Redistribution and use in source and binary forms, with or without  
45656 modification, are permitted provided that the following conditions are met:\n      1.  
45657 Redistributions of source code must retain the above copyright notice, this list of conditions and  
45658 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
45659 copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
45660 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open  
45661 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT  
45662 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR  
45663 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity  
45664 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,  
45665 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS  
45666 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND  
45667 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR  
45668 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY  
45669 OF SUCH DAMAGE.\n\n    }  
45670   },  
45671 },  
45672 "schemes": ["http"],  
45673 "consumes": ["application/json"],  
45674 "produces": ["application/json"],  
45675 "paths": {  
45676   "/PowerResourcesExampleResourceURI" : {  
45677     "get": {  
45678       "description": "This resource list the available power sources for the device.\nThe list is  
45679 read only and is informative only.\nIf there is more than 1 power sources active, use multiple  
45680 resources.\nnto indicate the active power sources.\nRetrieves the list of available power  
45681 sources.\n\nif the power source is unknown use the value \"unknown\".\n\n",  
45682       "parameters": [  
45683         {"$ref": "#/parameters/interface"}  
45684       ],  
45685       "responses": {  
45686         "200": {  
45687           "description": "",  
45688           "x-example":  
45689             {  
45690               "rt": ["oic.r.powersource"],  
45691               "id": "unique_example_id",  
45692               "powerSources": ["DC power",  
45693                 "Internal Battery",  
45694                 "External Battery",  
45695                 "Power over Ethernet",  
45696                 "USB",  
45697                 "AC (Mains) Power",  
45698                 "Solar"]  
45699             }  
45700           },  
45701           "schema": {"$ref": "#/definitions/powerSourceSchema"}  
45702         }  
45703       }  
45704     }  
45705   },  
45706 },  
45707 "parameters": {  
45708   "interface" : {  
45709     "in" : "query",
```

```

45710     "name" : "if",
45711     "type" : "string",
45712     "enum" : ["oic.if.r", "oic.if.baseline"]
45713   }
45714 },
45715 "definitions": {
45716   "powerSourceSchema" : {
45717     "properties": {
45718       "rt" :
45719         {
45720           "description": "Resource Type",
45721           "items": {
45722             "maxLength": 64,
45723             "type": "string"
45724           },
45725           "minItems": 1,
45726           "readOnly": true,
45727           "type": "array"
45728         },
45729
45730     "powerSources" :
45731       {
45732         "items": {
45733           "enum": [
45734             "unknown",
45735             "DC power",
45736             "Internal Battery",
45737             "External Battery",
45738             "Power over Ethernet",
45739             "USB",
45740             "AC (Mains) Power",
45741             "Solar"
45742           ],
45743           "minItems": 1,
45744           "type": "string",
45745           "uniqueItems": true
45746         },
45747         "type": "array"
45748       },
45749
45750     "precision" :
45751       {
45752         "description": "Accuracy granularity of the exposed value",
45753         "readOnly": true,
45754         "type": "number"
45755       },
45756
45757     "value" :
45758       {
45759         "anyOf": [
45760           {
45761             "type": "array"
45762           },
45763           {
45764             "type": "string"
45765           },
45766           {
45767             "type": "boolean"
45768           },
45769           {
45770             "type": "integer"
45771           },
45772           {
45773             "type": "number"
45774           },
45775           {
45776             "type": "object"
45777           }
45778         ],
45779         "description": "The value sensed or actuated by this Resource"
45780       },

```

```

45781
45782     "n" :
45783         {
45784             "description": "Friendly name of the resource",
45785             "maxLength": 64,
45786             "readOnly": true,
45787             "type": "string"
45788         },
45789
45790     "range" :
45791         {
45792             "description": "The valid range for the value Property",
45793             "items": {
45794                 "anyOf": [
45795                     {
45796                         "type": "number"
45797                     },
45798                     {
45799                         "type": "integer"
45800                     }
45801                 ]
45802             },
45803             "maxItems": 2,
45804             "minItems": 2,
45805             "readOnly": true,
45806             "type": "array"
45807         },
45808
45809     "step" :
45810         {
45811             "anyOf": [
45812                 {
45813                     "type": "integer"
45814                 },
45815                 {
45816                     "type": "number"
45817                 }
45818             ],
45819             "description": "Step value across the defined range",
45820             "readOnly": true
45821         },
45822
45823     "id" :
45824         {
45825             "description": "Instance ID of this specific resource",
45826             "maxLength": 64,
45827             "readOnly": true,
45828             "type": "string"
45829         },
45830
45831     "if" :
45832         {
45833             "description": "The interface set supported by this resource",
45834             "items": {
45835                 "enum": [
45836                     "oic.if.baseline",
45837                     "oic.if.ll",
45838                     "oic.if.b",
45839                     "oic.if.lb",
45840                     "oic.if.rw",
45841                     "oic.if.r",
45842                     "oic.if.a",
45843                     "oic.if.s"
45844                 ],
45845                 "type": "string"
45846             },
45847             "minItems": 1,
45848             "readOnly": true,
45849             "type": "array"
45850         }
45851

```



```

45852     }
45853     , "type" : "object"
45854     , "required": ["powerSources"]
45855   }
45856 }
45857 }
45858

```

45859 B.93.5 Property Definition

45860 **Table 423 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema	No	Read Only	The interface set supported by this resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
id	string	No	Read Only	Instance ID of this specific resource
powerSources	array: see schema	Yes	Read Write	
n	string	No	Read Only	Friendly name of the resource
rt	array: see schema	No	Read Only	Resource Type
precision	number	No	Read Only	Accuracy granularity of the exposed value
step	multiple types: see schema	No	Read Only	Step value across the defined range
range	array: see schema	No	Read Only	The valid range for the value Property

45861 B.93.6 CRUDN behaviour

45862 **Table 424 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/PowerResourcesExampleResourceURI		get			observe

45863 B.94 Presence Sensor

45864 B.94.1 Introduction

45865 This resource describes whether presence has been sensed or not.

45866 The value is a boolean.

45867 A value of 'true' means that presence has been sensed.

45868 A value of 'false' means that presence not been sensed.

45869

45870 **B.94.2 Example URI**

45871 /PresenceResURI

45872 **B.94.3 Resource Type**

45873 The resource type (rt) is defined as: ['oic.r.sensor.presence'].

45874 **B.94.4 Swagger2.0 Definition**

```
45875 {
45876   "swagger": "2.0",
45877   "info": {
45878     "title": "Presence Sensor",
45879     "version": "v1.1.0-20160519",
45880     "license": {
45881       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
45882       "x-description": "Redistribution and use in source and binary forms, with or without
45883 modification, are permitted provided that the following conditions are met:\n      1.
45884 Redistributions of source code must retain the above copyright notice, this list of conditions and
45885 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
45886 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
45887 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
45888 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
45889 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
45890 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
45891 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
45892 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
45893 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
45894 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
45895 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
45896 OF SUCH DAMAGE.\n"
45897     }
45898   },
45899   "schemes": ["http"],
45900   "consumes": ["application/json"],
45901   "produces": ["application/json"],
45902   "paths": {
45903     "/PresenceResURI" : {
45904       "get": {
45905         "description": "This resource describes whether presence has been sensed or not.\nThe value
45906 is a boolean.\nA value of 'true' means that presence has been sensed.\nA value of 'false' means
45907 that presence not been sensed.\n",
45908         "parameters": [
45909           {"$ref": "#/parameters/interface"}
45910         ],
45911         "responses": {
45912           "200": {
45913             "description": "",
45914             "x-example":
45915               {
45916                 "rt": ["oic.r.sensor.presence"],
45917                 "id": "unique_example_id",
45918                 "value": true
45919               }
45920           },
45921           "schema": { "$ref": "#/definitions/Presence" }
45922         }
45923       }
45924     }
45925   },
45926 },
45927 "parameters": {
45928   "interface" : {
45929     "in" : "query",
45930     "name" : "if",
45931     "type" : "string",
45932     "enum" : ["oic.if.s", "oic.if.baseline"]
45933   }
45934 }
```

```

45934 },
45935 "definitions": {
45936   "Presence" : {
45937     "properties": {
45938       "rt" :
45939         {
45940           "description": "Resource Type",
45941           "items": {
45942             "maxLength": 64,
45943             "type": "string"
45944           },
45945           "minItems": 1,
45946           "readOnly": true,
45947           "type": "array"
45948         },
45949     "precision" :
45950       {
45951         "description": "Accuracy granularity of the exposed value",
45952         "readOnly": true,
45953         "type": "number"
45954       },
45955     "value" :
45956       {
45957         "description": "true = sensed, false = not sensed.",
45958         "readOnly": true,
45959         "type": "boolean"
45960       },
45961     "n" :
45962       {
45963         "description": "Friendly name of the resource",
45964         "maxLength": 64,
45965         "readOnly": true,
45966         "type": "string"
45967       },
45968     "range" :
45969       {
45970         "description": "The valid range for the value Property",
45971         "items": {
45972           "anyOf": [
45973             {
45974               "type": "number"
45975             },
45976             {
45977               "type": "integer"
45978             }
45979           ]
45980         },
45981         "maxItems": 2,
45982         "minItems": 2,
45983         "readOnly": true,
45984         "type": "array"
45985       },
45986     "step" :
45987       {
45988         "anyOf": [
45989           {
45990             "type": "integer"
45991           },
45992           {
45993             "type": "number"
45994           }
45995         ],
45996         "description": "Step value across the defined range",
45997         "readOnly": true
45998       },
45999     },
46000   },
46001 },
46002 },
46003 },
46004 }

```

```

46005     "id" :
46006         {
46007             "description": "Instance ID of this specific resource",
46008             "maxLength": 64,
46009             "readOnly": true,
46010             "type": "string"
46011         },
46012
46013     "if" :
46014         {
46015             "description": "The interface set supported by this resource",
46016             "items": {
46017                 "enum": [
46018                     "oic.if.baseline",
46019                     "oic.if.ll",
46020                     "oic.if.b",
46021                     "oic.if.lb",
46022                     "oic.if.rw",
46023                     "oic.if.r",
46024                     "oic.if.a",
46025                     "oic.if.s"
46026                 ],
46027                 "type": "string"
46028             },
46029             "minItems": 1,
46030             "readOnly": true,
46031             "type": "array"
46032         }
46033     },
46034     "type" : "object"
46035 },
46036 "required": ["value"]
46037 }
46038 }
46039 }
46040

```

46041 B.94.5 Property Definition

46042 **Table 425 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema	No	Read Only	Step value across the defined range
range	array: see schema	No	Read Only	The valid range for the value Property
n	string	No	Read Only	Friendly name of the resource
value	boolean	Yes	Read Only	true = sensed, false = not sensed.
precision	number	No	Read Only	Accuracy granularity of the exposed value
rt	array: see schema	No	Read Only	Resource Type

if	array: schema	see	No	Read Only	The interface set supported by this resource
id	string		No	Read Only	Instance ID of this specific resource

46043 **B.94.6 CRUDN behaviour**

46044 **Table 426 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/PresenceResURI		get			observe

46045 **B.95 Print Queue**

46046 **B.95.1 Introduction**

46047 This resource describes the items in a Printer Queue. The URI and status are read only items
46048 that cannot be changed through this resource.

46049

46050 **B.95.2 Example URI**

46051 /PrintQueueResURI

46052 **B.95.3 Resource Type**

46053 The resource type (rt) is defined as: ['oic.r.printer.queue'].

46054 **B.95.4 Swagger2.0 Definition**

```

46055 {
46056   "swagger": "2.0",
46057   "info": {
46058     "title": "Print Queue",
46059     "version": "v1.1.0-20180115",
46060     "license": {
46061       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
46062       "x-description": "Redistribution and use in source and binary forms, with or without
46063 modification, are permitted provided that the following conditions are met:\n      1.
46064 Redistributions of source code must retain the above copyright notice, this list of conditions and
46065 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
46066 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
46067 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
46068 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
46069 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
46070 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
46071 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
46072 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
46073 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
46074 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
46075 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
46076 OF SUCH DAMAGE.\n"
46077     }
46078   },
46079   "schemes": ["http"],
46080   "consumes": ["application/json"],
46081   "produces": ["application/json"],
46082   "paths": {
46083     "/PrintQueueResURI" : {
46084       "get": {
46085         "description": "This resource describes the items in a Printer Queue. The URI and status
46086 are read only items that cannot be changed through this resource.\nRetrieves the current Print
46087 Queue.\n",
46088         "parameters": [
46089           { "$ref": "#/parameters/interface" }

```

```

46090     ],
46091     "responses": {
46092         "200": {
46093             "description": "",
46094             "x-example":
46095                 {
46096                     "rt" : ["oic.r.printer.queue"],
46097                     "id" : "unique_example_id",
46098                     "queue" :
46099                         [
46100                             {
46101                                 "uri" : "10.10.10.10/3dprinter/queueitem/1",
46102                                 "status" : "Printing"
46103                             },
46104                             {
46105                                 "uri" : "10.10.10.10/3dprinter/queueitem/2",
46106                                 "status" : "Pending"
46107                             }
46108                         ]
46109                 }
46110             ,
46111             "schema": { "$ref": "#/definitions/PrintQueue" }
46112         }
46113     }
46114 },
46115 },
46116 },
46117 "parameters": {
46118     "interface" : {
46119         "in" : "query",
46120         "name" : "if",
46121         "type" : "string",
46122         "enum" : ["oic.if.r", "oic.if.baseline"]
46123     }
46124 },
46125 "definitions": {
46126     "PrintQueue" : {
46127         "properties": {
46128             "rt" :
46129                 {
46130                     "description": "Resource Type",
46131                     "items": {
46132                         "maxLength": 64,
46133                         "type": "string"
46134                     },
46135                     "minItems": 1,
46136                     "readOnly": true,
46137                     "type": "array"
46138                 },
46139             "precision" :
46140                 {
46141                     "description": "Accuracy granularity of the exposed value",
46142                     "readOnly": true,
46143                     "type": "number"
46144                 },
46145             "value" :
46146                 {
46147                     "anyOf": [
46148                         {
46149                             "type": "array"
46150                         },
46151                         {
46152                             "type": "string"
46153                         },
46154                         {
46155                             "type": "boolean"
46156                         },
46157                         {
46158                             "type": "integer"
46159                         }
46160                     ]

```

```

46161         },
46162         {
46163             "type": "number"
46164         },
46165         {
46166             "type": "object"
46167         }
46168     ],
46169     "description": "The value sensed or actuated by this Resource"
46170 },
46171 "n" :
46172     {
46173         "description": "Friendly name of the resource",
46174         "maxLength": 64,
46175         "readOnly": true,
46176         "type": "string"
46177     },
46178 },
46179 "queue" :
46180     {
46181         "description": "The array of queue items for the printer.",
46182         "items": {
46183             "properties": {
46184                 "status": {
46185                     "description": "The status of the queue item.",
46186                     "enum": [
46187                         "Printing",
46188                         "Pending",
46189                         "Paused",
46190                         "Error",
46191                         "Unknown"
46192                     ],
46193                     "readOnly": true,
46194                     "type": "string"
46195                 },
46196                 "uri": {
46197                     "description": "The URI of the queue item.",
46198                     "format": "uri",
46199                     "maxLength": 256,
46200                     "readOnly": true,
46201                     "type": "string"
46202                 }
46203             },
46204             "required": [
46205                 "uri",
46206                 "status"
46207             ],
46208             "type": "object"
46209         },
46210         "readOnly": true,
46211         "type": "array"
46212     },
46213 },
46214 "range" :
46215     {
46216         "description": "The valid range for the value Property",
46217         "items": {
46218             "anyOf": [
46219                 {
46220                     "type": "number"
46221                 },
46222                 {
46223                     "type": "integer"
46224                 }
46225             ]
46226         },
46227         "maxItems": 2,
46228         "minItems": 2,
46229         "readOnly": true,
46230         "type": "array"
46231     }

```

```

46232     },
46233
46234     "step" :
46235     {
46236         "anyOf": [
46237             {
46238                 "type": "integer"
46239             },
46240             {
46241                 "type": "number"
46242             }
46243         ],
46244         "description": "Step value across the defined range",
46245         "readOnly": true
46246     },
46247
46248     "id" :
46249     {
46250         "description": "Instance ID of this specific resource",
46251         "maxLength": 64,
46252         "readOnly": true,
46253         "type": "string"
46254     },
46255
46256     "if" :
46257     {
46258         "description": "The interface set supported by this resource",
46259         "items": {
46260             "enum": [
46261                 "oic.if.baseline",
46262                 "oic.if.ll",
46263                 "oic.if.b",
46264                 "oic.if.lb",
46265                 "oic.if.rw",
46266                 "oic.if.r",
46267                 "oic.if.a",
46268                 "oic.if.s"
46269             ],
46270             "type": "string"
46271         },
46272         "minItems": 1,
46273         "readOnly": true,
46274         "type": "array"
46275     }
46276
46277     },
46278     "type" : "object"
46279 },
46280 "required": ["queue"]
46281 }
46282 }
46283

```

B.95.5 Property Definition

Table 427 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
precision	number	No	Read Only	Accuracy granularity of the exposed value
step	multiple types: see schema	No	Read Only	Step value across the defined range
if	array: see schema	No	Read Only	

				The interface set supported by this resource
queue	array: see schema	Yes	Read Only	The array of queue items for the printer.
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
n	string	No	Read Only	Friendly name of the resource
rt	array: see schema	No	Read Only	Resource Type
range	array: see schema	No	Read Only	The valid range for the value Property
id	string	No	Read Only	Instance ID of this specific resource

46286 **B.95.6 CRUDN behaviour**

46287 **Table 428 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/PrintQueueResURI		get			observe

46288 **B.96 Pan Tilt Zoom Movement**

46289 **B.96.1 Introduction**

46290 This resource specifies the pan tilt and zoom capabilities of a device.
46291 The resource rt is dynamic and reflects whether the values apply to
46292 physical movement of the device or digital/virtual enhancements to the image.
46293 For physical movement the rt is 'oic.r.movement.ptz'.
46294 For digital/virtual image enhancements the rt is 'oic.r.image.ptz'.
46295 The Pan and Tilt are specified in degrees.
46296 The Zoom Factor is a value in the range 1-100 for linear (optical) zoom.
46297 The Zoom Factor is a value in the range [1x, 2x, 4x, 8x, 16x, 32x] for digital zoom.
46298 If there is no zoom value to set the Zoom Factor shall be '1x'.
46299 The value 0 degrees means neutral, this is the vendor defined setting.
46300 Note that this resource also can be used to create an offset for physical movement.
46301 When that is the case, the rt value is: oic.r.movement.offset.ptz
46302 Note that this resource also can be used to create an offset for image movement.
46303 When that is the case, the rt value is: oic.r.image.offset.ptz
46304 When the pan_range value is omitted, then the range is [-180.0,180.0].
46305 If pan is not supported then the range shall be [0.0,0.0]
46306 When the tilt_range value is omitted, then the range is [-180.0,180.0].
46307 If tilt is not supported then the range shall be [0.0,0.0]
46308

46309 **B.96.2 Example URI**

46310 /PanTiltZoomResURI

46311 **B.96.3 Resource Type**

46312 The resource type (rt) is defined as: ['oic.r.ptz'].

46313 **B.96.4 Swagger2.0 Definition**

```
46314 {
46315   "swagger": "2.0",
46316   "info": {
46317     "title": "Pan Tilt Zoom Movement",
46318     "version": "v1.1.0-20160519",
46319     "license": {
46320       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
46321       "x-description": "Redistribution and use in source and binary forms, with or without
46322 modification, are permitted provided that the following conditions are met:\n      1.
46323 Redistributions of source code must retain the above copyright notice, this list of conditions and
46324 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
46325 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
46326 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
46327 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
46328 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
46329 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
46330 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
46331 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
46332 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
46333 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
46334 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
46335 OF SUCH DAMAGE.\n"
46336     }
46337   },
46338   "schemes": ["http"],
46339   "consumes": ["application/json"],
46340   "produces": ["application/json"],
46341   "paths": {
46342     "/PanTiltZoomResURI" : {
46343       "get": {
46344         "description": "This resource specifies the pan tilt and zoom capabilities of a
46345 device.\nThe resource rt is dynamic and reflects whether the values apply to\n physical movement
46346 of the device or digital/virtual enhancements to the image.\nFor physical movement the rt is
46347 'oic.r.movement.ptz'.\nFor digital/virtual image enhancements the rt is 'oic.r.image.ptz'.\nThe Pan
46348 and Tilt are specified in degrees.\nThe Zoom Factor is a value in the range 1-100 for linear
46349 (optical) zoom.\nThe Zoom Factor is a value in the range [1x, 2x, 4x, 8x, 16x, 32x] for digital
46350 zoom.\nIf there is no zoom value to set the Zoom Factor shall be '1x'.\nThe value 0 degrees means
46351 neutral, this is the vendor defined setting.\nNote that this resource also can be used to create an
46352 offset for physical movement.\nWhen that is the case, the rt value is:
46353 oic.r.movement.offset.ptz\nNote that this resource also can be used to create an offset for image
46354 movement.\nWhen that is the case, the rt value is: oic.r.image.offset.ptz\nWhen the pan_range value
46355 is omitted, then the range is [-180.0,180.0].\nIf pan is not supported then the range shall be
46356 [0.0,0.0]\nWhen the tilt_range value is omitted, then the range is [-180.0,180.0].\nIf tilt is not
46357 supported then the range shall be [0.0,0.0]\nRetrieves the current pan, tilt and zoom setting.\n",
46358         "parameters": [
46359           {"$ref": "#/parameters/interface"}
46360         ],
46361         "responses": {
46362           "200": {
46363             "description": "",
46364             "x-example":
46365               {
46366                 "rt": ["oic.r.ptz"],
46367                 "id": "unique_example_id",
46368                 "pan": 0.0,
46369                 "tilt": 0.0,
46370                 "zoomFactor": "2x"
46371               }
46372             ,
46373             "schema": { "$ref": "#/definitions/PanTiltZoom" }
46374           }
46375         }
46376       }
46377     }
46378   }
46379 }
```

```

46376 },
46377 "post": {
46378   "description": "Sets the current pan, tilt and zoom value\n",
46379   "parameters": [
46380     { "$ref": "#/parameters/interface"},
46381     {
46382       "name": "body",
46383       "in": "body",
46384       "required": true,
46385       "schema": { "$ref": "#/definitions/PanTiltZoom" },
46386       "x-example":
46387         {
46388           "id": "unique_example_id",
46389           "pan": 10.0,
46390           "tilt": -10.0,
46391           "zoomFactor": "4x"
46392         }
46393     }
46394   ],
46395   "responses": {
46396     "200": {
46397       "description": "",
46398       "x-example":
46399         {
46400           "id": "unique_example_id",
46401           "pan": 10.0,
46402           "tilt": -10.0,
46403           "zoomFactor": "4x"
46404         }
46405       ,
46406       "schema": { "$ref": "#/definitions/PanTiltZoom" }
46407     }
46408   }
46409 },
46410 },
46411 },
46412 "parameters": {
46413   "interface": {
46414     "in": "query",
46415     "name": "if",
46416     "type": "string",
46417     "enum": ["oic.if.a", "oic.if.baseline"]
46418   }
46419 },
46420 "definitions": {
46421   "PanTiltZoom": {
46422     "properties": {
46423       "rt": {
46424         {
46425           "description": "Resource Type",
46426           "items": {
46427             "maxLength": 64,
46428             "type": "string"
46429           },
46430           "minItems": 1,
46431           "readOnly": true,
46432           "type": "array"
46433         },
46434       "tilt_range": {
46435         {
46436           "description": "Min and Max values for the tilt setting",
46437           "items": {
46438             "type": "number"
46439           },
46440           "maxItems": 2,
46441           "minItems": 2,
46442           "readOnly": true,
46443           "type": "array"
46444         }
46445       }
46446     }

```

```

46447     "zoomFactor" :
46448         {
46449             "description": "The Zoomfactor value",
46450             "type": "string"
46451         },
46452
46453     "tilt" :
46454         {
46455             "description": "vertical tilt in degrees",
46456             "type": "number"
46457         },
46458
46459     "precision" :
46460         {
46461             "description": "Accuracy granularity of the exposed value",
46462             "readOnly": true,
46463             "type": "number"
46464         },
46465
46466     "value" :
46467         {
46468             "anyOf": [
46469                 {
46470                     "type": "array"
46471                 },
46472                 {
46473                     "type": "string"
46474                 },
46475                 {
46476                     "type": "boolean"
46477                 },
46478                 {
46479                     "type": "integer"
46480                 },
46481                 {
46482                     "type": "number"
46483                 },
46484                 {
46485                     "type": "object"
46486                 }
46487             ],
46488             "description": "The value sensed or actuated by this Resource"
46489         },
46490
46491     "n" :
46492         {
46493             "description": "Friendly name of the resource",
46494             "maxLength": 64,
46495             "readOnly": true,
46496             "type": "string"
46497         },
46498
46499     "range" :
46500         {
46501             "description": "The valid range for the value Property",
46502             "items": {
46503                 "anyOf": [
46504                     {
46505                         "type": "number"
46506                     },
46507                     {
46508                         "type": "integer"
46509                     }
46510                 ]
46511             },
46512             "maxItems": 2,
46513             "minItems": 2,
46514             "readOnly": true,
46515             "type": "array"
46516         },
46517

```

```

46518     "pan_range" :
46519         {
46520             "description": "Min and Max values for the pan setting",
46521             "items": {
46522                 "type": "number"
46523             },
46524             "maxItems": 2,
46525             "minItems": 2,
46526             "readOnly": true,
46527             "type": "array"
46528         },
46529
46530     "step" :
46531         {
46532             "anyOf": [
46533                 {
46534                     "type": "integer"
46535                 },
46536                 {
46537                     "type": "number"
46538                 }
46539             ],
46540             "description": "Step value across the defined range",
46541             "readOnly": true
46542         },
46543
46544     "zoomFactorRange" :
46545         {
46546             "description": "allowed Zoom Factor values. Linear equates to a 1-100 min/max.",
46547             "enum": [
46548                 "linear",
46549                 "1x",
46550                 "2x",
46551                 "4x",
46552                 "8x",
46553                 "16x",
46554                 "32x"
46555             ],
46556             "readOnly": true,
46557             "type": "string"
46558         },
46559
46560     "id" :
46561         {
46562             "description": "Instance ID of this specific resource",
46563             "maxLength": 64,
46564             "readOnly": true,
46565             "type": "string"
46566         },
46567
46568     "pan" :
46569         {
46570             "description": "horizontal pan in degrees",
46571             "type": "number"
46572         },
46573
46574     "if" :
46575         {
46576             "description": "The interface set supported by this resource",
46577             "items": {
46578                 "enum": [
46579                     "oic.if.baseline",
46580                     "oic.if.ll",
46581                     "oic.if.b",
46582                     "oic.if.lb",
46583                     "oic.if.rw",
46584                     "oic.if.r",
46585                     "oic.if.a",
46586                     "oic.if.s"
46587                 ],
46588                 "type": "string"

```

```

46589     },
46590     "minItems": 1,
46591     "readOnly": true,
46592     "type": "array"
46593   }
46594
46595   }
46596   , "type" : "object"
46597   , "required": ["pan", "tilt", "zoomFactor"]
46598 }
46599 }
46600 }
46601

```

46602 **B.96.5 Property Definition**

46603 **Table 429 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema	No	Read Only	Step value across the defined range
precision	number	No	Read Only	Accuracy granularity of the exposed value
if	array: see schema	No	Read Only	The interface set supported by this resource
range	array: see schema	No	Read Only	The valid range for the value Property
pan	number	Yes	Read Write	horizontal pan in degrees
zoomFactorRange	string	No	Read Only	allowed Zoom Factor values. Linear equates to a 1-100 min/max.
zoomFactor	string	Yes	Read Write	The Zoomfactor value
pan_range	array: see schema	No	Read Only	Min and Max values for the pan setting
n	string	No	Read Only	Friendly name of the resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource

rt	array: schema	see	No	Read Only	Resource Type
tilt_range	array: schema	see	No	Read Only	Min and Max values for the tilt setting
tilt	number		Yes	Read Write	vertical tilt in degrees
id	string		No	Read Only	Instance ID of this specific resource

46604 **B.96.6 CRUDN behaviour**

46605 **Table 430 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/PanTiltZoomResURI		get	post		observe

46606 **B.97 Pulse Rate**

46607 **B.97.1 Introduction**

46608 This resource describes the properties associated with a person's pulse rate.
 46609 The unit, which is the default unit, is bpm.
 46610 The PulseRate and unit Properties are read-only values that are provided by the server.
 46611 When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.
 46612

46613 **B.97.2 Example URI**

46614 /PulseRateResURI

46615 **B.97.3 Resource Type**

46616 The resource type (rt) is defined as: ['oic.r.pulserate'].

46617 **B.97.4 Swagger2.0 Definition**

```

46618 {
46619   "swagger": "2.0",
46620   "info": {
46621     "title": "Pulse Rate",
46622     "version": "v1.1.0-20160519",
46623     "license": {
46624       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
46625       "x-description": "Redistribution and use in source and binary forms, with or without
46626 modification, are permitted provided that the following conditions are met:\n      1.
46627 Redistributions of source code must retain the above copyright notice, this list of conditions and
46628 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
46629 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
46630 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
46631 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
46632 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
46633 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
46634 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
46635 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
46636 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
46637 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
46638 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
46639 OF SUCH DAMAGE.\n"
46640     }
46641   },
46642   "schemes": ["http"],
46643   "consumes": ["application/json"],

```

```

46644     "produces": ["application/json"],
46645     "paths": {
46646         "/PulseRateResURI" : {
46647             "get": {
46648                 "description": "This resource describes the properties associated with a person's pulse
46649 rate.\nThe unit, which is the default unit, is bpm.\nThe PulseRate and unit Properties are read-
46650 only values that are provided by the server.\nWhen range (from oic.r.baseresource) is omitted the
46651 default is 0 to +MAXFLOAT.\nRetrieves pulse rate of an object.\n",
46652                 "parameters": [
46653                     { "$ref": "#/parameters/interface" }
46654                 ],
46655                 "responses": {
46656                     "200": {
46657                         "description": "",
46658                         "x-example":
46659                             {
46660                                 "rt": ["oic.r.pulserate"],
46661                                 "id": "unique_example_id",
46662                                 "pulserate": 80
46663                             }
46664                         ,
46665                         "schema": { "$ref": "#/definitions/PulseRate" }
46666                     }
46667                 }
46668             }
46669         },
46670     },
46671     "parameters": {
46672         "interface" : {
46673             "in" : "query",
46674             "name" : "if",
46675             "type" : "string",
46676             "enum" : ["oic.if.s", "oic.if.baseline"]
46677         }
46678     },
46679     "definitions": {
46680         "PulseRate" : {
46681             "properties": {
46682                 "rt" :
46683                     {
46684                         "description": "Resource Type",
46685                         "items": {
46686                             "maxLength": 64,
46687                             "type": "string"
46688                         },
46689                         "minItems": 1,
46690                         "readOnly": true,
46691                         "type": "array"
46692                     },
46693                 "step" :
46694                     {
46695                         "anyOf": [
46696                             {
46697                                 "type": "integer"
46698                             },
46699                             {
46700                                 "type": "number"
46701                             }
46702                         ],
46703                         "description": "Step value across the defined range",
46704                         "readOnly": true
46705                     },
46706                 "precision" :
46707                     {
46708                         "description": "Accuracy granularity of the exposed value",
46709                         "readOnly": true,
46710                         "type": "number"
46711                     }
46712             },
46713         },
46714     }

```



```

46715     "value" :
46716         {
46717             "anyOf": [
46718                 {
46719                     "type": "array"
46720                 },
46721                 {
46722                     "type": "string"
46723                 },
46724                 {
46725                     "type": "boolean"
46726                 },
46727                 {
46728                     "type": "integer"
46729                 },
46730                 {
46731                     "type": "number"
46732                 },
46733                 {
46734                     "type": "object"
46735                 }
46736             ],
46737             "description": "The value sensed or actuated by this Resource"
46738         },
46739     "n" :
46740         {
46741             "description": "Friendly name of the resource",
46742             "maxLength": 64,
46743             "readOnly": true,
46744             "type": "string"
46745         },
46746     "range" :
46747         {
46748             "description": "The valid range for the value Property",
46749             "items": {
46750                 "anyOf": [
46751                     {
46752                         "type": "number"
46753                     },
46754                     {
46755                         "type": "integer"
46756                     }
46757                 ]
46758             }
46759         },
46760     "maxItems": 2,
46761     "minItems": 2,
46762     "readOnly": true,
46763     "type": "array"
46764 },
46765 "pulserate" :
46766     {
46767         "description": "Pulse rate in bpm.",
46768         "minimum": 0,
46769         "readOnly": true,
46770         "type": "integer"
46771     },
46772 "id" :
46773     {
46774         "description": "Instance ID of this specific resource",
46775         "maxLength": 64,
46776         "readOnly": true,
46777         "type": "string"
46778     },
46779 "if" :
46780     {
46781         "description": "The interface set supported by this resource",

```

```

46786     "items": {
46787         "enum": [
46788             "oic.if.baseline",
46789             "oic.if.ll",
46790             "oic.if.b",
46791             "oic.if.lb",
46792             "oic.if.rw",
46793             "oic.if.r",
46794             "oic.if.a",
46795             "oic.if.s"
46796         ],
46797         "type": "string"
46798     },
46799     "minItems": 1,
46800     "readOnly": true,
46801     "type": "array"
46802 }
46803
46804 }
46805 , "type" : "object"
46806 , "required": ["pulserate"]
46807 }
46808 }
46809 }
46810

```

46811 B.97.5 Property Definition

46812 **Table 431 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
precision	number	No	Read Only	Accuracy granularity of the exposed value
if	array: see schema	No	Read Only	The interface set supported by this resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
pulserate	integer	Yes	Read Only	Pulse rate in bpm.
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
id	string	No	Read Only	Instance ID of this specific resource
range	array: see schema	No	Read Only	The valid range for the value Property
rt	array: see schema	No	Read Only	Resource Type
n	string	No	Read Only	

				Friendly name of the resource
--	--	--	--	-------------------------------

46813 **B.97.6 CRUDN behaviour**

46814 **Table 432 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/PulseRateResURI		get			observe

46815 **B.98 Ramp Time**

46816 **B.98.1 Introduction**

46817 This resource that describes the Ramp Time of a dimming function.
 46818 This specifies the actual speed of changing between 2 dimming values.
 46819 Time is specified in milliseconds [ms].
 46820 When range (from oic.r.baseresource) is omitted the maximum value is 100 ms.
 46821 The RampTime of 0ms indicates the minimal delay possible by the implementation.
 46822

46823 **B.98.2 Example URI**

46824 /RampTimeResURI

46825 **B.98.3 Resource Type**

46826 The resource type (rt) is defined as: ['oic.r.light.ramptime'].

46827 **B.98.4 Swagger2.0 Definition**

```

46828 {
46829   "swagger": "2.0",
46830   "info": {
46831     "title": "Ramp Time",
46832     "version": "v1.1.0-20160519",
46833     "license": {
46834       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
46835       "x-description": "Redistribution and use in source and binary forms, with or without
46836 modification, are permitted provided that the following conditions are met:\n      1.
46837 Redistributions of source code must retain the above copyright notice, this list of conditions and
46838 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
46839 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
46840 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
46841 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
46842 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
46843 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
46844 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
46845 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
46846 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
46847 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
46848 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
46849 OF SUCH DAMAGE.\n"
46850     }
46851   },
46852   "schemes": ["http"],
46853   "consumes": ["application/json"],
46854   "produces": ["application/json"],
46855   "paths": {
46856     "/RampTimeResURI" : {
46857       "get": {
46858         "description": "This resource that describes the Ramp Time of a dimming function.\nThis
46859 specifies the actual speed of changing between 2 dimming values.\nTime is specified in milliseconds
46860 [ms].\nWhen range (from oic.r.baseresource) is omitted the maximum value is 100 ms.\n\nThe RampTime
46861 of 0ms indicates the minimal delay possible by the implementation.\nRetrieves the current
46862 RampTime.\n",
46863         "parameters": [
46864           { "$ref": "#/parameters/interface" }
46865         ],
46866         "responses": {

```

```

46867         "200": {
46868             "description" : "",
46869             "x-example":
46870             {
46871                 "rt":      ["oic.r.light.ramptime"],
46872                 "id":      "unique_example_id",
46873                 "rampTime": 0,
46874                 "range":   [0,100]
46875             }
46876         },
46877         "schema": { "$ref": "#/definitions/RampTime" }
46878     }
46879 },
46880 },
46881 "post": {
46882     "description": "Sets the current RampTime.\n",
46883     "parameters": [
46884         { "$ref": "#/parameters/interface" },
46885         {
46886             "name": "body",
46887             "in": "body",
46888             "required": true,
46889             "schema": { "$ref": "#/definitions/RampTime" },
46890             "x-example":
46891             {
46892                 "id":      "unique_example_id",
46893                 "rampTime": 50
46894             }
46895         }
46896     ],
46897     "responses": {
46898         "200": {
46899             "description" : "",
46900             "x-example":
46901             {
46902                 "id":      "unique_example_id",
46903                 "rampTime": 50
46904             }
46905         },
46906         "schema": { "$ref": "#/definitions/RampTime" }
46907     },
46908     "403": {
46909         "description" : "This response is generated by the OIC Server when the client
46910 sends:\n An update with an out of range property value for rampTime.\nThe server responds with the
46911 current resource representation.\n",
46912         "x-example":
46913         {
46914             "id":      "unique_example_id",
46915             "rampTime": 40
46916         }
46917     },
46918     "schema": { "$ref": "#/definitions/RampTime" }
46919 }
46920 }
46921 }
46922 },
46923 },
46924 "parameters": {
46925     "interface" : {
46926         "in" : "query",
46927         "name" : "if",
46928         "type" : "string",
46929         "enum" : ["oic.if.a", "oic.if.baseline"]
46930     }
46931 },
46932 "definitions": {
46933     "RampTime" : {
46934         "properties": {
46935             "rt" :
46936             {
46937                 "description": "Resource Type",

```

```

46938     "items": {
46939         "maxLength": 64,
46940         "type": "string"
46941     },
46942     "minItems": 1,
46943     "readOnly": true,
46944     "type": "array"
46945 },
46946
46947 "precision" :
46948     {
46949     "description": "Accuracy granularity of the exposed value",
46950     "readOnly": true,
46951     "type": "number"
46952     },
46953
46954 "value" :
46955     {
46956     "anyOf": [
46957         {
46958         "type": "array"
46959         },
46960         {
46961         "type": "string"
46962         },
46963         {
46964         "type": "boolean"
46965         },
46966         {
46967         "type": "integer"
46968         },
46969         {
46970         "type": "number"
46971         },
46972         {
46973         "type": "object"
46974         }
46975     ],
46976     "description": "The value sensed or actuated by this Resource"
46977     },
46978
46979 "n" :
46980     {
46981     "description": "Friendly name of the resource",
46982     "maxLength": 64,
46983     "readOnly": true,
46984     "type": "string"
46985     },
46986
46987 "range" :
46988     {
46989     "description": "The valid range for the value Property",
46990     "items": {
46991     "anyOf": [
46992         {
46993         "type": "number"
46994         },
46995         {
46996         "type": "integer"
46997         }
46998     ]
46999     },
47000     "maxItems": 2,
47001     "minItems": 2,
47002     "readOnly": true,
47003     "type": "array"
47004     },
47005
47006 "rampTime" :
47007     {
47008     "description": "Actual speed of changing between 2 dimming values",

```

```

47009     "type": "integer"
47010   },
47011
47012   "step" :
47013     {
47014     "anyOf": [
47015       {
47016         "type": "integer"
47017       },
47018       {
47019         "type": "number"
47020       }
47021     ],
47022     "description": "Step value across the defined range",
47023     "readOnly": true
47024   },
47025
47026   "id" :
47027     {
47028     "description": "Instance ID of this specific resource",
47029     "maxLength": 64,
47030     "readOnly": true,
47031     "type": "string"
47032   },
47033
47034   "if" :
47035     {
47036     "description": "The interface set supported by this resource",
47037     "items": {
47038       "enum": [
47039         "oic.if.baseline",
47040         "oic.if.ll",
47041         "oic.if.b",
47042         "oic.if.lb",
47043         "oic.if.rw",
47044         "oic.if.r",
47045         "oic.if.a",
47046         "oic.if.s"
47047       ],
47048       "type": "string"
47049     },
47050     "minItems": 1,
47051     "readOnly": true,
47052     "type": "array"
47053   }
47054
47055   }
47056   , "type" : "object"
47057   , "required": ["rampTime"]
47058 }
47059 }
47060 }
47061

```

B.98.5 Property Definition

Table 433 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
rampTime	integer	Yes	Read Write	

				Actual speed of changing between 2 dimming values
precision	number	No	Read Only	Accuracy granularity of the exposed value
id	string	No	Read Only	Instance ID of this specific resource
rt	array: schema see	No	Read Only	Resource Type
n	string	No	Read Only	Friendly name of the resource
range	array: schema see	No	Read Only	The valid range for the value Property
if	array: schema see	No	Read Only	The interface set supported by this resource

47064 **B.98.6 CRUDN behaviour**

47065 **Table 434 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/RampTimeResURI		get	post		observe

47066 **B.99 Refrigeration**

47067 **B.99.1 Introduction**

47068 This resource describes a refrigeration function.
 47069 The filter state is a read-only value providing the percentage life time remaining for the water
 47070 filter.
 47071 RapidFreeze is a boolean that controls the rapid freeze capability if present.
 47072 RapidCool is a boolean that controls the rapid cool capability if present.
 47073 Defrost is a boolean that controls the defrost cycle if present.
 47074 At least one of the listed Properties shall be present in a Resource Instance.
 47075
 47076

47077 **B.99.2 Example URI**

47078 /RefrigerationResURI

47079 **B.99.3 Resource Type**

47080 The resource type (rt) is defined as: ['oic.r.refrigeration'].

47081 **B.99.4 Swagger2.0 Definition**

```
47082 {
47083   "swagger": "2.0",
47084   "info": {
47085     "title": "Refrigeration",
47086     "version": "v1.1.0-20160519",
47087     "license": {
```

```

47088     "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
47089     "x-description": "Redistribution and use in source and binary forms, with or without
47090 modification, are permitted provided that the following conditions are met:\n      1.
47091 Redistributions of source code must retain the above copyright notice, this list of conditions and
47092 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
47093 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
47094 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
47095 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
47096 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
47097 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
47098 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
47099 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
47100 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
47101 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
47102 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
47103 OF SUCH DAMAGE.\n"
47104   }
47105 },
47106 "schemes": ["http"],
47107 "consumes": ["application/json"],
47108 "produces": ["application/json"],
47109 "paths": {
47110   "/RefrigerationResURI" : {
47111     "get": {
47112       "description": "This resource describes a refrigeration function.\nThe filter state is a
47113 read-only value providing the percentage life time remaining for the water filter.\nRapidFreeze is
47114 a boolean that controls the rapid freeze capability if present.\nRapidCool is a boolean that
47115 controls the rapid cool capability if present.\nDefrost is a boolean that controls the defrost
47116 cycle if present.\nAt least one of the listed Properties shall be present in a Resource
47117 Instance.\nRetrieves the current Refrigeration function status; all Properties supported by the
47118 Device are returned.\n",
47119       "parameters": [
47120         { "$ref": "#/parameters/interface" }
47121       ],
47122       "responses": {
47123         "200": {
47124           "description": "",
47125           "x-example":
47126             {
47127               "rt":           ["oic.r.refrigeration"],
47128               "id":          "unique_example_id",
47129               "filter":      75,
47130               "rapidFreeze": false,
47131               "rapidCool":   false,
47132               "defrost":     true
47133             }
47134           ,
47135           "schema": { "$ref": "#/definitions/Refrigeration" }
47136         }
47137       }
47138     },
47139     "post": {
47140       "description": "Activates the desired Refrigeration functions.\nSuported values are
47141 rapidFreeze, rapidCool and defrost.\nAt least on of the supported values shall be provided.\n",
47142       "parameters": [
47143         { "$ref": "#/parameters/interface" },
47144         {
47145           "name": "body",
47146           "in": "body",
47147           "required": true,
47148           "schema": { "$ref": "#/definitions/RefrigerationUpdate" },
47149           "x-example":
47150             {
47151               "id":          "unique_example_id",
47152               "rapidFreeze": true
47153             }
47154         }
47155       ],
47156       "responses": {
47157         "200": {
47158           "description": "Indicates that the Refrigeration function was changed.\nThe new

```



```

47159 status can be provided in the response.\n",
47160     "x-example":
47161     {
47162         "id": "unique_example_id",
47163         "rapidFreeze": true
47164     }
47165     ,
47166     "schema": { "$ref": "#/definitions/RefrigerationUpdate" }
47167 }
47168 }
47169 }
47170 }
47171 },
47172 "parameters": {
47173     "interface" : {
47174         "in" : "query",
47175         "name" : "if",
47176         "type" : "string",
47177         "enum" : ["oic.if.a", "oic.if.baseline"]
47178     }
47179 },
47180 "definitions": {
47181     "Refrigeration" : {
47182         "properties": {
47183             "rt" :
47184             {
47185                 "description": "Resource Type",
47186                 "items": {
47187                     "maxLength": 64,
47188                     "type": "string"
47189                 },
47190                 "minItems": 1,
47191                 "readOnly": true,
47192                 "type": "array"
47193             },
47194             "rapidFreeze" :
47195             {
47196                 "description": "Indicates whether the unit has a rapid freeze capability active.",
47197                 "type": "boolean"
47198             },
47199             "defrost" :
47200             {
47201                 "description": "Indicates whether a defrost cycle is currently active",
47202                 "type": "boolean"
47203             },
47204             "precision" :
47205             {
47206                 "description": "Accuracy granularity of the exposed value",
47207                 "readOnly": true,
47208                 "type": "number"
47209             },
47210             "value" :
47211             {
47212                 "anyOf": [
47213                 {
47214                     "type": "array"
47215                 },
47216                 {
47217                     "type": "string"
47218                 },
47219                 {
47220                     "type": "boolean"
47221                 },
47222                 {
47223                     "type": "integer"
47224                 }
47225             ],
47226             }
47227         }
47228     }
47229 }

```

```

47230         "type": "number"
47231     },
47232     {
47233         "type": "object"
47234     }
47235 ],
47236 "description": "The value sensed or actuated by this Resource"
47237 },
47238
47239 "n" :
47240     {
47241         "description": "Friendly name of the resource",
47242         "maxLength": 64,
47243         "readOnly": true,
47244         "type": "string"
47245     },
47246
47247 "filter" :
47248     {
47249         "description": "Percentage life time remaining for the water filter",
47250         "maximum": 100,
47251         "minimum": 0,
47252         "readOnly": true,
47253         "type": "integer"
47254     },
47255
47256 "range" :
47257     {
47258         "description": "The valid range for the value Property",
47259         "items": {
47260             "anyOf": [
47261                 {
47262                     "type": "number"
47263                 },
47264                 {
47265                     "type": "integer"
47266                 }
47267             ]
47268         },
47269         "maxItems": 2,
47270         "minItems": 2,
47271         "readOnly": true,
47272         "type": "array"
47273     },
47274
47275 "rapidCool" :
47276     {
47277         "description": "Indicates whether the unit has a rapid cool capability active",
47278         "type": "boolean"
47279     },
47280
47281 "step" :
47282     {
47283         "anyOf": [
47284             {
47285                 "type": "integer"
47286             },
47287             {
47288                 "type": "number"
47289             }
47290         ],
47291         "description": "Step value across the defined range",
47292         "readOnly": true
47293     },
47294
47295 "id" :
47296     {
47297         "description": "Instance ID of this specific resource",
47298         "maxLength": 64,
47299         "readOnly": true,
47300         "type": "string"

```

```

47301     },
47302
47303     "if" :
47304     {
47305         "description": "The interface set supported by this resource",
47306         "items": {
47307             "enum": [
47308                 "oic.if.baseline",
47309                 "oic.if.ll",
47310                 "oic.if.b",
47311                 "oic.if.lb",
47312                 "oic.if.rw",
47313                 "oic.if.r",
47314                 "oic.if.a",
47315                 "oic.if.s"
47316             ],
47317             "type": "string"
47318         },
47319         "minItems": 1,
47320         "readOnly": true,
47321         "type": "array"
47322     }
47323 }
47324 }
47325 , "anyOf" :
47326 [
47327     {
47328         "required": [
47329             "filter"
47330         ]
47331     },
47332     {
47333         "required": [
47334             "rapidFreeze"
47335         ]
47336     },
47337     {
47338         "required": [
47339             "rapidCool"
47340         ]
47341     },
47342     {
47343         "required": [
47344             "defrost"
47345         ]
47346     }
47347 ]
47348
47349 , "type" : "object"
47350 }
47351 ,
47352 "RefrigerationUpdate" : {
47353     "properties": {
47354         "rt" :
47355         {
47356             "description": "Resource Type",
47357             "items": {
47358                 "maxLength": 64,
47359                 "type": "string"
47360             },
47361             "minItems": 1,
47362             "readOnly": true,
47363             "type": "array"
47364         },
47365         "rapidFreeze" :
47366         {
47367             "description": "Indicates whether the unit has a rapid freeze capability active.",
47368             "type": "boolean"
47369         },
47370     },
47371

```

```

47372     "defrost" :
47373         {
47374             "description": "Indicates whether a defrost cycle is currently active",
47375             "type": "boolean"
47376         },
47377
47378     "precision" :
47379         {
47380             "description": "Accuracy granularity of the exposed value",
47381             "readOnly": true,
47382             "type": "number"
47383         },
47384
47385     "value" :
47386         {
47387             "anyOf": [
47388                 {
47389                     "type": "array"
47390                 },
47391                 {
47392                     "type": "string"
47393                 },
47394                 {
47395                     "type": "boolean"
47396                 },
47397                 {
47398                     "type": "integer"
47399                 },
47400                 {
47401                     "type": "number"
47402                 },
47403                 {
47404                     "type": "object"
47405                 }
47406             ],
47407             "description": "The value sensed or actuated by this Resource"
47408         },
47409
47410     "n" :
47411         {
47412             "description": "Friendly name of the resource",
47413             "maxLength": 64,
47414             "readOnly": true,
47415             "type": "string"
47416         },
47417
47418     "range" :
47419         {
47420             "description": "The valid range for the value Property",
47421             "items": {
47422                 "anyOf": [
47423                     {
47424                         "type": "number"
47425                     },
47426                     {
47427                         "type": "integer"
47428                     }
47429                 ]
47430             },
47431             "maxItems": 2,
47432             "minItems": 2,
47433             "readOnly": true,
47434             "type": "array"
47435         },
47436
47437     "rapidCool" :
47438         {
47439             "description": "Indicates whether the unit has a rapid cool capability active",
47440             "type": "boolean"
47441         },
47442

```

```

47443     "step" :
47444         {
47445             "anyOf": [
47446                 {
47447                     "type": "integer"
47448                 },
47449                 {
47450                     "type": "number"
47451                 }
47452             ],
47453             "description": "Step value across the defined range",
47454             "readOnly": true
47455         },
47456     "id" :
47457         {
47458             "description": "Instance ID of this specific resource",
47459             "maxLength": 64,
47460             "readOnly": true,
47461             "type": "string"
47462         },
47463     "if" :
47464         {
47465             "description": "The interface set supported by this resource",
47466             "items": {
47467                 "enum": [
47470                     "oic.if.baseline",
47471                     "oic.if.ll",
47472                     "oic.if.b",
47473                     "oic.if.lb",
47474                     "oic.if.rw",
47475                     "oic.if.r",
47476                     "oic.if.a",
47477                     "oic.if.s"
47478                 ],
47479                 "type": "string"
47480             },
47481             "minItems": 1,
47482             "readOnly": true,
47483             "type": "array"
47484         }
47485     }
47486 }
47487 , "anyOf" :
47488     [
47489         {
47490             "required": [
47491                 "rapidFreeze"
47492             ]
47493         },
47494         {
47495             "required": [
47496                 "rapidCool"
47497             ]
47498         },
47499         {
47500             "required": [
47501                 "defrost"
47502             ]
47503         }
47504     ]
47505 }
47506 , "type" : "object"
47507 }
47508 }
47509 }
47510

```

47511

B.99.5 Property Definition

47512

Table 435 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
defrost	boolean	Yes	Read Write	Indicates whether a defrost cycle is currently active
id	string	No	Read Only	Instance ID of this specific resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
n	string	No	Read Only	Friendly name of the resource
range	array: see schema	No	Read Only	The valid range for the value Property
rt	array: see schema	No	Read Only	Resource Type
rapidFreeze	boolean	No	Read Write	Indicates whether the unit has a rapid freeze capability active.
step	multiple types: see schema	No	Read Only	Step value across the defined range
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
rapidCool	boolean	No	Read Write	Indicates whether the unit has a rapid cool capability active
if	array: see schema	No	Read Only	The interface set supported by this resource
filter	integer	No	Read Only	Percentage life time remaining for the water filter
rapidCool	boolean	No	Read Write	

				Indicates whether the unit has a rapid cool capability active
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
defrost	boolean	Yes	Read Write	Indicates whether a defrost cycle is currently active
n	string	No	Read Only	Friendly name of the resource
if	array: schema see	No	Read Only	The interface set supported by this resource
range	array: schema see	No	Read Only	The valid range for the value Property
rt	array: schema see	No	Read Only	Resource Type
id	string	No	Read Only	Instance ID of this specific resource
rapidFreeze	boolean	No	Read Write	Indicates whether the unit has a rapid freeze capability active.
step	multiple types: see schema	No	Read Only	Step value across the defined range

47513

B.99.6 CRUDN behaviour

47514

Table 436 The CRUDN operations of the resource

Resource	Create	Read	Update	Delete	Notify
/RefrigerationResURI		get	post		observe

47515 **B.100 Selectable Levels**

47516 **B.100.1 Introduction**

47517 This Resource provides a set of device defined 'levels' that can be selected for an operation.
47518 For example where a humidifier has a discrete set that model different humidity levels that can
47519 be set.
47520 availablelevels is an array of the levels that can be selected, these can be a number or an
47521 integer.
47522 targetlevel is the level that has currently been selected and is written to in order to select a new
47523 level.
47524 When retrieved the targetlevel provides the actual value that has been selected.
47525

47526 **B.100.2 Example URI**

47527 /SelectableLevelsResURI

47528 **B.100.3 Resource Type**

47529 The resource type (rt) is defined as: ['oic.r.selectablelevels'].

47530 **B.100.4 Swagger2.0 Definition**

```
47531 {
47532   "swagger": "2.0",
47533   "info": {
47534     "title": "Selectable Levels",
47535     "version": "v1.1.0-20160519",
47536     "license": {
47537       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
47538       "x-description": "Redistribution and use in source and binary forms, with or without
47539 modification, are permitted provided that the following conditions are met:\n      1.
47540 Redistributions of source code must retain the above copyright notice, this list of conditions and
47541 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
47542 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
47543 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
47544 Connectivity Foundation, INC. \ "AS IS\ " AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
47545 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
47546 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
47547 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
47548 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
47549 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
47550 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
47551 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
47552 OF SUCH DAMAGE.\n"
47553   }
47554 },
47555 "schemes": ["http"],
47556 "consumes": ["application/json"],
47557 "produces": ["application/json"],
47558 "paths": {
47559   "/SelectableLevelsResURI" : {
47560     "get": {
47561       "description": "This Resource provides a set of device defined 'levels' that can be
47562 selected for an operation.\nFor example where a humidifier has a discrete set that model different
47563 humidity levels that can be set.\navailablelevels is an array of the levels that can be selected,
47564 these can be a number or an integer.\ntargetlevel is the level that has currently been selected and
47565 is written to in order to select a new level.\nWhen retrieved the targetlevel provides the actual
47566 value that has been selected.\nRetrieves the current selectable levels.\n",
47567       "parameters": [
47568         {"$ref": "#/parameters/interface"}
47569       ],
47570       "responses": {
47571         "200": {
47572           "description": "",
47573           "x-example":
47574             {
47575               "rt": ["oic.r.selectablelevels"],
47576               "id": "unique_example_id",
```



```

47577         "availablelevels":[0,2,4,6,8],
47578         "targetlevel": 2
47579     }
47580     ,
47581     "schema": { "$ref": "#/definitions/SelectableLevels" }
47582 }
47583 },
47584 },
47585 "post": {
47586     "description": "Sets the current level from the set that is selectable",
47587     "parameters": [
47588         { "$ref": "#/parameters/interface" },
47589         {
47590             "name": "body",
47591             "in": "body",
47592             "required": true,
47593             "schema": { "$ref": "#/definitions/UpdateSchema" },
47594             "x-example":
47595                 {
47596                     "targetlevel": 4
47597                 }
47598         }
47599     ],
47600     "responses": {
47601         "200": {
47602             "description": "",
47603             "x-example":
47604                 {
47605                     "targetlevel": 4
47606                 }
47607             ,
47608             "schema": { "$ref": "#/definitions/UpdateSchema" }
47609         },
47610         "403": {
47611             "description": "Generated by a Server when an attempt is made to update to a
47612 targetlevel that is not in the set of availablelevels",
47613             "x-example":
47614                 {
47615                     "id": "unique_example_id",
47616                     "availablelevels":[0,2,4,6,8],
47617                     "targetlevel": 2
47618                 }
47619             ,
47620             "schema": { "$ref": "#/definitions/SelectableLevels" }
47621         }
47622     }
47623 }
47624 },
47625 },
47626 "parameters": {
47627     "interface": {
47628         "in": "query",
47629         "name": "if",
47630         "type": "string",
47631         "enum": ["oic.if.a", "oic.if.baseline"]
47632     }
47633 },
47634 "definitions": {
47635     "SelectableLevels": {
47636         "properties": {
47637             "rt":
47638                 {
47639                     "description": "Resource Type",
47640                     "items": {
47641                         "maxLength": 64,
47642                         "type": "string"
47643                     },
47644                     "minItems": 1,
47645                     "readOnly": true,
47646                     "type": "array"
47647                 }

```

```

47648
47649     "precision" :
47650         {
47651             "description": "Accuracy granularity of the exposed value",
47652             "readOnly": true,
47653             "type": "number"
47654         },
47655
47656     "value" :
47657         {
47658             "anyOf": [
47659                 {
47660                     "type": "array"
47661                 },
47662                 {
47663                     "type": "string"
47664                 },
47665                 {
47666                     "type": "boolean"
47667                 },
47668                 {
47669                     "type": "integer"
47670                 },
47671                 {
47672                     "type": "number"
47673                 },
47674                 {
47675                     "type": "object"
47676                 }
47677             ],
47678             "description": "The value sensed or actuated by this Resource"
47679         },
47680
47681     "n" :
47682         {
47683             "description": "Friendly name of the resource",
47684             "maxLength": 64,
47685             "readOnly": true,
47686             "type": "string"
47687         },
47688
47689     "targetlevel" :
47690         {
47691             "anyOf": [
47692                 {
47693                     "type": "integer"
47694                 },
47695                 {
47696                     "type": "number"
47697                 }
47698             ],
47699             "description": "The target level from the available selectable set"
47700         },
47701
47702     "range" :
47703         {
47704             "description": "The valid range for the value Property",
47705             "items": {
47706                 "anyOf": [
47707                     {
47708                         "type": "number"
47709                     },
47710                     {
47711                         "type": "integer"
47712                     }
47713                 ]
47714             },
47715             "maxItems": 2,
47716             "minItems": 2,
47717             "readOnly": true,
47718             "type": "array"

```

```

47719     },
47720
47721     "availablelevels" :
47722     {
47723         "description": "Set of levels from which one can be selected",
47724         "items": {
47725             "anyOf": [
47726                 {
47727                     "type": "integer"
47728                 },
47729                 {
47730                     "type": "number"
47731                 }
47732             ]
47733         },
47734         "readOnly": true,
47735         "type": "array"
47736     },
47737
47738     "step" :
47739     {
47740         "anyOf": [
47741             {
47742                 "type": "integer"
47743             },
47744             {
47745                 "type": "number"
47746             }
47747         ],
47748         "description": "Step value across the defined range",
47749         "readOnly": true
47750     },
47751
47752     "id" :
47753     {
47754         "description": "Instance ID of this specific resource",
47755         "maxLength": 64,
47756         "readOnly": true,
47757         "type": "string"
47758     },
47759
47760     "if" :
47761     {
47762         "description": "The interface set supported by this resource",
47763         "items": {
47764             "enum": [
47765                 "oic.if.baseline",
47766                 "oic.if.ll",
47767                 "oic.if.b",
47768                 "oic.if.lb",
47769                 "oic.if.rw",
47770                 "oic.if.r",
47771                 "oic.if.a",
47772                 "oic.if.s"
47773             ],
47774             "type": "string"
47775         },
47776         "minItems": 1,
47777         "readOnly": true,
47778         "type": "array"
47779     }
47780
47781     },
47782     "type" : "object"
47783 , "required": ["availablelevels", "targetlevel"]
47784 }
47785 ,
47786 "UpdateSchema" : {
47787     "properties": {
47788         "rt" :
47789         {

```

```

47790     "description": "Resource Type",
47791     "items": {
47792         "maxLength": 64,
47793         "type": "string"
47794     },
47795     "minItems": 1,
47796     "readOnly": true,
47797     "type": "array"
47798 },
47799
47800 "precision" :
47801     {
47802     "description": "Accuracy granularity of the exposed value",
47803     "readOnly": true,
47804     "type": "number"
47805 },
47806
47807 "value" :
47808     {
47809     "anyOf": [
47810         {
47811         "type": "array"
47812         },
47813         {
47814         "type": "string"
47815         },
47816         {
47817         "type": "boolean"
47818         },
47819         {
47820         "type": "integer"
47821         },
47822         {
47823         "type": "number"
47824         },
47825         {
47826         "type": "object"
47827         }
47828     ],
47829     "description": "The value sensed or actuated by this Resource"
47830 },
47831
47832 "n" :
47833     {
47834     "description": "Friendly name of the resource",
47835     "maxLength": 64,
47836     "readOnly": true,
47837     "type": "string"
47838 },
47839
47840 "targetlevel" :
47841     {
47842     "description": "The target level from the available selectable set",
47843     "type": [
47844         "integer",
47845         "number"
47846     ]
47847 },
47848
47849 "range" :
47850     {
47851     "description": "The valid range for the value Property",
47852     "items": {
47853     "anyOf": [
47854         {
47855         "type": "number"
47856         },
47857         {
47858         "type": "integer"
47859         }
47860     ]

```

```

47861     },
47862     "maxItems": 2,
47863     "minItems": 2,
47864     "readOnly": true,
47865     "type": "array"
47866   },
47867
47868   "step" :
47869     {
47870     "anyOf": [
47871       {
47872         "type": "integer"
47873       },
47874       {
47875         "type": "number"
47876       }
47877     ],
47878     "description": "Step value across the defined range",
47879     "readOnly": true
47880   },
47881
47882   "id" :
47883     {
47884     "description": "Instance ID of this specific resource",
47885     "maxLength": 64,
47886     "readOnly": true,
47887     "type": "string"
47888   },
47889
47890   "if" :
47891     {
47892     "description": "The interface set supported by this resource",
47893     "items": {
47894       "enum": [
47895         "oic.if.baseline",
47896         "oic.if.ll",
47897         "oic.if.b",
47898         "oic.if.lb",
47899         "oic.if.rw",
47900         "oic.if.r",
47901         "oic.if.a",
47902         "oic.if.s"
47903       ],
47904       "type": "string"
47905     },
47906     "minItems": 1,
47907     "readOnly": true,
47908     "type": "array"
47909   }
47910 }
47911 }, "type" : "object"
47912 , "required": ["targetlevel"]
47913 }
47914 }
47915 }
47916 }
47917

```

B.100.5 Property Definition

Table 437 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
range	array: see schema	No	Read Only	The valid range for the value Property
id	string	No	Read Only	

				Instance ID of this specific resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
n	string	No	Read Only	Friendly name of the resource
availablelevels	array: see schema	Yes	Read Only	Set of levels from which one can be selected
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
if	array: see schema	No	Read Only	The interface set supported by this resource
targetlevel	multiple types: see schema	Yes	Read Write	The target level from the available selectable set
rt	array: see schema	No	Read Only	Resource Type
range	array: see schema	No	Read Only	The valid range for the value Property
id	string	No	Read Only	Instance ID of this specific resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
n	string	No	Read Only	Friendly name of the resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource

step	multiple types: see schema	No	Read Only	Step value across the defined range
if	array: see schema	No	Read Only	The interface set supported by this resource
targetlevel	['integer', 'number']	Yes	Read Write	The target level from the available selectable set

47920 **B.100.6 CRUDN behaviour**

47921 **Table 438 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/SelectableLevelsResURI		get	post		observe

47922 **B.101 Sensor Properties**

47923 **B.101.1 Introduction**

47924 This resource describes the properties which guide the reporting of a state change of a Sensor.
 47925 The silenttime represents the period after which a state change report was sent where the
 47926 Sensor state change is not reported.
 47927 The sensitivity represents the level at which the sensor detects a state change.
 47928 These values are completely dependent on the type of Sensor and the manufacturer capability,
 47929 so no range restrictions are used.
 47930 The range from the baseresource is only applied to the sensitivity.

47932 **B.101.2 Example URI**

47933 /SensorPropsResURI

47934 **B.101.3 Resource Type**

47935 The resource type (rt) is defined as: ['oic.r.sensor.props'].

47936 **B.101.4 Swagger2.0 Definition**

```

47937 {
47938   "swagger": "2.0",
47939   "info": {
47940     "title": "Sensor Properties",
47941     "version": "v1.1.0-20180115",
47942     "license": {
47943       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
47944       "x-description": "Redistribution and use in source and binary forms, with or without
47945 modification, are permitted provided that the following conditions are met:\n      1.
47946 Redistributions of source code must retain the above copyright notice, this list of conditions and
47947 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
47948 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
47949 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
47950 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
47951 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
47952 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
47953 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
47954 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
47955 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND
47956 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
47957 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
47958 OF SUCH DAMAGE.\n"
47959   }
  }

```

```

47960     },
47961     "schemes": ["http"],
47962     "consumes": ["application/json"],
47963     "produces": ["application/json"],
47964     "paths": {
47965         "/SensorPropsResURI" : {
47966             "get": {
47967                 "description": "This resource describes the properties which guide the reporting of a state
47968 change of a Sensor.\nThe silenttime represents the period after which a state change report was
47969 sent where the Sensor state change is not reported.\nThe sensitivity represents the level at which
47970 the sensor detects a state change.\nThese values are completely dependent on the type of Sensor and
47971 the manufacturer capability, so no range restrictions are used.\nThe range from the baseresource is
47972 only applied to the sensitivity.\nGets current Sensor Property values\n",
47973                 "parameters": [
47974                     { "$ref": "#/parameters/interface" }
47975                 ],
47976                 "responses": {
47977                     "200": {
47978                         "description": "",
47979                         "x-example":
47980                         {
47981                             "rt": ["oic.r.sensor.props"],
47982                             "id": "unique_example_id",
47983                             "silenttime": 10,
47984                             "sensitivity": 20.5,
47985                             "range" : [ 0, 100 ]
47986                         }
47987                     },
47988                     "schema": { "$ref": "#/definitions/SensorProps" }
47989                 }
47990             }
47991         },
47992         "post": {
47993             "description": "Sets Sensor Property values\n",
47994             "parameters": [
47995                 { "$ref": "#/parameters/interface" },
47996                 {
47997                     "name": "body",
47998                     "in": "body",
47999                     "required": true,
48000                     "schema": { "$ref": "#/definitions/SensorProps" },
48001                     "x-example":
48002                     {
48003                         "id": "unique_example_id",
48004                         "silenttime": 20,
48005                         "sensitivity": 10.75
48006                     }
48007                 }
48008             ],
48009             "responses": {
48010                 "200": {
48011                     "description": "",
48012                     "x-example":
48013                     {
48014                         "id": "unique_example_id",
48015                         "silenttime": 20,
48016                         "sensitivity": 10.75
48017                     },
48018                     "schema": { "$ref": "#/definitions/SensorProps" }
48019                 }
48020             }
48021         }
48022     },
48023     },
48024     "parameters": {
48025         "interface" : {
48026             "in" : "query",
48027             "name" : "if",
48028             "type" : "string",
48029             "enum" : ["oic.if.rw", "oic.if.baseline"]
48030         }
48031     }

```



```

48031 },
48032 "definitions": {
48033   "SensorProps" : {
48034     "properties": {
48035       "rt" :
48036         {
48037           "description": "Resource Type",
48038           "items": {
48039             "maxLength": 64,
48040             "type": "string"
48041           },
48042           "minItems": 1,
48043           "readOnly": true,
48044           "type": "array"
48045         },
48046       "silenttime" :
48047         {
48048           "description": "The time in seconds from the previous report that the Sensor restrains
48049 from sending a state change. This is used to avoid repeated state change reports.",
48050           "type": "integer"
48051         },
48052       "sensitivity" :
48053         {
48054           "description": "The level of the detection accuracy of the Sensor. This is used to
48055 control the level at which the Sensor detects a state change. Range should be specified per
48056 manufacturer device capabilities.",
48057           "type": "number"
48058         },
48059       "precision" :
48060         {
48061           "description": "Accuracy granularity of the exposed value",
48062           "readOnly": true,
48063           "type": "number"
48064         },
48065       "value" :
48066         {
48067           "anyOf": [
48068             {
48069               "type": "array"
48070             },
48071             {
48072               "type": "string"
48073             },
48074             {
48075               "type": "boolean"
48076             },
48077             {
48078               "type": "integer"
48079             },
48080             {
48081               "type": "number"
48082             },
48083             {
48084               "type": "object"
48085             }
48086           ],
48087           "description": "The value sensed or actuated by this Resource"
48088         },
48089       "n" :
48090         {
48091           "description": "Friendly name of the resource",
48092           "maxLength": 64,
48093           "readOnly": true,
48094           "type": "string"
48095         }
48096     }
48097   },
48098 }
48099
48100
48101

```

```

48102     "range" :
48103     {
48104         "description": "The valid range for the value Property",
48105         "items": {
48106             "anyOf": [
48107                 {
48108                     "type": "number"
48109                 },
48110                 {
48111                     "type": "integer"
48112                 }
48113             ]
48114         },
48115         "maxItems": 2,
48116         "minItems": 2,
48117         "readOnly": true,
48118         "type": "array"
48119     },
48120     "step" :
48121     {
48122         "anyOf": [
48123             {
48124                 "type": "integer"
48125             },
48126             {
48127                 "type": "number"
48128             }
48129         ],
48130         "description": "Step value across the defined range",
48131         "readOnly": true
48132     },
48133     "id" :
48134     {
48135         "description": "Instance ID of this specific resource",
48136         "maxLength": 64,
48137         "readOnly": true,
48138         "type": "string"
48139     },
48140     "if" :
48141     {
48142         "description": "The interface set supported by this resource",
48143         "items": {
48144             "enum": [
48145                 "oic.if.baseline",
48146                 "oic.if.ll",
48147                 "oic.if.b",
48148                 "oic.if.lb",
48149                 "oic.if.rw",
48150                 "oic.if.r",
48151                 "oic.if.a",
48152                 "oic.if.s"
48153             ],
48154             "type": "string"
48155         },
48156         "minItems": 1,
48157         "readOnly": true,
48158         "type": "array"
48159     }
48160     },
48161     "type" : "object"
48162     , "required": ["silenttime", "sensitivity"]
48163 }
48164 }
48165 }
48166 }
48167 }
48168 }
48169 }
48170 }

```

48171

B.101.5 Property Definition

48172

Table 439 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
silenttime	integer	Yes	Read Write	The time in seconds from the previous report that the Sensor restrains from sending a state change. This is used to avoid repeated state change reports.
step	multiple types: see schema	No	Read Only	Step value across the defined range
n	string	No	Read Only	Friendly name of the resource
rt	array: see schema	No	Read Only	Resource Type
id	string	No	Read Only	Instance ID of this specific resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
if	array: see schema	No	Read Only	The interface set supported by this resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
range	array: see schema	No	Read Only	The valid range for the value Property
sensitivity	number	Yes	Read Write	The level of the detection accuracy of the Sensor. This is used to control the level at which the Sensor detects a state change. Range

				should be specified per manufacturer device capabilities.
--	--	--	--	---

48173 **B.101.6 CRUDN behaviour**

48174 **Table 440 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/SensorPropsResURI		get	post		observe

48175 **B.102 Signal Strength**

48176 **B.102.1 Introduction**

48177 This resource describes the strength of a signal by means of lqi and rssi.
 48178 The lqi is a floating point number that represents Link Quality Indicator.
 48179 The rssi is a floating point number that represents the received signal strength indicator.
 48180

48181 **B.102.2 Example URI**

48182 /SignalStrengthResURI

48183 **B.102.3 Resource Type**

48184 The resource type (rt) is defined as: ['oic.r.signalstrength'].

48185 **B.102.4 Swagger2.0 Definition**

```

48186 {
48187   "swagger": "2.0",
48188   "info": {
48189     "title": "Signal Strength",
48190     "version": "v1.1.0-20160519",
48191     "license": {
48192       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
48193       "x-description": "Redistribution and use in source and binary forms, with or without
48194 modification, are permitted provided that the following conditions are met:\n      1.
48195 Redistributions of source code must retain the above copyright notice, this list of conditions and
48196 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
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48205 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
48206 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
48207 OF SUCH DAMAGE.\n"
48208     }
48209   },
48210   "schemes": ["http"],
48211   "consumes": ["application/json"],
48212   "produces": ["application/json"],
48213   "paths": {
48214     "/SignalStrengthResURI" : {
48215       "get": {
48216         "description": "This resource describes the strength of a signal by means of lqi and
48217 rssi.\nThe lqi is a floating point number that represents Link Quality Indicator.\nThe rssi is a
48218 floating point number that represents the received signal strength indicator.\n",
48219         "parameters": [
48220           { "$ref": "#/parameters/interface" }
48221         ],
48222         "responses": {
48223           "200": {

```

```

48224         "description" : "",
48225         "x-example":
48226             {
48227                 "rt": ["oic.r.signalstrength"],
48228                 "id": "unique_example_id",
48229                 "lqi": 10.0,
48230                 "rssi": 55.0
48231             }
48232         ,
48233         "schema": { "$ref": "#/definitions/SignalStrength" }
48234     }
48235 }
48236 }
48237 }
48238 },
48239 "parameters": {
48240     "interface" : {
48241         "in" : "query",
48242         "name" : "if",
48243         "type" : "string",
48244         "enum" : ["oic.if.s", "oic.if.baseline"]
48245     }
48246 },
48247 "definitions": {
48248     "SignalStrength" : {
48249         "properties": {
48250             "rt" :
48251                 {
48252                 "description": "Resource Type",
48253                 "items": {
48254                     "maxLength": 64,
48255                     "type": "string"
48256                 },
48257                 "minItems": 1,
48258                 "readOnly": true,
48259                 "type": "array"
48260             },
48261             "precision" :
48262                 {
48263                 "description": "Accuracy granularity of the exposed value",
48264                 "readOnly": true,
48265                 "type": "number"
48266             },
48267             "value" :
48268                 {
48269                 "anyOf": [
48270                     {
48271                     "type": "array"
48272                     },
48273                     {
48274                     "type": "string"
48275                     },
48276                     {
48277                     "type": "boolean"
48278                     },
48279                     {
48280                     "type": "integer"
48281                     },
48282                     {
48283                     "type": "number"
48284                     },
48285                     {
48286                     "type": "object"
48287                     }
48288                 ],
48289                 "description": "The value sensed or actuated by this Resource"
48290             },
48291         },
48292     },
48293     "n" :

```

```

48295         {
48296         "description": "Friendly name of the resource",
48297         "maxLength": 64,
48298         "readOnly": true,
48299         "type": "string"
48300     },
48301
48302     "range" :
48303     {
48304         "description": "The valid range for the value Property",
48305         "items": {
48306             "anyOf": [
48307                 {
48308                     "type": "number"
48309                 },
48310                 {
48311                     "type": "integer"
48312                 }
48313             ]
48314         },
48315         "maxItems": 2,
48316         "minItems": 2,
48317         "readOnly": true,
48318         "type": "array"
48319     },
48320
48321     "lqi" :
48322     {
48323         "description": "current value of Link Quality Indicator",
48324         "readOnly": true,
48325         "type": "number"
48326     },
48327
48328     "step" :
48329     {
48330         "anyOf": [
48331             {
48332                 "type": "integer"
48333             },
48334             {
48335                 "type": "number"
48336             }
48337         ],
48338         "description": "Step value across the defined range",
48339         "readOnly": true
48340     },
48341
48342     "rssi" :
48343     {
48344         "description": "current value of Received Signal Strength Indicator",
48345         "readOnly": true,
48346         "type": "number"
48347     },
48348
48349     "id" :
48350     {
48351         "description": "Instance ID of this specific resource",
48352         "maxLength": 64,
48353         "readOnly": true,
48354         "type": "string"
48355     },
48356
48357     "if" :
48358     {
48359         "description": "The interface set supported by this resource",
48360         "items": {
48361             "enum": [
48362                 "oic.if.baseline",
48363                 "oic.if.ll",
48364                 "oic.if.b",
48365                 "oic.if.lb",

```

```

48366         "oic.if.rw",
48367         "oic.if.r",
48368         "oic.if.a",
48369         "oic.if.s"
48370     ],
48371     "type": "string"
48372 },
48373 "minItems": 1,
48374 "readOnly": true,
48375 "type": "array"
48376 }
48377
48378 }
48379 , "type" : "object"
48380 , "required": ["lqi", "rssi"]
48381 }
48382 }
48383 }
48384

```

B.102.5 Property Definition

Table 441 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
rssi	number	Yes	Read Only	current value of Received Signal Strength Indicator
precision	number	No	Read Only	Accuracy granularity of the exposed value
rt	array: see schema	No	Read Only	Resource Type
id	string	No	Read Only	Instance ID of this specific resource
n	string	No	Read Only	Friendly name of the resource
if	array: see schema	No	Read Only	The interface set supported by this resource
lqi	number	Yes	Read Only	current value of Link Quality Indicator
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
range	array: see schema	No	Read Only	The valid range for the value Property

step	multiple types: see schema	No	Read Only	Step value across the defined range
------	-------------------------------	----	-----------	---

48387 **B.102.6 CRUDN behaviour**

48388 **Table 442 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/SignalStrengthResURI		get			observe

48389 **B.103 Sleep Sensor**

48390 **B.103.1 Introduction**

48391 This resource describes whether human sleep has been sensed or not.
48392 The value is a boolean.
48393 A value of 'true' means that sleep has been sensed.
48394 A value of 'false' means that sleep not been sensed.
48395

48396 **B.103.2 Example URI**

48397 /SleepSensorResURI

48398 **B.103.3 Resource Type**

48399 The resource type (rt) is defined as: ['oic.r.sensor.sleep'].

48400 **B.103.4 Swagger2.0 Definition**

```

48401 {
48402   "swagger": "2.0",
48403   "info": {
48404     "title": "Sleep Sensor",
48405     "version": "v1.1.0-20160519",
48406     "license": {
48407       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
48408       "x-description": "Redistribution and use in source and binary forms, with or without
48409 modification, are permitted provided that the following conditions are met:\n      1.
48410 Redistributions of source code must retain the above copyright notice, this list of conditions and
48411 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
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48413 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
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48420 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
48421 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
48422 OF SUCH DAMAGE.\n"
48423   }
48424 },
48425 "schemes": ["http"],
48426 "consumes": ["application/json"],
48427 "produces": ["application/json"],
48428 "paths": {
48429   "/SleepSensorResURI" : {
48430     "get": {
48431       "description": "This resource describes whether human sleep has been sensed or not.\nThe
48432 value is a boolean.\nA value of 'true' means that sleep has been sensed.\nA value of 'false' means
48433 that sleep not been sensed.\n",
48434       "parameters": [
48435         {"$ref": "#/parameters/interface"}
48436       ],
48437       "responses": {
48438         "200": {

```



```

48439         "description" : "",
48440         "x-example":
48441         {
48442             "rt":      ["oic.r.sensor.sleep"],
48443             "id":      "unique_example_id",
48444             "value":   true
48445         }
48446     },
48447     "schema": { "$ref": "#/definitions/sleep" }
48448 }
48449 }
48450 }
48451 }
48452 },
48453 "parameters": {
48454     "interface" : {
48455         "in" : "query",
48456         "name" : "if",
48457         "type" : "string",
48458         "enum" : ["oic.if.s", "oic.if.baseline"]
48459     }
48460 },
48461 "definitions": {
48462     "sleep" : {
48463         "properties": {
48464             "rt" :
48465             {
48466                 "description": "Resource Type",
48467                 "items": {
48468                     "maxLength": 64,
48469                     "type": "string"
48470                 },
48471                 "minItems": 1,
48472                 "readOnly": true,
48473                 "type": "array"
48474             },
48475             "precision" :
48476             {
48477                 "description": "Accuracy granularity of the exposed value",
48478                 "readOnly": true,
48479                 "type": "number"
48480             },
48481             },
48482             "value" :
48483             {
48484                 "description": "true = sensed, false = not sensed.",
48485                 "readOnly": true,
48486                 "type": "boolean"
48487             },
48488             },
48489             "n" :
48490             {
48491                 "description": "Friendly name of the resource",
48492                 "maxLength": 64,
48493                 "readOnly": true,
48494                 "type": "string"
48495             },
48496             },
48497             "range" :
48498             {
48499                 "description": "The valid range for the value Property",
48500                 "items": {
48501                     "anyOf": [
48502                         {
48503                             "type": "number"
48504                         },
48505                         {
48506                             "type": "integer"
48507                         }
48508                     ]
48509                 }

```

```

48510     },
48511     "maxItems": 2,
48512     "minItems": 2,
48513     "readOnly": true,
48514     "type": "array"
48515   },
48516
48517   "step" :
48518     {
48519     "anyOf": [
48520       {
48521         "type": "integer"
48522       },
48523       {
48524         "type": "number"
48525       }
48526     ],
48527     "description": "Step value across the defined range",
48528     "readOnly": true
48529   },
48530
48531   "id" :
48532     {
48533     "description": "Instance ID of this specific resource",
48534     "maxLength": 64,
48535     "readOnly": true,
48536     "type": "string"
48537   },
48538
48539   "if" :
48540     {
48541     "description": "The interface set supported by this resource",
48542     "items": {
48543       "enum": [
48544         "oic.if.baseline",
48545         "oic.if.ll",
48546         "oic.if.b",
48547         "oic.if.lb",
48548         "oic.if.rw",
48549         "oic.if.r",
48550         "oic.if.a",
48551         "oic.if.s"
48552       ],
48553       "type": "string"
48554     },
48555     "minItems": 1,
48556     "readOnly": true,
48557     "type": "array"
48558   }
48559
48560   },
48561   "type" : "object"
48562 , "required": ["value"]
48563 }
48564 }
48565 }
48566

```

B.103.5 Property Definition

Table 443 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
precision	number	No	Read Only	Accuracy granularity of the exposed value
if	array: see schema	No	Read Only	

				The interface set supported by this resource
n	string	No	Read Only	Friendly name of the resource
rt	array: see schema	No	Read Only	Resource Type
value	boolean	Yes	Read Only	true = sensed, false = not sensed.
range	array: see schema	No	Read Only	The valid range for the value Property
id	string	No	Read Only	Instance ID of this specific resource
step	multiple types: see schema	No	Read Only	Step value across the defined range

48569 **B.103.6 CRUDN behaviour**

48570 **Table 444 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/SleepSensorResURI		get			observe

48571 **B.104 Smoke Sensor**

48572 **B.104.1 Introduction**

48573 This resource describes whether smoke has been sensed or not.

48574 The value is a boolean.

48575 A value of 'true' means that smoke has been sensed.

48576 A value of 'false' means that smoke not been sensed.

48577

48578 **B.104.2 Example URI**

48579 /SmokeSensorResURI

48580 **B.104.3 Resource Type**

48581 The resource type (rt) is defined as: ['oic.r.sensor.smoke'].

48582 **B.104.4 Swagger2.0 Definition**

```
48583 {
48584   "swagger": "2.0",
48585   "info": {
48586     "title": "Smoke Sensor",
48587     "version": "v1.1.0-20160519",
48588     "license": {
48589       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
48590       "x-description": "Redistribution and use in source and binary forms, with or without
48591 modification, are permitted provided that the following conditions are met:\n      1.
48592 Redistributions of source code must retain the above copyright notice, this list of conditions and
48593 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
48594 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
```

```

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48602 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
48603 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
48604 OF SUCH DAMAGE.\n"
48605     }
48606   },
48607   "schemes": ["http"],
48608   "consumes": ["application/json"],
48609   "produces": ["application/json"],
48610   "paths": {
48611     "/SmokeSensorResURI" : {
48612       "get": {
48613         "description": "This resource describes whether smoke has been sensed or not.\nThe value is
48614 a boolean.\nA value of 'true' means that smoke has been sensed.\nA value of 'false' means that
48615 smoke not been sensed.\n",
48616         "parameters": [
48617           { "$ref": "#/parameters/interface" }
48618         ],
48619         "responses": {
48620           "200": {
48621             "description" : "",
48622             "x-example":
48623               {
48624                 "rt": ["oic.r.sensor.smoke"],
48625                 "id": "unique_example_id",
48626                 "value": true
48627               }
48628           },
48629           "schema": { "$ref": "#/definitions/smoke" }
48630         }
48631       }
48632     }
48633   },
48634   "parameters": {
48635     "interface" : {
48636       "in" : "query",
48637       "name" : "if",
48638       "type" : "string",
48639       "enum" : ["oic.if.s", "oic.if.baseline"]
48640     }
48641   },
48642   "definitions": {
48643     "smoke" : {
48644       "properties": {
48645         "rt" :
48646           {
48647             "description": "Resource Type",
48648             "items": {
48649               "maxLength": 64,
48650               "type": "string"
48651             },
48652             "minItems": 1,
48653             "readOnly": true,
48654             "type": "array"
48655           },
48656       },
48657       "precision" :
48658         {
48659           "description": "Accuracy granularity of the exposed value",
48660           "readOnly": true,
48661           "type": "number"
48662         },
48663     },
48664     "value" :

```

```

48666         {
48667         "description": "true = sensed, false = not sensed.",
48668         "readOnly": true,
48669         "type": "boolean"
48670     },
48671
48672     "n" :
48673     {
48674         "description": "Friendly name of the resource",
48675         "maxLength": 64,
48676         "readOnly": true,
48677         "type": "string"
48678     },
48679
48680     "range" :
48681     {
48682         "description": "The valid range for the value Property",
48683         "items": {
48684             "anyOf": [
48685                 {
48686                     "type": "number"
48687                 },
48688                 {
48689                     "type": "integer"
48690                 }
48691             ]
48692         },
48693         "maxItems": 2,
48694         "minItems": 2,
48695         "readOnly": true,
48696         "type": "array"
48697     },
48698
48699     "step" :
48700     {
48701         "anyOf": [
48702             {
48703                 "type": "integer"
48704             },
48705             {
48706                 "type": "number"
48707             }
48708         ],
48709         "description": "Step value across the defined range",
48710         "readOnly": true
48711     },
48712
48713     "id" :
48714     {
48715         "description": "Instance ID of this specific resource",
48716         "maxLength": 64,
48717         "readOnly": true,
48718         "type": "string"
48719     },
48720
48721     "if" :
48722     {
48723         "description": "The interface set supported by this resource",
48724         "items": {
48725             "enum": [
48726                 "oic.if.baseline",
48727                 "oic.if.ll",
48728                 "oic.if.b",
48729                 "oic.if.lb",
48730                 "oic.if.rw",
48731                 "oic.if.r",
48732                 "oic.if.a",
48733                 "oic.if.s"
48734             ],
48735             "type": "string"
48736         },

```

```

48737         "minItems": 1,
48738         "readOnly": true,
48739         "type": "array"
48740     }
48741 }
48742 },
48743     "type" : "object"
48744     , "required": ["value"]
48745 }
48746 }
48747 }
48748

```

48749 **B.104.5 Property Definition**

48750 **Table 445 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
if	array: see schema	No	Read Only	The interface set supported by this resource
id	string	No	Read Only	Instance ID of this specific resource
n	string	No	Read Only	Friendly name of the resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
range	array: see schema	No	Read Only	The valid range for the value Property
precision	number	No	Read Only	Accuracy granularity of the exposed value
value	boolean	Yes	Read Only	true = sensed, false = not sensed.

48751 **B.104.6 CRUDN behaviour**

48752 **Table 446 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/SmokeSensorResURI		get			observe

48753 **B.105 Speech Synthesis-TTS**

48754 **B.105.1 Introduction**

48755 This resource may be created on the OIC Server that is capable of rendering speech by an OIC
48756 Client
48757 and allows the client to provide an SSML document with text to render
48758 or may be created on the OIC Server by some resident application.

48759 The audio rendered is at this stage local to the Server (i.e. not streamed).
48760 The utterance is an SSML document.
48761 The supportedLanguages is an array of the RFC 5646 defined language tags that are supported.
48762 The supportedVoices is an SSML document fragment indicating the voices that are supported.
48763 Utterance in the example shall be a properly escaped (JSON rules) SSML document. An
48764 example is given below:

```
48765 "<?xml version="1.0" encoding="ISO-8859-1"?>  
48766  
48767 <spek version="1.1" xmlns="http://www.w3.org/2001/10/synthesis"  
48768  
48769     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
48770  
48771     xsi:schemaLocation="http://www.w3.org/2001/10/synthesis  
48772  
48773     http://www.w3.org/TR/speech-synthesis11/synthesis.xsd"  
48774  
48775     xml:lang="en-US">
```

```
48776  
48777  
48778  
48779  
48780  
48781  
48782  
48783  
48784  
48785  
48786     The title of the movie is:  
48787  
48788     "Monty Pythons The Meaning of Life"
```

```
48789  
48790  
48791     which is directed by Terry Jones.  
48792  
48793  
48794  
48795 </spek">
```

48797 **B.105.2 Example URI**

48798 /SpeechTTSResURI

48799 **B.105.3 Resource Type**

48800 The resource type (rt) is defined as: ['oic.r.speech.tts'].

48801 **B.105.4 Swagger2.0 Definition**

```
48802 {  
48803   "swagger": "2.0",  
48804   "info": {  
48805     "title": "Speech Synthesis-TTS",  
48806     "version": "v1.1.0-20160519",  
48807     "license": {  
48808       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
48809       "x-description": "Redistribution and use in source and binary forms, with or without  
48810 modification, are permitted provided that the following conditions are met:\n      1.  
48811 Redistributions of source code must retain the above copyright notice, this list of conditions and  
48812 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
48813 copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
48814 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
```

```

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48821 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
48822 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
48823 OF SUCH DAMAGE.\n"
48824 }
48825 },
48826 "schemes": ["http"],
48827 "consumes": ["application/json"],
48828 "produces": ["application/json"],
48829 "paths": {
48830   "/SpeechTTSResURI" : {
48831     "get": {
48832       "description": "This resource may be created on the OIC Server that is capable of rendering
48833 speech by an OIC Client\n and allows the client to provide an SSML document with text to render\n
48834 or may be created on the OIC Server by some resident application.\nThe audio rendered is at this
48835 stage local to the Server (i.e. not streamed).\nThe utterance is an SSML document.\nThe
48836 supportedLanguages is an array of the RFC 5646 defined language tags that are supported.\nThe
48837 supportedVoices is an SSML document fragment indicating the voices that are supported.\nUtterance
48838 in the example shall be a properly escaped (JSON rules) SSML document. An example is given below:\n
48839 \<?xml version=\"1.0\" encoding=\"ISO-8859-1\"?\>\n\r\n <spek version=\"1.1\"
48840 xmlns=\"http://www.w3.org/2001/10/synthesis\"\n\r\n
48841 \txmlns:xsi=\"http://www.w3.org/2001/XMLSchema-instance\"\n\r\n
48842 \txsi:schemaLocation=\"http://www.w3.org/2001/10/synthesis\"\n\r\n
48843 \thttp://www.w3.org/TR/speech-synthesis11/synthesis.xsd\"\n\r\n \txml:lang=\"en-US\">\n\r\n
48844 \n\r\n \tThe title of the movie is:\n\r\n \t\"Monty Pythons The Meaning of Life\"\n\r\n \twhich
48845 is directed by Terry Jones.\n\r\n </spek\"\n",
48846     "parameters": [
48847       { "$ref": "#/parameters/interface" }
48848     ],
48849     "responses": {
48850       "200": {
48851         "description": "",
48852         "x-example":
48853           {
48854             "rt": ["oic.r.speech.tts"],
48855             "id": "unique_example_id",
48856             "utterance": "SSML Document",
48857             "supportedLanguages": ["en-US", "en-GB", "fr-CA"],
48858             "supportedVoices": "<voice gender=\"female\" variant=\"2\"></voice>\n\r<voice
48859 name=\"Mike\"></voice>"
48860           }
48861       },
48862       "schema": { "$ref": "#/definitions/Speech" }
48863     }
48864   },
48865 },
48866 "post": {
48867   "description": "Changes the utterance being rendered.\nExample shows a change in language
48868 selected.\n",
48869   "parameters": [
48870     { "$ref": "#/parameters/interface" },
48871     {
48872       "name": "body",
48873       "in": "body",
48874       "required": true,
48875       "schema": { "$ref": "#/definitions/Speech" },
48876       "x-example":
48877         {
48878           "rt": ["oic.r.speech.tts"],
48879           "id": "unique_example_id",
48880           "utterance": "SSML Document"
48881         }
48882     }
48883   ],
48884   "responses": {
48885     "200": {

```



```

48886         "description" : "",
48887         "x-example":
48888             {
48889                 "rt":          ["oic.r.speech.tts"],
48890                 "id":          "unique_example_id",
48891                 "utterance":   "SSML Document"
48892             }
48893         ,
48894         "schema": { "$ref": "#/definitions/Speech" }
48895     }
48896 }
48897 }
48898 }
48899 },
48900 "parameters": {
48901     "interface" : {
48902         "in" : "query",
48903         "name" : "if",
48904         "type" : "string",
48905         "enum" : ["oic.if.a", "oic.if.baseline"]
48906     }
48907 },
48908 "definitions": {
48909     "Speech" : {
48910         "properties": {
48911             "rt" :
48912                 {
48913                     "description": "Resource Type",
48914                     "items": {
48915                         "maxLength": 64,
48916                         "type": "string"
48917                     },
48918                     "minItems": 1,
48919                     "readOnly": true,
48920                     "type": "array"
48921                 },
48922         "supportedLanguages" :
48923             {
48924                 "description": "array of supported language tags",
48925                 "items": {
48926                     "type": "string"
48927                 },
48928                 "readOnly": true,
48929                 "type": "array"
48930             },
48931         "precision" :
48932             {
48933                 "description": "Accuracy granularity of the exposed value",
48934                 "readOnly": true,
48935                 "type": "number"
48936             },
48937         "value" :
48938             {
48939                 "anyOf": [
48940                     {
48941                         "type": "array"
48942                     },
48943                     {
48944                         "type": "string"
48945                     },
48946                     {
48947                         "type": "boolean"
48948                     },
48949                     {
48950                         "type": "integer"
48951                     },
48952                     {
48953                         "type": "number"
48954                     }
48955                 ]
48956             }

```

```

48957     },
48958     {
48959         "type": "object"
48960     }
48961 ],
48962 "description": "The value sensed or actuated by this Resource"
48963 },
48964
48965 "n" :
48966     {
48967         "description": "Friendly name of the resource",
48968         "maxLength": 64,
48969         "readOnly": true,
48970         "type": "string"
48971     },
48972
48973 "range" :
48974     {
48975         "description": "The valid range for the value Property",
48976         "items": {
48977             "anyOf": [
48978                 {
48979                     "type": "number"
48980                 },
48981                 {
48982                     "type": "integer"
48983                 }
48984             ]
48985         },
48986         "maxItems": 2,
48987         "minItems": 2,
48988         "readOnly": true,
48989         "type": "array"
48990     },
48991
48992 "supportedVoices" :
48993     {
48994         "description": "SSML document fragment indicating supported voices",
48995         "readOnly": true,
48996         "type": "string"
48997     },
48998
48999 "step" :
49000     {
49001         "anyOf": [
49002             {
49003                 "type": "integer"
49004             },
49005             {
49006                 "type": "number"
49007             }
49008         ],
49009         "description": "Step value across the defined range",
49010         "readOnly": true
49011     },
49012
49013 "utterance" :
49014     {
49015         "description": "SSML document including the speech body",
49016         "type": "string"
49017     },
49018
49019 "id" :
49020     {
49021         "description": "Instance ID of this specific resource",
49022         "maxLength": 64,
49023         "readOnly": true,
49024         "type": "string"
49025     },
49026
49027 "if" :

```

```

49028     {
49029     "description": "The interface set supported by this resource",
49030     "items": {
49031         "enum": [
49032             "oic.if.baseline",
49033             "oic.if.ll",
49034             "oic.if.b",
49035             "oic.if.lb",
49036             "oic.if.rw",
49037             "oic.if.r",
49038             "oic.if.a",
49039             "oic.if.s"
49040         ],
49041         "type": "string"
49042     },
49043     "minItems": 1,
49044     "readOnly": true,
49045     "type": "array"
49046 }
49047
49048 }
49049 , "type" : "object"
49050 , "required": ["utterance"]
49051 }
49052 }
49053 }
49054

```

49055 B.105.5 Property Definition

49056 **Table 447 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
supportedVoices	string	No	Read Only	SSML document fragment indicating supported voices
n	string	No	Read Only	Friendly name of the resource
rt	array: see schema	No	Read Only	Resource Type
range	array: see schema	No	Read Only	The valid range for the value Property
step	multiple types: see schema	No	Read Only	Step value across the defined range
supportedLanguages	array: see schema	No	Read Only	array of supported language tags
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
precision	number	No	Read Only	

				Accuracy granularity of the exposed value
utterance	string	Yes	Read Write	SSML document including the speech body
id	string	No	Read Only	Instance ID of this specific resource
if	array: see schema	No	Read Only	The interface set supported by this resource

49057 **B.105.6 CRUDN behaviour**

49058 **Table 448 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/SpeechTTSResURI		get	post		observe

49059 **B.106 Temperature**

49060 **B.106.1 Introduction**

49061 This resource describes a sensed or actuated Temperature value.
49062 The temperature describes the current value measured.
49063 The units is a single value that is one of C, F or K.
49064 It provides the unit of measurement for the temperature value.
49065 It is a read-only value that is provided by the server.
49066 If the units Property is missing the default is Celsius [C].
49067 When range (from oic.r.baseresource) is omitted the default is +/- MAXINT.
49068 Retrieves the current temperature value.
49069 A client can specify the units for the requested temperature by use of a query parameter.
49070 If no query parameter is provided the server provides its default measure or set value.
49071 It is recommended to return always the units Property in the result.
49072

49073 **B.106.2 Example URI**

49074 /TemperatureResURI

49075 **B.106.3 Resource Type**

49076 The resource type (rt) is defined as: ['oic.r.temperature'].

49077 **B.106.4 Swagger2.0 Definition**

```

49078 {
49079   "swagger": "2.0",
49080   "info": {
49081     "title": "Temperature",
49082     "version": "v1.1.0-20160519",
49083     "license": {
49084       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
49085       "x-description": "Redistribution and use in source and binary forms, with or without
49086 modification, are permitted provided that the following conditions are met:\n      1.
49087 Redistributions of source code must retain the above copyright notice, this list of conditions and
49088 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
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49098 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
49099 OF SUCH DAMAGE.\n"

```

49100   }
49101 },
49102 "schemes": ["http"],
49103 "consumes": ["application/json"],
49104 "produces": ["application/json"],
49105 "paths": {
49106   "/TemperatureResURI" : {
49107     "get": {
49108       "description": "This resource describes a sensed or actuated Temperature value.\nThe
49109 temperature describes the current value measured.\nThe units is a single value that is one of C, F
49110 or K.\nIt provides the unit of measurement for the temperature value.\nIt is a read-only value that
49111 is provided by the server.\nIf the units Property is missing the default is Celsius [C].\nWhen
49112 range (from oic.r.baseresource) is omitted the default is +/- MAXINT.\nRetrieves the current
49113 temperature value.\nA client can specify the units for the requested temperature by use of a query
49114 parameter.\nIf no query parameter is provided the server provides its default measure or set
49115 value.\nIt is recommended to return always the units Property in the result.\n",
49116     "parameters": [
49117       { "$ref": "#/parameters/interface" },
49118     ],
49119     "in": "query",
49120     "description": "Units",
49121     "type": "string",
49122     "enum": ["C", "F", "K"],
49123     "name": "units"
49124   }
49125 ],
49126 "responses": {
49127   "200": {
49128     "description": "",
49129     "x-example":
49130     {
49131       "rt": ["oic.r.temperature"],
49132       "id": "unique_example_id",
49133       "temperature": 20.0,
49134       "units": "C",
49135       "range": [0.0,100.0]
49136     },
49137     "schema": { "$ref": "#/definitions/Temperature" }
49138   },
49139   "403": {
49140     "description": "This response is generated by the OIC Server when the client
49141 sends:\n A retrieve with q queryParameter indicating a unit that the server does not support.\nThe
49142 server responds with the current resource representation including the\nunits property illustrating
49143 the supported units and the error.\n",
49144     "x-example":
49145     {
49146       "id": "unique_example_id",
49147       "temperature": 20.0,
49148       "units": "C"
49149     },
49150     "schema": { "$ref": "#/definitions/Temperature" }
49151   }
49152 },
49153 },
49154 },
49155 "post": {
49156   "description": "Sets the desired temperature value.\nIf a unit is included and the server
49157 does not support the unit indicated the request will fail.\nIf the units are omitted value is taken
49158 to be in C.\n",
49159   "parameters": [
49160     { "$ref": "#/parameters/interface" },
49161   ]
49162 }

```

```

49163         "name": "body",
49164         "in": "body",
49165         "required": true,
49166         "schema": { "$ref": "#/definitions/Temperature" },
49167         "x-example":
49168         {
49169             "id": "unique_example_id",
49170             "temperature": 18.0
49171         }
49172     },
49173 ],
49174 "responses": {
49175     "200": {
49176         "description": "",
49177         "x-example":
49178         {
49179             "id": "unique_example_id",
49180             "temperature": 18.0
49181         }
49182     },
49183     "schema": { "$ref": "#/definitions/Temperature" }
49184 },
49185     "403": {
49186         "description": "This response is generated by the OIC Server when the client
49187 sends:\n An update with an out of range property value for temperature.\n An update with an
49188 unsupported unit for this server.\nThe server responds with the current resource representation
49189 including\nthe range property illustrating the supported range and the error.\n",
49190         "x-example":
49191         {
49192             "id": "unique_example_id",
49193             "temperature": 20.0,
49194             "units": "C",
49195             "range": [0.0,100.0]
49196         }
49197     },
49198     "schema": { "$ref": "#/definitions/Temperature" }
49199 }
49200 }
49201 }
49202 }
49203 },
49204 "parameters": {
49205     "interface": {
49206         "in": "query",
49207         "name": "if",
49208         "type": "string",
49209         "enum": ["oic.if.a", "oic.if.s", "oic.if.baseline"]
49210     }
49211 },
49212 "definitions": {
49213     "Temperature": {
49214         "properties": {
49215             "rt": {
49216                 {
49217                     "description": "Resource Type",
49218                     "items": {
49219                         "maxLength": 64,
49220                         "type": "string"
49221                     },
49222                     "minItems": 1,
49223                     "readOnly": true,
49224                     "type": "array"
49225                 },
49226             },
49227             "temperature": {
49228                 {
49229                     "description": "Current temperature setting or measurement",
49230                     "type": "number"
49231                 },
49232             },
49233             "precision":

```

```

49234         {
49235         "description": "Accuracy granularity of the exposed value",
49236         "readOnly": true,
49237         "type": "number"
49238     },
49239
49240     "value" :
49241     {
49242         "anyOf": [
49243         {
49244             "type": "array"
49245         },
49246         {
49247             "type": "string"
49248         },
49249         {
49250             "type": "boolean"
49251         },
49252         {
49253             "type": "integer"
49254         },
49255         {
49256             "type": "number"
49257         },
49258         {
49259             "type": "object"
49260         }
49261     ],
49262     "description": "The value sensed or actuated by this Resource"
49263 },
49264
49265     "n" :
49266     {
49267         "description": "Friendly name of the resource",
49268         "maxLength": 64,
49269         "readOnly": true,
49270         "type": "string"
49271     },
49272
49273     "units" :
49274     {
49275         "description": "Units for the temperature value",
49276         "enum": [
49277             "C",
49278             "F",
49279             "K"
49280         ],
49281         "readOnly": true,
49282         "type": "string"
49283     },
49284
49285     "range" :
49286     {
49287         "description": "The valid range for the value Property",
49288         "items": {
49289             "anyOf": [
49290             {
49291                 "type": "number"
49292             },
49293             {
49294                 "type": "integer"
49295             }
49296         ]
49297     },
49298     "maxItems": 2,
49299     "minItems": 2,
49300     "readOnly": true,
49301     "type": "array"
49302 },
49303
49304     "step" :

```

```

49305     {
49306     "anyOf": [
49307     {
49308     "type": "integer"
49309     },
49310     {
49311     "type": "number"
49312     }
49313     ],
49314     "description": "Step value across the defined range",
49315     "readOnly": true
49316   },
49317
49318   "id" :
49319   {
49320     "description": "Instance ID of this specific resource",
49321     "maxLength": 64,
49322     "readOnly": true,
49323     "type": "string"
49324   },
49325
49326   "if" :
49327   {
49328     "description": "The interface set supported by this resource",
49329     "items": {
49330       "enum": [
49331         "oic.if.baseline",
49332         "oic.if.ll",
49333         "oic.if.b",
49334         "oic.if.lb",
49335         "oic.if.rw",
49336         "oic.if.r",
49337         "oic.if.a",
49338         "oic.if.s"
49339       ],
49340       "type": "string"
49341     },
49342     "minItems": 1,
49343     "readOnly": true,
49344     "type": "array"
49345   }
49346 }
49347
49348 , "type" : "object"
49349 , "required": ["temperature"]
49350 }
49351 }
49352 }
49353

```

49354 **B.106.5 Property Definition**

49355 **Table 449 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
range	array: see schema	No	Read Only	The valid range for the value Property
n	string	No	Read Only	Friendly name of the resource
id	string	No	Read Only	Instance ID of this specific resource
rt	array: see schema	No	Read Only	Resource Type

units	string	No	Read Only	Units for the temperature value
step	multiple types: see schema	No	Read Only	Step value across the defined range
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
if	array: see schema	No	Read Only	The interface set supported by this resource
temperature	number	Yes	Read Write	Current temperature setting or measurement
precision	number	No	Read Only	Accuracy granularity of the exposed value

49356 **B.106.6 CRUDN behaviour**

49357 **Table 450 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/TemperatureResURI		get	post		observe

49358 **B.107 Three Axis Sensor**

49359 **B.107.1 Introduction**

49360 This resource provides a representation of the measurement from a three-axis sensor.
 49361 The orientation is an array of numbers representing x-plane, y-plane and z-plane values.
 49362 The unit of measurement for each pane is 'g'.
 49363

49364 **B.107.2 Example URI**

49365 /ThreeAxisResURI

49366 **B.107.3 Resource Type**

49367 The resource type (rt) is defined as: ['oic.r.sensor.threeaxis'].

49368 **B.107.4 Swagger2.0 Definition**

```

49369 {
49370   "swagger": "2.0",
49371   "info": {
49372     "title": "Three Axis Sensor",
49373     "version": "v1.1.0-20160519",
49374     "license": {
49375       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
49376       "x-description": "Redistribution and use in source and binary forms, with or without
49377 modification, are permitted provided that the following conditions are met:\n      1.
49378 Redistributions of source code must retain the above copyright notice, this list of conditions and
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```

```

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49388 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
49389 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
49390 OF SUCH DAMAGE.\n"
49391 }
49392 },
49393 "schemes": ["http"],
49394 "consumes": ["application/json"],
49395 "produces": ["application/json"],
49396 "paths": {
49397   "/ThreeAxisResURI" : {
49398     "get": {
49399       "description": "This resource provides a representation of the measurement from a three-
49400 axis sensor.\nThe orientation is an array of numbers representing x-plane, y-plane and z-plane
49401 values.\nThe unit of measurement for each pane is 'g'.\n",
49402       "parameters": [
49403         {"$ref": "#/parameters/interface"}
49404       ],
49405       "responses": {
49406         "200": {
49407           "description": "",
49408           "x-example":
49409             {
49410               "rt": ["oic.r.sensor.threeaxis"],
49411               "id": "unique_example_id",
49412               "orientation": [0.7, 1.1, -0.2]
49413             }
49414           ,
49415           "schema": { "$ref": "#/definitions/threeAxis" }
49416         }
49417       }
49418     }
49419   }
49420 },
49421 "parameters": {
49422   "interface" : {
49423     "in" : "query",
49424     "name" : "if",
49425     "type" : "string",
49426     "enum" : ["oic.if.s", "oic.if.baseline"]
49427   }
49428 },
49429 "definitions": {
49430   "threeAxis" : {
49431     "properties": {
49432       "rt" :
49433         {
49434           "description": "Resource Type",
49435           "items": {
49436             "maxLength": 64,
49437             "type": "string"
49438           },
49439           "minItems": 1,
49440           "readOnly": true,
49441           "type": "array"
49442         },
49443       "orientation" :
49444         {
49445           "description": "Array containing x-plane, y-plane and z-plane orientation in 'g'.",
49446           "items": {
49447             "type": "number"
49448           },
49449           "maxItems": 3,

```

```

49451         "minItems": 3,
49452         "readOnly": true,
49453         "type": "array"
49454     },
49455     "precision" :
49456     {
49457         "description": "Accuracy granularity of the exposed value",
49458         "readOnly": true,
49459         "type": "number"
49460     },
49461     "value" :
49462     {
49463         "anyOf": [
49464             {
49465                 "type": "array"
49466             },
49467             {
49468                 "type": "string"
49469             },
49470             {
49471                 "type": "boolean"
49472             },
49473             {
49474                 "type": "integer"
49475             },
49476             {
49477                 "type": "number"
49478             },
49479             {
49480                 "type": "object"
49481             }
49482         ],
49483         "description": "The value sensed or actuated by this Resource"
49484     },
49485     "n" :
49486     {
49487         "description": "Friendly name of the resource",
49488         "maxLength": 64,
49489         "readOnly": true,
49490         "type": "string"
49491     },
49492     "range" :
49493     {
49494         "description": "The valid range for the value Property",
49495         "items": {
49496             "anyOf": [
49497                 {
49498                     "type": "number"
49499                 },
49500                 {
49501                     "type": "integer"
49502                 }
49503             ]
49504         },
49505         "maxItems": 2,
49506         "minItems": 2,
49507         "readOnly": true,
49508         "type": "array"
49509     },
49510     "step" :
49511     {
49512         "anyOf": [
49513             {
49514                 "type": "integer"
49515             }
49516         ]
49517     }

```

```

49522         "type": "number"
49523     }
49524 ],
49525     "description": "Step value across the defined range",
49526     "readOnly": true
49527 },
49528
49529     "id" :
49530     {
49531         "description": "Instance ID of this specific resource",
49532         "maxLength": 64,
49533         "readOnly": true,
49534         "type": "string"
49535     },
49536
49537     "if" :
49538     {
49539         "description": "The interface set supported by this resource",
49540         "items": {
49541             "enum": [
49542                 "oic.if.baseline",
49543                 "oic.if.ll",
49544                 "oic.if.b",
49545                 "oic.if.lb",
49546                 "oic.if.rw",
49547                 "oic.if.r",
49548                 "oic.if.a",
49549                 "oic.if.s"
49550             ],
49551             "type": "string"
49552         },
49553         "minItems": 1,
49554         "readOnly": true,
49555         "type": "array"
49556     }
49557
49558     }
49559     , "type" : "object"
49560     , "required": ["orientation"]
49561 }
49562 }
49563 }
49564

```

B.107.5 Property Definition

Table 451 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
n	string	No	Read Only	Friendly name of the resource
range	array: see schema	No	Read Only	The valid range for the value Property
rt	array: see schema	No	Read Only	Resource Type
step	multiple types: see schema	No	Read Only	Step value across the defined range
orientation	array: see schema	Yes	Read Only	Array containing x-plane, y-plane and z-plane orientation in 'g'.

id	string	No	Read Only	Instance ID of this specific resource
if	array: see schema	No	Read Only	The interface set supported by this resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
precision	number	No	Read Only	Accuracy granularity of the exposed value

49567 **B.107.6 CRUDN behaviour**

49568 **Table 452 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/ThreeAxisResURI		get			observe

49569 **B.108 Time Period**

49570 **B.108.1 Introduction**

49571 This resource describes the time period over which any additionally provided
49572 information is derived or bounded.

49573 The startTime and stopTime are ISO8601 encoded strings. startTime must be present.

49574 The interval is the interval of the time period in minutes, if present this value must be no less
49575 than 1 minute.

49576 stopTime and interval are mutually exclusive; both Properties cannot be present in a Resource
49577 instance.

49578 Defines a time period for information retrieval, action or other behaviour.

49579

49580 **B.108.2 Example URI**

49581 /TimePeriodResURI

49582 **B.108.3 Resource Type**

49583 The resource type (rt) is defined as: ['oic.r.time.period'].

49584 **B.108.4 Swagger2.0 Definition**

```
49585 {
49586   "swagger": "2.0",
49587   "info": {
49588     "title": "Time Period",
49589     "version": "v1.1.0-20160519",
49590     "license": {
49591       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
49592       "x-description": "Redistribution and use in source and binary forms, with or without
49593 modification, are permitted provided that the following conditions are met:\n      1.
49594 Redistributions of source code must retain the above copyright notice, this list of conditions and
49595 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
49596 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
49597 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
49598 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
49599 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
49600 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
```

```

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49602 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
49603 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n          HOWEVER CAUSED AND
49604 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
49605 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
49606 OF SUCH DAMAGE.\n"
49607 }
49608 },
49609 "schemes": ["http"],
49610 "consumes": ["application/json"],
49611 "produces": ["application/json"],
49612 "paths": {
49613   "/TimePeriodResURI" : {
49614     "get": {
49615       "description": "This resource describes the time period over which any additionally
49616 provided\ninformation is derived or bounded.\nThe startTime and stopTime are ISO8601 encoded
49617 strings. startTime must be present.\nThe interval is the interval of the time period in minutes,
49618 if present this value must be no less than 1 minute.\nstopTime and interval are mutually exclusive;
49619 both Properties cannot be present in a Resource instance.\nDefines a time period for information
49620 retrieval, action or other behaviour.\n",
49621       "parameters": [
49622         { "$ref": "#/parameters/interface" }
49623       ],
49624       "responses": {
49625         "200": {
49626           "description" : "",
49627           "x-example":
49628             {
49629               "rt":      ["oic.r.time.period"],
49630               "id":      "unique_example_id",
49631               "startTime": "2015-01-09T14:30Z",
49632               "stopTime": "2015-01-09T14:45Z"
49633             }
49634           ,
49635           "schema": { "$ref": "#/definitions/TimePeriod" }
49636         }
49637       }
49638     },
49639     "post": {
49640       "description": "Sets or updates a time period for information retrieval, action or other
49641 behavior.\n",
49642       "parameters": [
49643         { "$ref": "#/parameters/interface" },
49644         {
49645           "name": "body",
49646           "in": "body",
49647           "required": true,
49648           "schema": { "$ref": "#/definitions/TimePeriod" },
49649           "x-example":
49650             {
49651               "id":      "unique_example_id",
49652               "startTime": "2015-01-09T14:30Z",
49653               "stopTime": "2015-01-09T14:45Z"
49654             }
49655           }
49656       ],
49657       "responses": {
49658         "200": {
49659           "description" : "",
49660           "x-example":
49661             {
49662               "id":      "unique_example_id",
49663               "startTime": "2015-01-09T14:30Z",
49664               "stopTime": "2015-01-09T14:45Z"
49665             }
49666           ,
49667           "schema": { "$ref": "#/definitions/TimePeriod" }
49668         }
49669       }
49670     }
49671   }

```

```

49672 },
49673 "parameters": {
49674   "interface" : {
49675     "in" : "query",
49676     "name" : "if",
49677     "type" : "string",
49678     "enum" : ["oic.if.a", "oic.if.baseline"]
49679   }
49680 },
49681 "definitions": {
49682   "TimePeriod" : {
49683     "properties": {
49684       "rt" :
49685         {
49686           "description": "Resource Type",
49687           "items": {
49688             "maxLength": 64,
49689             "type": "string"
49690           },
49691           "minItems": 1,
49692           "readOnly": true,
49693           "type": "array"
49694         },
49695       "interval" :
49696         {
49697           "description": "Time interval in minutes after the startTime, if present stopTime cannot
49698 be present",
49699           "type": "integer"
49700         },
49701       },
49702       "precision" :
49703         {
49704           "description": "Accuracy granularity of the exposed value",
49705           "readOnly": true,
49706           "type": "number"
49707         },
49708       },
49709       "value" :
49710         {
49711           "anyOf": [
49712             {
49713               "type": "array"
49714             },
49715             {
49716               "type": "string"
49717             },
49718             {
49719               "type": "boolean"
49720             },
49721             {
49722               "type": "integer"
49723             },
49724             {
49725               "type": "number"
49726             },
49727             {
49728               "type": "object"
49729             }
49730           ],
49731           "description": "The value sensed or actuated by this Resource"
49732         },
49733       },
49734       "n" :
49735         {
49736           "description": "Friendly name of the resource",
49737           "maxLength": 64,
49738           "readOnly": true,
49739           "type": "string"
49740         },
49741       },
49742     }

```

```

49743     "range" :
49744         {
49745             "description": "The valid range for the value Property",
49746             "items": {
49747                 "anyOf": [
49748                     {
49749                         "type": "number"
49750                     },
49751                     {
49752                         "type": "integer"
49753                     }
49754                 ]
49755             },
49756             "maxItems": 2,
49757             "minItems": 2,
49758             "readOnly": true,
49759             "type": "array"
49760         },
49761     "stopTime" :
49762         {
49763             "description": "Stop time for the time period, if present interval cannot be present",
49764             "type": "string"
49765         },
49766     "startTime" :
49767         {
49768             "description": "Start time for the time period",
49769             "type": "string"
49770         },
49771     "step" :
49772         {
49773             "anyOf": [
49774                 {
49775                     "type": "integer"
49776                 },
49777                 {
49778                     "type": "number"
49779                 }
49780             ],
49781             "description": "Step value across the defined range",
49782             "readOnly": true
49783         },
49784     "id" :
49785         {
49786             "description": "Instance ID of this specific resource",
49787             "maxLength": 64,
49788             "readOnly": true,
49789             "type": "string"
49790         },
49791     "if" :
49792         {
49793             "description": "The interface set supported by this resource",
49794             "items": {
49795                 "enum": [
49796                     "oic.if.baseline",
49797                     "oic.if.ll",
49798                     "oic.if.b",
49799                     "oic.if.lb",
49800                     "oic.if.rw",
49801                     "oic.if.r",
49802                     "oic.if.a",
49803                     "oic.if.s"
49804                 ],
49805                 "type": "string"
49806             },
49807             "minItems": 1,
49808             "readOnly": true,

```



```

49814         "type": "array"
49815     }
49816
49817     }
49818     , "type" : "object"
49819 }
49820 }
49821 }
49822

```

49823 **B.108.5 Property Definition**

49824 **Table 453 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
precision	number		Read Only	Accuracy granularity of the exposed value
value	multiple types: see schema		Read Write	The value sensed or actuated by this Resource
step	multiple types: see schema		Read Only	Step value across the defined range
stopTime	string		Read Write	Stop time for the time period, if present interval cannot be present
startTime	string		Read Write	Start time for the time period
rt	array: see schema		Read Only	Resource Type
id	string		Read Only	Instance ID of this specific resource
n	string		Read Only	Friendly name of the resource
range	array: see schema		Read Only	The valid range for the value Property
interval	integer		Read Write	Time interval in minutes after the startTime, if present stopTime cannot be present
if	array: see schema		Read Only	

				The interface set supported by this resource
--	--	--	--	--

49825 **B.108.6 CRUDN behaviour**

49826 **Table 454 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/TimePeriodResURI		get	post		observe

49827 **B.109 Time Stamp**

49828 **B.109.1 Introduction**

49829 This resource describes the properties associated with a timestamp.
 49830 TimeStamp is a string that captures the timestamp using the RFC3339 datetime format (e.g:
 49831 2007-04-05T14:30Z) (Time+Date+Timezone)
 49832 Retrieves the current timestamp data.
 49833

49834 **B.109.2 Example URI**

49835 /TimeStampResURI

49836 **B.109.3 Resource Type**

49837 The resource type (rt) is defined as: ['oic.r.time.stamp'].

49838 **B.109.4 Swagger2.0 Definition**

```

49839 {
49840   "swagger": "2.0",
49841   "info": {
49842     "title": "Time Stamp",
49843     "version": "v1.1.0-20170830",
49844     "license": {
49845       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
49846       "x-description": "Redistribution and use in source and binary forms, with or without
49847 modification, are permitted provided that the following conditions are met:\n      1.
49848 Redistributions of source code must retain the above copyright notice, this list of conditions and
49849 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
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49851 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
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49858 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
49859 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
49860 OF SUCH DAMAGE.\n"
49861     }
49862   },
49863   "schemes": ["http"],
49864   "consumes": ["application/json"],
49865   "produces": ["application/json"],
49866   "paths": {
49867     "/TimeStampResURI": {
49868       "get": {
49869         "description": "This resource describes the properties associated with a
49870 timestamp.\nTimeStamp is a string that captures the timestamp using the RFC3339 datetime format
49871 (e.g: 2007-04-05T14:30Z) (Time+Date+Timezone)\nRetrieves the current timestamp data.\n",
49872         "parameters": [
49873           {"$ref": "#/parameters/interface"}
49874         ],
49875         "responses": {
49876           "200": {
49877             "description": ""

```

```

49878         "x-example":
49879             {
49880                 "rt":          ["oic.r.time.stamp"],
49881                 "id":          "unique_example_id",
49882                 "timestamp":    "2015-11-05T14:30Z"
49883             }
49884         ,
49885         "schema": { "$ref": "#/definitions/TimeStamp" }
49886     }
49887 }
49888 }
49889 }
49890 },
49891 "parameters": {
49892     "interface" : {
49893         "in" : "query",
49894         "name" : "if",
49895         "type" : "string",
49896         "enum" : ["oic.if.s", "oic.if.r", "oic.if.baseline"]
49897     }
49898 },
49899 "definitions": {
49900     "TimeStamp" : {
49901         "properties": {
49902             "rt" :
49903                 {
49904                     "description": "Resource Type",
49905                     "items": {
49906                         "maxLength": 64,
49907                         "type": "string"
49908                     },
49909                     "minItems": 1,
49910                     "readOnly": true,
49911                     "type": "array"
49912                 },
49913             "timestamp" :
49914                 {
49915                     "description": "An RFC3339 formatted time indicating when the data was observed (e.g.:
49916 2016-02-15T09:19Z, 1996-12-19T16:39:57-08:00)",
49917                     "format": "date-time",
49918                     "readOnly": true,
49919                     "type": "string"
49920                 },
49921             "precision" :
49922                 {
49923                     "description": "Accuracy granularity of the exposed value",
49924                     "readOnly": true,
49925                     "type": "number"
49926                 },
49927             "value" :
49928                 {
49929                     "anyOf": [
49930                         {
49931                             "type": "array"
49932                         },
49933                         {
49934                             "type": "string"
49935                         },
49936                         {
49937                             "type": "boolean"
49938                         },
49939                         {
49940                             "type": "integer"
49941                         },
49942                         {
49943                             "type": "number"
49944                         }
49945                     ],
49946                 }
49947             }
49948         }

```

```

49949         "type": "object"
49950     }
49951 ],
49952 "description": "The value sensed or actuated by this Resource"
49953 },
49954
49955 "n" :
49956     {
49957         "description": "Friendly name of the resource",
49958         "maxLength": 64,
49959         "readOnly": true,
49960         "type": "string"
49961     },
49962
49963 "range" :
49964     {
49965         "description": "The valid range for the value Property",
49966         "items": {
49967             "anyOf": [
49968                 {
49969                     "type": "number"
49970                 },
49971                 {
49972                     "type": "integer"
49973                 }
49974             ]
49975         },
49976         "maxItems": 2,
49977         "minItems": 2,
49978         "readOnly": true,
49979         "type": "array"
49980     },
49981
49982 "step" :
49983     {
49984         "anyOf": [
49985             {
49986                 "type": "integer"
49987             },
49988             {
49989                 "type": "number"
49990             }
49991         ],
49992         "description": "Step value across the defined range",
49993         "readOnly": true
49994     },
49995
49996 "id" :
49997     {
49998         "description": "Instance ID of this specific resource",
49999         "maxLength": 64,
50000         "readOnly": true,
50001         "type": "string"
50002     },
50003
50004 "if" :
50005     {
50006         "description": "The interface set supported by this resource",
50007         "items": {
50008             "enum": [
50009                 "oic.if.baseline",
50010                 "oic.if.ll",
50011                 "oic.if.b",
50012                 "oic.if.lb",
50013                 "oic.if.rw",
50014                 "oic.if.r",
50015                 "oic.if.a",
50016                 "oic.if.s"
50017             ],
50018             "type": "string"
50019         },

```

```

50020         "minItems": 1,
50021         "readOnly": true,
50022         "type": "array"
50023     }
50024 }
50025     }, "type" : "object"
50026     , "required": ["timestamp"]
50027 }
50028 }
50029 }
50030 }
50031 }

```

50032 **B.109.5 Property Definition**

50033 **Table 455 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
id	string	No	Read Only	Instance ID of this specific resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
timestamp	string	Yes	Read Only	An RFC3339 formatted time indicating when the data was observed (e.g.: 2016-02-15T09:19Z, 1996-12-19T16:39:57-08:00)
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
n	string	No	Read Only	Friendly name of the resource
range	array: see schema	No	Read Only	The valid range for the value Property
if	array: see schema	No	Read Only	The interface set supported by this resource
rt	array: see schema	No	Read Only	Resource Type
precision	number	No	Read Only	Accuracy granularity of the exposed value

50034 **B.109.6 CRUDN behaviour**

50035 **Table 456 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/TimeStampResURI		get			observe

50036 **B.110 Touch Sensor**

50037 **B.110.1 Introduction**

50038 This resource describes whether touch has been sensed or not.

50039 The value is a boolean.

50040 A value of 'true' means that touch has been sensed.

50041 A value of 'false' means that touch not been sensed.

50042

50043 **B.110.2 Example URI**

50044 /TouchResURI

50045 **B.110.3 Resource Type**

50046 The resource type (rt) is defined as: ['oic.r.sensor.touch'].

50047 **B.110.4 Swagger2.0 Definition**

```

50048 {
50049   "swagger": "2.0",
50050   "info": {
50051     "title": "Touch Sensor",
50052     "version": "v1.1.0-20160519",
50053     "license": {
50054       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
50055       "x-description": "Redistribution and use in source and binary forms, with or without
50056 modification, are permitted provided that the following conditions are met:\n      1.
50057 Redistributions of source code must retain the above copyright notice, this list of conditions and
50058 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
50059 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
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50067 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
50068 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
50069 OF SUCH DAMAGE.\n"
50070     }
50071   },
50072   "schemes": ["http"],
50073   "consumes": ["application/json"],
50074   "produces": ["application/json"],
50075   "paths": {
50076     "/TouchResURI" : {
50077       "get": {
50078         "description": "This resource describes whether touch has been sensed or not.\nThe value is
50079 a boolean.\nA value of 'true' means that touch has been sensed.\nA value of 'false' means that
50080 touch not been sensed.\n",
50081         "parameters": [
50082           {"$ref": "#/parameters/interface"}
50083         ],
50084         "responses": {
50085           "200": {
50086             "description": "",
50087             "x-example":
50088               {
50089                 "rt": ["oic.r.sensor.touch"],
50090                 "id": "unique_example_id",
50091                 "value": true

```

```

50092         }
50093     },
50094     "schema": { "$ref": "#/definitions/Touch" }
50095 }
50096 }
50097 }
50098 }
50099 },
50100 "parameters": {
50101     "interface": {
50102         "in": "query",
50103         "name": "if",
50104         "type": "string",
50105         "enum": ["oic.if.s", "oic.if.baseline"]
50106     }
50107 },
50108 "definitions": {
50109     "Touch": {
50110         "properties": {
50111             "rt": {
50112                 {
50113                     "description": "Resource Type",
50114                     "items": {
50115                         "maxLength": 64,
50116                         "type": "string"
50117                     },
50118                     "minItems": 1,
50119                     "readOnly": true,
50120                     "type": "array"
50121                 },
50122                 "precision": {
50123                     {
50124                         "description": "Accuracy granularity of the exposed value",
50125                         "readOnly": true,
50126                         "type": "number"
50127                     },
50128                 },
50129                 "value": {
50130                     {
50131                         "description": "true = sensed, false = not sensed.",
50132                         "readOnly": true,
50133                         "type": "boolean"
50134                     },
50135                 },
50136                 "n": {
50137                     {
50138                         "description": "Friendly name of the resource",
50139                         "maxLength": 64,
50140                         "readOnly": true,
50141                         "type": "string"
50142                     },
50143                 },
50144                 "range": {
50145                     {
50146                         "description": "The valid range for the value Property",
50147                         "items": {
50148                             "anyOf": [
50149                                 {
50150                                     "type": "number"
50151                                 },
50152                                 {
50153                                     "type": "integer"
50154                                 }
50155                             ]
50156                         },
50157                     },
50158                     "maxItems": 2,
50159                     "minItems": 2,
50160                     "readOnly": true,
50161                     "type": "array"
50162                 },

```

```

50163
50164     "step" :
50165     {
50166         "anyOf": [
50167             {
50168                 "type": "integer"
50169             },
50170             {
50171                 "type": "number"
50172             }
50173         ],
50174         "description": "Step value across the defined range",
50175         "readOnly": true
50176     },
50177
50178     "id" :
50179     {
50180         "description": "Instance ID of this specific resource",
50181         "maxLength": 64,
50182         "readOnly": true,
50183         "type": "string"
50184     },
50185
50186     "if" :
50187     {
50188         "description": "The interface set supported by this resource",
50189         "items": {
50190             "enum": [
50191                 "oic.if.baseline",
50192                 "oic.if.ll",
50193                 "oic.if.b",
50194                 "oic.if.lb",
50195                 "oic.if.rw",
50196                 "oic.if.r",
50197                 "oic.if.a",
50198                 "oic.if.s"
50199             ],
50200             "type": "string"
50201         },
50202         "minItems": 1,
50203         "readOnly": true,
50204         "type": "array"
50205     }
50206
50207     },
50208     "type" : "object"
50209     , "required": ["value"]
50210 }
50211 }
50212 }
50213

```

50214 **B.110.5 Property Definition**

50215 **Table 457 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
n	string	No	Read Only	Friendly name of the resource
value	boolean	Yes	Read Only	true = sensed, false = not sensed.
id	string	No	Read Only	Instance ID of this specific resource

step	multiple types: see schema	No	Read Only	Step value across the defined range
precision	number	No	Read Only	Accuracy granularity of the exposed value
rt	array: see schema	No	Read Only	Resource Type
range	array: see schema	No	Read Only	The valid range for the value Property
if	array: see schema	No	Read Only	The interface set supported by this resource

50216 **B.110.6 CRUDN behaviour**

50217 **Table 458 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/TouchResURI		get			observe

50218 **B.111 User ID**

50219 **B.111.1 Introduction**

50220 This resource describes the properties associated with user ID of an OCF client.
50221 The userid Property is a single value whose type is one of string, number or integer.
50222 The userid Property is a read-only value that is provided by the server.
50223 Retrieves User ID of an object.
50224

50225 **B.111.2 Example URI**

50226 /UserIDResURI

50227 **B.111.3 Resource Type**

50228 The resource type (rt) is defined as: ['oic.r.userid'].

50229 **B.111.4 Swagger2.0 Definition**

```
50230 {
50231   "swagger": "2.0",
50232   "info": {
50233     "title": "User ID",
50234     "version": "v1.1.0-20160519",
50235     "license": {
50236       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
50237       "x-description": "Redistribution and use in source and binary forms, with or without
50238 modification, are permitted provided that the following conditions are met:\n      1.
50239 Redistributions of source code must retain the above copyright notice, this list of conditions and
50240 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
50241 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
50242 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
50243 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
50244 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
50245 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
50246 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
50247 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
50248 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
50249 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
```

```

50250 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
50251 OF SUCH DAMAGE.\n"
50252 }
50253 },
50254 "schemes": ["http"],
50255 "consumes": ["application/json"],
50256 "produces": ["application/json"],
50257 "paths": {
50258   "/UserIDResURI" : {
50259     "get": {
50260       "description": "This resource describes the properties associated with user ID of an OCF
50261 client.\nThe userid Property is a single value whose type is one of string, number or integer.\nThe
50262 userid Property is a read-only value that is provided by the server.\nRetrieves User ID of an
50263 object.\n",
50264     "parameters": [
50265       { "$ref": "#/parameters/interface" }
50266     ],
50267     "responses": {
50268       "200": {
50269         "description": "",
50270         "x-example":
50271           {
50272             "rt": ["oic.r.userid"],
50273             "id": "unique_example_id",
50274             "userid": "USER1"
50275           }
50276         ,
50277         "schema": { "$ref": "#/definitions/UserID" }
50278       }
50279     }
50280   }
50281 }
50282 },
50283 "parameters": {
50284   "interface" : {
50285     "in" : "query",
50286     "name" : "if",
50287     "type" : "string",
50288     "enum" : ["oic.if.s", "oic.if.baseline"]
50289   }
50290 },
50291 "definitions": {
50292   "UserID" : {
50293     "properties": {
50294       "rt" :
50295         {
50296           "description": "Resource Type",
50297           "items": {
50298             "maxLength": 64,
50299             "type": "string"
50300           },
50301           "minItems": 1,
50302           "readOnly": true,
50303           "type": "array"
50304         },
50305       "userid" :
50306         {
50307           "description": "ID of a patient/user of healthcare devices",
50308           "readOnly": true,
50309           "type": "string"
50310         },
50311     },
50312     "precision" :
50313       {
50314         "description": "Accuracy granularity of the exposed value",
50315         "readOnly": true,
50316         "type": "number"
50317       },
50318   },
50319   "value" :

```

```

50321         {
50322     "anyOf": [
50323         {
50324             "type": "array"
50325         },
50326         {
50327             "type": "string"
50328         },
50329         {
50330             "type": "boolean"
50331         },
50332         {
50333             "type": "integer"
50334         },
50335         {
50336             "type": "number"
50337         },
50338         {
50339             "type": "object"
50340         }
50341     ],
50342     "description": "The value sensed or actuated by this Resource"
50343 },
50344 "n" :
50345     {
50346         "description": "Friendly name of the resource",
50347         "maxLength": 64,
50348         "readOnly": true,
50349         "type": "string"
50350     },
50351 "range" :
50352     {
50353         "description": "The valid range for the value Property",
50354         "items": {
50355             "anyOf": [
50356                 {
50357                     "type": "number"
50358                 },
50359                 {
50360                     "type": "integer"
50361                 }
50362             ]
50363         },
50364         "maxItems": 2,
50365         "minItems": 2,
50366         "readOnly": true,
50367         "type": "array"
50368     },
50369 "step" :
50370     {
50371         "anyOf": [
50372             {
50373                 "type": "integer"
50374             },
50375             {
50376                 "type": "number"
50377             }
50378         ],
50379         "description": "Step value across the defined range",
50380         "readOnly": true
50381     },
50382 "id" :
50383     {
50384         "description": "Instance ID of this specific resource",
50385         "maxLength": 64,
50386         "readOnly": true,
50387         "type": "string"
50388     }
50389 }
50390 }
50391 }

```

```

50392     },
50393
50394     "if" :
50395     {
50396         "description": "The interface set supported by this resource",
50397         "items": {
50398             "enum": [
50399                 "oic.if.baseline",
50400                 "oic.if.ll",
50401                 "oic.if.b",
50402                 "oic.if.lb",
50403                 "oic.if.rw",
50404                 "oic.if.r",
50405                 "oic.if.a",
50406                 "oic.if.s"
50407             ],
50408             "type": "string"
50409         },
50410         "minItems": 1,
50411         "readOnly": true,
50412         "type": "array"
50413     }
50414
50415     },
50416     "type" : "object"
50417     , "required": ["userid"]
50418 }
50419 }
50420 }
50421

```

50422 **B.111.5 Property Definition**

50423 **Table 459 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
userid	string	Yes	Read Only	ID of a patient/user of healthcare devices
rt	array: see schema	No	Read Only	Resource Type
if	array: see schema	No	Read Only	The interface set supported by this resource
n	string	No	Read Only	Friendly name of the resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
id	string	No	Read Only	Instance ID of this specific resource
precision	number	No	Read Only	Accuracy granularity of the exposed value

range	array: schema	see	No	Read Only	The valid range for the value Property
step	multiple types: see schema		No	Read Only	Step value across the defined range

50424 **B.111.6 CRUDN behaviour**

50425 **Table 460 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/UserIDResURI		get			observe

50426 **B.112 UV Radiation**

50427 **B.112.1 Introduction**

50428 This resource specifies UV radiation measurement.
50429 The measurement is the current measured UV Index

50430

50431 **B.112.2 Example URI**

50432 /UVRadiationResURI

50433 **B.112.3 Resource Type**

50434 The resource type (rt) is defined as: ['oic.r.sensor.radiation.uv'].

50435 **B.112.4 Swagger2.0 Definition**

```

50436 {
50437   "swagger": "2.0",
50438   "info": {
50439     "title": "UV Radiation",
50440     "version": "v1.1.0-20160519",
50441     "license": {
50442       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
50443       "x-description": "Redistribution and use in source and binary forms, with or without
50444 modification, are permitted provided that the following conditions are met:\n      1.
50445 Redistributions of source code must retain the above copyright notice, this list of conditions and
50446 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
50447 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
50448 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
50449 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
50450 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
50451 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
50452 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
50453 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
50454 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
50455 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
50456 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
50457 OF SUCH DAMAGE.\n"
50458     }
50459   },
50460   "schemes": ["http"],
50461   "consumes": ["application/json"],
50462   "produces": ["application/json"],
50463   "paths": {
50464     "/UVRadiationResURI" : {
50465       "get": {
50466         "description": "This resource specifies UV radiation measurement.\nThe measurement is the
50467 current measured UV Index\nRetrieves the current UV Radiation value\n",
50468         "parameters": [
50469           {"$ref": "#/parameters/interface"}
50470         ],

```

```

50471     "responses": {
50472         "200": {
50473             "description" : "",
50474             "x-example":
50475                 {
50476                     "rt":          ["oic.r.sensor.radiation.uv"],
50477                     "id":          "unique_example_id",
50478                     "measurement": 3.5
50479                 }
50480             ,
50481             "schema": { "$ref": "#/definitions/UVRadiation" }
50482         }
50483     }
50484 }
50485 },
50486 "parameters": {
50487     "interface" : {
50488         "in" : "query",
50489         "name" : "if",
50490         "type" : "string",
50491         "enum" : ["oic.if.s", "oic.if.baseline"]
50492     }
50493 },
50494 "definitions": {
50495     "UVRadiation" : {
50496         "properties": {
50497             "rt" :
50498                 {
50499                     "description": "Resource Type",
50500                     "items": {
50501                         "maxLength": 64,
50502                         "type": "string"
50503                     },
50504                     "minItems": 1,
50505                     "readOnly": true,
50506                     "type": "array"
50507                 },
50508         },
50509         "precision" :
50510             {
50511                 "description": "Accuracy granularity of the exposed value",
50512                 "readOnly": true,
50513                 "type": "number"
50514             },
50515     },
50516     "value" :
50517         {
50518             "anyOf": [
50519                 {
50520                     "type": "array"
50521                 },
50522                 {
50523                     "type": "string"
50524                 },
50525                 {
50526                     "type": "boolean"
50527                 },
50528                 {
50529                     "type": "integer"
50530                 },
50531                 {
50532                     "type": "number"
50533                 },
50534                 {
50535                     "type": "object"
50536                 }
50537             ],
50538         },
50539     "description": "The value sensed or actuated by this Resource"
50540 },
50541

```

```

50542     "n" :
50543         {
50544             "description": "Friendly name of the resource",
50545             "maxLength": 64,
50546             "readOnly": true,
50547             "type": "string"
50548         },
50549
50550     "range" :
50551         {
50552             "description": "The valid range for the value Property",
50553             "items": {
50554                 "anyOf": [
50555                     {
50556                         "type": "number"
50557                     },
50558                     {
50559                         "type": "integer"
50560                     }
50561                 ]
50562             },
50563             "maxItems": 2,
50564             "minItems": 2,
50565             "readOnly": true,
50566             "type": "array"
50567         },
50568
50569     "measurement" :
50570         {
50571             "description": "The measured UV Index",
50572             "readOnly": true,
50573             "type": "number"
50574         },
50575
50576     "step" :
50577         {
50578             "anyOf": [
50579                 {
50580                     "type": "integer"
50581                 },
50582                 {
50583                     "type": "number"
50584                 }
50585             ],
50586             "description": "Step value across the defined range",
50587             "readOnly": true
50588         },
50589
50590     "id" :
50591         {
50592             "description": "Instance ID of this specific resource",
50593             "maxLength": 64,
50594             "readOnly": true,
50595             "type": "string"
50596         },
50597
50598     "if" :
50599         {
50600             "description": "The interface set supported by this resource",
50601             "items": {
50602                 "enum": [
50603                     "oic.if.baseline",
50604                     "oic.if.ll",
50605                     "oic.if.b",
50606                     "oic.if.lb",
50607                     "oic.if.rw",
50608                     "oic.if.r",
50609                     "oic.if.a",
50610                     "oic.if.s"
50611                 ],
50612                 "type": "string"

```

```

50613     },
50614     "minItems": 1,
50615     "readOnly": true,
50616     "type": "array"
50617   }
50618 }
50619 }
50620 , "type" : "object"
50621 , "required": ["measurement"]
50622 }
50623 }
50624 }
50625

```

50626 **B.112.5 Property Definition**

50627 **Table 461 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema	No	Read Only	The interface set supported by this resource
precision	number	No	Read Only	Accuracy granularity of the exposed value
id	string	No	Read Only	Instance ID of this specific resource
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
n	string	No	Read Only	Friendly name of the resource
rt	array: see schema	No	Read Only	Resource Type
measurement	number	Yes	Read Only	The measured UV Index
range	array: see schema	No	Read Only	The valid range for the value Property
step	multiple types: see schema	No	Read Only	Step value across the defined range

50628 **B.112.6 CRUDN behaviour**

50629 **Table 462 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/UVRadiationResURI		get			observe

50630 **B.113 Value Conditional**

50631 **B.113.1 Introduction**

50632 This resource specifies conditions that can be applied to an observed value in any Resource.
50633 These conditions are applied by the server exposing the Resource to any generated notifications
50634 because of subscriptions to the Resource.

50635 A unicast RETRIEVE to the Resource will receive the most recent value; which may not be the
50636 most recent notified value.

50637 A server exposes this Resource in association with the Resource conveying the observed value.
50638 This is done by means of a new Resource instance with an RT of ["oic.r.<thing being observed>",
50639 "oic.r.value conditional"], e.g ["oic.r.temperature", "oic.r.value conditional"]. Please see Section
50640 5.7.1 of the published OCF Resource Type Specification for more details.

50641 The threshold is the amount by which the thing being observed must change before a notification
50642 is sent.

50643 The minnotifyperiod is the minimum time in ms (milliseconds) that must elapse before a
50644 notification is sent.

50645 If the maxnotifyperiod (time in ms (milliseconds)) elapses then a notification must be sent.

50646 The maxnotifyperiod timer resets each time a notification is sent.

50647 A value of '0' for any of threshold, minnotifyperiod or maxnotifyperiod means that the capability is
50648 supported but not active.

50649

50650 **B.113.2 Example URI**

50651 /ValueConditionalResURI

50652 **B.113.3 Resource Type**

50653 The resource type (rt) is defined as: ['oic.r.value conditional'].

50654 **B.113.4 Swagger2.0 Definition**

```
50655 {  
50656   "swagger": "2.0",  
50657   "info": {  
50658     "title": "Value Conditional",  
50659     "version": "v1.1.0-20161031",  
50660     "license": {  
50661       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
50662       "x-description": "Redistribution and use in source and binary forms, with or without  
50663 modification, are permitted provided that the following conditions are met:\n      1.  
50664 Redistributions of source code must retain the above copyright notice, this list of conditions and  
50665 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
50666 copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
50667 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open  
50668 Connectivity Foundation, INC. \n      AS IS\n      AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT  
50669 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR  
50670 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity  
50671 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,  
50672 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS  
50673 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND  
50674 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR  
50675 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY  
50676 OF SUCH DAMAGE.\n\n    }  
50677   },  
50678 },  
50679 "schemes": ["http"],  
50680 "consumes": ["application/json"],  
50681 "produces": ["application/json"],  
50682 "paths": {  
50683   "/ValueConditionalResURI" : {  
50684     "get": {  
50685       "description": "This resource specifies conditions that can be applied to an observed value  
50686 in any Resource.\nThese conditions are applied by the server exposing the Resource to any generated  
50687 notifications because of subscriptions to the Resource.\nA unicast RETRIEVE to the Resource will  
50688 receive the most recent value; which may not be the most recent notified value.\nA server exposes
```

```

50689 this Resource in association with the Resource conveying the observed value.\nThis is done by means
50690 of a new Resource instance with an RT of [{"oic.r.<thing being observed>\"},
50691 \"oic.r.value.conditional\"], e.g [{"oic.r.temperature\"}, {"oic.r.value.conditional\"}]. Please see
50692 Section 5.7.1 of the published OCF Resource Type Specification for more details.\nThe threshold is
50693 the amount by which the thing being observed must change before a notification is sent.\nThe
50694 minnotifyperiod is the minimum time in ms (milliseconds) that must elapse before a notification is
50695 sent.\nIf the maxnotifyperiod (time in ms (milliseconds)) elapses then a notification must be
50696 sent.\nThe maxnotifyperiod timer resets each time a notification is sent.\nA value of '0' for any
50697 of threshold, minnotifyperiod or maxnotifyperiod means that the capability is supported but not
50698 active.\n\",
50699     \"parameters\": [
50700         { \"$ref\": \"#/parameters/interface\" }
50701     ],
50702     \"responses\": {
50703         \"200\": {
50704             \"description\": \"\",
50705             \"x-example\":
50706                 {
50707                     \"rt\":         [\"oic.r.value.conditional\"],
50708                     \"id\":         \"unique_example_id\",
50709                     \"threshold\":    2,
50710                     \"minnotifyperiod\": 2000,
50711                     \"maxnotifyperiod\": 5000
50712                 }
50713             ,
50714             \"schema\": { \"$ref\": \"#/definitions/valueconditional\" }
50715         }
50716     },
50717     \"post\": {
50718         \"description\": \"body:\\n application/json:\\n  schema: valueconditional\\n  example: |\\n
50719 {\\n    \\\"threshold\\\":    2,\\n    \\\"minnotifyperiod\\\": 1500\\n  }\\n\",
50720         \"parameters\": [
50721             { \"$ref\": \"#/parameters/interface\" }
50722         ],
50723         \"responses\": {
50724             \"200\": {
50725                 \"description\": \"\",
50726                 \"x-example\":
50727                     {
50728                         \"threshold\":    2,
50729                         \"minnotifyperiod\": 1500
50730                     }
50731             }
50732             ,
50733             \"schema\": { \"$ref\": \"#/definitions/valueconditional\" }
50734         }
50735     }
50736 },
50737 },
50738 },
50739 \"parameters\": {
50740     \"interface\" : {
50741         \"in\" : \"query\",
50742         \"name\" : \"if\",
50743         \"type\" : \"string\",
50744         \"enum\" : [\"oic.if.rw\", \"oic.if.baseline\"]
50745     }
50746 },
50747 \"definitions\": {
50748     \"valueconditional\" : {
50749         \"properties\": {
50750             \"rt\" :
50751                 {
50752                     \"description\": \"Resource Type\",
50753                     \"items\": {
50754                         \"maxLength\": 64,
50755                         \"type\": \"string\"
50756                     },
50757                     \"minItems\": 1,
50758                     \"readOnly\": true,
50759                     \"type\": \"array\"

```

```

50760     },
50761
50762     "maxnotifyperiod" :
50763     {
50764         "description": "Maximum elapsed time in ms before a notification must be sent.",
50765         "minimum": 0,
50766         "type": "integer"
50767     },
50768
50769     "n" :
50770     {
50771         "description": "Friendly name of the resource",
50772         "maxLength": 64,
50773         "readOnly": true,
50774         "type": "string"
50775     },
50776
50777     "minnotifyperiod" :
50778     {
50779         "description": "Minimum elapsed time in ms before a notification is sent.",
50780         "minimum": 0,
50781         "type": "integer"
50782     },
50783
50784     "threshold" :
50785     {
50786         "description": "Amount by which the measured value must change before a notification is
50787 sent.",
50788         "minimum": 0,
50789         "type": "number"
50790     },
50791
50792     "id" :
50793     {
50794         "description": "Instance ID of this specific resource",
50795         "maxLength": 64,
50796         "readOnly": true,
50797         "type": "string"
50798     },
50799
50800     "if" :
50801     {
50802         "description": "The interface set supported by this resource",
50803         "items": {
50804             "enum": [
50805                 "oic.if.baseline",
50806                 "oic.if.ll",
50807                 "oic.if.b",
50808                 "oic.if.lb",
50809                 "oic.if.rw",
50810                 "oic.if.r",
50811                 "oic.if.a",
50812                 "oic.if.s"
50813             ],
50814             "type": "string"
50815         },
50816         "minItems": 1,
50817         "readOnly": true,
50818         "type": "array"
50819     }
50820 }
50821 },
50822 "anyOf" :
50823 [
50824     {
50825         "required": [
50826             "threshold"
50827         ]
50828     },
50829     {
50830         "required": [

```

```

50831         "minnotifyperiod"
50832     ]
50833 },
50834 {
50835     "required": [
50836         "maxnotifyperiod"
50837     ]
50838 }
50839 ]
50840
50841     , "type" : "object"
50842 }
50843 }
50844 }
50845

```

50846 **B.113.5 Property Definition**

50847 **Table 463 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
id	string	No	Read Only	Instance ID of this specific resource
if	array: schema see	No	Read Only	The interface set supported by this resource
maxnotifyperiod	integer	Yes	Read Write	Maximum elapsed time in ms before a notification must be sent.
threshold	number	No	Read Write	Amount by which the measured value must change before a notification is sent.
minnotifyperiod	integer	No	Read Write	Minimum elapsed time in ms before a notification is sent.
rt	array: schema see	No	Read Only	Resource Type
n	string	No	Read Only	Friendly name of the resource

50848 **B.113.6 CRUDN behaviour**

50849 **Table 464 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/ValueConditionalResURI		get	post		observe

50850 **B.114 Vehicle Connector**

50851 **B.114.1 Introduction**

50852 This resource describes the attributes associated with an electric vehicle charging connector.
50853 The connected state is a boolean indicating the status of the connector (False = disconnected,
50854 True = connected). The rated charging capacity and rated discharging capacity are in Amps (A).
50855

50856 **B.114.2 Example URI**

50857 /VehicleConnectorResURI

50858 **B.114.3 Resource Type**

50859 The resource type (rt) is defined as: ['oic.r.vehicle.connector'].

50860 **B.114.4 Swagger2.0 Definition**

```
50861 {  
50862   "swagger": "2.0",  
50863   "info": {  
50864     "title": "Vehicle Connector",  
50865     "version": "v1.1.0-20170815",  
50866     "license": {  
50867       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
50868       "x-description": "Redistribution and use in source and binary forms, with or without  
50869 modification, are permitted provided that the following conditions are met:\n      1.  
50870 Redistributions of source code must retain the above copyright notice, this list of conditions and  
50871 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
50872 copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
50873 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open  
50874 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT  
50875 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR  
50876 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity  
50877 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,  
50878 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS  
50879 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND  
50880 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR  
50881 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY  
50882 OF SUCH DAMAGE.\n\n    }  
50883   },  
50884   "schemes": ["http"],  
50885   "consumes": ["application/json"],  
50886   "produces": ["application/json"],  
50887   "paths": {  
50888     "/VehicleConnectorResURI" : {  
50889       "get": {  
50890         "description": "This resource describes the attributes associated with an electric vehicle  
50891 charging connector. The connected state is a boolean indicating the status of the connector (False  
50892 = disconnected, True = connected). The rated charging capacity and rated discharging capacity are  
50893 in Amps (A).\nRetrieves the state of the vehicle connector.\n",  
50894         "parameters": [  
50895           { "$ref": "#/parameters/interface" }  
50896         ],  
50897         "responses": {  
50898           "200": {  
50899             "description": "",  
50900             "x-example":  
50901               {  
50902                 "rt": ["oic.r.vehicle.connector"],  
50903                 "id": "unique_example_id",  
50904                 "connected": true,  
50905                 "ratedchargingcapacity": 20.0,  
50906                 "rateddischargingcapacity": 5.0  
50907               }  
50908             }  
50909           },  
50910           "schema": { "$ref": "#/definitions/VehicleConnector" }  
50911         }  
50912       }  
50913     }  
50914   }  
50915 }
```

```

50913     }
50914   }
50915 },
50916 "parameters": {
50917   "interface" : {
50918     "in" : "query",
50919     "name" : "if",
50920     "type" : "string",
50921     "enum" : ["oic.if.s", "oic.if.baseline"]
50922   }
50923 },
50924 "definitions": {
50925   "VehicleConnector" : {
50926     "properties": {
50927       "rt" :
50928         {
50929           "description": "Resource Type",
50930           "items": {
50931             "maxLength": 64,
50932             "type": "string"
50933           },
50934           "minItems": 1,
50935           "readOnly": true,
50936           "type": "array"
50937         },
50938
50939     "precision" :
50940       {
50941         "description": "Accuracy granularity of the exposed value",
50942         "readOnly": true,
50943         "type": "number"
50944       },
50945
50946     "value" :
50947       {
50948         "anyOf": [
50949           {
50950             "type": "array"
50951           },
50952           {
50953             "type": "string"
50954           },
50955           {
50956             "type": "boolean"
50957           },
50958           {
50959             "type": "integer"
50960           },
50961           {
50962             "type": "number"
50963           },
50964           {
50965             "type": "object"
50966           }
50967         ],
50968         "description": "The value sensed or actuated by this Resource"
50969       },
50970
50971     "n" :
50972       {
50973         "description": "Friendly name of the resource",
50974         "maxLength": 64,
50975         "readOnly": true,
50976         "type": "string"
50977       },
50978
50979     "range" :
50980       {
50981         "description": "The valid range for the value Property",
50982         "items": {
50983           "anyOf": [

```

```

50984         {
50985             "type": "number"
50986         },
50987         {
50988             "type": "integer"
50989         }
50990     ]
50991 },
50992     "maxItems": 2,
50993     "minItems": 2,
50994     "readOnly": true,
50995     "type": "array"
50996 },
50997
50998 "connected" :
50999     {
51000         "description": "The connection state.",
51001         "readOnly": true,
51002         "type": "boolean"
51003     },
51004
51005 "ratedchargingcapacity" :
51006     {
51007         "description": "The rated charging capacity in Amps (A).",
51008         "readOnly": true,
51009         "type": "number"
51010     },
51011
51012 "rateddischargingcapacity" :
51013     {
51014         "description": "The rated discharging capacity in Amps (A).",
51015         "readOnly": true,
51016         "type": "number"
51017     },
51018
51019 "step" :
51020     {
51021         "anyOf": [
51022             {
51023                 "type": "integer"
51024             },
51025             {
51026                 "type": "number"
51027             }
51028         ],
51029         "description": "Step value across the defined range",
51030         "readOnly": true
51031     },
51032
51033 "id" :
51034     {
51035         "description": "Instance ID of this specific resource",
51036         "maxLength": 64,
51037         "readOnly": true,
51038         "type": "string"
51039     },
51040
51041 "if" :
51042     {
51043         "description": "The interface set supported by this resource",
51044         "items": {
51045             "enum": [
51046                 "oic.if.baseline",
51047                 "oic.if.ll",
51048                 "oic.if.b",
51049                 "oic.if.lb",
51050                 "oic.if.rw",
51051                 "oic.if.r",
51052                 "oic.if.a",
51053                 "oic.if.s"
51054             ],

```

```

51055         "type": "string"
51056     },
51057     "minItems": 1,
51058     "readOnly": true,
51059     "type": "array"
51060 }
51061 }
51062 },
51063     "type" : "object"
51064     , "required": ["connected"]
51065 }
51066 }
51067 }
51068

```

51069 **B.114.5 Property Definition**

51070 **Table 465 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
precision	number	No	Read Only	Accuracy granularity of the exposed value
n	string	No	Read Only	Friendly name of the resource
range	array: see schema	No	Read Only	The valid range for the value Property
ratedchargingcapacity	number	No	Read Only	The rated charging capacity in Amps (A).
rateddischargingcapacity	number	No	Read Only	The rated discharging capacity in Amps (A).
id	string	No	Read Only	Instance ID of this specific resource
step	multiple types: see schema	No	Read Only	Step value across the defined range
connected	boolean	Yes	Read Only	The connection state.
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource

if	array: see schema	No	Read Only	The interface set supported by this resource
----	----------------------	----	-----------	--

51071 **B.114.6 CRUDN behaviour**

51072 **Table 466 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/VehicleConnectorResURI		get			observe

51073 **B.115 Water Sensor**

51074 **B.115.1 Introduction**

51075 This resource describes whether water has been sensed or not.

51076 The value is a boolean.

51077 A value of 'true' means that water has been sensed.

51078 A value of 'false' means that water not been sensed.

51079

51080 **B.115.2 Example URI**

51081 /WaterResURI

51082 **B.115.3 Resource Type**

51083 The resource type (rt) is defined as: ['oic.r.sensor.water'].

51084 **B.115.4 Swagger2.0 Definition**

```

51085 {
51086   "swagger": "2.0",
51087   "info": {
51088     "title": "Water Sensor",
51089     "version": "v1.1.0-20160519",
51090     "license": {
51091       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
51092       "x-description": "Redistribution and use in source and binary forms, with or without
51093 modification, are permitted provided that the following conditions are met:\n      1.
51094 Redistributions of source code must retain the above copyright notice, this list of conditions and
51095 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
51096 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
51097 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
51098 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
51099 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
51100 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
51101 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
51102 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
51103 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
51104 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
51105 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
51106 OF SUCH DAMAGE.\n"
51107     }
51108   },
51109   "schemes": ["http"],
51110   "consumes": ["application/json"],
51111   "produces": ["application/json"],
51112   "paths": {
51113     "/WaterResURI" : {
51114       "get": {
51115         "description": "This resource describes whether water has been sensed or not.\nThe value is
51116 a boolean.\nA value of 'true' means that water has been sensed.\nA value of 'false' means that
51117 water not been sensed.\n",
51118         "parameters": [
51119           {"$ref": "#/parameters/interface"}
51120         ],
51121         "responses": {

```

```

51122         "200": {
51123             "description" : "",
51124             "x-example":
51125                 {
51126                     "rt":    ["oic.r.sensor.water"],
51127                     "id":    "unique_example_id",
51128                     "value": true
51129                 }
51130             ,
51131             "schema": { "$ref": "#/definitions/Water" }
51132         }
51133     }
51134 }
51135 },
51136 },
51137 "parameters": {
51138     "interface" : {
51139         "in" : "query",
51140         "name" : "if",
51141         "type" : "string",
51142         "enum" : ["oic.if.s", "oic.if.baseline"]
51143     }
51144 },
51145 "definitions": {
51146     "Water" : {
51147         "properties": {
51148             "rt" :
51149                 {
51150                     "description": "Resource Type",
51151                     "items": {
51152                         "maxLength": 64,
51153                         "type": "string"
51154                     },
51155                     "minItems": 1,
51156                     "readOnly": true,
51157                     "type": "array"
51158                 },
51159             "precision" :
51160                 {
51161                     "description": "Accuracy granularity of the exposed value",
51162                     "readOnly": true,
51163                     "type": "number"
51164                 },
51165             "value" :
51166                 {
51167                     "description": "true = sensed, false = not sensed.",
51168                     "readOnly": true,
51169                     "type": "boolean"
51170                 },
51171             "n" :
51172                 {
51173                     "description": "Friendly name of the resource",
51174                     "maxLength": 64,
51175                     "readOnly": true,
51176                     "type": "string"
51177                 },
51178             "range" :
51179                 {
51180                     "description": "The valid range for the value Property",
51181                     "items": {
51182                         "anyOf": [
51183                             {
51184                                 "type": "number"
51185                             },
51186                             {
51187                                 "type": "integer"
51188                             }
51189                         ]
51190                     }
51191                 }
51192         }

```

```

51193     ]
51194     },
51195     "maxItems": 2,
51196     "minItems": 2,
51197     "readOnly": true,
51198     "type": "array"
51199   },
51200
51201   "step" :
51202   {
51203     "anyOf": [
51204       {
51205         "type": "integer"
51206       },
51207       {
51208         "type": "number"
51209       }
51210     ],
51211     "description": "Step value across the defined range",
51212     "readOnly": true
51213   },
51214
51215   "id" :
51216   {
51217     "description": "Instance ID of this specific resource",
51218     "maxLength": 64,
51219     "readOnly": true,
51220     "type": "string"
51221   },
51222
51223   "if" :
51224   {
51225     "description": "The interface set supported by this resource",
51226     "items": {
51227       "enum": [
51228         "oic.if.baseline",
51229         "oic.if.ll",
51230         "oic.if.b",
51231         "oic.if.lb",
51232         "oic.if.rw",
51233         "oic.if.r",
51234         "oic.if.a",
51235         "oic.if.s"
51236       ],
51237       "type": "string"
51238     },
51239     "minItems": 1,
51240     "readOnly": true,
51241     "type": "array"
51242   }
51243
51244   },
51245   "type" : "object"
51246   ,"required": ["value"]
51247 }
51248 }
51249 }
51250

```

B.115.5 Property Definition

Table 467 The properties definitions of the resource

Property name	Value type	Mandatory	Access mode	Description
id	string	No	Read Only	Instance ID of this specific resource
precision	number	No	Read Only	

				Accuracy granularity of the exposed value
step	multiple types: see schema	No	Read Only	Step value across the defined range
rt	array: see schema	No	Read Only	Resource Type
range	array: see schema	No	Read Only	The valid range for the value Property
value	boolean	Yes	Read Only	true = sensed, false = not sensed.
n	string	No	Read Only	Friendly name of the resource
if	array: see schema	No	Read Only	The interface set supported by this resource

51253 **B.115.6 CRUDN behaviour**

51254 **Table 468 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/WaterResURI		get			observe

51255 **B.116 Weight**

51256 **B.116.1 Introduction**

51257 This resource describes the properties associated with weight of an object.

51258 The unit is a single value that is one of kg, g, lb or oz.

51259 If the unit Property is missing the default is kilograms [kg].

51260 The unit Property is a read-only value that is provided by the server.

51261 When range (from oic.r.baseresource) is omitted the default is 0 to +MAXFLOAT.

51262

51263 **B.116.2 Example URI**

51264 /WeightResURI

51265 **B.116.3 Resource Type**

51266 The resource type (rt) is defined as: ['oic.r.weight'].

51267 **B.116.4 Swagger2.0 Definition**

51268 {
51269 "swagger": "2.0",
51270 "info": {
51271 "title": "Weight",
51272 "version": "v1.1.0-20160519",
51273 "license": {
51274 "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
51275 "x-description": "Redistribution and use in source and binary forms, with or without
51276 modification, are permitted provided that the following conditions are met:\n 1.
51277 Redistributions of source code must retain the above copyright notice, this list of conditions and
51278 the following disclaimer.\n 2. Redistributions in binary form must reproduce the above

```

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51280 other materials provided with the distribution.\n\n THIS SOFTWARE IS PROVIDED BY THE Open
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51282 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
51283 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n IN NO EVENT SHALL THE Open Connectivity
51284 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
51285 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
51286 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n HOWEVER CAUSED AND
51287 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
51288 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
51289 OF SUCH DAMAGE.\n"
51290 }
51291 },
51292 "schemes": ["http"],
51293 "consumes": ["application/json"],
51294 "produces": ["application/json"],
51295 "paths": {
51296   "/WeightResURI" : {
51297     "get": {
51298       "description": "This resource describes the properties associated with weight of an
51299 object.\nThe unit is a single value that is one of kg, g, lb or oz.\nIf the unit Property is
51300 missing the default is kilograms [kg].\nThe unit Property is a read-only value that is provided by
51301 the server.\nWhen range (from oic.r.baseresource) is omitted the default is 0 to
51302 +MAXFLOAT.\nRetrieves weight of an object.\n",
51303     "parameters": [
51304       { "$ref": "#/parameters/interface" }
51305     ],
51306     "responses": {
51307       "200": {
51308         "description": "",
51309         "x-example":
51310           {
51311             "rt": ["oic.r.weight"],
51312             "id": "unique_example_id",
51313             "weight": 80.0,
51314             "units": "kg"
51315           }
51316         ,
51317         "schema": { "$ref": "#/definitions/Weight" }
51318       }
51319     }
51320   }
51321 },
51322 },
51323 "parameters": {
51324   "interface" : {
51325     "in" : "query",
51326     "name" : "if",
51327     "type" : "string",
51328     "enum" : ["oic.if.s", "oic.if.baseline"]
51329   }
51330 },
51331 "definitions": {
51332   "Weight" : {
51333     "properties": {
51334       "rt" :
51335         {
51336           "description": "Resource Type",
51337           "items": {
51338             "maxLength": 64,
51339             "type": "string"
51340           },
51341           "minItems": 1,
51342           "readOnly": true,
51343           "type": "array"
51344         },
51345       "weight" :
51346         {
51347           "description": "Weight of an object",
51348           "minimum": 0,

```

```

51350         "readOnly": true,
51351         "type": "number"
51352     },
51353     "precision" :
51354     {
51355         "description": "Accuracy granularity of the exposed value",
51356         "readOnly": true,
51357         "type": "number"
51358     },
51359     "value" :
51360     {
51361         "anyOf": [
51362             {
51363                 "type": "array"
51364             },
51365             {
51366                 "type": "string"
51367             },
51368             {
51369                 "type": "boolean"
51370             },
51371             {
51372                 "type": "integer"
51373             },
51374             {
51375                 "type": "number"
51376             },
51377             {
51378                 "type": "object"
51379             }
51380         ],
51381         "description": "The value sensed or actuated by this Resource"
51382     },
51383     "n" :
51384     {
51385         "description": "Friendly name of the resource",
51386         "maxLength": 64,
51387         "readOnly": true,
51388         "type": "string"
51389     },
51390     "units" :
51391     {
51392         "description": "Weight unit",
51393         "enum": [
51394             "kg",
51395             "g",
51396             "lb",
51397             "oz"
51398         ],
51399         "readOnly": true,
51400         "type": "string"
51401     },
51402     "range" :
51403     {
51404         "description": "The valid range for the value Property",
51405         "items": {
51406             "anyOf": [
51407                 {
51408                     "type": "number"
51409                 },
51410                 {
51411                     "type": "integer"
51412                 }
51413             ]
51414         },
51415         "maxItems": 2,

```

```

51421         "minItems": 2,
51422         "readOnly": true,
51423         "type": "array"
51424     },
51425
51426     "step" :
51427     {
51428         "anyOf": [
51429             {
51430                 "type": "integer"
51431             },
51432             {
51433                 "type": "number"
51434             }
51435         ],
51436         "description": "Step value across the defined range",
51437         "readOnly": true
51438     },
51439
51440     "id" :
51441     {
51442         "description": "Instance ID of this specific resource",
51443         "maxLength": 64,
51444         "readOnly": true,
51445         "type": "string"
51446     },
51447
51448     "if" :
51449     {
51450         "description": "The interface set supported by this resource",
51451         "items": {
51452             "enum": [
51453                 "oic.if.baseline",
51454                 "oic.if.ll",
51455                 "oic.if.b",
51456                 "oic.if.lb",
51457                 "oic.if.rw",
51458                 "oic.if.r",
51459                 "oic.if.a",
51460                 "oic.if.s"
51461             ],
51462             "type": "string"
51463         },
51464         "minItems": 1,
51465         "readOnly": true,
51466         "type": "array"
51467     }
51468
51469     },
51470     "type" : "object"
51471     , "required": ["weight", "units"]
51472 }
51473 }
51474 }
51475

```

51476 **B.116.5 Property Definition**

51477 **Table 469 The properties definitions of the resource**

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema	No	Read Only	The interface set supported by this resource
rt	array: see schema	No	Read Only	Resource Type
precision	number	No	Read Only	

				Accuracy granularity of the exposed value
range	array: see schema	No	Read Only	The valid range for the value Property
weight	number	Yes	Read Only	Weight of an object
step	multiple types: see schema	No	Read Only	Step value across the defined range
value	multiple types: see schema	No	Read Write	The value sensed or actuated by this Resource
id	string	No	Read Only	Instance ID of this specific resource
n	string	No	Read Only	Friendly name of the resource
units	string	Yes	Read Only	Weight unit

51478 **B.116.6 CRUDN behaviour**

51479 **Table 470 The CRUDN operations of the resource**

Resource	Create	Read	Update	Delete	Notify
/WeightResURI		get			observe

51480