

# OCF Resource Type Specification

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1643 **1 Scope**

1644 This document specifies the Resources that have been defined by OCF that may be exposed by  
1645 an OCF Device.

1646 Application profile device documents (for example those created for Smart Home or Healthcare)  
1647 specify device types appropriate to the profile; such documents use Resource Type definitions from  
1648 this document.

1649 This document is built on top of ISO/IEC 30118-1:2018. ISO/IEC 30118-1:2018 specifies the OCF  
1650 Framework that enables the implementation of profiles for IoT usages and ecosystems. The OCF  
1651 Core Framework is scalable to support simple devices (constrained device) and more capable  
1652 devices (smart device).

1653 **2 Normative references**

1654 The following documents are referred to in the text in such a way that some or all of their content  
1655 constitutes requirements of this document. For dated references, only the edition cited applies. For  
1656 undated references, the latest edition of the referenced document (including any amendments)  
1657 applies.

1658 ISO/IEC 30118-1:2018 Information technology -- Open Connectivity Foundation (OCF)  
1659 Specification -- Part 1: Core specification  
1660 <https://www.iso.org/standard/53238.html>  
1661 Latest version available at: [https://openconnectivity.org/specs/OCF\\_Core\\_Specification.pdf](https://openconnectivity.org/specs/OCF_Core_Specification.pdf)

1662 OpenAPI specification, fka *Swagger RESTful API Documentation Specification*, Version 2.0  
1663 <https://github.com/OAI/OpenAPI-Specification/blob/master/versions/2.0.md>

1664 **3 Terms, definitions, and abbreviated terms**

1665 For the purposes of this document, the terms and definitions given in ISO/IEC 30118-1:2018 and  
1666 the following apply.

1667 ISO and IEC maintain terminological databases for use in standardization at the following  
1668 addresses:

- 1669 – ISO Online browsing platform: available at <https://www.iso.org/obp>
- 1670 – IEC Electropedia: available at <http://www.electropedia.org/>

1671 **3.1 Terms and definitions**

1672 **3.1.1**

1673 **actuator**

1674 resource with support of the UPDATE operation

1675 **3.1.2**

1676 **Composite Resource Type**

1677 a Resource Type defined as an OCF Collection of other Resource Types

1678 **3.1.3**

1679 **sensor**

1680 resource without support of the UPDATE operation

1681 **3.2 Abbreviated terms**

1682 **3.2.1**

1683 **CRUDN**

1684 Create Retrieve Update Delete Notify

1685 This is an acronym indicating which operations are possible on the Resource.

1686 **4 Document conventions and organization**

1687 **4.1 Conventions**

1688 In this document a number of terms, conditions, mechanisms, sequences, parameters, events,  
1689 states, or similar terms are printed with the first letter of each word in uppercase and the rest  
1690 lowercase (e.g., Resource Type). Any lowercase uses of these words have the normal technical  
1691 English meaning.

1692 **4.2 Notation**

1693 In this document, features are described as required, recommended, allowed or DEPRECATED as  
1694 follows:

1695 Required (or shall or mandatory).

1696 These basic features shall be implemented to comply with OCF Resource Type Specification.  
1697 The phrases "shall not", and "PROHIBITED" indicate behaviour that is prohibited, i.e. that if  
1698 performed means the implementation is not in compliance.

1699 Recommended (or should).

1700 These features add functionality supported by the OCF Resource Type Specification and should  
1701 be implemented. Recommended features take advantage of the capabilities of the OCF  
1702 Resource Type Specification, usually without imposing major increase of complexity. Notice  
1703 that for compliance testing, if a recommended feature is implemented, it shall meet the specified  
1704 requirements to be in compliance with these guidelines. Some recommended features could  
1705 become requirements in the future. The phrase "should not" indicates behaviour that is  
1706 permitted but not recommended.

1707 Allowed (or allowed).

1708 These features are neither required nor recommended by OCF Resource Type Specification,  
1709 but if the feature is implemented, it shall meet the specified requirements to be in compliance  
1710 with these guidelines.

1711 DEPRECATED

1712 Although these features are still described in this document, they should not be implemented  
1713 except for backward compatibility. The occurrence of a deprecated feature during operation of  
1714 an implementation compliant with the current document has no effect on the implementation's  
1715 operation and does not produce any error conditions. Backward compatibility may require that  
1716 a feature is implemented and functions as specified but it shall never be used by  
1717 implementations compliant with this document.

1718 Conditionally allowed (CA)

1719 The definition or behaviour depends on a condition. If the specified condition is met, then the  
1720 definition or behaviour is allowed, otherwise it is not allowed.

1721 Conditionally required (CR)

1722 The definition or behaviour depends on a condition. If the specified condition is met, then the  
1723 definition or behaviour is required. Otherwise the definition or behaviour is allowed as default  
1724 unless specifically defined as not allowed.

1725 Strings that are to be taken literally are enclosed in "double quotes".

1726 Words that are emphasized are printed in *italic*.

## 1727 **5 Baseline Model Constructs**

### 1728 **5.1 URI**

1729 The URIs mentioned in this document are non-normative, they may be vendor defined.

1730 An Instance of a Resource is indicated by the URI. When more than one instance of the same  
1731 Resource Type is used in an OCF Device, different URIs for the different Resource instances shall  
1732 be used.

1733 An implementation shall follow the requirements defined in ISO/IEC 30118-1:2018 with respect to  
1734 population of the URI. Please refer to the ISO/IEC 30118-1:2018 clauses 6.2 and 6.3 for specific  
1735 details.

### 1736 **5.2 Interfaces**

#### 1737 **5.2.1 Introduction**

1738 ISO/IEC 30118-1:2018 specifies that all Resource Types have associated with them at least one  
1739 Interface; this Interface is advertised during Resource discovery. In addition ISO/IEC 30118-1:2018  
1740 defines a number of Interfaces that can be applied to an instance of a Resource Type.

1741 The difference between using sensor/actuator and read/write interfaces is due to the fact that a  
1742 sensor/actuator interface describes an action that has immediate effect on the device, either by  
1743 reading the sensed value and putting the value on the wire, or as an UPDATE action that something  
1744 needs to happen (e.g. actuate) on the device. The read/write interface is typically used to set a  
1745 settings value on the device that might be used later when an action occurs. A typical example is  
1746 setting the coffee strength that will be used when the coffee is brewed.

#### 1747 **5.2.2 Restricting Interface Functionality**

1748 Note that the functionality associated with, or visibility of, an instance of any Resource exposed by  
1749 a Device may be restricted depending upon local (per country or legislative region) regulatory  
1750 requirements or other restrictions (e.g. with respect to Binary Switch in some jurisdictions the ability  
1751 to remotely power on a connected device is restricted; a lock status could be read-only depending  
1752 on the context).

1753 The actual implementation of a resource can be limited by:

- 1754 – Not implementing the optional properties defined in the payload of a CRUDN operation.
- 1755 – Removing CRUDN operations

1756 If an UPDATE operation of a resource that can be actuated is not implemented, this change in  
1757 behaviour is indicated by changing the interfaces accordingly.

1758 When the resource is defined with the interface "oic.if.a", and the UPDATE operation is removed  
1759 then the interface listed is "oic.if.s".

1760 When the resource is defined with the interface "oic.if.rw", and the UPDATE operation is removed  
1761 then the interface listed is "oic.if.r".

### 1762 **5.3 OpenAPI Specification 2.0 definition**

1763 The OpenAPI Specification 2.0 definitions provided in clause 6 in this document are normative.

1764 The OpenAPI Specification 2.0 definitions are used to describe the payloads of the CRUDN  
1765 operations on the specified Resource Type. The CRUDN operations are defined in ISO/IEC 30118-  
1766 1:2018. ISO/IEC 30118-1:2018 also specifies additional Properties in the payloads of the CRUDN  
1767 operations. The OpenAPI Specification 2.0 definitions in this document are not of themselves  
1768 sufficient to create an implementation, additional Properties defined in ISO/IEC 30118-1:2018 need  
1769 to be added to create a compliant implementation. This document makes use of a subset of the

1770 responses supported by OpenAPI Specification 2.0, specifics on the use of these responses are  
 1771 defined in Table 4. Note that the actual values of success and error conditions are defined in  
 1772 ISO/IEC 30118-1:2018.

1773 The OpenAPI Specification 2.0 definitions map the OCF CRUDN behaviour to the OpenAPI  
 1774 Specification 2.0 as defined in Table 1.

1775 **Table 1 – Conversion between OCF CRUDN and OpenAPI Specification 2.0 definitions<sup>1</sup>**

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

1776 Notify is not part of an OpenAPI Specification 2.0 definition but is defined in ISO/IEC 30118-1:2018.  
 1777 All Resource Types defined in this document support notification via the use of observe as defined  
 1778 in ISO/IEC 30118-1:2018 clause 11.4.2.

1779 **5.4 Property definition**

1780 **5.4.1 Common Properties**

1781 ISO/IEC 30118-1:2018 specifies a number of Properties that may be defined for OCF Resources.  
 1782 The Common Properties “if” and “rt” shall be specified for all Resource Types defined in this  
 1783 document; they are exposed within the ISO/IEC 30118-1:2018 defined “/oic/res/” Resource Type  
 1784 through which the OCF Server and its available Resources are discovered. The Common  
 1785 Properties “id” and “n” may be specified for all Resource Types defined in this document. Table 2  
 1786 lists all of the noted Common Properties.

1787 If an OCF Client requires that these Properties be included in a Resource representation that is  
 1788 provided in response to a RETRIEVE operation then the client shall select the ISO/IEC 30118-  
 1789 1:2018 defined baseline interface (oic.if.baseline) by specifying this in a query parameter.

1790 **Table 2 – Common Properties for OCF Resources**

Property Name	Property Title	Property Value	Value Type	Access Modes	Description
if	Interface	See ISO/IEC 30118-1:2018 clause 7.6.2	Array of string	Readonly	Core defined; Interface(s) supported by the Resource
rt	Resource type	See ISO/IEC 30118-1:2018 clause 7.4	Array of string	Readonly	Core defined; Resource type. The Resource Types are defined in this document. See clause 6
n	Name	See ISO/IEC 30118-1:2018 clause 7.3.2.5	String	Readonly	Core defined; human understandable name for the Resource.
id	Resource Identity	See ISO/IEC 30118-1:2018 clause 7.3.2.6	String	Readonly	Core defined; Unique identifier of the Resource (over all Resources in the OCF device)

<sup>1</sup> Please refer to ISO/IEC 30118-1:2018 Table 26 for detailed semantics around the appropriate use of CoAP request methods.

1791

## 1792 5.4.2 Resource Properties

### 1793 5.4.2.1 Introduction

1794 The Properties against which the CRUDN operations are specified are defined as part of an  
1795 OpenAPI Specification 2.0 definition.

1796 A basic Resource Type is formulated around one single value denoting a physical property.

1797 Such a Resource Type is specified with the Properties as defined Table 3. Mandatory in the table  
1798 means that the Property shall be defined as part of the overall Resource Type schema; actual  
1799 inclusion of the Property as part of a returned or generated payload is dependent upon the schema  
1800 that applies to the operation being invoked.

1801 **Table 3 – Property definitions of a Resource Type in the OpenAPI Specification 2.0 file**

Property Name	Friendly Alias Name	Property Value	Value Type	Value Rules	Access Modes	Mandatory	Description
<value>, name may change dependent on the Resource	<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
range	Range	[Min,Max]	array of integers or numbers	Linear range	Read-only	no	Range of input values, specified as a two element array. See clause 5.4.2.2.
step	Step	Dependent on the Resource	Integer or Number	Dependent on the Resource	Read-only	no	Step value across the defined range. See clause 5.4.2.3.
precision	Precision	Dependent on the Resource	Number	Dependent on the Resource	Read-only	no	Accuracy granularity of the exposed value. See clause 5.4.2.4.

1802

1803 For Resources, which by their nature have more than one physical parameter, the value Property  
1804 can be replaced with multiple Properties specifying the different physical parameters, or with further  
1805 structures such as arrays of Properties, objects, or Collections. The type of the value shall be  
1806 indicated in the OpenAPI Specification 2.0 definition of the Resource Type and should be suitable  
1807 for the conveyed value. All Property Names and Property Values defined in this document are case  
1808 sensitive.

1809 **5.4.2.2 "range" Property**

1810 The "range" defines the valid range for the Property in the Resource as a two element array. This  
1811 is either an integer or a number range. The first value in the array is the minimum value, the second  
1812 value in the array is the maximum value.

1813 **5.4.2.3 "step" Property**

1814 The "step" defines the step value across the defined "range" as either an integer or a number. This  
1815 is the increment for valid values across the range. For example, for the integer case if the "range"  
1816 is 0..10 and "step" is 2 then valid values are 0,2,4,6,8,10; for the number case if the "range" is  
1817 0.0..10.0 and "step" is 2.5 then valid values are 0.0,2.5,5.0,7.5,10.0.

1818 **5.4.2.4 "precision" Property**

1819 When exposed the value in "precision" provides a +/- tolerance against the Properties in the  
1820 Resource. Thus if a Property is UPDATED to a value and that Property then RETRIEVED, the  
1821 RETRIEVED value is valid if in the range of the set value +/- precision

1822 **5.4.3 Basic Resource Schema**

1823 All Resource Types defined herein are represented as previously noted by OpenAPI Specification  
1824 2.0 files.

1825 **5.4.4 CRUDN Operation Response Codes**

1826 A Resource can be created or updated depending on the Resource Type definition and the allowed  
1827 CRUDN operations. The operation may have different response codes with different meanings.  
1828 This is explained in Table 4.

1829 **Table 4 – Return codes behaviour in OpenAPI Specification 2.0**

Response Code	Meaning
200	Payload of the response will confirm the change. The OpenAPI Specification 2.0 definition will contain a schema to define the payload.
201	Payload is the URL of the Resource that was created by the server as a result of a CREATE operation. The OpenAPI Specification 2.0 definition will contain schema to define the payload.
204	Ok, everything went well, no payload provided. The OpenAPI Specification 2.0 definition does not contain a schema. The OpenAPI Specification 2.0 definition may even omit this value, since it is regarded as default behaviour of an OCF Server.
403	Case 1: 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. The response payload should include the allowed values for the query parameter. Case 2: The server could not CREATE or UPDATE the Resource due to a problem with the provided payload. 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).

1830

1831 **5.5 Example Resource Definitions**

1832 Please see the OCF Resource Types in Clause 6 for examples of Resource Definitions. For an  
1833 example Resource Type that models an actuator refer to the definition of Dimming; for an example  
1834 Resource Type that models a sensor refer to the definition of an Illuminance Sensor.

1835 **5.6 Observable Resource Types**

1836 **5.6.1 Introduction**

1837 ISO/IEC 30118-1:2018 defines a mechanism by which Resources can advertise themselves as  
1838 “Observable” to an OCF Client. All Resource Types defined in this document may be observed.  
1839 Whether or not a Resource Type is made observable via use of the Policy Link Parameter is entirely  
1840 implementation dependent.

1841 **5.6.2 Conditional Notification**

1842 **5.6.2.1 General**

1843 All observable Resources may apply conditions to the generation of notifications that result from  
1844 the observe action, these conditions can be time based or value based or time and value based.  
1845 This is achieved by composing the Conditional Notification (oic.r.value.conditional) Resource Type  
1846 with an instance of an observable Resource; that is the Resource that is exposed by the Server  
1847 has an “rt” of “[“oic.r.<resource>”,“oic.r.value.conditional”]”.

1848 **5.6.2.2 Conditional Notification Property Summary**

1849 Table 5 summarizes the Properties provided by the Conditional Notification Resource Type. At  
1850 least one Property from the table shall be present in an instance of the Resource Type.

1851 **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

1852

1853 All Properties if exposed shall be set with initial values. All Properties may be exposed with a value  
1854 of “0” (zero); this indicates that the functionality associated with the Property is not active. Any  
1855 Client may update the exposed values subject to any ACL restrictions; such changes are global  
1856 and apply to all notifications that are sent to all observers. A notifier may reject an update to the  
1857 Property values; in such cases a diagnostic payload should be included in the rejection response  
1858 indicating the valid ranges for the Properties.

1859 **5.6.2.3 Property Definition: threshold**

1860 Minimum value change between two notifications. A notification shall be sent (within the constraints  
1861 of “minnotifyperiod”) when the change since the last notification is greater than or equal to this  
1862 value. The measurement is done against the value in the last notification that was sent; thus all  
1863 notifications (within any “maxnotifyperiod” constraints that may be present) will carry values that  
1864 differ by at least “threshold”. A “threshold” value of “0” means that no “threshold” is applied.

1865 **5.6.2.4 Property Definition: minnotifyperiod**

1866 Minimum time (in ms) that shall occur between notifications. If a value change condition is met  
1867 (“threshold” equalled or exceeded or any change in value if threshold is not present) before  
1868 expiration the notification shall not be sent till the period expires. If the Property is present and set  
1869 to “0” then no minimum notify period timer is run; if the Property is present and with a value greater  
1870 than “0” then a minimum notify period timer shall be run equal to the value. The Property value  
1871 itself is initially populated by the notifier. If the Property is not present, the minimum notify period  
1872 is up to the notifier. The timer shall be reset each time a notification is sent.

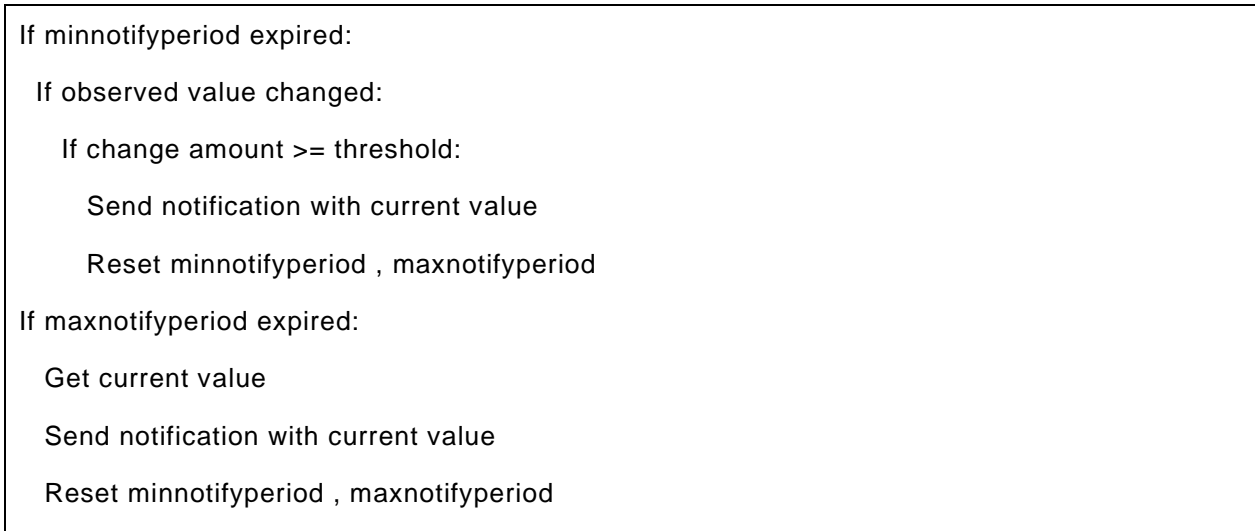
1873 **5.6.2.5 Property Definition: maxnotifyperiod**

1874 Maximum time (in ms) that the notifier shall not exceed between notifications. When the timer  
1875 expires a notification shall be sent. If present and set to “0” then no maximum notify period timer  
1876 is run; if present and with a value greater than 0 then a maximum notify period timer shall be run  
1877 equal to the value. The Property value itself shall be initially populated by the notifier. When both  
1878 “minnotifyperiod” and “maxnotifyperiod” are present and both are non-zero the value of  
1879 “maxnotifyperiod” shall be larger than the “minnotifyperiod”. If not present, the value shall be set  
1880 by the notifier. The timer shall be reset each time a notification is sent.

1881 **5.6.2.6 Governing State Machine**

1882 The “minnotifyperiod” and “maxnotifyperiod” timers are restarted each time a notification is sent  
1883 (response to the Observe). A notification is sent when value change condition (threshold) and  
1884 “minnotifyperiod” are both met if both are present. If the observed Property value subsequently  
1885 drops beneath threshold before the expiration of “minnotifyperiod” the notifier may take no action  
1886 or a notification may be sent on expiration of “minnotifyperiod” containing the current observed  
1887 Property value (at the time of the notification). If there are no timer constraints; then notifications  
1888 are sent whenever the observed Property value has changed by an amount greater than or equal  
1889 to “threshold”.

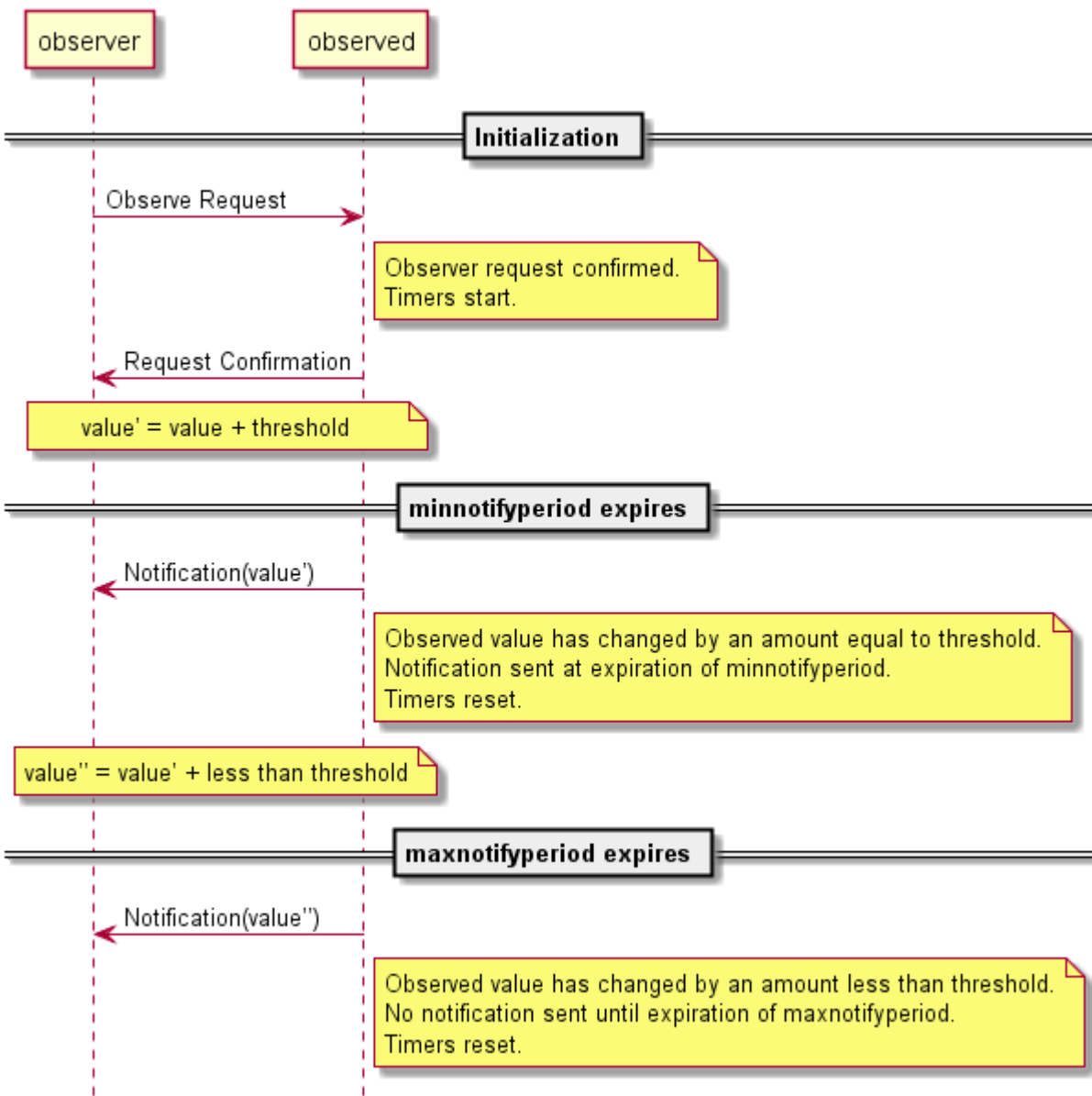
1890 Overall logic is defined in Figure 1. Figure 2 provides an illustrative sequence.



1891 **Figure 1 – Overall conditional notification logic**

1892





1893

1894

**Figure 2 – Conditional Notification Example Flow**

1895

**1896 5.7 Composite Resource Types**

1897 Composite Resource Types are Resources that comprises of one or more single or other composite  
 1898 Resource Types, an example of which is shown in Figure 3. The Composite Resource Type can be  
 1899 viewed upon as a new single Resource Type. The Composite Resource Type mechanism is a  
 1900 powerful concept since it uses existing Resource Types in a new combination to express more  
 1901 contexts to a Resource without specifying new single unit Resource Types.

1902 Composite Resource Types are defined by linking the referenced existing Resource values in to a  
 1903 Collection.

1904 The linking is done by using an array of Links; refer to ISO/IEC 30118-1:2018 clause 7.8.2 for more  
1905 details. Note that the example in Figure 3 contains a partial schema of this definition as it is for  
1906 descriptive purpose only. The Property name of the array in the example is “resources”.

1907 The contents of the listed Resources can be achieved in a single operation by using the ISO/IEC  
1908 30118-1:2018 defined oic.if.b interface.

```
{
  "swagger": "2.0",
  "info": {
    "title": "Compsite Example",
    "version": "v1.1.0-2018",
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/CompositeResURI?if=oic.if.baseline" : {
      "get": {
        "description": "Composite Resource.\n",
        "parameters": [
          {"$ref": "#/parameters/interface-baseline"}
        ],
        "responses": {
          "200": {
            "description": "Success path response for the Resource",
            "x-example": {
              "rt": ["oic.r.example"],
              "if": ["oic.if.ll", "oic.if.b", "oic.if.baseline"],
              "id": "unique_example_id",
              "resources": [
                {
                  "href": "/TimeIntervalResURI",
                  "rt": ["oic.r.time.period"],
                  "if": ["oic.if.a", "oic.if.baseline"],
                  "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
                },
                {
                  "href": "/GasConsumptionResURI",
                  "rt": ["oic.r.gas.consumption"],
                  "if": ["oic.if.s", "oic.if.baseline"],
                  "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
                }
              ]
            },
            "schema": {"$ref": "#/definitions/composite"}
          }
        }
      }
    }
  }
}
```

Figure 3 – Composite Resource Example

1909 **5.8 Document Version**

1910 Devices conformant to this document version shall add the string “ocf.res.1.3.0” to the dmV Property  
1911 in “oic.wk.d”. This Property is for legacy Device support only and will no longer be revised in  
1912 alignment with document versions.  
1913

1914 **5.9 Data types**

1915 This document adopts the types defined in ISO/IEC 30118-1:2018 with the exceptions defined in  
1916 this clause

1917 All Properties in this document that are defined as JSON number type shall be transmitted encoded  
 1918 as floating point values and not integer values. Reception of Properties defined as JSON number  
 1919 type shall be as defined in ISO/IEC 30118-1:2018. See ISO/IEC 30118-1:2018 clause 12.4 for  
 1920 specifics.

## 1921 6 Resource Type definitions

### 1922 6.1 Introduction

1923 This clause contains definitions for all Resource Types; the complete set is listed in Table 6 –  
 1924 Alphabetical list of Resource Types.

1925 All Resource Types shall be created in accordance with ISO/IEC 30118-1:2018 clause 7.4. All  
 1926 comparisons against a Resource Type shall be case insensitive.

1927 All Resource Types in this document are prefixed with “oic.r” denoting that it is an OCF defined  
 1928 Resource Type.

1929 **Table 6 – Alphabetical list of Resource Types**

Friendly Name (informative)	Resource Type (rt)	Clause
3D Printer	oic.r.printer.3d	6.88
Acceleration Sensor	oic.r.sensor.acceleration	6.56
Activity	oic.r.activity	6.127
Activity Count	oic.r.sensor.activity.count	6.24
Activity Tracker Atomic Measurement	oic.r.activitytracker-am	6.128
Air Flow	oic.r.airflow	6.2
Air Flow Control	oic.r.airflowcontrol	6.3
Air Quality	oic.r.airquality	6.66
Air Quality Collection	oic.r.airqualitycollection	6.67
Alarm	oic.r.alarm	6.129
Altimeter	oic.r.altimeter	6.61
Atmospheric Pressure	oic.r.sensor.atmosphericpressure	6.25
Audio Controls	oic.r.audio	6.26
Auto Focus	oic.r.autofocus	6.27
Automatic Document Feeder	oic.r.automaticdocumentfeeder	6.28
Auto White Balance	oic.r.colour.autowhitebalance	6.32
Battery	oic.r.energy.battery	6.4
Battery Material	oic.r.batterymaterial	6.79
Body Composition Analyser Atomic Measurement	oic.r.bodycompositionanalyser-am	6.155
Binary switch	oic.r.switch.binary	6.5
Blood Pressure	oic.r.blood.pressure	6.89
Blood Pressure Monitor Atomic Measurement	oic.r.bloodpressuremonitor-am	6.90
BMI	oic.r.bmi	6.91
Body Fat	oic.r.body.fat	6.92
Body Fat Free Mass	oic.r.body.ffm	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	6.80
Brightness	oic.r.light.brightness	6.6
Button Switch	oic.r.button	6.29
Cadence	oic.r.cadence	6.144
Calibrate for Continuous Glucose Meter (CGM)	oic.r.cgm.calibrate	6.131
Calorific Value	oic.r.calorificvalue	6.116
Carbon Dioxide Sensor	oic.r.sensor.carbondioxide	6.30
Carbon Monoxide Sensor	oic.r.sensor.carbonmonoxide	6.31
Circuit Breaker (IEC 61850)	oic.r.circuitbreaker	6.145
Clock	oic.r.clock	6.62
Colour Chroma	oic.r.colour.chroma	6.7
Colour Hue Saturation	oic.r.colour.hs	6.78
Colour RGB	oic.r.colour.rgb	6.8
Colour Saturation	oic.r.colour.saturation	6.33
Colour Space Coordinates	oic.r.colour.csc	6.76
Colour Temperature	oic.r.colour.colourtemperature	6.77
Consumable	oic.r.consumable	6.68
Consumable Collection	oic.r.consumablecollection	6.69
Contact Sensor	oic.r.sensor.contact	6.34
Continuous Glucose Meter (CGM) Atomic Measurement	oic.r.cgm-am	6.130
Conversion Factor	oic.r.conversionfactor	6.117
Cycling Power	oic.r.cyclingpower	6.146
Delay Defrost	oic.r.delaydefrost	6.70
Demand Response Load Control (DRLC)	oic.r.energy.drlc	6.35
Deodorization	oic.r.deodorization	6.152
Dimming	oic.r.light.dimming	6.9
Door	oic.r.door	6.10
Ecomode	oic.r.ecomode	6.71
Electric Vehicle Connector	oic.r.vehicle.connector	6.86
Electrical Energy	oic.r.energy.electrical	6.81
Energy Consumption	oic.r.energy.consumption	6.11
Energy Generation	oic.r.energy.generation	6.82
Energy Overload/Circuit Breaker	oic.r.energy.overload	6.36
Energy Usage	oic.r.energy.usage	6.12

Gas Consumption	oic.r.gas.consumption	6.118
Gas Usage	oic.r.gas.usage	6.119
Fault Interrupter Switch	oic.r.switch.fault	6.156
Foaming	oic.r.foaming	6.83
Generic Sensor	oic.r.sensor	6.37
Geolocation Sensor	oic.r.sensor.geolocation	6.63
Glass Break Sensor	oic.r.sensor.glassbreak	6.38
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 Context Medication	oic.r.glucose.medications	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.testers	6.108
Grinder	oic.r.grinder	6.84
HVAC Capacity	Oic.r.hvac.capacity	6.157
Heart Rate	oic.r.heartrate	6.136
Heart Rate Monitor Atomic Measurement Representation	oic.r.heartratemonitor-am	6.137
Heart Rate Zone Sensor	oic.r.sensor.heart.zone	6.39
Heating Zone	oic.r.heatingzone	6.72
Heating Zone Collection	oic.r.heatingzonecollection	6.73
Height	oic.r.height	6.64
Humidity	oic.r.humidity	6.13
IAS Zone Info	oic.r.iaszoneinfo	6.124
IAS Zone Collection	oic.r.iaszone	6.125
Icemaker	oic.r.icemaker	6.14
Illuminance Sensor	oic.r.sensor.illuminance	6.40
Impact Sensor	oic.r.impactsensor	6.120
Inverter (IEC 61850)	oic.r.inverter	6.147
KeyCard Switch	oic.r.keycardswitch	6.153
Keypad Character	oic.r.keypadchar	6.121
Liquid Level	oic.r.liquid.level	6.85
Lock	oic.r.lock.status	6.15
Lock Code	oic.r.lock.code	6.16
Magnetic Field Direction	oic.r.sensor.magneticfielddirection	6.41
Media	oic.r.media	6.42

Media Audio	oic.r.media.audio	6.158
Media Core	oic.r.media.core	6.159
Media Image	oic.r.media.image	6.160
Media Source	oic.r.mediasource	6.43
Media Source List	oic.r.mediasourcelist	6.44
Media Source Input	oic.r.media.input	6.45
Media Source Output	oic.r.media.output	6.46
Media Text	oic.r.media.text	6.161
Media Video	oic.r.media.video	6.162
Mode	oic.r.mode	6.17
Movement	oic.r.movement.linear	6.57
Motion Sensor	oic.r.sensor.motion	6.47
Muscle Oxygen Saturation	oic.r.muscleoxygensaturation	6.154
Night Mode	oic.r.nightmode	6.48
Opaque Data	oic.r.opaquedata	6.122
Open Level	oic.r.openlevel	6.18
Operational State	oic.r.operational.state	6.19
Optical RFID Station	oic.r.rfid.station	6.109
Optical RFID Tag	oic.r.rfid.tag	6.110
Pan Tilt Zoom Movement	oic.r.ptz	6.50
Power Source	oic.r.powersource	6.111
Presence Sensor	oic.r.sensor.presence	6.49
Print Queue	oic.r.printer.queue	6.112
Pulsatile Characteristic for Pulse Oximeter	oic.r.pulsatilecharacteristic	6.138
Pulsatile Occurrence for Pulse Oximeter	oic.r.pulsatileoccurrence	6.139
Pulse Oximeter Atomic Measurement Representation	oic.r.pulseoximeter-am	6.140
Pulse Rate	oic.r.pulserate	6.113
PV array system connection terminal (IEC 61850)	oic.r.pvconnectionterminal	6.148
Ramp Time	oic.r.light.ramptime	6.20
Refrigeration	oic.r.refrigeration	6.21
Restricted Switch	oic.r.switch.restricted	6.163
Sampling Interface for Continuous Glucose Meter (CGM)	oic.r.cgm.samplinginterval	6.132
Selectable Levels	oic.r.selectablelevels	6.74
Sensor for Continuous Glucose Meter (CGM)	oic.r.cgm.sensor	6.133
Sensor Properties	oic.r.sensor.props	6.114
Signal Strength	oic.r.signalstrength	6.51
Sleep	oic.r.sleep	6.141

Sleep Monitor Atomic Measurement Batch Representation	oic.r.sleepmonitor-am	6.142
Sleep Sensor	oic.r.sensor.sleep	6.58
Smoke Sensor	oic.r.sensor.smoke	6.59
Speech Synthesis	oic.r.speech.tts	6.52
Speed	oic.r.speed	6.149
SpO2 for Pulse Oximeter	oic.r.spo2	6.143
Status for Continuous Glucose Meter (CGM)	oic.r.cgm.status	6.134
Temperature	oic.r.temperature	6.22
Three Axis Sensor	oic.r.sensor.threeaxis	6.60
Threshold for Continuous Glucose Meter (CGM)	oic.r.cgm.threshold	6.135
Time Period	oic.r.time.period	6.23
Time Stamp	oic.r.time.stamp	6.87
Torque	oic.r.torque	6.150
Touch Sensor	oic.r.sensor.touch	6.53
UV Radiation	oic.r.sensor.radiation.uv	6.54
User ID	oic.r.userid	6.115
User Info for Application Layer	oic.r.userinfo	6.123
Value Conditional	oic.r.value.conditional	6.75
Water Info	oic.r.waterinfo	6.151
Water Sensor	oic.r.sensor.water	6.55
Weight	oic.r.weight	6.65
Window Covering	oic.r.windowcovering	6.126

1930

## 1931 **6.2 Air Flow**

### 1932 **6.2.1 Introduction**

1933 This Resource describes Properties associated with air flow.

1934 The Property "supporteddirections" is the set of valid values for the direction property for a particular instance of this Resource Type.

1936 The Property "direction" is the directionality of the air flow if applicable, if Property "supporteddirections" is also present it must be a value from that set.

1938 The values of Property "direction" are dependent on the capabilities of the unit.

1939 The Property "speed" is an integer representing the current speed level for the unit.

1940 The Property "range" is an array of the min,max values for the speed level. If not present the "range" defaults to [0,100].

1942 Property "automode" is the status of the automode feature; Off means automode is not enabled, 1943 On means automode is active and the speed is automatically controlled by the Device.

### 1944 **6.2.2 Example URI**

1945 /AirFlowResURI

### 1946 **6.2.3 Resource type**

1947 The Resource Type is defined as: "oic.r.airflow".

## 1948 6.2.4 OpenAPI 2.0 definition

```
1949 {
1950   "swagger": "2.0",
1951   "info": {
1952     "title": "Air Flow",
1953     "version": "20190215",
1954     "license": {
1955       "name": "OCF Data Model License",
1956       "url":
1957         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
1958 CENSE.md",
1959       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
1960 reserved."
1961     },
1962     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
1963   },
1964   "schemes": ["http"],
1965   "consumes": ["application/json"],
1966   "produces": ["application/json"],
1967   "paths": {
1968     "/AirFlowResURI" : {
1969       "get": {
1970         "description": "This Resource describes Properties associated with air flow.\nThe Property
1971 \n\"supporteddirections\" is the set of valid values for the direction property for a particular
1972 instance of this Resource Type.\nThe Property \"direction\" is the directionality of the air flow if
1973 applicable, if Property \"supporteddirections\" is also present it must be a value from that set.\n
1974 The values of Property \"direction\" are dependent on the capabilities of the unit.\nThe Property
1975 \"speed\" is an integer representing the current speed level for the unit.\nThe Property \"range\"
1976 is an array of the min,max values for the speed level. If not present the \"range\" defaults to
1977 [0,100].\nProperty \"automode\" is the status of the automode feature; Off means automode is not
1978 enabled, On means automode is active and the speed is automatically controlled by the Device.",
1979         "parameters": [
1980           { "$ref": "#/parameters/interface" }
1981         ],
1982         "responses": {
1983           "200": {
1984             "description": "",
1985             "x-example":
1986               {
1987                 "rt": ["oic.r.airflow"],
1988                 "if": ["oic.if.a", "oic.if.baseline"],
1989                 "supporteddirections": ["left", "right", "centre"],
1990                 "direction": "left",
1991                 "speed": 5,
1992                 "range": [1, 7],
1993                 "automode": "Off"
1994               },
1995             "schema": { "$ref": "#/definitions/AirFlow" }
1996           }
1997         }
1998       },
1999       "post": {
2000         "description": "When \"automode\" is set to true, \"direction\" and \"speed\" are not
2001 utilized by the device.",
2002         "parameters": [
2003           { "$ref": "#/parameters/interface" },
2004           {
2005             "name": "body",
2006             "in": "body",
2007             "required": true,
2008             "schema": { "$ref": "#/definitions/AirFlow" },
2009             "x-example":
2010               {
2011                 "direction": "right",
2012                 "speed": 3
2013               }
2014           }
2015         ],
2016         "responses": {
2017           "200": {
2018             "description": "",
```



```

2019         "x-example":
2020             {
2021                 "direction": "right",
2022                 "speed": 3
2023             },
2024         "schema": { "$ref": "#/definitions/AirFlow" }
2025     },
2026     "403": {
2027         "description": "This response is generated by the OCF Server when the client sends:\n
2028 An UPDATE with an invalid Property value for direction.\n An UPDATE with an out of range property
2029 value for speed.\nThe server may respond with the current resource representation.\n",
2030         "x-example":
2031             {
2032                 "supporteddirections": ["left", "right", "centre"],
2033                 "direction": "right",
2034                 "speed": 3
2035             },
2036         "schema": { "$ref": "#/definitions/AirFlow" }
2037     }
2038 }
2039 }
2040 }
2041 },
2042 "parameters": {
2043     "interface" : {
2044         "in": "query",
2045         "name": "if",
2046         "type": "string",
2047         "enum": ["oic.if.a", "oic.if.baseline"]
2048     }
2049 },
2050 "definitions": {
2051     "AirFlow" : {
2052         "properties": {
2053             "rt" : {
2054                 "description": "The Resource Type",
2055                 "items": {
2056                     "enum": ["oic.r.airflow"],
2057                     "maxLength": 64,
2058                     "type": "string"
2059                 },
2060                 "minItems": 1,
2061                 "uniqueItems": true,
2062                 "readOnly": true,
2063                 "type": "array"
2064             },
2065             "speed" : {
2066                 "description": "The current speed level.",
2067                 "type": "integer"
2068             },
2069             "direction" : {
2070                 "description": "The directionality of the air flow, a value indicated by
2071 \"supporteddirections\".",
2072                 "type": "string"
2073             },
2074             "automode" : {
2075                 "description": "The status of the automode feature, if on speed is set by the Device.",
2076                 "enum": [
2077                     "On",
2078                     "Off"
2079                 ],
2080                 "type": "string"
2081             },
2082             "supporteddirections" : {
2083                 "description": "The array of possible direction settings for this instance of the Resource
2084 Type.",
2085                 "items": {
2086                     "minItems": 1,
2087                     "type": "string",
2088                     "uniqueItems": true
2089                 },
2090                 "readOnly": true,

```

```

2091         "type": "array"
2092     },
2093     "n": {
2094         "$ref":
2095         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2096         schema.json#/definitions/n"
2097     },
2098     "id": {
2099         "$ref":
2100         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2101         schema.json#/definitions/id"
2102     },
2103     "range": {
2104         "$ref":
2105         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
2106         schema.json#/definitions/range_integer"
2107     },
2108     "step": {
2109         "$ref":
2110         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
2111         schema.json#/definitions/step_integer"
2112     },
2113     "if": {
2114         "description": "The OCF Interface set supported by this Resource.",
2115         "items": {
2116             "enum": [
2117                 "oic.if.a",
2118                 "oic.if.baseline"
2119             ],
2120             "type": "string"
2121         },
2122         "minItems": 2,
2123         "uniqueItems": true,
2124         "readOnly": true,
2125         "type": "array"
2126     }
2127 },
2128 "type": "object",
2129 "required": ["speed"]
2130 }
2131 }
2132 }
2133

```

### 2134 6.2.5 Property definition

2135 Table 7 defines the Properties that are part of the "oic.r.airflow" Resource Type.

2136 **Table 7 – The Property definitions of the Resource with type "rt" = "oic.r.airflow".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type
speed	integer	Yes	Read Write	The current speed level.
direction	string	No	Read Write	The directionality of the air flow, a value indicated by "supporteddirections".
automode	string	No	Read Write	The status of the automode feature, if on speed is set by the Device.
supporteddirections	array: see schema	No	Read Only	The array of possible direction settings for this instance of the Resource Type.

n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

2137 **6.2.6 CRUDN behaviour**

2138 Table 8 defines the CRUDN operations that are supported on the "oic.r.airflow" Resource Type.

2139 **Table 8 – The CRUDN operations of the Resource with type "rt" = "oic.r.airflow".**

Create	Read	Update	Delete	Notify
	get	post		observe

2140 **6.3 Air Flow Control**

2141 **6.3.1 Introduction**

2142 This Resource describes the attributes associated with control of air flow,  
 2143 for example as modelled by a Thermostat (fan), Room A/C or other device.  
 2144 The Resource is a Collection of:

- 2145 AirFlow Resource
- 2146 BinarySwitch Resource

2148 **6.3.2 Example URI**

2149 /AirFlowControlResURI

2150 **6.3.3 Resource type**

2151 The Resource Type is defined as: "oic.r.airflowcontrol".

2152 **6.3.4 OpenAPI 2.0 definition**

```

2153 {
2154   "swagger": "2.0",
2155   "info": {
2156     "title": "Air Flow Control",
2157     "version": "20190307",
2158     "license": {
2159       "name": "OCF Data Model License",
2160       "url":
2161         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
2162         CENSE.md",
2163       "x-copyright": "copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
2164     },
2165     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
2166   },
2167   "schemes": ["http"],
2168   "consumes": ["application/json"],
2169   "produces": ["application/json"],
2170   "paths": {
2171     "/AirFlowControlResURI?if=oic.if.ll" : {
2172       "get": {
2173         "description": "This Resource describes the attributes associated with control of air
2174         flow,\nfor example as modelled by a Thermostat (fan), Room A/C or other device.\nThe Resource is a
2175         Collection of:\n AirFlow Resource\n BinarySwitch Resource\n",
2176         "parameters": [

```

```

2177     {"$ref": "#/parameters/interface-all"}
2178   ],
2179   "responses": {
2180     "200": {
2181       "description" : "",
2182       "x-example": [
2183         {"href": "/BinarySwitchResURI", "rt":["oic.r.switch.binary"],
2184 "if":["oic.if.a","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80:b1d6]:1122"}]},
2185         {"href": "/AirFlowResURI", "rt":["oic.r.airflow"],
2186 "if":["oic.if.a","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80:b1d6]:1122"}]}
2187       ],
2188       "schema": { "$ref": "#/definitions/AirFlowControl-11" }
2189     }
2190   }
2191 },
2192 "/AirFlowControlResURI?if=oic.if.b": {
2193   "get": {
2194     "description": "This Resource describes the attributes associated with control of air
2195 flow,\nfor example as modelled by a Thermostat (fan), Room A/C or other device.\nThe Resource is a
2196 Collection of:\n AirFlow Resource\n BinarySwitch Resource\n",
2197     "parameters": [
2198       {"$ref": "#/parameters/interface-all"}
2199     ],
2200     "responses": {
2201       "200": {
2202         "description" : "",
2203         "x-example": [
2204           {
2205             "href": "/BinarySwitchResURI",
2206             "rep": {
2207               "value": true
2208             }
2209           },
2210           {
2211             "href": "/AirFlowResURI",
2212             "rep": {
2213               "supporteddirections": ["left","right","centre"],
2214               "direction": "right",
2215               "speed": 3,
2216               "range": [1,7],
2217               "automode": "Off"
2218             }
2219           }
2220         ],
2221       },
2222       "schema": { "$ref": "#/definitions/AirFlowControlBatch-Retrieve" }
2223     }
2224   },
2225   "post": {
2226     "description": "Sets the current air flow control values using the batch OCF Interface\n",
2227     "parameters": [
2228       {"$ref": "#/parameters/interface-b"},
2229       {
2230         "name": "body",
2231         "in": "body",
2232         "required": true,
2233         "schema": { "$ref": "#/definitions/AirFlowControlBatch-Update" },
2234         "x-example": [
2235           {
2236             "href": "/AirFlowResURI",
2237             "rep": {
2238               "direction": "left",
2239               "speed": 4
2240             }
2241           }
2242         ]
2243       }
2244     ],
2245     "responses": {
2246       "200": {
2247         "description" : "",

```

```

2249         "x-example": [
2250             {
2251                 "href": "/BinarySwitchResURI",
2252                 "rep": {
2253                     "value": true
2254                 }
2255             },
2256             {
2257                 "href": "/AirFlowResURI",
2258                 "rep": {
2259                     "supporteddirections": ["left","right","centre"],
2260                     "direction": "left",
2261                     "speed": 4,
2262                     "range": [1,7],
2263                     "automode": "Off"
2264                 }
2265             }
2266         ],
2267         "schema": { "$ref": "#/definitions/AirFlowControlBatch-Retrieve" }
2268     }
2269 },
2270 },
2271 },
2272 "/AirFlowControlResURI?if=oic.if.baseline" : {
2273     "get": {
2274         "description": "This Resource describes the attributes associated with control of air
2275 flow,\nfor example as modelled by a Thermostat (fan), Room A/C or other device.\nThe Resource is a
2276 Collection of:\n AirFlow Resource\n BinarySwitch Resource\n",
2277         "parameters": [
2278             { "$ref": "#/parameters/interface-all" }
2279         ],
2280         "responses": {
2281             "200": {
2282                 "description" : "",
2283                 "x-example": {
2284                     "rt": ["oic.r.airflowcontrol"],
2285                     "rts": ["oic.r.airflow","oic.r.switch.binary"],
2286                     "if": ["oic.if.ll","oic.if.b","oic.if.baseline"],
2287                     "links": [
2288                         { "href": "/BinarySwitchResURI", "rt":["oic.r.switch.binary"],
2289 "if":["oic.if.a","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80:b1d6]:1122"}]},
2290                         { "href": "/AirFlowResURI", "rt":["oic.r.airflow"],
2291 "if":["oic.if.a","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80:b1d6]:1122"}]}
2292                     ]
2293                 },
2294                 "schema": { "$ref": "#/definitions/AirFlowControl-baseline" }
2295             }
2296         }
2297     }
2298 },
2299 },
2300 "parameters": {
2301     "interface-b" : {
2302         "in" : "query",
2303         "name" : "if",
2304         "type" : "string",
2305         "enum" : ["oic.if.b"]
2306     },
2307     "interface-all" : {
2308         "in" : "query",
2309         "name" : "if",
2310         "type" : "string",
2311         "enum" : ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
2312     }
2313 },
2314 "definitions": {
2315     "AirFlowControl-ll" : {
2316         "type": "array",
2317         "minItems": 2,
2318         "uniqueItems": true,
2319         "readOnly": true,
2320         "items": {

```

```

2321         "$ref": "#/definitions/oic.oic-link"
2322     }
2323 },
2324 "oic.oic-link": {
2325     "type": "object",
2326     "properties": {
2327         "anchor": {
2328             "$ref":
2329 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2330 schema.json#/definitions/anchor"
2331         },
2332         "di": {
2333             "$ref":
2334 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2335 schema.json#/definitions/di"
2336         },
2337         "eps": {
2338             "$ref":
2339 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2340 schema.json#/definitions/eps"
2341         },
2342         "href": {
2343             "$ref":
2344 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2345 schema.json#/definitions/href"
2346         },
2347         "ins": {
2348             "$ref":
2349 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2350 schema.json#/definitions/ins"
2351         },
2352         "p": {
2353             "$ref":
2354 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2355 schema.json#/definitions/p"
2356         },
2357         "rel": {
2358             "$ref":
2359 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2360 schema.json#/definitions/rel_array"
2361         },
2362         "title": {
2363             "$ref":
2364 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2365 schema.json#/definitions/title"
2366         },
2367         "type": {
2368             "$ref":
2369 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2370 schema.json#/definitions/type"
2371         },
2372         "if": {
2373             "description": "The OCF Interfaces supported by the target Resource",
2374             "items": {
2375                 "enum": [
2376                     "oic.if.a",
2377                     "oic.if.baseline"
2378                 ],
2379                 "type": "string",
2380                 "maxLength": 64
2381             },
2382             "minItems": 2,
2383             "uniqueItems": true,
2384             "type": "array",
2385             "readOnly": true
2386         },
2387         "rt": {
2388             "description": "Resource Type of the target Resource",
2389             "items": {
2390                 "maxLength": 64,
2391                 "type": "string",
2392                 "enum": ["oic.r.switch.binary", "oic.r.airflow"]

```

```

2393     },
2394     "minItems": 1,
2395     "type": "array",
2396     "uniqueItems": true,
2397     "readOnly": true
2398   }
2399 },
2400 "required": [
2401   "href",
2402   "rt",
2403   "if"
2404 ]
2405 },
2406 "AirFlowControl-baseline" : {
2407   "properties": {
2408     "n": {
2409       "$ref" :
2410 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2411 schema.json#/definitions/n"
2412     },
2413     "id": {
2414       "$ref" :
2415 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2416 schema.json#/definitions/id"
2417     },
2418     "rt": {
2419       "description": "Resource Type of this Resource",
2420       "items": {
2421         "maxLength": 64,
2422         "type": "string",
2423         "enum": ["oic.r.airflowcontrol"]
2424       },
2425       "minItems": 1,
2426       "uniqueItems": true,
2427       "readOnly": true,
2428       "type": "array"
2429     },
2430     "rts": {
2431       "items": {
2432         "type": "string",
2433         "enum": ["oic.r.airflow", "oic.r.switch.binary"],
2434         "maxLength": 64
2435       },
2436       "minItems": 1,
2437       "type": "array",
2438       "uniqueItems": true,
2439       "readOnly": true
2440     },
2441     "if": {
2442       "description": "The OCF Interfaces supported by this Resource",
2443       "items": {
2444         "enum": [
2445           "oic.if.ll",
2446           "oic.if.b",
2447           "oic.if.baseline"
2448         ],
2449         "type": "string",
2450         "maxLength": 64
2451       },
2452       "minItems": 1,
2453       "readOnly": true,
2454       "uniqueItems": true,
2455       "type": "array"
2456     },
2457     "links": {
2458       "description": "A set of simple or individual OCF Links.",
2459       "items": {
2460         "$ref": "#/definitions/oic.oic-link"
2461       },
2462       "type": "array",
2463       "minItems": 2,
2464       "uniqueItems": true,

```

```

2465         "readOnly": true
2466     }
2467 },
2468 "type" : "object",
2469 "required": ["rt","rts","if","links"]
2470 },
2471 "AirFlowControlBatch-Retrieve" : {
2472     "type": "array",
2473     "minItems": 2,
2474     "uniqueItems": true,
2475     "items": {
2476         "type": "object",
2477         "additionalProperties": true,
2478         "properties": {
2479             "href": {
2480                 "$ref":
2481 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2482 schema.json#/definitions/href"
2483             },
2484             "rep": {
2485                 "anyOf": [
2486                     {"$ref":
2487 "https://openconnectivityfoundation.github.io/IoTDataModels/AirFlowResURI.swagger.json#/definitions/
2488 AirFlow"},
2489                     {"$ref":
2490 "https://openconnectivityfoundation.github.io/IoTDataModels/BinarySwitchResURI.swagger.json#/definit
2491 ions/BinarySwitch"}
2492                 ]
2493             }
2494         },
2495         "required": [
2496             "href",
2497             "rep"
2498         ]
2499     }
2500 },
2501 "AirFlowControlBatch-Update" : {
2502     "type": "array",
2503     "minItems": 1,
2504     "uniqueItems": true,
2505     "items": {
2506         "type": "object",
2507         "additionalProperties": true,
2508         "properties": {
2509             "href": {
2510                 "$ref":
2511 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2512 schema.json#/definitions/href"
2513             },
2514             "rep": {
2515                 "anyOf": [
2516                     {"$ref":
2517 "https://openconnectivityfoundation.github.io/IoTDataModels/AirFlowResURI.swagger.json#/definitions/
2518 AirFlow"},
2519                     {"$ref":
2520 "https://openconnectivityfoundation.github.io/IoTDataModels/BinarySwitchResURI.swagger.json#/definit
2521 ions/BinarySwitch"}
2522                 ]
2523             }
2524         },
2525         "required": [
2526             "href",
2527             "rep"
2528         ]
2529     }
2530 }
2531 }
2532 }
2533

```

### 2534 6.3.5 Property definition

2535 Table 9 defines the Properties that are part of the "oic.r.airflowcontrol" Resource Type.  
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**Table 9 – The Property definitions of the Resource with type "rt" = "oic.r.airflowcontrol".**

Property name	Value type	Mandatory	Access mode	Description
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	
if	array: see schema	Yes	Read Only	The OCF Interfaces supported by the target Resource
rt	array: see schema	Yes	Read Only	Resource Type of the target Resource
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
rt	array: see schema	Yes	Read Only	Resource Type of this Resource
rts	array: see schema	Yes	Read Only	
if	array: see schema	Yes	Read Only	The OCF Interfaces supported by this Resource
links	array: see schema	Yes	Read Only	A set of simple or individual OCF Links.
href	multiple types: see schema	Yes	Read Write	
rep	multiple types: see schema	Yes	Read Write	
href	multiple types: see schema	Yes	Read Write	
rep	multiple types: see schema	Yes	Read Write	

2537

**6.3.6 CRUDN behaviour**

2538

Table 10 defines the CRUDN operations that are supported on the "oic.r.airflowcontrol" Resource Type.

2539

2540 **Table 10 – The CRUDN operations of the Resource with type "rt" = "oic.r.airflowcontrol".**

Create	Read	Update	Delete	Notify
	get			observe

2541 **6.4 Battery**

2542 **6.4.1 Introduction**

2543 This Resource describes the attributes associated with a battery. The Property "charge" is an  
 2544 integer showing the current battery charge level as a percentage in the range 0 (fully discharged)  
 2545 to 100 (fully charged). The Property "capacity" represents the total capacity of battery in Amp  
 2546 Hours (Ah). The "charging" status and "discharging" status are represented by boolean values set  
 2547 to "true" indicating enabled and "false" indicating disabled. Low battery status is represented by a  
 2548 boolean value set to "true" indicating low charge level and "false" indicating otherwise, based  
 2549 upon the battery threshold represented as a percentage.

2550 **6.4.2 Example URI**

2551 /BatteryResURI

2552 **6.4.3 Resource type**

2553 The Resource Type is defined as: "oic.r.energy.battery".

2554 **6.4.4 OpenAPI 2.0 definition**

```

2555 {
2556   "swagger": "2.0",
2557   "info": {
2558     "title": "Battery",
2559     "version": "20190618",
2560     "license": {
2561       "name": "OCF Data Model License",
2562       "url":
2563         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
2564         CENSE.md",
2565       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
2566     },
2567     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
2568   },
2569   "schemes": ["http"],
2570   "consumes": ["application/json"],
2571   "produces": ["application/json"],
2572   "paths": {
2573     "/BatteryResURI" : {
2574       "get": {
2575         "description": "This Resource describes the attributes associated with a battery. The
2576         Property \"charge\" is an integer showing the current battery charge level as a percentage in the
2577         range 0 (fully discharged) to 100 (fully charged). The Property \"capacity\" represents the total
2578         capacity of battery in Amp Hours (Ah). The \"charging\" status and \"discharging\" status are
2579         represented by boolean values set to \"true\" indicating enabled and \"false\" indicating disabled.
2580         Low battery status is represented by a boolean value set to \"true\" indicating low charge level and
2581         \"false\" indicating otherwise, based upon the battery threshold represented as a percentage.",
2582         "parameters": [
2583           {"$ref": "#/parameters/interface"}
2584         ],
2585         "responses": {
2586           "200": {
2587             "description" : "",
2588             "x-example":
2589               {
2590                 "rt": ["oic.r.energy.battery"],
2591                 "if": ["oic.if.rw", "oic.if.baseline"],
2592                 "charge": 50,
2593                 "capacity": 3000,
2594                 "charging": true,
2595                 "discharging": false,
2596                 "lowbattery": false,

```

```

2597         "batterythreshold": 20,
2598         "defect": false,
2599         "timestamp": "2015-11-05T14:30:00.20Z"
2600     },
2601     "schema": { "$ref": "#/definitions/Battery" }
2602 }
2603 }
2604 },
2605 "post": {
2606     "description": "Sets current battery values\n",
2607     "parameters": [
2608         {"$ref": "#/parameters/interface"},
2609         {
2610             "name": "body",
2611             "in": "body",
2612             "required": true,
2613             "schema": { "$ref": "#/definitions/BatteryUpdate" },
2614             "x-example":
2615                 {
2616                     "batterythreshold": 20
2617                 }
2618         }
2619     ],
2620     "responses": {
2621         "200": {
2622             "description" : "",
2623             "x-example":
2624                 {
2625                     "batterythreshold": 20
2626                 },
2627             "schema": { "$ref": "#/definitions/BatteryUpdate" }
2628         }
2629     }
2630 }
2631 }
2632 },
2633 "parameters": {
2634     "interface" : {
2635         "in": "query",
2636         "name": "if",
2637         "type": "string",
2638         "enum": ["oic.if.rw", "oic.if.baseline"]
2639     }
2640 },
2641 "definitions": {
2642     "Battery" : {
2643         "properties": {
2644             "rt": {
2645                 "description": "The Resource Type.",
2646                 "items": {
2647                     "enum": ["oic.r.energy.battery"],
2648                     "maxLength": 64,
2649                     "type": "string"
2650                 },
2651                 "minItems": 1,
2652                 "uniqueItems": true,
2653                 "readOnly": true,
2654                 "type": "array"
2655             },
2656             "discharging": {
2657                 "description": "The status of discharging.",
2658                 "readOnly": true,
2659                 "type": "boolean"
2660             },
2661             "lowbattery": {
2662                 "description": "The status of the low battery warning based upon the defined threshold.",
2663                 "readOnly": true,
2664                 "type": "boolean"
2665             },
2666             "capacity": {
2667                 "description": "The total capacity in Amp-hours (Ah).",
2668                 "readOnly": true,

```

```

2669         "type": "number"
2670     },
2671     "batterythreshold": {
2672         "description": "The threshold percentage for the low battery warning.",
2673         "maximum": 100,
2674         "minimum": 0,
2675         "type": "integer"
2676     },
2677     "charge": {
2678         "description": "The current charge percentage.",
2679         "maximum": 100,
2680         "minimum": 0,
2681         "readOnly": true,
2682         "type": "integer"
2683     },
2684     "charging": {
2685         "description": "The status of charging.",
2686         "readOnly": true,
2687         "type": "boolean"
2688     },
2689     "defect": {
2690         "description": "Battery defect detected. True = defect, False = no defect",
2691         "readOnly": true,
2692         "type": "boolean"
2693     },
2694     "timestamp": {
2695         "description": "An RFC3339 formatted time indicating when the data was observed (e.g.:
2696 2016-02-15T09:19Z, 1996-12-19T16:39:57-08:00). Note that 1/100 time resolution should be used.",
2697         "format": "date-time",
2698         "readOnly": true,
2699         "type": "string"
2700     },
2701     "n": {
2702         "$ref":
2703         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2704         schema.json#/definitions/n"
2705     },
2706     "id": {
2707         "$ref":
2708         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2709         schema.json#/definitions/id"
2710     },
2711     "if": {
2712         "description": "The OCF Interface set supported by this Resource.",
2713         "items": {
2714             "enum": [
2715                 "oic.if.rw",
2716                 "oic.if.baseline"
2717             ],
2718             "type": "string"
2719         },
2720         "minItems": 2,
2721         "uniqueItems": true,
2722         "readOnly": true,
2723         "type": "array"
2724     }
2725 },
2726 "type" : "object",
2727 "required": ["charge"]
2728 },
2729 "BatteryUpdate": {
2730     "properties": {
2731         "batterythreshold": {
2732             "description": "The threshold percentage for the low battery warning.",
2733             "maximum": 100,
2734             "minimum": 0,
2735             "type": "integer"
2736         }
2737     },
2738     "type" : "object",
2739     "required": ["batterythreshold"]
2740 }

```

2741 }  
 2742 }  
 2743 }

2744 **6.4.5 Property definition**

2745 Table 11 defines the Properties that are part of the "oic.r.energy.battery" Resource Type.

2746 **Table 11 – The Property definitions of the Resource with type "rt" = "oic.r.energy.battery".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
discharging	boolean	No	Read Only	The status of discharging.
lowbattery	boolean	No	Read Only	The status of the low battery warning based upon the defined threshold.
capacity	number	No	Read Only	The total capacity in Amp-hours (Ah).
batterythreshold	integer	No	Read Write	The threshold percentage for the low battery warning.
charge	integer	Yes	Read Only	The current charge percentage.
charging	boolean	No	Read Only	The status of charging.
defect	boolean	No	Read Only	Battery defect detected. True = defect, False = no defect
timestamp	string	No	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). Note that 1/100 time resolution should be used.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
batterythreshold	integer	Yes	Read Write	The threshold percentage for the low battery warning.

2747 **6.4.6 CRUDN behaviour**

2748 Table 12 defines the CRUDN operations that are supported on the "oic.r.energy.battery" Resource  
 2749 Type.

2750 **Table 12 – The CRUDN operations of the Resource with type "rt" = "oic.r.energy.battery".**

Create	Read	Update	Delete	Notify
	get	post		observe

2751 **6.5 Binary Switch**

2752 **6.5.1 Introduction**

2753 This Resource describes a binary switch (on/off).

2754 The Property "value" is a boolean.

2755 A value of 'true' means that the switch is on.

2756 A value of 'false' means that the switch is off.

2757

2758 **6.5.2 Example URI**

2759 /BinarySwitchResURI

2760 **6.5.3 Resource type**

2761 The Resource Type is defined as: "oic.r.switch.binary".

2762 **6.5.4 OpenAPI 2.0 definition**

```

2763 {
2764   "swagger": "2.0",
2765   "info": {
2766     "title": "Binary Switch",
2767     "version": "20190222",
2768     "license": {
2769       "name": "OCF Data Model License",
2770       "url":
2771 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
2772 CENSE.md",
2773       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
2774     },
2775     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
2776   },
2777   "schemes": ["http"],
2778   "consumes": ["application/json"],
2779   "produces": ["application/json"],
2780   "paths": {
2781     "/BinarySwitchResURI" : {
2782       "get": {
2783         "description": "This Resource describes a binary switch (on/off).\n\nThe Property \"value\" is
2784 a boolean.\n\nA value of 'true' means that the switch is on.\n\nA value of 'false' means that the switch
2785 is off.\n\n",
2786         "parameters": [
2787           { "$ref": "#/parameters/interface" }
2788         ],
2789         "responses": {
2790           "200": {
2791             "description": "",
2792             "x-example":
2793               {
2794                 "rt": ["oic.r.switch.binary"],
2795                 "if": ["oic.if.a", "oic.if.baseline"],
2796                 "value": false
2797               },
2798             "schema": { "$ref": "#/definitions/BinarySwitch" }
2799           }
2800         }
2801       },
2802       "post": {
2803         "description": "",
2804         "parameters": [
2805           { "$ref": "#/parameters/interface" },
2806           {
2807             "name": "body",

```

```

2808         "in": "body",
2809         "required": true,
2810         "schema": { "$ref": "#/definitions/BinarySwitch" },
2811         "x-example":
2812             {
2813                 "value": true
2814             }
2815     },
2816 ],
2817 "responses": {
2818     "200": {
2819         "description": "",
2820         "x-example":
2821             {
2822                 "value": true
2823             },
2824         "schema": { "$ref": "#/definitions/BinarySwitch" }
2825     }
2826 }
2827 }
2828 },
2829 },
2830 "parameters": {
2831     "interface": {
2832         "in": "query",
2833         "name": "if",
2834         "type": "string",
2835         "enum": ["oic.if.a", "oic.if.baseline"]
2836     }
2837 },
2838 "definitions": {
2839     "BinarySwitch": {
2840         "properties": {
2841             "rt": {
2842                 "description": "The Resource Type.",
2843                 "items": {
2844                     "enum": ["oic.r.switch.binary"],
2845                     "maxLength": 64,
2846                     "type": "string"
2847                 },
2848                 "minItems": 1,
2849                 "uniqueItems": true,
2850                 "readOnly": true,
2851                 "type": "array"
2852             },
2853             "value": {
2854                 "description": "The status of the switch.",
2855                 "type": "boolean"
2856             },
2857             "n": {
2858                 "$ref":
2859 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2860 schema.json#/definitions/n"
2861             },
2862             "id": {
2863                 "$ref":
2864 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2865 schema.json#/definitions/id"
2866             },
2867             "if": {
2868                 "description": "The OCF Interface set supported by this Resource.",
2869                 "items": {
2870                     "enum": [
2871                         "oic.if.a",
2872                         "oic.if.baseline"
2873                     ],
2874                     "type": "string"
2875                 },
2876                 "minItems": 2,
2877                 "uniqueItems": true,
2878                 "readOnly": true,
2879                 "type": "array"

```

```

2880     }
2881   },
2882   "type": "object",
2883   "required": ["value"]
2884 }
2885 }
2886 }
2887

```

## 2888 6.5.5 Property definition

2889 Table 13 defines the Properties that are part of the "oic.r.switch.binary" Resource Type.

2890 **Table 13 – The Property definitions of the Resource with type "rt" = "oic.r.switch.binary".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
value	boolean	Yes	Read Write	The status of the switch.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

## 2891 6.5.6 CRUDN behaviour

2892 Table 14 defines the CRUDN operations that are supported on the "oic.r.switch.binary" Resource  
 2893 Type.

2894 **Table 14 – The CRUDN operations of the Resource with type "rt" = "oic.r.switch.binary".**

Create	Read	Update	Delete	Notify
	get	post		observe

## 2895 6.6 Brightness

### 2896 6.6.1 Introduction

2897 This Resource describes the brightness of a light or lamp.

2898 The Property "brightness" is an integer showing the current brightness level as a quantized  
 2899 representation in the range 0-100.

2900 A brightness of 0 is the minimum for the resource.

2901 A brightness of 100 is the maximum for the resource.

### 2902 6.6.2 Example URI

2903 /BrightnessResURI

### 2904 6.6.3 Resource type

2905 The Resource Type is defined as: "oic.r.light.brightness".

### 2906 6.6.4 OpenAPI 2.0 definition

```

2907 {
2908   "swagger": "2.0",
2909   "info": {
2910     "title": "Brightness",
2911     "version": "20190222",
2912     "license": {
2913       "name": "OCF Data Model License",
2914       "url":

```



```

2915 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
2916 CENSE.md",
2917     "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
2918 },
2919     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
2920 },
2921     "schemes": ["http"],
2922     "consumes": ["application/json"],
2923     "produces": ["application/json"],
2924     "paths": {
2925         "/BrightnessResURI" : {
2926             "get": {
2927                 "description": "This Resource describes the brightness of a light or lamp.\n\nThe Property
2928 \n\"brightness\" is an integer showing the current brightness level as a quantized representation in
2929 the range 0-100.\n\nA brightness of 0 is the minimum for the resource.\n\nA brightness of 100 is the
2930 maximum for the resource.",
2931                 "parameters": [
2932                     { "$ref": "#/parameters/interface" }
2933                 ],
2934                 "responses": {
2935                     "200": {
2936                         "description": "",
2937                         "x-example":
2938                             {
2939                                 "rt": ["oic.r.light.brightness"],
2940                                 "if": ["oic.if.a", "oic.if.baseline"],
2941                                 "brightness": 50
2942                             },
2943                         "schema": { "$ref": "#/definitions/Brightness" }
2944                     }
2945                 }
2946             },
2947             "post": {
2948                 "description": "Sets the desired brightness level.\n\n",
2949                 "parameters": [
2950                     { "$ref": "#/parameters/interface" },
2951                     {
2952                         "name": "body",
2953                         "in": "body",
2954                         "required": true,
2955                         "schema": { "$ref": "#/definitions/Brightness" },
2956                         "x-example":
2957                             {
2958                                 "brightness": 10
2959                             }
2960                     }
2961                 ],
2962                 "responses": {
2963                     "200": {
2964                         "description": "Indicates that the brightness was changed.\n\nThe new brightness level
2965 is provided in the response.\n\n",
2966                         "x-example":
2967                             {
2968                                 "brightness": 10
2969                             },
2970                         "schema": { "$ref": "#/definitions/Brightness" }
2971                     }
2972                 }
2973             }
2974         }
2975     },
2976     "parameters": {
2977         "interface" : {
2978             "in": "query",
2979             "name": "if",
2980             "type": "string",
2981             "enum": ["oic.if.a", "oic.if.baseline"]
2982         }
2983     },
2984     "definitions": {
2985         "Brightness" : {
2986             "properties": {

```

```

2987     "rt": {
2988         "description": "The Resource Type.",
2989         "items": {
2990             "enum": ["oic.r.light.brightness"],
2991             "maxLength": 64,
2992             "type": "string"
2993         },
2994         "minItems": 1,
2995         "uniqueItems": true,
2996         "readOnly": true,
2997         "type": "array"
2998     },
2999     "brightness": {
3000         "description": "The Quantized representation in the range 0-100 of the current sensed or
3001 set value for Brightness.",
3002         "maximum": 100,
3003         "minimum": 0,
3004         "type": "integer"
3005     },
3006     "n": {
3007         "$ref":
3008 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3009 schema.json#/definitions/n"
3010     },
3011     "id": {
3012         "$ref":
3013 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3014 schema.json#/definitions/id"
3015     },
3016     "if": {
3017         "description": "The OCF Interface set supported by this Resource.",
3018         "items": {
3019             "enum": [
3020                 "oic.if.a",
3021                 "oic.if.baseline"
3022             ],
3023             "type": "string"
3024         },
3025         "minItems": 2,
3026         "uniqueItems": true,
3027         "readOnly": true,
3028         "type": "array"
3029     }
3030 },
3031 "type": "object",
3032 "required": ["brightness"]
3033 }
3034 }
3035 }
3036

```

### 3037 6.6.5 Property definition

3038 Table 15 defines the Properties that are part of the "oic.r.light.brightness" Resource Type.

3039 **Table 15 – The Property definitions of the Resource with type "rt" =**  
3040 **"oic.r.light.brightness".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
brightness	integer	Yes	Read Write	The Quantized representation in the range 0-100 of the current sensed or set value for Brightness.
n	multiple types: see schema	No	Read Write	

id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

3041 **6.6.6 CRUDN behaviour**

3042 Table 16 defines the CRUDN operations that are supported on the "oic.r.light.brightness" Resource  
3043 Type.

3044 **Table 16 – The CRUDN operations of the Resource with type "rt" = "oic.r.light.brightness".**

Create	Read	Update	Delete	Notify
	get	post		observe

3045 **6.7 Colour Chroma**

3046 **6.7.1 Introduction**

3047 This Resource describes the colour using chroma conventions.

3048 Properties are "hue", "saturation", "csc", and "ct".

3049 The Property "hue" is the hue angle, it is an integer value as defined by the CIECAM02 model  
3050 definition (see reference [CIE CIE159:2004]).

3051 The Property "saturation" is an integer value as defined by the CIECAM02 model definition (see  
3052 reference [CIE CIE159:2004]).

3053 The Property "maximumsaturation" is the upper bound on the saturation supported by the Device.

3054 If not present the maximum value for "saturation" is 32767.

3055 The Property "csc" is the colour space coordinates in CIE colour space.

3056 The first item in the array is the X coordinate.

3057 The second item in the array is the Y coordinate.

3058 The Property "nct" is the Mired colour temperature.

3059 The Resource provides the colour using chroma conventions.

3060 **6.7.2 Example URI**

3061 /example/ColourChromaResURI

3062 **6.7.3 Resource type**

3063 The Resource Type is defined as: "oic.r.colour.chroma".

3064 **6.7.4 OpenAPI 2.0 definition**

```

3065 {
3066   "swagger": "2.0",
3067   "info": {
3068     "title": "Colour Chroma",
3069     "version": "20190215",
3070     "license": {
3071       "name": "OCF Data Model License",
3072       "url":
3073         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
3074         CENSE.md",
3075       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
3076         reserved."
3077     },
3078     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
3079   },
3080   "schemes": ["http"],
3081   "consumes": ["application/json"],
3082   "produces": ["application/json"],
3083   "paths": {
3084     "/example/ColourChromaResURI" : {
3085       "get": {
3086         "description": "This Resource describes the colour using chroma conventions.\nProperties are

```

```

3087  \"hue\", \"saturation\", \"csc\", and \"ct\".\nThe Property \"hue\" is the hue angle, it is an
3088  integer value as defined by the CIECAM02 model definition (see reference [CIE CIE159:2004]).\nThe
3089  Property \"saturation\" is an integer value as defined by the CIECAM02 model definition (see
3090  reference [CIE CIE159:2004]).\nThe Property \"maximumsaturation\" is the upper bound on the
3091  saturation supported by the Device.\nIf not present the maximum value for \"saturation\" is
3092  32767.\nThe Property \"csc\" is the colour space coordinates in CIE colour space.\n The first item
3093  in the array is the X coordinate.\n The second item in the array is the Y coordinate.\nThe Property
3094  \"nct\" is the Mired colour temperature.\nThe Resource provides the colour using chroma
3095  conventions.",
3096      "parameters": [
3097          {"$ref": "#/parameters/interface"}
3098      ],
3099      "responses": {
3100          "200": {
3101              "description": "",
3102              "x-example":
3103              {
3104                  "rt": ["oic.r.colour.chroma"],
3105                  "if": [ "oic.if.a", "oic.if.baseline"],
3106                  "hue": 256.0,
3107                  "saturation": 212,
3108                  "maximumsaturation": 1000,
3109                  "csc": [0.41, 0.51],
3110                  "ct": 457
3111              },
3112              "schema": { "$ref": "#/definitions/ColourChroma" }
3113          }
3114      },
3115  },
3116  "post": {
3117      "description": "Sets current colour chroma values\n",
3118      "parameters": [
3119          {"$ref": "#/parameters/interface"},
3120          {
3121              "name": "body",
3122              "in": "body",
3123              "required": true,
3124              "schema": { "$ref": "#/definitions/ColourChroma" },
3125              "x-example":
3126              {
3127                  "hue": 300.0,
3128                  "saturation": 212,
3129                  "csc": [0.41, 0.51],
3130                  "ct": 457
3131              }
3132          }
3133      ],
3134      "responses": {
3135          "200": {
3136              "description": "",
3137              "x-example":
3138              {
3139                  "hue": 300.0,
3140                  "saturation": 212,
3141                  "csc": [0.41, 0.51],
3142                  "ct": 467
3143              },
3144              "schema": { "$ref": "#/definitions/ColourChroma" }
3145          }
3146      }
3147  },
3148  },
3149  },
3150  "parameters": {
3151      "interface": {
3152          "in": "query",
3153          "name": "if",
3154          "type": "string",
3155          "enum": ["oic.if.a", "oic.if.baseline"]
3156      }
3157  },
3158  "definitions": {

```

```

3159     "ColourChroma" : {
3160         "properties": {
3161             "rt" : {
3162                 "description": "The Resource Type.",
3163                 "items": {
3164                     "enum": ["oic.r.colour.chroma"],
3165                     "maxLength": 64,
3166                     "type": "string"
3167                 },
3168                 "minItems": 1,
3169                 "uniqueItems": true,
3170                 "readOnly": true,
3171                 "type": "array"
3172             },
3173             "ct" : {
3174                 "description": "The Mired colour temperature.",
3175                 "minimum": 0,
3176                 "type": "integer"
3177             },
3178             "hue" : {
3179                 "description": "The hue angle as defined by the CIECAM02 model definition.",
3180                 "maximum": 360.0,
3181                 "minimum": 0.0,
3182                 "type": "number"
3183             },
3184             "saturation" : {
3185                 "description": "The saturation as defined by the CIECAM02 model definition.",
3186                 "maximum": 32767,
3187                 "minimum": 0,
3188                 "type": "integer"
3189             },
3190             "maximalsaturation" : {
3191                 "description": "The maximum supported value of \"saturation\" for this Device.",
3192                 "maximum": 32767,
3193                 "minimum": 0,
3194                 "readOnly": true,
3195                 "type": "integer"
3196             },
3197             "csc" : {
3198                 "description": "The X and Y coordinates of the colour in CIE colour space",
3199                 "items": {
3200                     "maximum": 1,
3201                     "minimum": 0,
3202                     "type": "number"
3203                 },
3204                 "maxItems": 2,
3205                 "minItems": 2,
3206                 "type": "array"
3207             },
3208             "n" : {
3209                 "$ref":
3210                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3211                 schema.json#/definitions/n"
3212             },
3213             "id" : {
3214                 "$ref":
3215                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3216                 schema.json#/definitions/id"
3217             },
3218             "if" : {
3219                 "description": "The OCF Interface set supported by this Resource.",
3220                 "items": {
3221                     "enum": [
3222                         "oic.if.a",
3223                         "oic.if.baseline"
3224                     ],
3225                     "maxLength": 64,
3226                     "type": "string"
3227                 },
3228                 "minItems": 2,
3229                 "uniqueItems": true,
3230                 "readOnly": true,

```

```

3231         "type": "array"
3232     },
3233 },
3234     "type": "object",
3235     "required": ["hue", "saturation", "csc"]
3236 }
3237 }
3238 }
3239

```

### 3240 6.7.5 Property definition

3241 Table 17 defines the Properties that are part of the "oic.r.colour.chroma" Resource Type.

3242 **Table 17 – The Property definitions of the Resource with type "rt" = "oic.r.colour.chroma".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
ct	integer	No	Read Write	The Mired colour temperature.
hue	number	Yes	Read Write	The hue angle as defined by the CIECAM02 model definition.
saturation	integer	Yes	Read Write	The saturation as defined by the CIECAM02 model definition.
maximumsaturation	integer	No	Read Only	The maximum supported value of "saturation" for this Device.
csc	array: see schema	Yes	Read Write	The X and Y coordinates of the colour in CIE colour space
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

### 3243 6.7.6 CRUDN behaviour

3244 Table 18 defines the CRUDN operations that are supported on the "oic.r.colour.chroma" Resource  
3245 Type.

3246 **Table 18 – The CRUDN operations of the Resource with type "rt" = "oic.r.colour.chroma".**

Create	Read	Update	Delete	Notify
	get	post		observe

## 3247 6.8 Colour RGB

### 3248 6.8.1 Introduction

3249 This Resource specifies the actual colour in the RGB space represented as an array of integers.  
3250 Each colour value is described with a Red, Green, Blue component.  
3251 These colour values are encoded as an array of integer values ([R,G,B]).  
3252 The minimum and maximum colour value per component may be described by the Property

3253 "range".  
3254 When "range" is omitted, then the "range" is [0,255].

## 3255 6.8.2 Example URI

3256 /ColourRGBResURI

## 3257 6.8.3 Resource type

3258 The Resource Type is defined as: "oic.r.colour.rgb".

## 3259 6.8.4 OpenAPI 2.0 definition

```
3260 {
3261   "swagger": "2.0",
3262   "info": {
3263     "title": "Colour RGB",
3264     "version": "20190215",
3265     "license": {
3266       "name": "OCF Data Model License",
3267       "url":
3268         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
3269         CENSE.md",
3270       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
3271         reserved."
3272     },
3273     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
3274   },
3275   "schemes": ["http"],
3276   "consumes": ["application/json"],
3277   "produces": ["application/json"],
3278   "paths": {
3279     "/ColourRGBResURI" : {
3280       "get": {
3281         "description": "This Resource specifies the actual colour in the RGB space represented as an
3282         array of integers.\nEach colour value is described with a Red, Green, Blue component.\nThese colour
3283         values are encoded as an array of integer values ([R,G,B]).\nThe minimum and maximum colour value
3284         per component may be described by the Property \"range\".\nWhen \"range\" is omitted, then the
3285         \"range\" is [0,255].",
3286         "parameters": [
3287           { "$ref": "#/parameters/interface" }
3288         ],
3289         "responses": {
3290           "200": {
3291             "description": "",
3292             "x-example":
3293               {
3294                 "rt": ["oic.r.colour.rgb"],
3295                 "if": ["oic.if.a", "oic.if.baseline"],
3296                 "rgbValue": [255, 255, 255],
3297                 "range": [0, 255]
3298               },
3299             "schema": { "$ref": "#/definitions/ColourRGB" }
3300           }
3301         }
3302       },
3303       "post": {
3304         "description": "Sets the current colourRGB value\n",
3305         "parameters": [
3306           { "$ref": "#/parameters/interface" },
3307           {
3308             "name": "body",
3309             "in": "body",
3310             "required": true,
3311             "schema": { "$ref": "#/definitions/ColourRGB" },
3312             "x-example":
3313               {
3314                 "rgbValue": [255, 0, 0]
3315               }
3316           }
3317         ]
3318       }
3319     }
3320   }
3321 }
```

```

3318     "responses": {
3319         "200": {
3320             "description": "",
3321             "x-example":
3322                 {
3323                     "rgbValue": [255, 0, 0]
3324                 },
3325             "schema": { "$ref": "#/definitions/ColourRGB" }
3326         }
3327     }
3328 }
3329 },
3330 },
3331 "parameters": {
3332     "interface": {
3333         "in": "query",
3334         "name": "if",
3335         "type": "string",
3336         "enum": ["oic.if.a", "oic.if.baseline"]
3337     }
3338 },
3339 "definitions": {
3340     "ColourRGB": {
3341         "properties": {
3342             "rt": {
3343                 "description": "The Resource Type.",
3344                 "items": {
3345                     "enum": ["oic.r.colour.rgb"],
3346                     "maxLength": 64,
3347                     "type": "string"
3348                 },
3349                 "minItems": 1,
3350                 "uniqueItems": true,
3351                 "readOnly": true,
3352                 "type": "array"
3353             },
3354             "rgbValue": {
3355                 "description": "The RGB value; the first item is the R, second the G, third the B.",
3356                 "items": {
3357                     "type": "integer"
3358                 },
3359                 "maxItems": 3,
3360                 "minItems": 3,
3361                 "type": "array"
3362             },
3363             "n": {
3364                 "$ref":
3365                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3366                 schema.json#/definitions/n"
3367             },
3368             "id": {
3369                 "$ref":
3370                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3371                 schema.json#/definitions/id"
3372             },
3373             "range": {
3374                 "$ref":
3375                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
3376                 schema.json#/definitions/range_integer"
3377             },
3378             "step": {
3379                 "$ref":
3380                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
3381                 schema.json#/definitions/step_integer"
3382             },
3383             "if": {
3384                 "description": "The OCF Interface set supported by this Resource.",
3385                 "items": {
3386                     "enum": [
3387                         "oic.if.a",
3388                         "oic.if.baseline"
3389                     ],

```



```

3390         "type": "string"
3391     },
3392     "minItems": 2,
3393     "uniqueItems": true,
3394     "readOnly": true,
3395     "type": "array"
3396 }
3397 },
3398 "type": "object",
3399 "required": ["rgbValue"]
3400 }
3401 }
3402 }
3403

```

### 3404 6.8.5 Property definition

3405 Table 19 defines the Properties that are part of the "oic.r.colour.rgb" Resource Type.

3406 **Table 19 – The Property definitions of the Resource with type "rt" = "oic.r.colour.rgb".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
rgbValue	array: see schema	Yes	Read Write	The RGB value; the first item is the R, second the G, third the B.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

### 3407 6.8.6 CRUDN behaviour

3408 Table 20 defines the CRUDN operations that are supported on the "oic.r.colour.rgb" Resource Type.

3409 **Table 20 – The CRUDN operations of the Resource with type "rt" = "oic.r.colour.rgb".**

Create	Read	Update	Delete	Notify
	get	post		observe

## 3410 6.9 Dimming

### 3411 6.9.1 Introduction

3412 This Resource describes a dimming function.

3413 The Property "dimmingSetting" is an integer showing the current dimming level.

3414 If Property "step" is present then it represents the increment between dimmer values.

3415 When the Property "range" is omitted, then the range is [0,100].

3416 A value of 0 means total dimming; a value of 100 means no dimming.

### 3417 6.9.2 Example URI

3418 /DimmingResURI

### 3419 6.9.3 Resource type

3420 The Resource Type is defined as: "oic.r.light.dimming".

### 3421 6.9.4 OpenAPI 2.0 definition

```
3422 {
3423   "swagger": "2.0",
3424   "info": {
3425     "title": "Dimming",
3426     "version": "20190215",
3427     "license": {
3428       "name": "OCF Data Model License",
3429       "url":
3430 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
3431 CENSE.md",
3432     "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
3433 reserved."
3434   },
3435   "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
3436 },
3437 "schemes": ["http"],
3438 "consumes": ["application/json"],
3439 "produces": ["application/json"],
3440 "paths": {
3441   "/DimmingResURI" : {
3442     "get": {
3443       "description": "This Resource describes a dimming function.\n\nThe Property \"dimmingSetting\"
3444 is an integer showing the current dimming level.\n\nIf Property \"step\" is present then it represents
3445 the increment between dimmer values.\n\nWhen the Property \"range\" is omitted, then the range is
3446 [0,100].\n\nA value of 0 means total dimming; a value of 100 means no dimming.",
3447       "parameters": [
3448         { "$ref": "#/parameters/interface" }
3449       ],
3450       "responses": {
3451         "200": {
3452           "description": "",
3453           "x-example":
3454             {
3455               "rt": ["oic.r.light.dimming"],
3456               "if": ["oic.if.a", "oic.if.baseline"],
3457               "dimmingSetting": 30,
3458               "step": 5,
3459               "range": [0, 100]
3460             },
3461           "schema": { "$ref": "#/definitions/Dimming" }
3462         }
3463       }
3464     },
3465     "post": {
3466       "description": "Sets the desired dimming level.\n\n",
3467       "parameters": [
3468         { "$ref": "#/parameters/interface" },
3469         {
3470           "name": "body",
3471           "in": "body",
3472           "required": true,
3473           "schema": { "$ref": "#/definitions/Dimming" },
3474           "x-example":
3475             {
3476               "dimmingSetting": 40
3477             }
3478         }
3479       ],
3480       "responses": {
3481         "200": {
3482           "description": "Indicates that the dimming was changed.\n\nThe new dimming level is
3483 provided in the response.\n\n",
3484           "x-example":
3485             {
3486               "dimmingSetting": 40
3487             },

```

```

3488         "schema": { "$ref": "#/definitions/Dimming" }
3489     },
3490     "403": {
3491         "description": "This response is generated by the OCF Server when the client sends:\n
3492 An update with an out of range property value for dimmingSetting.\nThe server responds with the
3493 current resource representation.\n",
3494         "x-example":
3495             {
3496                 "dimmingSetting": 40
3497             },
3498         "schema": { "$ref": "#/definitions/Dimming" }
3499     }
3500 }
3501 }
3502 }
3503 },
3504 "parameters": {
3505     "interface": {
3506         "in": "query",
3507         "name": "if",
3508         "type": "string",
3509         "enum": ["oic.if.a", "oic.if.baseline"]
3510     }
3511 },
3512 "definitions": {
3513     "Dimming": {
3514         "properties": {
3515             "rt": {
3516                 "description": "The Resource Type.",
3517                 "items": {
3518                     "enum": ["oic.r.light.dimming"],
3519                     "maxLength": 64,
3520                     "type": "string"
3521                 },
3522                 "minItems": 1,
3523                 "uniqueItems": true,
3524                 "readOnly": true,
3525                 "type": "array"
3526             },
3527             "dimmingSetting": {
3528                 "description": "The current dimming value.",
3529                 "type": "integer"
3530             },
3531             "n": {
3532                 "$ref":
3533 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3534 schema.json#/definitions/n"
3535             },
3536             "id": {
3537                 "$ref":
3538 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3539 schema.json#/definitions/id"
3540             },
3541             "range": {
3542                 "$ref":
3543 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
3544 schema.json#/definitions/range_integer"
3545             },
3546             "step": {
3547                 "$ref":
3548 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
3549 schema.json#/definitions/step_integer"
3550             },
3551             "if": {
3552                 "description": "The OCF Interface set supported by this Resource.",
3553                 "items": {
3554                     "enum": [
3555                         "oic.if.a",
3556                         "oic.if.baseline"
3557                     ],
3558                     "type": "string"
3559                 }

```

```

3560         "minItems": 2,
3561         "uniqueItems": true,
3562         "readOnly": true,
3563         "type": "array"
3564     },
3565 },
3566 "type": "object",
3567 "required": ["dimmingSetting"]
3568 }
3569 }
3570 }
3571

```

### 3572 6.9.5 Property definition

3573 Table 21 defines the Properties that are part of the "oic.r.light.dimming" Resource Type.

3574 **Table 21 – The Property definitions of the Resource with type "rt" = "oic.r.light.dimming".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
dimmingSetting	integer	Yes	Read Write	The current dimming value.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

### 3575 6.9.6 CRUDN behaviour

3576 Table 22 defines the CRUDN operations that are supported on the "oic.r.light.dimming" Resource  
3577 Type.

3578 **Table 22 – The CRUDN operations of the Resource with type "rt" = "oic.r.light.dimming".**

Create	Read	Update	Delete	Notify
	get	post		observe

## 3579 6.10 Door

### 3580 6.10.1 Introduction

3581 This Resource describes the open state of the door.  
3582 A door is modelled by means of openState (Open/Closed), openDuration (ISO 8601 Time), and  
3583 openAlarm (boolean).  
3584 For Property "openState", the value 'Open' indicates the door is open.  
3585 The value 'Closed' indicates the door is closed.  
3586 The type of Property "openDuration" is an RFC Time encoded string.  
3587 The Property "openAlarm" value 'true' indicates that the open alarm is active.  
3588 The openAlarm value 'false' indicates that open alarm is not active.  
3589 retrieves the state of the Door.

### 3590 6.10.2 Example URI

3591 /DoorResURI

### 3592 6.10.3 Resource type

3593 The Resource Type is defined as: "oic.r.door".

### 3594 6.10.4 OpenAPI 2.0 definition

```
3595 {
3596   "swagger": "2.0",
3597   "info": {
3598     "title": "Door",
3599     "version": "20190215",
3600     "license": {
3601       "name": "OCF Data Model License",
3602       "url":
3603 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
3604 CENSE.md",
3605       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
3606 reserved."
3607     },
3608     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
3609   },
3610   "schemes": ["http"],
3611   "consumes": ["application/json"],
3612   "produces": ["application/json"],
3613   "paths": {
3614     "/DoorResURI" : {
3615       "get": {
3616         "description": "This Resource describes the open state of the door.\nA door is modelled by
3617 means of openState (Open/Closed), openDuration (ISO 8601 Time), and openAlarm (boolean).\nFor
3618 Property \"openState\", the value 'Open' indicates the door is open.\nThe value 'Closed' indicates
3619 the door is closed.\nThe type of Property \"openDuration\" is an RFC Time encoded string.\nThe
3620 Property \"openAlarm\" value 'true' indicates that the open alarm is active.\nThe openAlarm value
3621 'false' indicates that open alarm is not active.\nretrieves the state of the Door.",
3622         "parameters": [
3623           { "$ref": "#/parameters/interface" }
3624         ],
3625         "responses": {
3626           "200": {
3627             "description": "",
3628             "x-example": {
3629               "rt": ["oic.r.door"],
3630               "if": ["oic.if.a", "oic.if.baseline"],
3631               "openState": "Open",
3632               "openDuration": "P0Y0M0DT2H25M5S",
3633               "openAlarm": true
3634             },
3635             "schema": { "$ref": "#/definitions/Door" }
3636           }
3637         }
3638       },
3639       "post": {
3640         "description": "Sets the current Door properties.\nThe only property that can be set as part
3641 of an update operation is\n the openAlarm.\nThis can be made active (true) or inactive (false)\n",
3642         "parameters": [
3643           { "$ref": "#/parameters/interface" },
3644           {
3645             "name": "body",
3646             "in": "body",
3647             "required": true,
3648             "schema": { "$ref": "#/definitions/DoorUpdate" },
3649             "x-example": {
3650               "openAlarm": false
3651             }
3652           }
3653         ],
3654         "responses": {
3655           "200": {
3656             "description": "",
3657             "x-example": {
3658               "openAlarm": false
3659             },
3660             "schema": { "$ref": "#/definitions/DoorUpdate" }
3661           }
3662         }
3663       }
3664     }
3665   }
3666 }
```

```

3661     }
3662   }
3663 }
3664 },
3665 },
3666 "parameters": {
3667   "interface": {
3668     "in": "query",
3669     "name": "if",
3670     "type": "string",
3671     "enum": ["oic.if.a", "oic.if.baseline"]
3672   }
3673 },
3674 "definitions": {
3675   "Door" : {
3676     "properties": {
3677       "rt": {
3678         "description": "The Resource Type.",
3679         "items": {
3680           "enum": ["oic.r.door"],
3681           "maxLength": 64,
3682           "type": "string"
3683         },
3684         "minItems": 1,
3685         "uniqueItems": true,
3686         "readOnly": true,
3687         "type": "array"
3688       },
3689       "openDuration": {
3690         "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
3691 schema.json#/definitions/duration"
3692       },
3693       "openState": {
3694         "description": "The state of the door (open or closed).",
3695         "enum": [
3696           "Open",
3697           "Closed"
3698         ],
3699         "readOnly": true,
3700         "type": "string"
3701       },
3702       "openAlarm": {
3703         "description": "The state of the door open alarm.",
3704         "type": "boolean"
3705       },
3706       "n": {
3707         "$ref":
3708 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3709 schema.json#/definitions/n"
3710       },
3711       "id": {
3712         "$ref":
3713 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3714 schema.json#/definitions/id"
3715       },
3716       "if": {
3717         "description": "The OCF Interface set supported by this Resource.",
3718         "items": {
3719           "enum": [
3720             "oic.if.a",
3721             "oic.if.baseline"
3722           ],
3723           "type": "string"
3724         },
3725         "minItems": 2,
3726         "uniqueItems": true,
3727         "readOnly": true,
3728         "type": "array"
3729       }
3730     },
3731     "type": "object",
3732     "required": ["openState"]

```

```

3733     },
3734     "DoorUpdate" : {
3735       "properties": {
3736         "openAlarm": {
3737           "description": "The state of the door open alarm.",
3738           "type": "boolean"
3739         }
3740       },
3741       "type": "object",
3742       "required": ["openAlarm"]
3743     }
3744   }
3745 }
3746

```

### 3747 6.10.5 Property definition

3748 Table 23 defines the Properties that are part of the "oic.r.door" Resource Type.

3749 **Table 23 – The Property definitions of the Resource with type "rt" = "oic.r.door".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
openDuration	multiple types: see schema	No	Read Write	
openState	string	Yes	Read Only	The state of the door (open or closed).
openAlarm	boolean	No	Read Write	The state of the door open alarm.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
openAlarm	boolean	Yes	Read Write	The state of the door open alarm.

### 3750 6.10.6 CRUDN behaviour

3751 Table 24 defines the CRUDN operations that are supported on the "oic.r.door" Resource Type.

3752 **Table 24 – The CRUDN operations of the Resource with type "rt" = "oic.r.door".**

Create	Read	Update	Delete	Notify
	get	post		observe

## 3753 6.11 Energy Consumption

### 3754 6.11.1 Introduction

3755 This Resource describes the energy consumed by the Device since power up (the energy value is  
3756 in Watt Hours [Wh])

3757 and the instantaneous power draw of the device (the power value is in Watts [W]) at the time the  
3758 resource was queried.

3759 The Property "power" value is in Watts [W].

3760 The Property "energy" value is in Watt Hours [Wh].

3761 The Resource provides the current power draw and cumulative energy usage.

3762 **6.11.2 Example URI**

3763 /EnergyConsumptionResURI

3764 **6.11.3 Resource type**

3765 The Resource Type is defined as: "oic.r.energy.consumption".

3766 **6.11.4 OpenAPI 2.0 definition**

```
3767 {
3768   "swagger": "2.0",
3769   "info": {
3770     "title": "Energy Consumption",
3771     "version": "20190215",
3772     "license": {
3773       "name": "OCF Data Model License",
3774       "url":
3775         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
3776         CENSE.md",
3777       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
3778       reserved."
3779     },
3780     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
3781   },
3782   "schemes": ["http"],
3783   "consumes": ["application/json"],
3784   "produces": ["application/json"],
3785   "paths": {
3786     "/EnergyConsumptionResURI" : {
3787       "get": {
3788         "description": "This Resource describes the energy consumed by the Device since power up
3789         (the energy value is in Watt Hours [Wh]) \nand the instantaneous power draw of the device (the power
3790         value is in Watts [W]) at the time the resource was queried.\nThe Property \"power\" value is in
3791         Watts [W].\nThe Property \"energy\" value is in Watt Hours [Wh].\nThe Resource provides the current
3792         power draw and cumulative energy usage.",
3793         "parameters": [
3794           { "$ref": "#/parameters/interface" }
3795         ],
3796         "responses": {
3797           "200": {
3798             "description": "",
3799             "x-example":
3800               {
3801                 "rt": ["oic.r.energy.consumption"],
3802                 "if": ["oic.if.s", "oic.if.baseline"],
3803                 "power": 2000.1,
3804                 "energy": 3500.4
3805               },
3806             "schema": { "$ref": "#/definitions/Consumption" }
3807           }
3808         }
3809       }
3810     }
3811   },
3812   "parameters": {
3813     "interface" : {
3814       "in" : "query",
3815       "name" : "if",
3816       "type" : "string",
3817       "enum" : ["oic.if.s", "oic.if.baseline"]
3818     }
3819   },
3820   "definitions": {
3821     "Consumption" : {
3822       "properties": {
3823         "rt": {
3824           "description": "The Resource Type.",
3825           "items": {
3826             "enum": ["oic.r.energy.consumption"],
3827             "maxLength": 64,
3828             "type": "string"
```



```

3829     },
3830     "minItems": 1,
3831     "uniqueItems": true,
3832     "readOnly": true,
3833     "type": "array"
3834   },
3835   "power": {
3836     "description": "The instantaneous Power.",
3837     "readOnly": true,
3838     "type": "number"
3839   },
3840   "energy": {
3841     "description": "The energy consumed.",
3842     "readOnly": true,
3843     "type": "number"
3844   },
3845   "n": {
3846     "$ref":
3847     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3848     schema.json#/definitions/n"
3849   },
3850   "id": {
3851     "$ref":
3852     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3853     schema.json#/definitions/id"
3854   },
3855   "if": {
3856     "description": "The OCF Interface set supported by this Resource.",
3857     "items": {
3858       "enum": [
3859         "oic.if.s",
3860         "oic.if.baseline"
3861       ],
3862       "type": "string"
3863     },
3864     "minItems": 2,
3865     "uniqueItems": true,
3866     "readOnly": true,
3867     "type": "array"
3868   }
3869 },
3870 "type": "object",
3871 "required": ["power", "energy"]
3872 }
3873 }
3874 }
3875

```

### 3876 6.11.5 Property definition

3877 Table 25 defines the Properties that are part of the "oic.r.energy.consumption" Resource Type.

3878 **Table 25 – The Property definitions of the Resource with type "rt" =**  
3879 **"oic.r.energy.consumption".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
power	number	Yes	Read Only	The instantaneous Power.
energy	number	Yes	Read Only	The energy consumed.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	

if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
----	-------------------	----	-----------	---

3880 **6.11.6 CRUDN behaviour**

3881 Table 26 defines the CRUDN operations that are supported on the "oic.r.energy.consumption"  
3882 Resource Type.

3883 **Table 26 – The CRUDN operations of the Resource with type "rt" =**  
3884 **"oic.r.energy.consumption".**

Create	Read	Update	Delete	Notify
	get			observe

3885 **6.12 Energy Usage**

3886 **6.12.1 Introduction**

3887 This Resource describes a cumulative time-based energy usage query..  
3888 The Resource is a Collection of:  
3889 TimePeriod Resource  
3890 EnergyConsumption Resource  
3891

3892 **6.12.2 Example URI**

3893 /EnergyUsageResURI

3894 **6.12.3 Resource type**

3895 The Resource Type is defined as: "oic.r.energy.usage".

3896 **6.12.4 OpenAPI 2.0 definition**

```

3897 {
3898   "swagger": "2.0",
3899   "info": {
3900     "title": "Energy Usage",
3901     "version": "20190307",
3902     "license": {
3903       "name": "OCF Data Model License",
3904       "url":
3905         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
3906         CENSE.md",
3907       "x-copyright": "copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
3908     },
3909     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
3910   },
3911   "schemes": ["http"],
3912   "consumes": ["application/json"],
3913   "produces": ["application/json"],
3914   "paths": {
3915     "/EnergyUsageResURI?if=oic.if.ll": {
3916       "get": {
3917         "description": "This Resource describes a cumulative time-based energy usage query.\nThe
3918         Resource is a Collection of:\n TimePeriod Resource\n EnergyConsumption Resource\n",
3919         "parameters": [
3920           {"$ref": "#/parameters/interface"}
3921         ],
3922         "responses": {
3923           "200": {
3924             "description": "",
3925             "x-example":
3926               [
3927                 {"href": "/TimePeriodResURI", "rt":["oic.r.time.period"]},
3928                 {"href": "/EnergyConsumptionResURI", "rt":["oic.r.energy.consumption"]},
3929

```

```

3930 "if":["oic.if.s","oic.if.baseline"], "eps":[{"ep": "coaps://[fe80::b1d6]:1122}]]
3931     ],
3932     "schema": { "$ref": "#/definitions/Usage-11" }
3933   }
3934 }
3935 },
3936 "/EnergyUsageResURI?if=oic.if.b" : {
3937   "get": {
3938     "description": "This Resource describes a cumulative time-based energy usage query.\nThe
3939 Resource is a Collection of:\n TimePeriod Resource\n EnergyConsumption Resource\n",
3940     "parameters": [
3941       {"$ref": "#/parameters/interface"}
3942     ],
3943     "responses": {
3944       "200": {
3945         "description": "",
3946         "x-example": [
3947           {
3948             "href": "/TimePeriodResURI",
3949             "rep": {
3950               "startTime": "2015-01-09T14:30Z",
3951               "stopTime": "2015-01-09T14:45Z"
3952             }
3953           },
3954           {
3955             "href": "/EnergyConsumptionResURI",
3956             "rep": {
3957               "power": 2000.1,
3958               "energy": 3500.4
3959             }
3960           }
3961         ],
3962         "schema": { "$ref": "#/definitions/EnergyUsageBatch-Retrieve" }
3963       }
3964     },
3965   },
3966   "post": {
3967     "description": "Sets the timer period of the query using the batch OCF Interface\n",
3968     "parameters": [
3969       {"$ref": "#/parameters/interface-b"},
3970       {
3971         "name": "body",
3972         "in": "body",
3973         "required": true,
3974         "schema": { "$ref": "#/definitions/EnergyUsageBatch-Update" },
3975         "x-example": [
3976           {
3977             "href": "/TimePeriodResURI",
3978             "rep": {
3979               "startTime": "2015-03-15T10:30Z",
3980               "stopTime": "2015-03-15T10:45Z"
3981             }
3982           }
3983         ]
3984       }
3985     ],
3986     "responses": {
3987       "200": {
3988         "description": "",
3989         "x-example": [
3990           {
3991             "href": "/TimePeriodResURI",
3992             "rep": {
3993               "startTime": "2015-03-15T10:30Z",
3994               "stopTime": "2015-03-15T10:45Z"
3995             }
3996           },
3997           {
3998             "href": "/EnergyConsumptionResURI",
3999             "rep": {
4000               "power": 1500.1,

```

```

4002         "energy": 2200.4
4003     }
4004 }
4005 ],
4006 "schema": { "$ref": "#/definitions/EnergyUsageBatch-Retrieve" }
4007 }
4008 }
4009 }
4010 },
4011 "/EnergyUsageResURI?if=oic.if.baseline" : {
4012     "get": {
4013         "description": "This Resource describes a cumulative time-based energy usage query..\nThe
4014 Resource is a Collection of:\n TimePeriod Resource\n EnergyConsumption Resource\n",
4015         "parameters": [
4016             {"$ref": "#/parameters/interface"}
4017         ],
4018         "responses": {
4019             "200": {
4020                 "description": "",
4021                 "x-example":
4022                 {
4023                     "rt": ["oic.r.energy.usage"],
4024                     "if": ["oic.if.ll", "oic.if.b", "oic.if.baseline"],
4025                     "rts": ["oic.r.time.period", "oic.r.energy.consumption"],
4026                     "links": [
4027                         {"href": "/TimePeriodResURI", "rt": ["oic.r.time.period"],
4028 "if": ["oic.if.a", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
4029                         {"href": "/EnergyConsumptionResURI", "rt": ["oic.r.energy.consumption"],
4030 "if": ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
4031                     ]
4032                 },
4033                 "schema": { "$ref": "#/definitions/Usage-baseline" }
4034             }
4035         }
4036     }
4037 }
4038 },
4039 "parameters": {
4040     "interface" : {
4041         "in" : "query",
4042         "name" : "if",
4043         "type" : "string",
4044         "enum" : ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
4045     },
4046     "interface-b" : {
4047         "in" : "query",
4048         "name" : "if",
4049         "type" : "string",
4050         "enum" : ["oic.if.b"]
4051     }
4052 },
4053 "definitions": {
4054     "Usage-ll": {
4055         "items": {
4056             "$ref": "#/definitions/oic.oic-link"
4057         },
4058         "type": "array"
4059     },
4060     "oic.oic-link": {
4061         "type": "object",
4062         "properties": {
4063             "anchor": {
4064                 "$ref":
4065                 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
4066                 schema.json#/definitions/anchor"
4067             },
4068             "di": {
4069                 "$ref":
4070                 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
4071                 schema.json#/definitions/di"
4072             },
4073             "eps": {

```

```

4074         "$ref":
4075         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
4076         schema.json#/definitions/eps"
4077     },
4078     "href": {
4079         "$ref":
4080         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
4081         schema.json#/definitions/href"
4082     },
4083     "ins": {
4084         "$ref":
4085         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
4086         schema.json#/definitions/ins"
4087     },
4088     "p": {
4089         "$ref":
4090         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
4091         schema.json#/definitions/p"
4092     },
4093     "rel": {
4094         "$ref":
4095         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
4096         schema.json#/definitions/rel_array"
4097     },
4098     "title": {
4099         "$ref":
4100         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
4101         schema.json#/definitions/title"
4102     },
4103     "type": {
4104         "$ref":
4105         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
4106         schema.json#/definitions/type"
4107     },
4108     "if": {
4109         "description": "The OCF Interfaces supported by the target Resource",
4110         "items": {
4111             "enum": [
4112                 "oic.if.a",
4113                 "oic.if.s",
4114                 "oic.if.baseline"
4115             ],
4116             "type": "string",
4117             "maxLength": 64
4118         },
4119         "minItems": 2,
4120         "uniqueItems": true,
4121         "type": "array",
4122         "readOnly": true
4123     },
4124     "rt": {
4125         "description": "Resource Type of the target Resource",
4126         "items": {
4127             "maxLength": 64,
4128             "type": "string",
4129             "enum": ["oic.r.time.period", "oic.r.energy.consumption"]
4130         },
4131         "minItems": 1,
4132         "type": "array",
4133         "uniqueItems": true,
4134         "readOnly": true
4135     }
4136 },
4137 "required": [
4138     "href",
4139     "rt",
4140     "if"
4141 ]
4142 },
4143 "Usage-baseline": {
4144     "properties": {
4145         "rt": {

```

```

4146         "description": "Resource Type of this Resource",
4147         "items": {
4148             "maxLength": 64,
4149             "type": "string",
4150             "enum": ["oic.r.energy.usage"]
4151         },
4152         "minItems": 1,
4153         "readOnly": true,
4154         "uniqueItems": true,
4155         "type": "array"
4156     },
4157     "rts": {
4158         "items": {
4159             "enum": [
4160                 "oic.r.time.period",
4161                 "oic.r.energy.consumption"
4162             ],
4163             "type": "string",
4164             "maxLength": 64
4165         },
4166         "minItems": 1,
4167         "type": "array",
4168         "readOnly": true,
4169         "uniqueItems": true
4170     },
4171     "links": {
4172         "description": "A set of simple or individual OCF Links.",
4173         "type": "array",
4174         "items": {
4175             "$ref": "#/definitions/oic.oic-link"
4176         }
4177     },
4178     "n": {
4179         "$ref":
4180         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4181         schema.json#/definitions/n"
4182     },
4183     "id": {
4184         "$ref":
4185         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4186         schema.json#/definitions/id"
4187     },
4188     "if": {
4189         "description": "The OCF Interfaces supported by this Resource",
4190         "items": {
4191             "enum": [
4192                 "oic.if.ll",
4193                 "oic.if.b",
4194                 "oic.if.baseline"
4195             ],
4196             "type": "string",
4197             "maxLength": 64
4198         },
4199         "minItems": 1,
4200         "readOnly": true,
4201         "uniqueItems": true,
4202         "type": "array"
4203     }
4204 },
4205 "type": "object",
4206 "required": ["rt", "if", "links"]
4207 },
4208 "EnergyUsageBatch-Retrieve" : {
4209     "type": "array",
4210     "minItems": 2,
4211     "uniqueItems": true,
4212     "items": {
4213         "type": "object",
4214         "additionalProperties": true,
4215         "properties": {
4216             "href": {
4217                 "$ref":

```

```

4218 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
4219 schema.json#/definitions/href"
4220     },
4221     "rep": {
4222         "anyOf": [
4223             {"$ref":
4224 "https://openconnectivityfoundation.github.io/IoTDataModels/TimePeriodResURI.swagger.json#/definitio
4225 ns/TimePeriod"},
4226             {"$ref":
4227 "https://openconnectivityfoundation.github.io/IoTDataModels/EnergyConsumptionResURI.swagger.json#/de
4228 finitions/Consumption"}
4229         ]
4230     }
4231 },
4232 "required": [
4233     "href",
4234     "rep"
4235 ]
4236 }
4237 },
4238 "EnergyUsageBatch-Update" : {
4239     "type": "array",
4240     "minItems": 1,
4241     "uniqueItems": true,
4242     "items": {
4243         "type": "object",
4244         "additionalProperties": true,
4245         "properties": {
4246             "href": {
4247                 "$ref":
4248 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
4249 schema.json#/definitions/href"
4250             },
4251             "rep": {
4252                 "anyOf": [
4253                     {"$ref":
4254 "https://openconnectivityfoundation.github.io/IoTDataModels/TimePeriodResURI.swagger.json#/definitio
4255 ns/TimePeriod"}
4256                 ]
4257             }
4258         },
4259         "required": [
4260             "href",
4261             "rep"
4262         ]
4263     }
4264 }
4265 }
4266 }
4267

```

### 4268 6.12.5 Property definition

4269 Table 27 defines the Properties that are part of the "oic.r.energy.usage" Resource Type.

4270 **Table 27 – The Property definitions of the Resource with type "rt" = "oic.r.energy.usage".**

Property name	Value type	Mandatory	Access mode	Description
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
ins	multiple types: see schema	No	Read Write	

p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	
if	array: see schema	Yes	Read Only	The OCF Interfaces supported by the target Resource
rt	array: see schema	Yes	Read Only	Resource Type of the target Resource
rt	array: see schema	Yes	Read Only	Resource Type of this Resource
rts	array: see schema	No	Read Only	
links	array: see schema	Yes	Read Write	A set of simple or individual OCF Links.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	Yes	Read Only	The OCF Interfaces supported by this Resource
href	multiple types: see schema	Yes	Read Write	
rep	multiple types: see schema	Yes	Read Write	
href	multiple types: see schema	Yes	Read Write	
rep	multiple types: see schema	Yes	Read Write	

4271 **6.12.6 CRUDN behaviour**

4272 Table 28 defines the CRUDN operations that are supported on the "oic.r.energy.usage" Resource  
4273 Type.

4274 **Table 28 – The CRUDN operations of the Resource with type "rt" = "oic.r.energy.usage".**

Create	Read	Update	Delete	Notify
	get			observe

4275 **6.13 Humidity**

4276 **6.13.1 Introduction**

4277 This Resource describes a sensed or desired humidity.

4278 The Property "humidity" is an integer describing the percentage measured relative humidity.

4279 The Property "desiredHumidity" is an integer showing the desired target relative humidity.

4280 **6.13.2 Example URI**

4281 /HumidityResURI



### 4282 6.13.3 Resource type

4283 The Resource Type is defined as: "oic.r.humidity".

### 4284 6.13.4 OpenAPI 2.0 definition

```
4285 {
4286   "swagger": "2.0",
4287   "info": {
4288     "title": "Humidity",
4289     "version": "20190215",
4290     "license": {
4291       "name": "OCF Data Model License",
4292       "url":
4293 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
4294 CENSE.md",
4295     "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
4296 reserved."
4297   },
4298   "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
4299 },
4300 "schemes": ["http"],
4301 "consumes": ["application/json"],
4302 "produces": ["application/json"],
4303 "paths": {
4304   "/HumidityResURI" : {
4305     "get": {
4306       "description": "This Resource describes a sensed or desired humidity.\nThe Property
4307 \"humidity\" is an integer describing the percentage measured relative humidity.\nThe Property
4308 \"desiredHumidity\" is an integer showing the desired target relative humidity.",
4309       "parameters": [
4310         {"$ref": "#/parameters/interface"}
4311       ],
4312       "responses": {
4313         "200": {
4314           "description": "RETRIEVES the current (relative) humidity level.",
4315           "x-example":
4316             {
4317               "rt": ["oic.r.humidity"],
4318               "if": ["oic.if.a", "oic.if.baseline"],
4319               "humidity": 40,
4320               "desiredHumidity": 40
4321             },
4322           "schema": { "$ref": "#/definitions/Humidity" }
4323         }
4324       }
4325     },
4326     "post": {
4327       "description": "Sets the desired relative humidity level.",
4328       "parameters": [
4329         {"$ref": "#/parameters/interface"},
4330         {
4331           "name": "body",
4332           "in": "body",
4333           "required": true,
4334           "schema": { "$ref": "#/definitions/HumidityUpdate" },
4335           "x-example":
4336             {
4337               "desiredHumidity" : 45
4338             }
4339         }
4340       ],
4341       "responses": {
4342         "200": {
4343           "description": "Indicates that the relative humidity level was changed.\nThe new
4344 relative humidity level is provided in the response.",
4345           "x-example":
4346             {
4347               "desiredHumidity": 45
4348             },
4349           "schema": { "$ref": "#/definitions/HumidityUpdate" }
4350         }
4351       }
4352     }
4353   }
4354 }
```

```

4351     }
4352   }
4353 }
4354 },
4355 "parameters": {
4356   "interface": {
4357     "in": "query",
4358     "name": "if",
4359     "type": "string",
4360     "enum": ["oic.if.a", "oic.if.s", "oic.if.baseline"]
4361   }
4362 },
4363 "definitions": {
4364   "Humidity" : {
4365     "properties": {
4366       "rt": {
4367         "description": "The Resource Type.",
4368         "items": {
4369           "enum": ["oic.r.humidity"],
4370           "maxLength": 64,
4371           "type": "string"
4372         },
4373         "minItems": 1,
4374         "uniqueItems": true,
4375         "readOnly": true,
4376         "type": "array"
4377       },
4378       "desiredHumidity": {
4379         "description": "The desired value for humidity.",
4380         "maximum": 100,
4381         "minimum": 0,
4382         "type": "integer"
4383       },
4384       "humidity": {
4385         "description": "The current sensed value for humidity.",
4386         "maximum": 100,
4387         "minimum": 0,
4388         "readOnly": true,
4389         "type": "integer"
4390       },
4391       "n": {
4392         "$ref":
4393         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4394         schema.json#/definitions/n"
4395       },
4396       "id": {
4397         "$ref":
4398         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4399         schema.json#/definitions/id"
4400       },
4401       "if": {
4402         "description": "The OCF Interface set supported by this Resource.",
4403         "items": {
4404           "enum": [
4405             "oic.if.a",
4406             "oic.if.s",
4407             "oic.if.baseline"
4408           ],
4409           "type": "string"
4410         },
4411         "minItems": 2,
4412         "uniqueItems": true,
4413         "readOnly": true,
4414         "type": "array"
4415       }
4416     },
4417     "type": "object",
4418     "required": ["humidity"]
4419   },
4420   "HumidityUpdate" : {
4421     "properties": {
4422       "desiredHumidity": {

```

```

4423         "description": "Desired value for Humidity",
4424         "maximum": 100,
4425         "minimum": 0,
4426         "type": "integer"
4427     },
4428 },
4429     "type": "object",
4430     "required": ["desiredHumidity"]
4431 }
4432 }
4433 }
4434

```

### 4435 6.13.5 Property definition

4436 Table 29 defines the Properties that are part of the "oic.r.humidity" Resource Type.

4437 **Table 29 – The Property definitions of the Resource with type "rt" = "oic.r.humidity".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
desiredHumidity	integer	No	Read Write	The desired value for humidity.
humidity	integer	Yes	Read Only	The current sensed value for humidity.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
desiredHumidity	integer	Yes	Read Write	Desired value for Humidity

### 4438 6.13.6 CRUDN behaviour

4439 Table 30 defines the CRUDN operations that are supported on the "oic.r.humidity" Resource Type.

4440 **Table 30 – The CRUDN operations of the Resource with type "rt" = "oic.r.humidity".**

Create	Read	Update	Delete	Notify
	get	post		observe

## 4441 6.14 Ice Maker

### 4442 6.14.1 Introduction

4443 This Resource describes an the operational state of an Ice Maker.

4444 The Property "status" is a string containing a value from the set of possible ice maker statuses.

4445 The possible statuses are defined by the enumeration ["on", "off", "full"]

4446 A status of "on" means that the Ice Maker is operating.

4447 A status of "off" means that the Ice Maker is not operating.

4448 A status of "full" means that the ice collection bin is full (Ice Maker is operating).

### 4449 6.14.2 Example URI

4450 /IceMakerResURI

### 4451 6.14.3 Resource type

4452 The Resource Type is defined as: "oic.r.icemaker".

#### 4453 6.14.4 OpenAPI 2.0 definition

```
4454 {
4455   "swagger": "2.0",
4456   "info": {
4457     "title": "Ice Maker",
4458     "version": "20190215",
4459     "license": {
4460       "name": "OCF Data Model License",
4461       "url":
4462         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
4463         CENSE.md",
4464       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
4465       reserved."
4466     },
4467     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
4468   },
4469   "schemes": ["http"],
4470   "consumes": ["application/json"],
4471   "produces": ["application/json"],
4472   "paths": {
4473     "/IceMakerResURI" : {
4474       "get": {
4475         "description": "This Resource describes an the operational state of an Ice Maker.\nThe
4476         Property \"status\" is a string containing a value from the set of possible ice maker statuses.\nThe
4477         possible statuses are defined by the enumeration [\"on\", \"off\", \"full\"]\nA status of \"on\"
4478         means that the Ice Maker is operating.\nA status of \"off\" means that the Ice Maker is not
4479         operating.\nA status of \"full\" means that the ice collection bin is full (Ice Maker is
4480         operating).",
4481         "parameters": [
4482           { "$ref": "#/parameters/interface" }
4483         ],
4484         "responses": {
4485           "200": {
4486             "description": "RETRIEVES the current Ice Maker status.",
4487             "x-example":
4488               {
4489                 "rt": ["oic.r.icemaker"],
4490                 "if": ["oic.if.a", "oic.if.baseline"],
4491                 "status": "on"
4492               },
4493             "schema": { "$ref": "#/definitions/IceMaker" }
4494           }
4495         }
4496       },
4497       "post": {
4498         "description": "Sets the desired Ice Maker status.\nOnly valid settings for \"status\" in a
4499         UPDATE shall be \"on\" or \"off\".",
4500         "parameters": [
4501           { "$ref": "#/parameters/interface" },
4502           {
4503             "name": "body",
4504             "in": "body",
4505             "required": true,
4506             "schema": { "$ref": "#/definitions/IceMakerUpdate" },
4507             "x-example":
4508               {
4509                 "status": "off"
4510               }
4511           }
4512         ],
4513         "responses": {
4514           "200": {
4515             "description": "Indicates that the Ice Maker status was changed.\nThe new status is
4516             provided in the response.\n",
4517             "x-example":
4518               {
4519                 "status": "off"
4520               },
4521             "schema": { "$ref": "#/definitions/IceMakerUpdate" }
4522           },
4523           "403": {
```

```

4524         "description" : "This response is generated by the OCF Server when the client sends:\n
4525 An UPDATE with an invalid property value for \"status\".\n\nThe OCF Server responds with the current
4526 resource representation.\n",
4527         "x-example":
4528         {
4529             "status": "off"
4530         },
4531         "schema": { "$ref": "#/definitions/IceMakerUpdate" }
4532     }
4533 }
4534 }
4535 }
4536 },
4537 "parameters": {
4538     "interface": {
4539         "in": "query",
4540         "name": "if",
4541         "type": "string",
4542         "enum": ["oic.if.a", "oic.if.baseline"]
4543     }
4544 },
4545 "definitions": {
4546     "IceMaker" : {
4547         "properties": {
4548             "rt": {
4549                 "description": "The Resource Type.",
4550                 "items": {
4551                     "enum": ["oic.r.icemaker"],
4552                     "maxLength": 64,
4553                     "type": "string"
4554                 },
4555                 "minItems": 1,
4556                 "uniqueItems": true,
4557                 "readOnly": true,
4558                 "type": "array"
4559             },
4560             "status": {
4561                 "description": "The status of the Ice Maker.",
4562                 "enum": [
4563                     "on",
4564                     "off",
4565                     "full"
4566                 ],
4567                 "type": "string"
4568             },
4569             "n": {
4570                 "$ref":
4571 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4572 schema.json#/definitions/n"
4573             },
4574             "id": {
4575                 "$ref":
4576 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4577 schema.json#/definitions/id"
4578             },
4579             "if": {
4580                 "description": "The OCF Interface set supported by this Resource.",
4581                 "items": {
4582                     "enum": [
4583                         "oic.if.a",
4584                         "oic.if.baseline"
4585                     ],
4586                     "type": "string"
4587                 },
4588                 "minItems": 2,
4589                 "uniqueItems": true,
4590                 "readOnly": true,
4591                 "type": "array"
4592             }
4593         },
4594         "type": "object",
4595         "required": ["status"]

```

```

4596     },
4597     "IceMakerUpdate" : {
4598         "properties": {
4599             "status": {
4600                 "description": "Set the status of the Ice Maker.",
4601                 "enum": [
4602                     "on",
4603                     "off"
4604                 ]
4605             }
4606         },
4607         "type": "object",
4608         "required": ["status"]
4609     }
4610 }
4611 }
4612

```

4613 **6.14.5 Property definition**

4614 Table 31 defines the Properties that are part of the "oic.r.icemaker" Resource Type.

4615 **Table 31 – The Property definitions of the Resource with type "rt" = "oic.r.icemaker".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
status	string	Yes	Read Write	The status of the Ice Maker.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
status	multiple types: see schema	Yes	Read Write	Set the status of the Ice Maker.

4616 **6.14.6 CRUDN behaviour**

4617 Table 32 defines the CRUDN operations that are supported on the "oic.r.icemaker" Resource Type.

4618 **Table 32 – The CRUDN operations of the Resource with type "rt" = "oic.r.icemaker".**

Create	Read	Update	Delete	Notify
	get	post		observe

4619 **6.15 Lock**

4620 **6.15.1 Introduction**

4621 The Resource describing a lock.  
 4622 The Property "lockState" is a string. The value 'Locked' indicates that the door is Locked.  
 4623 The value 'Unlocked' indicates that the door is Unlocked.

4624 **6.15.2 Example URI**

4625 /LockStatusResURI

4626 **6.15.3 Resource type**

4627 The Resource Type is defined as: "oic.r.lock.status".

## 4628 6.15.4 OpenAPI 2.0 definition

```
4629 {
4630   "swagger": "2.0",
4631   "info": {
4632     "title": "Lock",
4633     "version": "20190215",
4634     "license": {
4635       "name": "OCF Data Model License",
4636       "url":
4637         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
4638         CENSE.md",
4639       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
4640         reserved."
4641     },
4642     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
4643   },
4644   "schemes": ["http"],
4645   "consumes": ["application/json"],
4646   "produces": ["application/json"],
4647   "paths": {
4648     "/LockStatusResURI" : {
4649       "get": {
4650         "description": "The Resource describing a lock.\n\nThe Property \"lockState\" is a string. The
4651         value 'Locked' indicates that the door is Locked.\n\nThe value 'Unlocked' indicates that the door is
4652         Unlocked.",
4653         "parameters": [
4654           { "$ref": "#/parameters/interface" }
4655         ],
4656         "responses": {
4657           "200": {
4658             "description": "RETRIEVES the state of the lock.",
4659             "x-example":
4660               {
4661                 "rt": ["oic.r.lock.status"],
4662                 "if": ["oic.if.a", "oic.if.baseline"],
4663                 "lockState": "Locked"
4664               },
4665             "schema": { "$ref": "#/definitions/Lock" }
4666           }
4667         }
4668       },
4669       "post": {
4670         "description": "Sets the current lock state.\n",
4671         "parameters": [
4672           { "$ref": "#/parameters/interface" },
4673           {
4674             "name": "body",
4675             "in": "body",
4676             "required": true,
4677             "schema": { "$ref": "#/definitions/Lock" },
4678             "x-example":
4679               {
4680                 "lockState": "Unlocked"
4681               }
4682           }
4683         ],
4684         "responses": {
4685           "200": {
4686             "description": "",
4687             "x-example":
4688               {
4689                 "lockState": "Unlocked"
4690               },
4691             "schema": { "$ref": "#/definitions/Lock" }
4692           },
4693           "403": {
4694             "description": "This response is generated by the OCF Server when the client sends:\n
4695             An UPDATE with an invalid property value for \"lockState\".\n\nThe server responds with the current
4696             resource representation.\n",
4697             "x-example":
4698               {
```

```

4699         "lockState": "Unlocked"
4700     },
4701     "schema": { "$ref": "#/definitions/Lock" }
4702 }
4703 }
4704 }
4705 }
4706 },
4707 "parameters": {
4708     "interface" : {
4709         "in" : "query",
4710         "name" : "if",
4711         "type" : "string",
4712         "enum" : ["oic.if.a", "oic.if.baseline"]
4713     }
4714 },
4715 "definitions": {
4716     "Lock" : {
4717         "properties": {
4718             "rt": {
4719                 "description": "Resource Type",
4720                 "items": {
4721                     "enum": ["oic.r.lock.status"],
4722                     "maxLength": 64,
4723                     "type": "string"
4724                 },
4725                 "minItems": 1,
4726                 "uniqueItems": true,
4727                 "readOnly": true,
4728                 "type": "array"
4729             },
4730             "lockState": {
4731                 "description": "The state of the lock.",
4732                 "enum": [
4733                     "Locked",
4734                     "Unlocked"
4735                 ],
4736                 "type": "string"
4737             },
4738             "n": {
4739                 "$ref":
4740 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4741 schema.json#/definitions/n"
4742             },
4743             "id": {
4744                 "$ref":
4745 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4746 schema.json#/definitions/id"
4747             },
4748             "if": {
4749                 "description": "The OCF Interface set supported by this Resource.",
4750                 "items": {
4751                     "enum": [
4752                         "oic.if.a",
4753                         "oic.if.baseline"
4754                     ],
4755                     "type": "string"
4756                 },
4757                 "minItems": 2,
4758                 "uniqueItems": true,
4759                 "readOnly": true,
4760                 "type": "array"
4761             }
4762         },
4763         "type": "object",
4764         "required": ["lockState"]
4765     }
4766 }
4767 }
4768

```



4769 **6.15.5 Property definition**

4770 Table 33 defines the Properties that are part of the "oic.r.lock.status" Resource Type.

4771 **Table 33 – The Property definitions of the Resource with type "rt" = "oic.r.lock.status".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
lockState	string	Yes	Read Write	The state of the lock.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

4772 **6.15.6 CRUDN behaviour**

4773 Table 34 defines the CRUDN operations that are supported on the "oic.r.lock.status" Resource  
4774 Type.

4775 **Table 34 – The CRUDN operations of the Resource with type "rt" = "oic.r.lock.status".**

Create	Read	Update	Delete	Notify
	get	post		observe

4776 **6.16 Lock Code**

4777 **6.16.1 Introduction**

4778 The Resource describing a lock code.

4779 The Property "lockCodeList" is an array of possible codes that may be associated with a lock.

4780 The codes are all presented as strings.

4781 **6.16.2 Example URI**

4782 /LockCodeResURI

4783 **6.16.3 Resource type**

4784 The Resource Type is defined as: "oic.r.lock.code".

4785 **6.16.4 OpenAPI 2.0 definition**

```

4786 {
4787   "swagger": "2.0",
4788   "info": {
4789     "title": "Lock Code",
4790     "version": "20190215",
4791     "license": {
4792       "name": "OCF Data Model License",
4793       "url":
4794         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
4795         CENSE.md",
4796       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
4797         reserved."
4798     },
4799     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
4800   },
4801   "schemes": ["http"],
4802   "consumes": ["application/json"],
4803   "produces": ["application/json"],
4804   "paths": {

```

```

4805     "/LockCodeResURI" : {
4806       "get": {
4807         "description": "The Resource describing a lock code.\nThe Property \"lockCodeList\" is an
4808 array of possible codes that may be associated with a lock.\nThe codes are all presented as
4809 strings.",
4810         "parameters": [
4811           {"$ref": "#/parameters/interface"}
4812         ],
4813         "responses": {
4814           "200": {
4815             "description": "RETRIEVES the current lock code values.",
4816             "x-example":
4817             {
4818               "rt": ["oic.r.lock.code"],
4819               "if": ["oic.if.a", "oic.if.baseline"],
4820               "lockCodeList": ["012345", "112233"]
4821             },
4822             "schema": { "$ref": "#/definitions/LockCode" }
4823           }
4824         }
4825       },
4826       "post": {
4827         "description": "Updates the current lock code values. e.g. all value in the property
4828 \"lockCodeList\"",
4829         "parameters": [
4830           {"$ref": "#/parameters/interface"},
4831           {
4832             "name": "body",
4833             "in": "body",
4834             "required": true,
4835             "schema": { "$ref": "#/definitions/LockCode" },
4836             "x-example":
4837             {
4838               "lockCodeList": ["543210", "332211"]
4839             }
4840           }
4841         ],
4842         "responses": {
4843           "200": {
4844             "description": "",
4845             "x-example":
4846             {
4847               "lockCodeList": ["543210", "332211"]
4848             },
4849             "schema": { "$ref": "#/definitions/LockCode" }
4850           }
4851         }
4852       }
4853     },
4854     "parameters": {
4855       "interface" : {
4856         "in" : "query",
4857         "name" : "if",
4858         "type" : "string",
4859         "enum" : ["oic.if.a", "oic.if.baseline"]
4860       }
4861     },
4862     "definitions": {
4863       "LockCode" : {
4864         "properties": {
4865           "rt": {
4866             "description": "The Resource Type.",
4867             "items": {
4868               "enum": ["oic.r.lock.code"],
4869               "maxLength": 64,
4870               "type": "string"
4871             },
4872             "minItems": 1,
4873             "uniqueItems": true,
4874             "readOnly": true,
4875             "type": "array"

```

```

4877     },
4878     "lockCodeList": {
4879       "items": {
4880         "description": "The value for the lock code.",
4881         "type": "string"
4882       },
4883       "type": "array"
4884     },
4885     "n": {
4886       "$ref":
4887       "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4888       schema.json#/definitions/n"
4889     },
4890     "id": {
4891       "$ref":
4892       "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4893       schema.json#/definitions/id"
4894     },
4895     "if": {
4896       "description": "The OCF Interface set supported by this Resource.",
4897       "items": {
4898         "enum": [
4899           "oic.if.a",
4900           "oic.if.baseline"
4901         ],
4902         "type": "string"
4903       },
4904       "minItems": 2,
4905       "uniqueItems": true,
4906       "readOnly": true,
4907       "type": "array"
4908     }
4909   },
4910   "type": "object",
4911   "required": ["lockCodeList"]
4912 }
4913 }
4914 }
4915

```

### 4916 6.16.5 Property definition

4917 Table 35 defines the Properties that are part of the "oic.r.lock.code" Resource Type.

4918 **Table 35 – The Property definitions of the Resource with type "rt" = "oic.r.lock.code".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
lockCodeList	array: see schema	Yes	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

### 4919 6.16.6 CRUDN behaviour

4920 Table 36 defines the CRUDN operations that are supported on the "oic.r.lock.code" Resource Type.

4921 **Table 36 – The CRUDN operations of the Resource with type "rt" = "oic.r.lock.code".**

Create	Read	Update	Delete	Notify
	get	post		observe

## 4922 6.17 Mode

### 4923 6.17.1 Introduction

4924 This Resource describes the modes of operation that a Device can provide.

4925 The mode can be read or set.

4926 The Property "supportedModes" is an array of possible modes the device supports.

4927 The Property "modes" is an array of the currently active mode(s).

### 4928 6.17.2 Example URI

4929 /ModeResURI

### 4930 6.17.3 Resource type

4931 The Resource Type is defined as: "oic.r.mode".

### 4932 6.17.4 OpenAPI 2.0 definition

```
4933 {
4934   "swagger": "2.0",
4935   "info": {
4936     "title": "Mode",
4937     "version": "20190215",
4938     "license": {
4939       "name": "OCF Data Model License",
4940       "url":
4941         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
4942         CENSE.md",
4943       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
4944         reserved."
4945     },
4946     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
4947   },
4948   "schemes": ["http"],
4949   "consumes": ["application/json"],
4950   "produces": ["application/json"],
4951   "paths": {
4952     "/ModeResURI" : {
4953       "get": {
4954         "description": "This Resource describes the modes of operation that a Device can
4955         provide.\n\nThe mode can be read or set.\n\nThe Property \"supportedModes\" is an array of possible
4956         modes the device supports.\n\nThe Property \"modes\" is an array of the currently active mode(s).",
4957         "parameters": [
4958           { "$ref": "#/parameters/interface" }
4959         ],
4960         "responses": {
4961           "200": {
4962             "description": "RETRIEVES the current mode.",
4963             "x-example":
4964               {
4965                 "rt": ["oic.r.mode"],
4966                 "if": ["oic.if.a", "oic.if.baseline"],
4967                 "supportedModes": ["active", "armedAway", "armedStay", "armedInstant"],
4968                 "modes": ["active"]
4969               },
4970             "schema": { "$ref": "#/definitions/Mode" }
4971           }
4972         }
4973       },
4974       "post": {
4975         "description": "Sets the desired mode.",
4976         "parameters": [
4977           { "$ref": "#/parameters/interface" },
4978           {
4979             "name": "body",
4980             "in": "body",
4981             "required": true,
4982             "schema": { "$ref": "#/definitions/ModeUpdate" },
4983             "x-example":
4984               {
```

```

4985         "modes": ["armedAway"]
4986     }
4987 }
4988 ],
4989 "responses": {
4990     "200": {
4991         "description": "",
4992         "x-example":
4993             {
4994                 "modes": ["armedAway"]
4995             }
4996     },
4997     "schema": { "$ref": "#/definitions/ModeUpdate" }
4998 },
4999     "403": {
5000         "description": "This response is generated by the OCF Server when the client sends:\n
5001 An UPDATE with an value for \"modes\" that is not found in \"supportedModes\".\n
5002 The server responds with the current resource representation.\n",
5003         "x-example":
5004             {
5005                 "supportedModes": ["active","armedAway","armedStay","armedInstant"],
5006                 "modes": ["active"]
5007             },
5008         "schema": { "$ref": "#/definitions/Mode" }
5009     }
5010 }
5011 }
5012 }
5013 },
5014 "parameters": {
5015     "interface": {
5016         "in": "query",
5017         "name": "if",
5018         "type": "string",
5019         "enum": ["oic.if.a", "oic.if.baseline"]
5020     }
5021 },
5022 "definitions": {
5023     "Mode" : {
5024         "properties": {
5025             "rt": {
5026                 "description": "The Resource Type.",
5027                 "items": {
5028                     "enum": ["oic.r.mode"],
5029                     "maxLength": 64,
5030                     "type": "string"
5031                 },
5032                 "minItems": 1,
5033                 "uniqueItems": true,
5034                 "readOnly": true,
5035                 "type": "array"
5036             },
5037             "modes": {
5038                 "description": "The array of the currently active mode(s).",
5039                 "items": {
5040                     "type": "string"
5041                 },
5042                 "type": "array"
5043             },
5044             "supportedModes": {
5045                 "description": "The array of possible modes the device supports.",
5046                 "items": {
5047                     "type": "string"
5048                 },
5049                 "readOnly": true,
5050                 "type": "array"
5051             },
5052             "n": {
5053                 "$ref":
5054                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5055                 schema.json#/definitions/n"
5056             },

```

```

5057     "id": {
5058         "$ref":
5059         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5060         schema.json#/definitions/id"
5061     },
5062     "if": {
5063         "description": "The OCF Interface set supported by this Resource.",
5064         "items": {
5065             "enum": [
5066                 "oic.if.a",
5067                 "oic.if.baseline"
5068             ],
5069             "type": "string"
5070         },
5071         "minItems": 2,
5072         "uniqueItems": true,
5073         "readOnly": true,
5074         "type": "array"
5075     }
5076 },
5077 "type": "object",
5078 "required": ["supportedModes", "modes"]
5079 },
5080 "ModeUpdate" : {
5081     "properties": {
5082         "modes": {
5083             "description": "Desired mode",
5084             "items": {
5085                 "type": "string"
5086             },
5087             "type": "array"
5088         }
5089     },
5090     "type": "object",
5091     "required": ["modes"]
5092 }
5093 }
5094 }
5095

```

5096 **6.17.5 Property definition**

5097 Table 37 defines the Properties that are part of the "oic.r.mode" Resource Type.

5098 **Table 37 – The Property definitions of the Resource with type "rt" = "oic.r.mode".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
modes	array: see schema	Yes	Read Write	The array of the currently active mode(s).
supportedModes	array: see schema	Yes	Read Only	The array of possible modes the device supports.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
modes	array: see schema	Yes	Read Write	Desired mode

5099 **6.17.6 CRUDN behaviour**

5100 Table 38 defines the CRUDN operations that are supported on the "oic.r.mode" Resource Type.

5101 **Table 38 – The CRUDN operations of the Resource with type "rt" = "oic.r.mode".**

Create	Read	Update	Delete	Notify
	get	post		observe

5102 **6.18 Open Level**

5103 **6.18.1 Introduction**

5104 This Resource describes how open or ajar an entity such as a window, door, blind or shutter is.  
 5105 The Property "openLevel" can be read (acting as a sensor).  
 5106 The "openLevel" can also be set (acting as an actuator).  
 5107 The "openLevel" is device dependent across the range provided.  
 5108 When the Property "range" is omitted then 0 to 100 is assumed where 0 means closed, 100  
 5109 means fully open.  
 5110 If a "range" is provided then the lower bound=closed, upper bound=open.  
 5111 If Property "step" is present then it represents the increment between possible values; if not  
 5112 provided 1 is assumed.

5113 **6.18.2 Example URI**

5114 /OpenLevelResURI

5115 **6.18.3 Resource type**

5116 The Resource Type is defined as: "oic.r.openlevel".

5117 **6.18.4 OpenAPI 2.0 definition**

```

5118 {
5119   "swagger": "2.0",
5120   "info": {
5121     "title": "Open Level",
5122     "version": "20190215",
5123     "license": {
5124       "name": "OCF Data Model License",
5125       "url":
5126         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
5127         CENSE.md",
5128       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
5129       reserved."
5130     },
5131     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
5132   },
5133   "schemes": ["http"],
5134   "consumes": ["application/json"],
5135   "produces": ["application/json"],
5136   "paths": {
5137     "/OpenLevelResURI" : {
5138       "get": {
5139         "description": "This Resource describes how open or ajar an entity such as a window, door,
5140         blind or shutter is.\nThe Property \"openLevel\" can be read (acting as a sensor).\nThe
5141         \"openLevel\" can also be set (acting as an actuator).\nThe \"openLevel\" is device dependent across
5142         the range provided.\nWhen the Property \"range\" is omitted then 0 to 100 is assumed where 0 means
5143         closed, 100 means fully open.\nIf a \"range\" is provided then the lower bound=closed, upper
5144         bound=open.\nIf Property \"step\" is present then it represents the increment between possible
5145         values; if not provided 1 is assumed.",
5146         "parameters": [
5147           {"$ref": "#/parameters/interface"}
5148         ],
5149         "responses": {
5150           "200": {
5151             "description": "RETRIEVES the current openLevel.",
5152             "x-example":
5153               {
5154                 "rt": ["oic.r.openlevel"],
5155                 "if": ["oic.if.a", "oic.if.baseline"],
5156                 "openLevel": 50,

```

```

5157         "step": 2,
5158         "range": [0, 100]
5159     },
5160     "schema": { "$ref": "#/definitions/OpenLevel" }
5161 }
5162 },
5163 },
5164 "post": {
5165     "description": "Sets the desired openLevel.",
5166     "parameters": [
5167         { "$ref": "#/parameters/interface" },
5168         {
5169             "name": "body",
5170             "in": "body",
5171             "required": true,
5172             "schema": { "$ref": "#/definitions/OpenLevel" },
5173             "x-example":
5174                 {
5175                     "openLevel": 0
5176                 }
5177         }
5178     ],
5179     "responses": {
5180         "200": {
5181             "description": "",
5182             "x-example":
5183                 {
5184                     "openLevel": 0
5185                 },
5186             "schema": { "$ref": "#/definitions/OpenLevel" }
5187         },
5188         "403": {
5189             "description": "This response is generated by the OCF Server when the client sends:\n
5190 An UPDATE with an out of range property value for \"openLevel\".\n\nThe OCF Server responds with the
5191 current resource representation.\n\n",
5192             "x-example":
5193                 {
5194                     "openLevel": 50,
5195                     "step": 2,
5196                     "range": [0, 100]
5197                 },
5198             "schema": { "$ref": "#/definitions/OpenLevel" }
5199         }
5200     }
5201 }
5202 },
5203 },
5204 "parameters": {
5205     "interface": {
5206         "in": "query",
5207         "name": "if",
5208         "type": "string",
5209         "enum": ["oic.if.a", "oic.if.baseline"]
5210     }
5211 },
5212 "definitions": {
5213     "OpenLevel": {
5214         "properties": {
5215             "rt": {
5216                 "description": "The Resource Type.",
5217                 "items": {
5218                     "maxLength": 64,
5219                     "type": "string",
5220                     "enum": ["oic.r.openlevel"]
5221                 },
5222                 "minItems": 1,
5223                 "uniqueItems": true,
5224                 "readOnly": true,
5225                 "type": "array"
5226             },
5227             "openLevel": {
5228                 "description": "How open or ajar the entity is.",

```



```

5229         "type": "integer"
5230     },
5231     "n": {
5232         "$ref":
5233         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5234         schema.json#/definitions/n"
5235     },
5236     "id": {
5237         "$ref":
5238         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5239         schema.json#/definitions/id"
5240     },
5241     "range": {
5242         "$ref":
5243         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
5244         schema.json#/definitions/range_integer"
5245     },
5246     "step": {
5247         "$ref":
5248         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
5249         schema.json#/definitions/step_integer"
5250     },
5251     "if": {
5252         "description": "The OCF Interface set supported by this Resource.",
5253         "items": {
5254             "enum": [
5255                 "oic.if.a",
5256                 "oic.if.baseline"
5257             ],
5258             "type": "string"
5259         },
5260         "minItems": 2,
5261         "uniqueItems": true,
5262         "readOnly": true,
5263         "type": "array"
5264     }
5265 },
5266 "type": "object",
5267 "required": ["openLevel"]
5268 }
5269 }
5270 }
5271

```

### 5272 6.18.5 Property definition

5273 Table 39 defines the Properties that are part of the "oic.r.openlevel" Resource Type.

5274 **Table 39 – The Property definitions of the Resource with type "rt" = "oic.r.openlevel".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
openLevel	integer	Yes	Read Write	How open or ajar the entity is.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

5275 **6.18.6 CRUDN behaviour**

5276 Table 40 defines the CRUDN operations that are supported on the "oic.r.openlevel" Resource Type.

5277 **Table 40 – The CRUDN operations of the Resource with type "rt" = "oic.r.openlevel".**

Create	Read	Update	Delete	Notify
	get	post		observe

5278 **6.19 Operational State**

5279 **6.19.1 Introduction**

5280 This Resource describes the operational and job states on a device.

5281 The states can be read or set, setting indicates a desired state.

5282 A device may reject an attempt to set a state that would result

5283 in adverse operational characteristics.

5284 The Property "machineStates" is an array of the possible operational states.

5285 The Property "currentMachineState" is the current state of operation of the device.

5286 The Property "jobStates" is an array of the possible job states.

5287 The Property "currentJobState" is the currently active jobState.

5288 The Property "runningTime" is the ISO8601 encoded elapsed time in the current operational state.

5290 The Property "remainingTime" is the ISO8601 encoded time till completion of the current operational state.

5292 The Property "progressPercentage" is the percentage completeness of the current jobState.

5293 **6.19.2 Example URI**

5294 /OperationalStateResURI

5295 **6.19.3 Resource type**

5296 The Resource Type is defined as: "oic.r.operational.state".

5297 **6.19.4 OpenAPI 2.0 definition**

```

5298 {
5299   "swagger": "2.0",
5300   "info": {
5301     "title": "Operational State",
5302     "version": "20190215",
5303     "license": {
5304       "name": "OCF Data Model License",
5305       "url":
5306         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
5307         CENSE.md",
5308       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
5309 reserved."
5310     },
5311     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
5312   },
5313   "schemes": ["http"],
5314   "consumes": ["application/json"],
5315   "produces": ["application/json"],
5316   "paths": {
5317     "/OperationalStateResURI": {
5318       "get": {
5319         "description": "This Resource describes the operational and job states on a device.\nThe
5320 states can be read or set, setting indicates a desired state.\nA device may reject an attempt to set
5321 a state that would result\n\nin adverse operational characteristics.\n\nThe Property \"machineStates\"
5322 is an array of the possible operational states.\n\nThe Property \"currentMachineState\" is the current
5323 state of operation of the device.\n\nThe Property \"jobStates\" is an array of the possible job
5324 states.\n\nThe Property \"currentJobState\" is the currently active jobState.\n\nThe Property
5325 \"runningTime\" is the ISO8601 encoded elapsed time in the current operational state.\n\nThe Property
5326 \"remainingTime\" is the ISO8601 encoded time till completion of the current operational state.\n\nThe
5327 Property \"progressPercentage\" is the percentage completeness of the current jobState.",

```

```

5328     "parameters": [
5329       { "$ref": "#/parameters/interface" }
5330     ],
5331     "responses": {
5332       "200": {
5333         "description": "RETRIEVES the current operational and job states.",
5334         "x-example": {
5335           "rt": ["oic.r.operational.state"],
5336           "if": ["oic.if.a", "oic.if.baseline"],
5337           "machineStates": ["pause", "stopped", "idle", "active"],
5338           "currentMachineState": "active",
5339           "jobStates": ["preWash", "wash", "rinse", "spin", "dry", "airDry", "wrinklePrevent"],
5340           "currentJobState": "rinse",
5341           "runningTime": "PT15M20S",
5342           "remainingTime": "PT10M40S",
5343           "progressPercentage": 75
5344         },
5345         "schema": { "$ref": "#/definitions/Operation" }
5346       }
5347     },
5348   },
5349   "post": {
5350     "description": "Sets the desired operational or job state.",
5351     "parameters": [
5352       { "$ref": "#/parameters/interface" },
5353       {
5354         "name": "body",
5355         "in": "body",
5356         "required": true,
5357         "schema": { "$ref": "#/definitions/OperationUpdate" },
5358         "x-example": {
5359           "currentMachineState": "pause",
5360           "currentJobState": "wash"
5361         }
5362       }
5363     ],
5364     "responses": {
5365       "200": {
5366         "description": "",
5367         "x-example": {
5368           "currentMachineState": "pause",
5369           "currentJobState": "wash"
5370         },
5371         "schema": { "$ref": "#/definitions/OperationUpdate" }
5372       },
5373       "403": {
5374         "description": "This response is generated by the OCF Server when the client sends:\n
5375 An UPDATE with an value for \"currentMachineState\" that is not found in \"machineStates\".\n An
5376 UPDATE with an value for \"currentJobState\" that is not found in \"jobStates\".\n\nThe OCF Server
5377 responds with the current resource representation.\n",
5378         "x-example": {
5379           "machineStates": ["pause", "stopped", "idle", "active"],
5380           "currentMachineState": "active",
5381           "jobStates": ["preWash", "wash", "rinse", "spin", "dry", "airDry", "wrinklePrevent"],
5382           "currentJobState": "rinse",
5383           "runningTime": "PT15M20S",
5384           "remainingTime": "PT10M40S",
5385           "progressPercentage": 75
5386         },
5387         "schema": { "$ref": "#/definitions/Operation" }
5388       }
5389     }
5390   }
5391 },
5392 ],
5393 "parameters": {
5394   "interface": {
5395     "in": "query",
5396     "name": "if",
5397     "type": "string",
5398     "enum": ["oic.if.a", "oic.if.baseline"]
5399   }

```

```

5400 },
5401 "definitions": {
5402   "Operation": {
5403     "properties": {
5404       "rt": {
5405         "description": "The Resource Type.",
5406         "items": {
5407           "enum": ["oic.r.operational.state"],
5408           "maxLength": 64,
5409           "type": "string"
5410         },
5411         "minItems": 1,
5412         "uniqueItems": true,
5413         "readOnly": true,
5414         "type": "array"
5415       },
5416       "currentMachineState": {
5417         "description": "The current state of operation of the device.",
5418         "type": "string"
5419       },
5420       "currentJobState": {
5421         "description": "The currently active jobState.",
5422         "type": "string"
5423       },
5424       "machineStates": {
5425         "description": "The array of the possible operational states.",
5426         "items": {
5427           "type": "string"
5428         },
5429         "readOnly": true,
5430         "type": "array"
5431       },
5432       "runningTime": {
5433         "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
5434 schema.json#/definitions/duration"
5435       },
5436       "remainingTime": {
5437         "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
5438 schema.json#/definitions/duration"
5439       },
5440       "progressPercentage": {
5441         "description": "The percentage completeness of the current jobState.",
5442         "maximum": 100,
5443         "minimum": 0,
5444         "readOnly": true,
5445         "type": "integer"
5446       },
5447       "jobStates": {
5448         "description": "The Array of the possible job states.",
5449         "items": {
5450           "type": "string"
5451         },
5452         "readOnly": true,
5453         "type": "array"
5454       },
5455       "n": {
5456         "$ref":
5457 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5458 schema.json#/definitions/n"
5459       },
5460       "id": {
5461         "$ref":
5462 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5463 schema.json#/definitions/id"
5464       },
5465       "if": {
5466         "description": "The OCF Interface set supported by this Resource.",
5467         "items": {
5468           "enum": [
5469             "oic.if.a",
5470             "oic.if.baseline"
5471           ],

```

```

5472         "type": "string"
5473     },
5474     "minItems": 2,
5475     "uniqueItems": true,
5476     "readOnly": true,
5477     "type": "array"
5478 }
5479 },
5480 "type": "object",
5481 "required": ["machineStates", "currentMachineState"]
5482 },
5483 "OperationUpdate" : {
5484     "properties": {
5485         "currentMachineState": {
5486             "description": "The current state of operation of the device.",
5487             "type": "string"
5488         },
5489         "currentJobState": {
5490             "description": "The currently active jobState.",
5491             "type": "string"
5492         }
5493     },
5494     "type": "object"
5495 }
5496 }
5497 }
5498

```

5499 **6.19.5 Property definition**

5500 Table 41 defines the Properties that are part of the "oic.r.operational.state" Resource Type.

5501 **Table 41 – The Property definitions of the Resource with type "rt" =**  
5502 **"oic.r.operational.state".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
currentMachineState	string	Yes	Read Write	The current state of operation of the device.
currentJobState	string	No	Read Write	The currently active jobState.
machineStates	array: see schema	Yes	Read Only	The array of the possible operational states.
runningTime	multiple types: see schema	No	Read Write	
remainingTime	multiple types: see schema	No	Read Write	
progressPercentage	integer	No	Read Only	The percentage completeness of the current jobState.
jobStates	array: see schema	No	Read Only	The Array of the possible job states.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

currentMachineState	string		Read Write	The current state of operation of the device.
currentJobState	string		Read Write	The currently active jobState.

5503 **6.19.6 CRUDN behaviour**

5504 Table 42 defines the CRUDN operations that are supported on the "oic.r.operational.state"  
5505 Resource Type.

5506 **Table 42 – The CRUDN operations of the Resource with type "rt" = "oic.r.operational.state".**

Create	Read	Update	Delete	Notify
	get	post		observe

5507 **6.20 Ramp Time**

5508 **6.20.1 Introduction**

5509 This Resource that describes the ramp time of a dimming function.  
5510 It specifies the actual speed of changing between 2 dimming values.  
5511 The Property "ramptime" is specified in milliseconds [ms].  
5512 When range is omitted the maximum value is 100 ms.  
5513 The ramp time of 0ms indicates the minimal delay possible by the implementation.

5514 **6.20.2 Example URI**

5515 /RampTimeResURI

5516 **6.20.3 Resource type**

5517 The Resource Type is defined as: "oic.r.light.ramptime".

5518 **6.20.4 OpenAPI 2.0 definition**

```
5519 {
5520   "swagger": "2.0",
5521   "info": {
5522     "title": "Ramp Time",
5523     "version": "20190215",
5524     "license": {
5525       "name": "OCF Data Model License",
5526       "url":
5527 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
5528 CENSE.md",
5529       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
5530 reserved."
5531     },
5532     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
5533   },
5534   "schemes": ["http"],
5535   "consumes": ["application/json"],
5536   "produces": ["application/json"],
5537   "paths": {
5538     "/RampTimeResURI" : {
5539       "get": {
5540         "description": "This Resource that describes the ramp time of a dimming function.\nIt
5541 specifies the actual speed of changing between 2 dimming values.\nThe Property \"ramptime\" is
5542 specified in milliseconds [ms].\nWhen range is omitted the maximum value is 100 ms.\nThe ramp time
5543 of 0ms indicates the minimal delay possible by the implementation.",
5544         "parameters": [
5545           {"$ref": "#/parameters/interface"}
5546         ],
5547         "responses": {
5548           "200": {
5549             "description": "RETRIEVES the current RampTime.",
5550             "x-example":
```

```

5551         {
5552             "rt": ["oic.r.light.ramptime"],
5553             "if": ["oic.if.a", "oic.if.baseline"],
5554             "rampTime": 40,
5555             "range": [0, 100]
5556         },
5557         "schema": { "$ref": "#/definitions/RampTime" }
5558     }
5559 },
5560 ],
5561 "post": {
5562     "description": "Sets the current RampTime.\n",
5563     "parameters": [
5564         { "$ref": "#/parameters/interface" },
5565         {
5566             "name": "body",
5567             "in": "body",
5568             "required": true,
5569             "schema": { "$ref": "#/definitions/RampTime" },
5570             "x-example":
5571                 {
5572                     "rampTime": 50
5573                 }
5574         }
5575     ],
5576     "responses": {
5577         "200": {
5578             "description": "This response is generated by the OCF Server when the client sends an
5579 UPDATE with an in range Property value for \"rampTime\". The OCF Server responds with the current
5580 resource representation.",
5581             "x-example":
5582                 {
5583                     "rampTime": 50,
5584                     "range": [0, 100]
5585                 },
5586             "schema": { "$ref": "#/definitions/RampTime" }
5587         },
5588         "403": {
5589             "description": "Error response. This response is generated by the OCF Server when the
5590 client sends an UPDATE with an out of range Property value for \"rampTime\".",
5591             "x-example":
5592                 {
5593                     "rampTime": 40,
5594                     "range": [0, 100]
5595                 },
5596             "schema": { "$ref": "#/definitions/RampTime" }
5597         }
5598     }
5599 }
5600 },
5601 ],
5602 "parameters": {
5603     "interface": {
5604         "in": "query",
5605         "name": "if",
5606         "type": "string",
5607         "enum": ["oic.if.a", "oic.if.baseline"]
5608     }
5609 },
5610 "definitions": {
5611     "RampTime": {
5612         "properties": {
5613             "rt": {
5614                 "description": "The Resource Type.",
5615                 "items": {
5616                     "enum": ["oic.r.light.ramptime"],
5617                     "maxLength": 64,
5618                     "type": "string"
5619                 },
5620                 "minItems": 1,
5621                 "uniqueItems": true,
5622                 "readOnly": true,

```

```

5623         "type": "array"
5624     },
5625     "rampTime" :
5626     {
5627         "description": "The actual speed of changing between 2 dimming values.",
5628         "type": "integer"
5629     },
5630     "n": {
5631         "$ref":
5632         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5633         schema.json#/definitions/n"
5634     },
5635     "id": {
5636         "$ref":
5637         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5638         schema.json#/definitions/id"
5639     },
5640     "range": {
5641         "$ref":
5642         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
5643         schema.json#/definitions/range_integer"
5644     },
5645     "step": {
5646         "$ref":
5647         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
5648         schema.json#/definitions/step_integer"
5649     },
5650     "precision": {
5651         "$ref":
5652         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
5653         schema.json#/definitions/precision"
5654     },
5655     "if": {
5656         "description": "The OCF Interface set supported by this Resource.",
5657         "items": {
5658             "enum": [
5659                 "oic.if.a",
5660                 "oic.if.baseline"
5661             ],
5662             "type": "string"
5663         },
5664         "minItems": 2,
5665         "uniqueItems": true,
5666         "readOnly": true,
5667         "type": "array"
5668     }
5669 },
5670 "type": "object",
5671 "required": ["rampTime"]
5672 }
5673 }
5674 }
5675

```

5676 **6.20.5 Property definition**

5677 Table 43 defines the Properties that are part of the "oic.r.light.ramptime" Resource Type.

5678 **Table 43 – The Property definitions of the Resource with type "rt" = "oic.r.light.ramptime".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
rampTime	integer	Yes	Read Write	The actual speed of changing between 2 dimming values.
n	multiple types: see schema	No	Read Write	



id	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

5679 **6.20.6 CRUDN behaviour**

5680 Table 44 defines the CRUDN operations that are supported on the "oic.r.light.ramptime" Resource  
5681 Type.

5682 **Table 44 – The CRUDN operations of the Resource with type "rt" = "oic.r.light.ramptime".**

Create	Read	Update	Delete	Notify
	get	post		observe

5683 **6.21 Refrigeration**

5684 **6.21.1 Introduction**

5685 This Resource describes a refrigeration function.

5686 The Property "filter" is a read-only value providing the percentage life time remaining for the  
5687 water filter.

5688 The Property "rapidFreeze" is a boolean that controls the rapid freeze capability if present.

5689 The Property "rapidCool" is a boolean that controls the rapid cool capability if present.

5690 The Property "defrost" is a boolean that controls the defrost cycle if present.

5691 At least one of the listed Properties shall be present in a Resource Instance.

5692 **6.21.2 Example URI**

5693 /RefrigerationResURI

5694 **6.21.3 Resource type**

5695 The Resource Type is defined as: "oic.r.refrigeration".

5696 **6.21.4 OpenAPI 2.0 definition**

```
5697 {
5698   "swagger": "2.0",
5699   "info": {
5700     "title": "Refrigeration",
5701     "version": "20190215",
5702     "license": {
5703       "name": "OCF Data Model License",
5704       "url":
5705 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
5706 CENSE.md",
5707       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
5708 reserved."
5709     },
5710     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
5711   },
5712   "schemes": ["http"],
5713   "consumes": ["application/json"],
5714   "produces": ["application/json"],
5715   "paths": {
5716     "/RefrigerationResURI" : {
5717       "get": {
```

```

5718         "description": "This Resource describes a refrigeration function.\nThe Property \"filter\"
5719 is a read-only value providing the percentage life time remaining for the water filter.\nThe
5720 Property \"rapidFreeze\" is a boolean that controls the rapid freeze capability if present.\nThe
5721 Property \"rapidCool\" is a boolean that controls the rapid cool capability if present.\nThe
5722 Property \"defrost\" is a boolean that controls the defrost cycle if present.\nAt least one of the
5723 listed Properties shall be present in a Resource Instance.",
5724         "parameters": [
5725             { "$ref": "#/parameters/interface" }
5726         ],
5727         "responses": {
5728             "200": {
5729                 "description": "Retrieves the current Refrigeration function status; all Properties
5730 supported by the Device are returned.",
5731                 "x-example":
5732                     {
5733                         "rt": ["oic.r.refrigeration"],
5734                         "if": ["oic.if.a", "oic.if.baseline"],
5735                         "filter": 75,
5736                         "rapidFreeze": false,
5737                         "rapidCool": false,
5738                         "defrost": true
5739                     },
5740                 "schema": { "$ref": "#/definitions/Refrigeration" }
5741             }
5742         },
5743     },
5744     "post": {
5745         "description": "Activates the desired Refrigeration functions.\nSupported values are
5746 \"rapidFreeze\", \"rapidCool\" and \"defrost\".\nAt least on of the supported values shall be
5747 provided.\n",
5748         "parameters": [
5749             { "$ref": "#/parameters/interface" },
5750             {
5751                 "name": "body",
5752                 "in": "body",
5753                 "required": true,
5754                 "schema": { "$ref": "#/definitions/RefrigerationUpdate" },
5755                 "x-example":
5756                     {
5757                         "rapidFreeze": true
5758                     }
5759             }
5760         ],
5761         "responses": {
5762             "200": {
5763                 "description": "Indicates that the Refrigeration function was changed.\nThe new
5764 status can be provided in the response.\n",
5765                 "x-example":
5766                     {
5767                         "rapidFreeze": true
5768                     },
5769                 "schema": { "$ref": "#/definitions/RefrigerationUpdate" }
5770             }
5771         }
5772     }
5773 },
5774 "parameters": {
5775     "interface": {
5776         "in": "query",
5777         "name": "if",
5778         "type": "string",
5779         "enum": ["oic.if.a", "oic.if.baseline"]
5780     }
5781 },
5782 "definitions": {
5783     "Refrigeration": {
5784         "properties": {
5785             "rt": {
5786                 "description": "The Resource Type.",
5787                 "items": {
5788                     "enum": ["oic.r.refrigeration"],

```

```

5790         "maxLength": 64,
5791         "type": "string"
5792     },
5793     "minItems": 1,
5794     "uniqueItems": true,
5795     "readOnly": true,
5796     "type": "array"
5797 },
5798 "rapidFreeze": {
5799     "description": "Indicates whether the unit has a rapid freeze capability active.",
5800     "type": "boolean"
5801 },
5802 "defrost": {
5803     "description": "Indicates whether a defrost cycle is currently active.",
5804     "type": "boolean"
5805 },
5806 "filter": {
5807     "description": "Percentage life time remaining for the water filter.",
5808     "maximum": 100,
5809     "minimum": 0,
5810     "readOnly": true,
5811     "type": "integer"
5812 },
5813 "rapidCool": {
5814     "description": "Indicates whether the unit has a rapid cool capability active.",
5815     "type": "boolean"
5816 },
5817 "n": {
5818     "$ref":
5819     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5820     schema.json#/definitions/n"
5821 },
5822 "id": {
5823     "$ref":
5824     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5825     schema.json#/definitions/id"
5826 },
5827 "if": {
5828     "description": "The OCF Interface set supported by this Resource.",
5829     "items": {
5830         "enum": [
5831             "oic.if.a",
5832             "oic.if.baseline"
5833         ],
5834         "type": "string"
5835     },
5836     "minItems": 2,
5837     "readOnly": true,
5838     "type": "array"
5839 }
5840 },
5841 "anyOf": [
5842     {
5843         "required": ["filter"]
5844     },
5845     {
5846         "required": ["rapidFreeze"]
5847     },
5848     {
5849         "required": ["rapidCool"]
5850     },
5851     {
5852         "required": ["defrost"]
5853     }
5854 ],
5855 "type": "object"
5856 },
5857 "RefrigerationUpdate": {
5858     "properties": {
5859         "rapidFreeze": {
5860             "description": "Indicates whether the unit has a rapid freeze capability active.",
5861             "type": "boolean"

```

```

5862     },
5863     "defrost": {
5864         "description": "Indicates whether a defrost cycle is currently active.",
5865         "type": "boolean"
5866     },
5867     "rapidCool": {
5868         "description": "Indicates whether the unit has a rapid cool capability active.",
5869         "type": "boolean"
5870     }
5871 },
5872 "anyOf": [
5873     {
5874         "required": ["rapidFreeze"]
5875     },
5876     {
5877         "required": ["rapidCool"]
5878     },
5879     {
5880         "required": ["defrost"]
5881     }
5882 ],
5883 "type": "object"
5884 }
5885 }
5886 }
5887

```

#### 5888 6.21.5 Property definition

5889 Table 45 defines the Properties that are part of the "oic.r.refrigeration" Resource Type.

5890 **Table 45 – The Property definitions of the Resource with type "rt" = "oic.r.refrigeration".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
rapidFreeze	boolean	No	Read Write	Indicates whether the unit has a rapid freeze capability active.
defrost	boolean	Yes	Read Write	Indicates whether a defrost cycle is currently active.
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.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
rapidFreeze	boolean	No	Read Write	Indicates whether the unit has a rapid freeze capability active.
defrost	boolean	Yes	Read Write	Indicates whether a defrost cycle is currently active.

rapidCool	boolean	No	Read Write	Indicates whether the unit has a rapid cool capability active.
-----------	---------	----	------------	--

5891 **6.21.6 CRUDN behaviour**

5892 Table 46 defines the CRUDN operations that are supported on the "oic.r.refrigeration" Resource  
5893 Type.

5894 **Table 46 – The CRUDN operations of the Resource with type "rt" = "oic.r.refrigeration".**

Create	Read	Update	Delete	Notify
	get	post		observe

5895 **6.22 Temperature**

5896 **6.22.1 Introduction**

5897 This Resource describes a sensed or actuated Temperature value.  
5898 The Property "temperature" describes the current value measured.  
5899 The Property "units" is a single value that is one of "C", "F" or "K".  
5900 It provides the unit of measurement for the "temperature" value.  
5901 It is a read-only value that is provided by the server.  
5902 If the "units" Property is missing the default is Celsius [C].  
5903 When the Property "range" is omitted the default is +/- MAXINT.  
5904 A client can specify the units for the requested temperature by use of a query parameter.  
5905 If no query parameter is provided the server provides its default measure or set value.  
5906 It is recommended to return always the units Property in the result.

5907 **6.22.2 Example URI**

5908 /TemperatureResURI

5909 **6.22.3 Resource type**

5910 The Resource Type is defined as: "oic.r.temperature".

5911 **6.22.4 OpenAPI 2.0 definition**

```
5912 {
5913   "swagger": "2.0",
5914   "info": {
5915     "title": "Temperature",
5916     "version": "20190215",
5917     "license": {
5918       "name": "OCF Data Model License",
5919       "url":
5920 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
5921 CENSE.md",
5922       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
5923 reserved."
5924     },
5925     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
5926   },
5927   "schemes": ["http"],
5928   "consumes": ["application/json"],
5929   "produces": ["application/json"],
5930   "paths": {
5931     "/TemperatureResURI" : {
5932       "get": {
5933         "description": "This Resource describes a sensed or actuated Temperature value.\nThe
5934 Property \"temperature\" describes the current value measured.\nThe Property \"units\" is a single
5935 value that is one of \"C\", \"F\" or \"K\".\nIt provides the unit of measurement for the
5936 \"temperature\" value.\nIt is a read-only value that is provided by the server.\nIf the \"units\"
5937 Property is missing the default is Celsius [C].\nWhen the Property \"range\" is omitted the default
5938 is +/- MAXINT.\nA client can specify the units for the requested temperature by use of a query
```

```

5939 parameter.\nIf no query parameter is provided the server provides its default measure or set
5940 value.\nIt is recommended to return always the units Property in the result.",
5941     "parameters": [
5942         {"$ref": "#/parameters/interface"},
5943         {"$ref": "#/parameters/unit"}
5944     ],
5945     "responses": {
5946         "200": {
5947             "description": "Retrieves the current temperature value.",
5948             "x-example":
5949                 {
5950                     "rt": ["oic.r.temperature"],
5951                     "if": [ "oic.if.a", "oic.if.baseline"],
5952                     "temperature": 20.0,
5953                     "units": "C"
5954                 }
5955             ,
5956             "schema": { "$ref": "#/definitions/Temperature" }
5957         },
5958         "403": {
5959             "description": "This response is generated by the OCF Server when the client sends:\n
5960 A RETRIEVE with queryParameter indicating a unit that the server does not support.\nThe server
5961 responds with the current resource representation including the\n\"units\" property illustrating the
5962 supported units and the error.",
5963             "x-example":
5964                 {
5965                     "temperature": 20.0,
5966                     "units": "C"
5967                 },
5968             "schema": { "$ref": "#/definitions/Temperature" }
5969         }
5970     }
5971 },
5972 "post": {
5973     "description": "Sets the desired temperature value.\nIf a \"unit\" is included and the
5974 server may not support the unit indicated the request will fail.\nIf the units are omitted value is
5975 taken to be in C.",
5976     "parameters": [
5977         {"$ref": "#/parameters/interface"},
5978         {
5979             "name": "body",
5980             "in": "body",
5981             "required": true,
5982             "schema": { "$ref": "#/definitions/Temperature" },
5983             "x-example":
5984                 {
5985                     "temperature": 18.0,
5986                     "units": "F"
5987                 }
5988         }
5989     ],
5990     "responses": {
5991         "200": {
5992             "description": "",
5993             "x-example":
5994                 {
5995                     "temperature": 18.0,
5996                     "units": "F"
5997                 }
5998             ,
5999             "schema": { "$ref": "#/definitions/Temperature" }
6000         },
6001         "403": {
6002             "description": "This response is generated by the OCF Server when the client sends:\n
6003 An UPDATE with an out of range property value for temperature.\n An UPDATE with an unsupported unit
6004 for this server.\nThe OCF Server responds with the current resource representation including\nthe
6005 \"range\" property illustrating the supported range and the error.",
6006             "x-example":
6007                 {
6008                     "temperature": 20.0,
6009                     "units": "C"
6010                 }

```

```

6011         ,
6012         "schema": { "$ref": "#/definitions/Temperature" }
6013     }
6014 }
6015 }
6016 }
6017 },
6018 "parameters": {
6019     "interface" : {
6020         "in" : "query",
6021         "name" : "if",
6022         "type" : "string",
6023         "enum" : ["oic.if.a", "oic.if.s", "oic.if.baseline"]
6024     },
6025     "unit" : {
6026         "in": "query",
6027         "description": "Units",
6028         "type": "string",
6029         "enum": ["C", "F", "K"],
6030         "name": "units",
6031         "x-queryexample" : "/TemperatureResURI?units=C"
6032     }
6033 },
6034 "definitions": {
6035     "Temperature" : {
6036         "properties": {
6037             "rt" : {
6038                 "description": "The Resource Type.",
6039                 "items": {
6040                     "maxLength": 64,
6041                     "type": "string",
6042                     "enum": ["oic.r.temperature"]
6043                 },
6044                 "minItems": 1,
6045                 "uniqueItems": true,
6046                 "readOnly": true,
6047                 "type": "array"
6048             },
6049             "temperature" : {
6050                 "description": "The current temperature setting or measurement.",
6051                 "type": "number"
6052             },
6053             "units" : {
6054                 "description": "The unit for the conveyed temperature value, Note that when doing an
6055 UPDATE, the unit on the device does NOT change, it only indicates the unit of the conveyed value
6056 during the UPDATE operation.",
6057                 "enum": [
6058                     "C",
6059                     "F",
6060                     "K"
6061                 ],
6062                 "type": "string"
6063             },
6064             "n": {
6065                 "$ref":
6066 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6067 schema.json#/definitions/n"
6068             },
6069             "id": {
6070                 "$ref":
6071 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6072 schema.json#/definitions/id"
6073             },
6074             "range" : {
6075                 "$ref":
6076 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6077 schema.json#/definitions/range_number"
6078             },
6079             "step" : {
6080                 "$ref":
6081 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6082 schema.json#/definitions/step_number"

```

```

6083     },
6084     "precision" : {
6085         "$ref":
6086         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6087         schema.json#/definitions/precision"
6088     },
6089     "if" : {
6090         "description": "The OCF Interface set supported by this Resource.",
6091         "items": {
6092             "enum": [
6093                 "oic.if.baseline",
6094                 "oic.if.s",
6095                 "oic.if.a"
6096             ],
6097             "maxLength": 64,
6098             "type": "string"
6099         },
6100         "minItems": 2,
6101         "uniqueItems": true,
6102         "readOnly": true,
6103         "type": "array"
6104     }
6105 },
6106 "type" : "object",
6107 "required": ["temperature"]
6108 }
6109 }
6110 }

```

6111 **6.22.5 Property definition**

6112 Table 47 defines the Properties that are part of the "oic.r.temperature" Resource Type.

6113 **Table 47 – The Property definitions of the Resource with type "rt" = "oic.r.temperature".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
temperature	number	Yes	Read Write	The current temperature setting or measurement.
units	string	No	Read Write	The unit for the conveyed temperature value, Note that when doing an UPDATE, the unit on the device does NOT change, it only indicates the unit of the conveyed value during the UPDATE operation.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	



if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
----	-------------------	----	-----------	---

6114 **6.22.6 CRUDN behaviour**

6115 Table 48 defines the CRUDN operations that are supported on the "oic.r.temperature" Resource  
6116 Type.

6117 **Table 48 – The CRUDN operations of the Resource with type "rt" = "oic.r.temperature".**

Create	Read	Update	Delete	Notify
	get	post		observe

6118 **6.23 Time Period**

6119 **6.23.1 Introduction**

6120 This Resource describes the time period over which any additionally provided information is  
6121 derived or bounded.  
6122 The Property "startTime" and "stopTime" are RFC3339 encoded strings. The Property "startTime"  
6123 must be present.  
6124 The interval is the interval of the time period in minutes, if present this value must be no less than  
6125 0 minute.  
6126 The intervalsecond is the interval of the time period in seconds, if present this value must be  
6127 numerical zero or greater.  
6128 The repeat is the number of the time period's iteration, which means how many times to repeat  
6129 the time period. The Property "repeat" accepts only negative one, numerical zero, and positive  
6130 number. When this value is numerical zero, the time period will be repeated infinitely until a client  
6131 makes it stop by inputting negative one for the value.  
6132 The Property "stoptime" and "interval" are mutually exclusive; both Properties cannot be present  
6133 in a Resource instance.  
6134 The Property "intervalsecond" cannot be presented with the Property "stopTime". In case of both  
6135 the Property "interval" and "intervalsecond" are presented together, the total time interval is the  
6136 sum of "interval" and "intervalsecond".  
6137 The Property "triggertiming" describes a specific time to execute an action. This property must  
6138 have one of the values among "startTime", "stopTime", and "totalInterval". The totalInterval  
6139 means the sum of the Property "interval" and "intervalsecond". If one of the properties does not  
6140 exist, the value of the unexpressed property is taken as a numerical zero.  
6141 The Property "state" describes a state of time interval. This property must have one of the values  
6142 among "preInterval", "inInterval", and "postInterval".  
6143 The Resource defines a time period for information retrieval, action or other behaviour.

6144 **6.23.2 Example URI**

6145 /TimePeriodResURI

6146 **6.23.3 Resource type**

6147 The Resource Type is defined as: "oic.r.time.period".

6148 **6.23.4 OpenAPI 2.0 definition**

```
6149 {
6150   "swagger": "2.0",
6151   "info": {
6152     "title": "Time Period",
6153     "version": "20191001",
6154     "license": {
6155       "name": "OCF Data Model License",
6156       "url":
6157         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
6158         CENSE.md",
6159       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
```

```

6160 reserved."
6161     },
6162     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
6163   },
6164   "schemes": ["http"],
6165   "consumes": ["application/json"],
6166   "produces": ["application/json"],
6167   "paths": {
6168     "/TimePeriodResURI" : {
6169       "get": {
6170         "description": "This Resource describes the time period over which any additionally provided
6171 information is derived or bounded.\nThe Property \"startTime\" and \"stopTime\" are RFC3339 encoded
6172 strings. The Property \"startTime\" must be present.\nThe interval is the interval of the time
6173 period in minutes, if present this value must be no less than 0 minute.\nThe intervalsecond is the
6174 interval of the time period in seconds, if present this value must be numerical zero or
6175 greater.\nThe repeat is the number of the time period's iteration, which means how many times to
6176 repeat the time period. The Property \"repeat\" accepts only negative one, numerical zero, and
6177 positive number. When this value is numerical zero, the time period will be repeated infinitely
6178 until a client makes it stop by inputting negative one for the value.\nThe Property \"stoptime\" and
6179 \"interval\" are mutually exclusive; both Properties cannot be present in a Resource instance.\nThe
6180 Property \"intervalsecond\" cannot be presented with the Property \"stopTime\". In case of both the
6181 Property \"interval\" and \"intervalsecond\" are presented together, the total time interval is the
6182 sum of \"interval\" and \"intervalsecond\".\nThe Property \"triggertiming\" describes a specific
6183 time to execute an action. This property must have one of the values among \"startTime\",
6184 \"stopTime\", and \"totalInterval\". The totalInterval means the sum of the Property \"interval\"
6185 and \"intervalsecond\". If one of the properties does not exist, the value of the unexpressed
6186 property is taken as a numerical zero.\nThe Property \"state\" describes a state of time interval.
6187 This property must have one of the values among \"preInterval\", \"inInterval\", and
6188 \"postInterval\".\nThe Resource defines a time period for information retrieval, action or other
6189 behaviour.",
6190         "parameters": [
6191           { "$ref": "#/parameters/interface" }
6192         ],
6193         "responses": {
6194           "200": {
6195             "description": "",
6196             "x-example":
6197               {
6198                 "rt": ["oic.r.time.period"],
6199                 "if": ["oic.if.a", "oic.if.baseline"],
6200                 "startTime": "2015-01-09T14:30:00Z",
6201                 "stopTime": "2015-01-09T14:45:00Z"
6202               },
6203             "schema": { "$ref": "#/definitions/TimePeriod" }
6204           }
6205         }
6206       },
6207       "post": {
6208         "description": "Sets or updates a time period for information retrieval, action or other
6209 behavior.",
6210         "parameters": [
6211           { "$ref": "#/parameters/interface" },
6212           {
6213             "name": "body",
6214             "in": "body",
6215             "required": true,
6216             "schema": { "$ref": "#/definitions/TimePeriod" },
6217             "x-example":
6218               {
6219                 "startTime": "2015-01-09T14:30:00Z",
6220                 "stopTime": "2015-01-09T14:45:00Z"
6221               }
6222           }
6223         ],
6224         "responses": {
6225           "200": {
6226             "description": "",
6227             "x-example":
6228               {
6229                 "startTime": "2015-01-09T14:30:00Z",
6230                 "stopTime": "2015-01-09T14:45:00Z"
6231               }
6232           }
6233         }
6234       }
6235     }
6236   }

```

```

6232         "schema": { "$ref": "#/definitions/TimePeriod" }
6233     }
6234 }
6235 }
6236 }
6237 },
6238 "parameters": {
6239     "interface": {
6240         "in": "query",
6241         "name": "if",
6242         "type": "string",
6243         "enum": ["oic.if.a", "oic.if.baseline"]
6244     }
6245 },
6246 "definitions": {
6247     "TimePeriod" : {
6248         "properties": {
6249             "rt": {
6250                 "description": "The Resource Type.",
6251                 "items": {
6252                     "enum": ["oic.r.time.period"],
6253                     "maxLength": 64,
6254                     "type": "string"
6255                 },
6256                 "minItems": 1,
6257                 "uniqueItems": true,
6258                 "readOnly": true,
6259                 "type": "array"
6260             },
6261             "interval": {
6262                 "description": "The time interval in minutes after the \"startTime\", if present the
6263 Property \"stopTime\" cannot be present.",
6264                 "type": "integer",
6265                 "minimum": 0
6266             },
6267             "intervalsecond": {
6268                 "description": "The time interval in seconds after the \"startTime\", if present the
6269 Property \"stopTime\" cannot be present.",
6270                 "type": "integer",
6271                 "minimum": 0
6272             },
6273             "stopTime": {
6274                 "description": "The stop time for the time period, if present the Property \"interval\" or
6275 \"intervalsecond\" cannot be present.",
6276                 "type": "string",
6277                 "format": "date-time"
6278             },
6279             "startTime": {
6280                 "description": "The start time for the time period.",
6281                 "type": "string",
6282                 "format": "date-time"
6283             },
6284             "repeat": {
6285                 "description": "The number of times to repeat the time period",
6286                 "type": "integer",
6287                 "minimum": -1
6288             },
6289             "triggertiming": {
6290                 "description": "The desired timing to trigger an action execution",
6291                 "type": "string",
6292                 "enum": [
6293                     "startTime",
6294                     "stopTime",
6295                     "totalInterval"
6296                 ]
6297             },
6298             "state": {
6299                 "description": "The current state of the time interval",
6300                 "type": "string",
6301                 "readOnly": true,
6302                 "enum": [
6303                     "preInterval",

```

```

6304         "inInterval",
6305         "postInterval"
6306     ]
6307 },
6308 "n": {
6309     "$ref":
6310 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6311 schema.json#/definitions/n"
6312 },
6313 "id": {
6314     "$ref":
6315 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6316 schema.json#/definitions/id"
6317 },
6318 "if": {
6319     "description": "The OCF Interface set supported by this Resource.",
6320     "items": {
6321         "enum": [
6322             "oic.if.a",
6323             "oic.if.baseline"
6324         ],
6325         "type": "string"
6326     },
6327     "minItems": 2,
6328     "uniqueItems": true,
6329     "readOnly": true,
6330     "type": "array"
6331 },
6332 },
6333 "type": "object",
6334 "required": ["startTime"]
6335 }
6336 }
6337 }
6338

```

### 6.23.5 Property definition

Table 49 defines the Properties that are part of the "oic.r.time.period" Resource Type.

**Table 49 – The Property definitions of the Resource with type "rt" = "oic.r.time.period".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
interval	integer	No	Read Write	The time interval in minutes after the "startTime", if present the Property "stopTime" cannot be present.
intervalsecond	integer	No	Read Write	The time interval in seconds after the "startTime", if present the Property "stopTime" cannot be present.
stopTime	string	No	Read Write	The stop time for the time period, if present the Property "interval" or "intervalsecond" cannot be present.
startTime	string	Yes	Read Write	The start time for the time period.
Repeat	integer	No	Read Write	The number of times to repeat the time period

triggertiming	string	No	Read Write	The desired timing to trigger an action execution
State	string	No	Read Only	The current state of the time interval
n	multiple types: see schema	No	Read Write	
Id	multiple types: see schema	No	Read Write	
If	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

6342 **6.23.6 CRUDN behaviour**

6343 Table 50 defines the CRUDN operations that are supported on the "oic.r.time.period" Resource  
6344 Type.

6345 **Table 50 – The CRUDN operations of the Resource with type "rt" = "oic.r.time.period".**

Create	Read	Update	Delete	Notify
	get	post		observe

6346

6347 **6.24 Activity Count**

6348 **6.24.1 Introduction**

6349 This Resource specifies an activity count.

6350 The Resource can be readonly (oic.if.s interface) in which instance it represents a count.

6351 The Resource can be readwrite (oic.if.a interface) in which instance it represents a goal or target  
6352 for a count.

6353 The Property "count" is an integer representing either the current count or goal value.

6354 **6.24.2 Example URI**

6355 /ActivityCountResURI

6356 **6.24.3 Resource type**

6357 The Resource Type is defined as: "oic.r.sensor.activity.count".

6358 **6.24.4 OpenAPI 2.0 definition**

```
6359 {
6360   "swagger": "2.0",
6361   "info": {
6362     "title": "Activity Count",
6363     "version": "20190222",
6364     "license": {
6365       "name": "OCF Data Model License",
6366       "url":
6367         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
6368         CENSE.md",
6369       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
6370     },
6371     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
6372   },
6373   "schemes": ["http"],
6374   "consumes": ["application/json"],
6375   "produces": ["application/json"],
6376   "paths": {
6377     "/ActivityCountResURI" : {
6378       "get": {
6379         "description": "This Resource specifies an activity count.\n\nThe Resource can be readonly
```

```

6380 (oic.if.s interface) in which instance it represents a count.\nThe Resource can be readwrite
6381 (oic.if.a interface) in which instance it represents a goal or target for a count.\nThe Property
6382 \"count\" is an integer representing either the current count or goal value.\",
6383   "parameters": [
6384     {"$ref": "#/parameters/interface"}
6385   ],
6386   "responses": {
6387     "200": {
6388       "description": "",
6389       "x-example":
6390         {
6391           "rt": ["oic.r.sensor.activity.count"],
6392           "if": ["oic.if.a", "oic.if.baseline"],
6393           "count": 2500
6394         },
6395       "schema": { "$ref": "#/definitions/Count" }
6396     }
6397   }
6398 },
6399 "post": {
6400   "description": "Sets the \"count\" target.",
6401   "parameters": [
6402     {"$ref": "#/parameters/interface"},
6403     {
6404       "name": "body",
6405       "in": "body",
6406       "required": true,
6407       "schema": { "$ref": "#/definitions/Count" },
6408       "x-example":
6409         {
6410           "count": 5000
6411         }
6412     }
6413   ],
6414   "responses": {
6415     "200": {
6416       "description": "",
6417       "x-example":
6418         {
6419           "count": 5000
6420         },
6421       "schema": { "$ref": "#/definitions/Count" }
6422     }
6423   }
6424 }
6425 },
6426 "parameters": {
6427   "interface": {
6428     "in": "query",
6429     "name": "if",
6430     "type": "string",
6431     "enum": ["oic.if.a", "oic.if.s", "oic.if.baseline"]
6432   }
6433 },
6434 "definitions": {
6435   "Count": {
6436     "properties": {
6437       "rt": {
6438         "description": "The Resource Type.",
6439         "items": {
6440           "maxLength": 64,
6441           "type": "string",
6442           "enum": ["oic.r.sensor.activity.count"]
6443         },
6444         "minItems": 1,
6445         "uniqueItems": true,
6446         "readOnly": true,
6447         "type": "array"
6448       },
6449     },
6450     "count": {
6451       "description": "The current or Target count.",

```

```

6452         "type": "integer"
6453     },
6454     "n": {
6455         "$ref":
6456         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6457         schema.json#/definitions/n"
6458     },
6459     "id": {
6460         "$ref":
6461         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6462         schema.json#/definitions/id"
6463     },
6464     "range": {
6465         "$ref":
6466         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6467         schema.json#/definitions/range_integer"
6468     },
6469     "step": {
6470         "$ref":
6471         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6472         schema.json#/definitions/step_integer"
6473     },
6474     "if": {
6475         "description": "The OCF Interface set supported by this Resource.",
6476         "items": {
6477             "enum": [
6478                 "oic.if.a",
6479                 "oic.if.s",
6480                 "oic.if.baseline"
6481             ],
6482             "type": "string"
6483         },
6484         "minItems": 2,
6485         "readOnly": true,
6486         "uniqueItems": true,
6487         "type": "array"
6488     }
6489 },
6490 "type": "object",
6491 "required": ["count"]
6492 }
6493 }
6494 }
6495

```

### 6.24.5 Property definition

Table 51 defines the Properties that are part of the "oic.r.sensor.activity.count" Resource Type.

**Table 51 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.activity.count".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
count	integer	Yes	Read Write	The current or Target count.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	

if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
----	-------------------	----	-----------	---

6500 **6.24.6 CRUDN behaviour**

6501 Table 52 defines the CRUDN operations that are supported on the "oic.r.sensor.activity.count"  
6502 Resource Type.

6503 **Table 52 – The CRUDN operations of the Resource with type "rt" =**  
6504 **"oic.r.sensor.activity.count".**

Create	Read	Update	Delete	Notify
	get	post		observe

6505 **6.25 Atmospheric Pressure Sensor**

6506 **6.25.1 Introduction**

6507 This Resource provides a measurement of Mean Sea Level Pressure experienced at the  
6508 measuring point expressed in millibars.  
6509 The Property "atmosphericPressure" is a float which describes the atmospheric pressure in hPa  
6510 (hectoPascals).  
6511 Note that hPa and the also commonly used unit of millibars (mbar) are numerically equivalent.

6512 **6.25.2 Example URI**

6513 /AtmosphericPressureResURI

6514 **6.25.3 Resource type**

6515 The Resource Type is defined as: "oic.r.sensor.atmosphericpressure".

6516 **6.25.4 OpenAPI 2.0 definition**

```
6517 {
6518   "swagger": "2.0",
6519   "info": {
6520     "title": "Atmospheric Pressure Sensor",
6521     "version": "20190225",
6522     "license": {
6523       "name": "OCF Data Model License",
6524       "url":
6525         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
6526         CENSE.md",
6527       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
6528       reserved."
6529     },
6530     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
6531   },
6532   "schemes": ["http"],
6533   "consumes": ["application/json"],
6534   "produces": ["application/json"],
6535   "paths": {
6536     "/AtmosphericPressureResURI" : {
6537       "get": {
6538         "description": "This Resource provides a measurement of Mean Sea Level Pressure experienced
6539         at the measuring point expressed in millibars.\nThe Property \"atmosphericPressure\" is a float
6540         which describes the atmospheric pressure in hPa (hectoPascals).\nNote that hPa and the also commonly
6541         used unit of millibars (mbar) are numerically equivalent.",
6542         "parameters": [
6543           {"$ref": "#/parameters/interface"}
6544         ],
6545         "responses": {
6546           "200": {
6547             "description": "",
6548             "x-example":
6549               {
```



```

6550         "rt": ["oic.r.sensor.atmosphericpressure"],
6551         "if": ["oic.if.s", "oic.if.baseline"],
6552         "atmosphericPressure": 1000.4
6553     },
6554     "schema": { "$ref": "#/definitions/atmosphericPressure" }
6555 }
6556 }
6557 }
6558 }
6559 },
6560 "parameters": {
6561     "interface" : {
6562         "in": "query",
6563         "name": "if",
6564         "type": "string",
6565         "enum": ["oic.if.s", "oic.if.baseline"]
6566     }
6567 },
6568 "definitions": {
6569     "atmosphericPressure" : {
6570         "properties": {
6571             "rt" : {
6572                 "description": "The Resource Type.",
6573                 "items": {
6574                     "enum": ["oic.r.sensor.atmosphericpressure"],
6575                     "maxLength": 64,
6576                     "type": "string"
6577                 },
6578                 "minItems": 1,
6579                 "uniqueItems": true,
6580                 "readOnly": true,
6581                 "type": "array"
6582             },
6583             "atmosphericPressure": {
6584                 "description": "The current atmospheric pressure in hPa.",
6585                 "readOnly": true,
6586                 "type": "number"
6587             },
6588             "n": {
6589                 "$ref":
6590 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6591 schema.json#/definitions/n"
6592             },
6593             "id": {
6594                 "$ref":
6595 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6596 schema.json#/definitions/id"
6597             },
6598             "precision": {
6599                 "$ref":
6600 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6601 schema.json#/definitions/precision"
6602             },
6603             "range": {
6604                 "$ref":
6605 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6606 schema.json#/definitions/range_number"
6607             },
6608             "step": {
6609                 "$ref":
6610 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6611 schema.json#/definitions/step_number"
6612             },
6613             "if": {
6614                 "description": "The OCF Interface set supported by this Resource.",
6615                 "items": {
6616                     "enum": [
6617                         "oic.if.s",
6618                         "oic.if.baseline"
6619                     ],
6620                     "type": "string"
6621                 }

```

```

6622         "minItems": 2,
6623         "uniqueItems": true,
6624         "readOnly": true,
6625         "type": "array"
6626     }
6627 },
6628     "type": "object",
6629     "required": ["atmosphericPressure"]
6630 }
6631 }
6632 }
6633

```

6634 **6.25.5 Property definition**

6635 Table 53 defines the Properties that are part of the "oic.r.sensor.atmosphericpressure" Resource  
6636 Type.

6637 **Table 53 – The Property definitions of the Resource with type "rt" =**  
6638 **"oic.r.sensor.atmosphericpressure".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
atmosphericPressure	number	Yes	Read Only	The current atmospheric pressure in hPa.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

6639 **6.25.6 CRUDN behaviour**

6640 Table 54 defines the CRUDN operations that are supported on the  
6641 "oic.r.sensor.atmosphericpressure" Resource Type.

6642 **Table 54 – The CRUDN operations of the Resource with type "rt" =**  
6643 **"oic.r.sensor.atmosphericpressure".**

Create	Read	Update	Delete	Notify
	get			observe

6644 **6.26 Audio Controls**

6645 **6.26.1 Introduction**

6646 This Resource defines basic audio control functions.  
6647 The Property "volume" is an integer containing a percentage [0,100].  
6648 A volume of 0 (zero) means no sound produced.  
6649 A volume of 100 means maximum sound production.  
6650 The Property "mute" is implemented as a boolean.  
6651 A mute value of true means that the device is muted (no audio).  
6652 A mute value of false means that the device is not muted (audio).

## 6653 6.26.2 Example URI

6654 /AudioResURI

## 6655 6.26.3 Resource type

6656 The Resource Type is defined as: "oic.r.audio".

## 6657 6.26.4 OpenAPI 2.0 definition

```
6658 {
6659   "swagger": "2.0",
6660   "info": {
6661     "title": "Audio Controls",
6662     "version": "20190620",
6663     "license": {
6664       "name": "OCF Data Model License",
6665       "url":
6666         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
6667         CENSE.md",
6668       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
6669         reserved."
6670     },
6671     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
6672   },
6673   "schemes": ["http"],
6674   "consumes": ["application/json"],
6675   "produces": ["application/json"],
6676   "paths": {
6677     "/AudioResURI" : {
6678       "get": {
6679         "description": "This Resource defines basic audio control functions.\nThe Property
6680         \"volume\" is an integer containing a percentage [0,100].\nA volume of 0 (zero) means no sound
6681         produced.\nA volume of 100 means maximum sound production.\nThe Property \"mute\" is implemented as
6682         a boolean.\nA mute value of true means that the device is muted (no audio).\nA mute value of false
6683         means that the device is not muted (audio).",
6684         "parameters": [
6685           { "$ref": "#/parameters/interface" }
6686         ],
6687         "responses": {
6688           "200": {
6689             "description": "",
6690             "x-example":
6691               {
6692                 "rt": ["oic.r.audio"],
6693                 "if": ["oic.if.a", "oic.if.baseline"],
6694                 "volume": 50,
6695                 "mute": false
6696               },
6697             "schema": { "$ref": "#/definitions/Audio" }
6698           }
6699         }
6700       },
6701       "post": {
6702         "description": "",
6703         "parameters": [
6704           { "$ref": "#/parameters/interface" },
6705           {
6706             "name": "body",
6707             "in": "body",
6708             "required": true,
6709             "schema": { "$ref": "#/definitions/Audio-update" },
6710             "x-example":
6711               {
6712                 "volume": 75
6713               }
6714           }
6715         ],
6716         "responses": {
6717           "200": {
6718             "description": "",
6719             "x-example":
```

```

6720         {
6721             "volume": 75,
6722             "mute": false
6723         },
6724         "schema": { "$ref": "#/definitions/Audio" }
6725     }
6726 }
6727 }
6728 }
6729 },
6730 "parameters": {
6731     "interface" : {
6732         "in": "query",
6733         "name": "if",
6734         "type": "string",
6735         "enum": ["oic.if.a", "oic.if.baseline"]
6736     }
6737 },
6738 "definitions": {
6739     "Audio" : {
6740         "properties": {
6741             "rt": {
6742                 "description": "The Resource Type.",
6743                 "items": {
6744                     "enum": ["oic.r.audio"],
6745                     "maxLength": 64,
6746                     "type": "string"
6747                 },
6748                 "minItems": 1,
6749                 "uniqueItems": true,
6750                 "readOnly": true,
6751                 "type": "array"
6752             },
6753             "mute": {
6754                 "description": "The mute setting of an audio rendering device.",
6755                 "type": "boolean"
6756             },
6757             "volume": {
6758                 "description": "The volume setting of an audio rendering device.",
6759                 "maximum": 100,
6760                 "minimum": 0,
6761                 "type": "integer"
6762             },
6763             "n": {
6764                 "$ref":
6765 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6766 schema.json#/definitions/n"
6767             },
6768             "id": {
6769                 "$ref":
6770 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6771 schema.json#/definitions/id"
6772             },
6773             "range": {
6774                 "$ref":
6775 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6776 schema.json#/definitions/range_integer"
6777             },
6778             "step": {
6779                 "$ref":
6780 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6781 schema.json#/definitions/step_integer"
6782             },
6783             "if": {
6784                 "description": "The OCF Interface set supported by this Resource.",
6785                 "items": {
6786                     "enum": [
6787                         "oic.if.a",
6788                         "oic.if.baseline"
6789                     ],
6790                     "type": "string"
6791                 },

```

```

6792         "minItems": 2,
6793         "uniqueItems": true,
6794         "readOnly": true,
6795         "type": "array"
6796     },
6797 },
6798 "type" : "object",
6799 "required": ["volume", "mute"]
6800 },
6801 "Audio-update" : {
6802     "properties": {
6803         "mute": {
6804             "description": "The mute setting of an audio rendering device.",
6805             "type": "boolean"
6806         },
6807         "volume": {
6808             "description": "The volume setting of an audio rendering device.",
6809             "maximum": 100,
6810             "minimum": 0,
6811             "type": "integer"
6812         }
6813     }
6814 }
6815 }
6816 }
6817

```

6818 **6.26.5 Property definition**

6819 Table 55 defines the Properties that are part of the "oic.r.audio" Resource Type.

6820 **Table 55 – The Property definitions of the Resource with type "rt" = "oic.r.audio".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
mute	boolean	Yes	Read Write	The mute setting of an audio rendering device.
volume	integer	Yes	Read Write	The volume setting of an audio rendering device.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
mute	boolean		Read Write	The mute setting of an audio rendering device.
volume	integer		Read Write	The volume setting of an audio rendering device.

6821 **6.26.6 CRUDN behaviour**

6822 Table 56 defines the CRUDN operations that are supported on the "oic.r.audio" Resource Type.

6823

**Table 56 – The CRUDN operations of the Resource with type "rt" = "oic.r.audio".**

Create	Read	Update	Delete	Notify
	get	post		observe

6824

**6.27 Auto Focus**

6825

**6.27.1 Introduction**

6826

This Resource describes an auto focus on/off feature.

6827

The Property "autoFocus" is a boolean.

6828

An "autoFocus" value of 'true' means that the auto focus feature is on.

6829

An "autoFocus" value of 'false' means that the auto focus feature is off.

6830

Note that when Pan Tilt Zoom (see 'Pan Tilt Zoom' Resource definition) is used the autofocus

6831

works only in the selected area.

6832

**6.27.2 Example URI**

6833

/AutoFocusResURI

6834

**6.27.3 Resource type**

6835

The Resource Type is defined as: "oic.r.autofocus".

6836

**6.27.4 OpenAPI 2.0 definition**

6837

```

6837 {
6838   "swagger": "2.0",
6839   "info": {
6840     "title": "Auto Focus",
6841     "version": "20190222",
6842     "license": {
6843       "name": "OCF Data Model License",
6844       "url":
6845         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
6846         CENSE.md",
6847       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
6848     },
6849     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
6850   },
6851   "schemes": ["http"],
6852   "consumes": ["application/json"],
6853   "produces": ["application/json"],
6854   "paths": {
6855     "/AutoFocusResURI" : {
6856       "get": {
6857         "description": "This Resource describes an auto focus on/off feature.\nThe Property
6858         \"autoFocus\" is a boolean.\nAn \"autoFocus\" value of 'true' means that the auto focus feature is
6859         on.\nAn \"autoFocus\" value of 'false' means that the auto focus feature is off.\nNote that when Pan
6860         Tilt Zoom (see 'Pan Tilt Zoom' Resource definition) is used the autofocus works only in the selected
6861         area.",
6862         "parameters": [
6863           { "$ref": "#/parameters/interface" }
6864         ],
6865         "responses": {
6866           "200": {
6867             "description": "",
6868             "x-example":
6869               {
6870                 "rt": ["oic.r.autofocus"],
6871                 "if": ["oic.if.a", "oic.if.baseline"],
6872                 "autoFocus": false
6873               },
6874             "schema": { "$ref": "#/definitions/AutoFocus" }
6875           }
6876         }
6877       },
6878       "post": {
6879         "description": "",

```

```

6880     "parameters": [
6881       { "$ref": "#/parameters/interface" },
6882       {
6883         "name": "body",
6884         "in": "body",
6885         "required": true,
6886         "schema": { "$ref": "#/definitions/AutoFocus" },
6887         "x-example":
6888           {
6889             "autoFocus": true
6890           }
6891       }
6892     ],
6893     "responses": {
6894       "200": {
6895         "description": "",
6896         "x-example":
6897           {
6898             "autoFocus": true
6899           },
6900         "schema": { "$ref": "#/definitions/AutoFocus" }
6901       }
6902     }
6903   }
6904 },
6905 },
6906 "parameters": {
6907   "interface": {
6908     "in": "query",
6909     "name": "if",
6910     "type": "string",
6911     "enum": ["oic.if.a", "oic.if.baseline"]
6912   }
6913 },
6914 "definitions": {
6915   "AutoFocus": {
6916     "properties": {
6917       "rt": {
6918         "description": "The Resource Type.",
6919         "items": {
6920           "enum": ["oic.r.autofocus"],
6921           "maxLength": 64,
6922           "type": "string"
6923         },
6924         "minItems": 1,
6925         "uniqueItems": true,
6926         "readOnly": true,
6927         "type": "array"
6928       },
6929       "autoFocus": {
6930         "description": "The status of the Auto Focus feature.",
6931         "type": "boolean"
6932       },
6933       "n": {
6934         "$ref":
6935           "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6936           schema.json#/definitions/n"
6937       },
6938       "id": {
6939         "$ref":
6940           "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6941           schema.json#/definitions/id"
6942       },
6943       "if": {
6944         "description": "The OCF Interface set supported by this Resource.",
6945         "items": {
6946           "enum": [
6947             "oic.if.a",
6948             "oic.if.baseline"
6949           ],
6950           "type": "string"
6951         }

```

```

6952         "minItems": 2,
6953         "readOnly": true,
6954         "uniqueItems": true,
6955         "type": "array"
6956     },
6957 },
6958 "type": "object",
6959 "required": ["autoFocus"]
6960 }
6961 }
6962 }
6963

```

### 6.27.5 Property definition

Table 57 defines the Properties that are part of the "oic.r.autofocus" Resource Type.

**Table 57 – The Property definitions of the Resource with type "rt" = "oic.r.autofocus".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
autoFocus	boolean	Yes	Read Write	The status of the Auto Focus feature.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

### 6.27.6 CRUDN behaviour

Table 58 defines the CRUDN operations that are supported on the "oic.r.autofocus" Resource Type.

**Table 58 – The CRUDN operations of the Resource with type "rt" = "oic.r.autofocus".**

Create	Read	Update	Delete	Notify
	get	post		observe

## 6.28 Automatic Document Feeder

### 6.28.1 Introduction

This Resource describes the state of an automatic document feeder, typically used with a scanner.

The Property "adfstates" and "currentAdfState" are read only.

The Property "adfStates" is an array of the possible operational states.

The Property "adfProcessing" is the OK state, other states are errors or require 'user attention'.

The currentAdfState is the current value of the ADF state on the device.

### 6.28.2 Example URI

/AutomaticDocumentFeederResURI

### 6.28.3 Resource type

The Resource Type is defined as: "oic.r.automaticdocumentfeeder".

### 6.28.4 OpenAPI 2.0 definition

```

6983 {
6984   "swagger": "2.0",
6985   "info": {
6986     "title": "Automatic Document Feeder",

```



```

6987     "version": "20190222",
6988     "license": {
6989         "name": "OCF Data Model License",
6990         "url":
6991 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
6992 CENSE.md",
6993         "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
6994     },
6995     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
6996 },
6997     "schemes": ["http"],
6998     "consumes": ["application/json"],
6999     "produces": ["application/json"],
7000     "paths": {
7001         "/AutomaticDocumentFeederResURI" : {
7002             "get": {
7003                 "description": "This Resource describes the state of an automatic document feeder, typically
7004 used with a scanner.\n\nThe Property \"adfstates\" and \"currentAdfState\" are read only.\n\nThe
7005 Property \"adfStates\" is an array of the possible operational states.\n\nThe Property
7006 \"adfProcessing\" is the OK state, other states are errors or require 'user attention'.\n\nThe
7007 currentAdfState is the current value of the ADF state on the device.",
7008                 "parameters": [
7009                     { "$ref": "#/parameters/interface" }
7010                 ],
7011                 "responses": {
7012                     "200": {
7013                         "description": "",
7014                         "x-example":
7015                         {
7016                             "rt": ["oic.r.automaticdocumentfeeder"],
7017                             "if": ["oic.if.s", "oic.if.baseline"],
7018                             "adfStates": ["adfProcessing", "adfEmpty", "adfJam", "adfLoaded", "adfMispick",
7019 "adfHatchOpen", "adfDuplexPageTooShort", "adfDuplexPageTooLong", "adfMultipickDetected",
7020 "adfInputTrayFailed", "adfInputTrayOverloaded"],
7021                             "currentAdfState": "adfProcessing"
7022                         },
7023                         "schema": { "$ref": "#/definitions/AutomaticDocumentFeeder" }
7024                     }
7025                 }
7026             }
7027         }
7028     },
7029     "parameters": {
7030         "interface" : {
7031             "in": "query",
7032             "name": "if",
7033             "type": "string",
7034             "enum": ["oic.if.s", "oic.if.baseline"]
7035         }
7036     },
7037     "definitions": {
7038         "AutomaticDocumentFeeder" : {
7039             "properties": {
7040                 "rt": {
7041                     "description": "The Resource Type.",
7042                     "items": {
7043                         "enum": ["oic.r.automaticdocumentfeeder"],
7044                         "maxLength": 64,
7045                         "type": "string"
7046                     },
7047                     "minItems": 1,
7048                     "uniqueItems": true,
7049                     "readOnly": true,
7050                     "type": "array"
7051                 },
7052                 "adfStates": {
7053                     "description": "The array of the possible adf states.",
7054                     "items": {
7055                         "type": "string"
7056                     },
7057                     "readOnly": true,
7058                     "uniqueItems": true,

```

```

7059     "type": "array"
7060   },
7061   "currentAdfState": {
7062     "description": "The current adf state.",
7063     "readOnly": true,
7064     "type": "string"
7065   },
7066   "n": {
7067     "$ref":
7068     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7069     schema.json#/definitions/n"
7070   },
7071   "id": {
7072     "$ref":
7073     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7074     schema.json#/definitions/id"
7075   },
7076   "if": {
7077     "description": "The OCF Interface set supported by this Resource.",
7078     "items": {
7079       "enum": [
7080         "oic.if.s",
7081         "oic.if.baseline"
7082       ],
7083       "type": "string"
7084     },
7085     "minItems": 2,
7086     "uniqueItems": true,
7087     "readOnly": true,
7088     "type": "array"
7089   }
7090 },
7091 "type": "object",
7092 "required": ["adfStates", "currentAdfState"]
7093 }
7094 }
7095 }
7096

```

7097 **6.28.5 Property definition**

7098 Table 59 defines the Properties that are part of the "oic.r.automaticdocumentfeeder" Resource  
7099 Type.

7100 **Table 59 – The Property definitions of the Resource with type "rt" =**  
7101 **"oic.r.automaticdocumentfeeder".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
adfStates	array: see schema	Yes	Read Only	The array of the possible adf states.
currentAdfState	string	Yes	Read Only	The current adf state.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

7102 **6.28.6 CRUDN behaviour**

7103 Table 60 defines the CRUDN operations that are supported on the "oic.r.automaticdocumentfeeder"  
7104 Resource Type.

7105  
7106

**Table 60 – The CRUDN operations of the Resource with type "rt" = "oic.r.automaticdocumentfeeder".**

Create	Read	Update	Delete	Notify
	get			observe

7107 **6.29 Button Switch**

7108 **6.29.1 Introduction**

7109 This Resource describes the operation of a button style switch.  
 7110 The Property "value" is a boolean.  
 7111 A value of 'true' means that the button is being pushed/pressed.  
 7112 A value of 'false' means that the button is not being pushed/pressed.

7113 **6.29.2 Example URI**

7114 /ButtonResURI

7115 **6.29.3 Resource type**

7116 The Resource Type is defined as: "oic.r.button".

7117 **6.29.4 OpenAPI 2.0 definition**

```

7118 {
7119   "swagger": "2.0",
7120   "info": {
7121     "title": "Button Switch",
7122     "version": "20190222",
7123     "license": {
7124       "name": "OCF Data Model License",
7125       "url":
7126         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
7127         CENSE.md",
7128       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
7129     },
7130     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
7131   },
7132   "schemes": ["http"],
7133   "consumes": ["application/json"],
7134   "produces": ["application/json"],
7135   "paths": {
7136     "/ButtonResURI" : {
7137       "get": {
7138         "description": "This Resource describes the operation of a button style switch.\n\nThe
7139         Property \"value\" is a boolean.\n\nA value of 'true' means that the button is being
7140         pushed/pressed.\n\nA value of 'false' means that the button is not being pushed/pressed.",
7141         "parameters": [
7142           { "$ref": "#/parameters/interface" }
7143         ],
7144         "responses": {
7145           "200": {
7146             "description": "",
7147             "x-example":
7148               {
7149                 "rt": ["oic.r.button"],
7150                 "if": ["oic.if.s", "oic.if.baseline"],
7151                 "value": true
7152               }
7153           },
7154           "schema": { "$ref": "#/definitions/Button" }
7155         }
7156       }
7157     }
7158   },
7159   "parameters": {
7160     "interface" : {
7161       "in": "query",
7162

```

```

7163     "name": "if",
7164     "type": "string",
7165     "enum": ["oic.if.s", "oic.if.baseline"]
7166   }
7167 },
7168 "definitions": {
7169   "Button": {
7170     "properties": {
7171       "rt": {
7172         "description": "The Resource Type.",
7173         "items": {
7174           "enum": ["oic.r.button"],
7175           "maxLength": 64,
7176           "type": "string"
7177         },
7178         "minItems": 1,
7179         "uniqueItems": true,
7180         "readOnly": true,
7181         "type": "array"
7182       },
7183       "value": {
7184         "description": "The status of the button",
7185         "readOnly": true,
7186         "type": "boolean"
7187       },
7188       "n": {
7189         "$ref":
7190 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7191 schema.json#/definitions/n"
7192       },
7193       "id": {
7194         "$ref":
7195 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7196 schema.json#/definitions/id"
7197       },
7198       "if": {
7199         "description": "The OCF Interface set supported by this Resource.",
7200         "items": {
7201           "enum": [
7202             "oic.if.s",
7203             "oic.if.baseline"
7204           ],
7205           "type": "string"
7206         },
7207         "minItems": 2,
7208         "uniqueItems": true,
7209         "readOnly": true,
7210         "type": "array"
7211       }
7212     },
7213     "type": "object",
7214     "required": ["value"]
7215   }
7216 }
7217 }
7218

```

### 7219 6.29.5 Property definition

7220 Table 61 defines the Properties that are part of the "oic.r.button" Resource Type.

7221 **Table 61 – The Property definitions of the Resource with type "rt" = "oic.r.button".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
value	boolean	Yes	Read Only	The status of the button
n	multiple types: see schema	No	Read Write	

id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

7222 **6.29.6 CRUDN behaviour**

7223 Table 62 defines the CRUDN operations that are supported on the "oic.r.button" Resource Type.

7224 **Table 62 – The CRUDN operations of the Resource with type "rt" = "oic.r.button".**

Create	Read	Update	Delete	Notify
	get			observe

7225 **6.30 Carbon Dioxide Sensor**

7226 **6.30.1 Introduction**

7227 This Resource describes whether carbon dioxide has been sensed or not.

7228 The Property "value" is a boolean.

7229 A value of 'true' means that carbon dioxide has been detected.

7230 A value of 'false' means that carbon dioxide has not been detected.

7231 **6.30.2 Example URI**

7232 /CarbonDioxideResURI

7233 **6.30.3 Resource type**

7234 The Resource Type is defined as: "oic.r.sensor.carbondioxide".

7235 **6.30.4 OpenAPI 2.0 definition**

```

7236 {
7237   "swagger": "2.0",
7238   "info": {
7239     "title": "Carbon Dioxide Sensor",
7240     "version": "20191118",
7241     "license": {
7242       "name": "OCF Data Model License",
7243       "url":
7244         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
7245         CENSE.md",
7246       "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
7247     },
7248     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
7249   },
7250   "schemes": ["http"],
7251   "consumes": ["application/json"],
7252   "produces": ["application/json"],
7253   "paths": {
7254     "/CarbonDioxideResURI" : {
7255       "get": {
7256         "description": "This Resource describes whether carbon dioxide has been sensed or not.\n\nThe
7257         Property \"value\" is a boolean.\n\nA value of 'true' means that carbon dioxide has been detected.\n\nA
7258         value of 'false' means that carbon dioxide has not been detected.",
7259         "parameters": [
7260           {"$ref": "#/parameters/interface"}
7261         ],
7262         "responses": {
7263           "200": {
7264             "description": "",
7265             "x-example":
7266               {
7267                 "rt": ["oic.r.sensor.carbondioxide"],
7268                 "id": "unique_example_id",
7269                 "value": true

```

```

7270         },
7271         "schema": { "$ref": "#/definitions/CO2" }
7272     }
7273 }
7274 }
7275 }
7276 },
7277 "parameters": {
7278     "interface" : {
7279         "in" : "query",
7280         "name" : "if",
7281         "type" : "string",
7282         "enum" : ["oic.if.s", "oic.if.baseline"]
7283     }
7284 },
7285 "definitions": {
7286     "CO2": {
7287         "properties": {
7288             "rt": {
7289                 "description": "The Resource Type",
7290                 "items": {
7291                     "maxLength": 64,
7292                     "type": "string",
7293                     "enum": ["oic.r.sensor.carbondioxide"]
7294                 },
7295                 "minItems": 1,
7296                 "readOnly": true,
7297                 "uniqueItems": true,
7298                 "type": "array"
7299             },
7300             "value": {
7301                 "description": "The carbon dioxide indicator, true = sensed, false = not sensed.",
7302                 "readOnly": true,
7303                 "type": "boolean"
7304             },
7305             "measurement": {
7306                 "type": "number",
7307                 "description": "Measured value for this sensor, units are in ppm",
7308                 "readOnly": true
7309             },
7310             "precision": {
7311                 "$ref":
7312 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
7313 schema.json#/definitions/precision"
7314             },
7315             "n": {
7316                 "$ref":
7317 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7318 schema.json#/definitions/n"
7319             },
7320             "range": {
7321                 "$ref":
7322 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
7323 schema.json#/definitions/range_number"
7324             },
7325             "step": {
7326                 "$ref":
7327 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
7328 schema.json#/definitions/step_number"
7329             },
7330             "id": {
7331                 "$ref":
7332 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7333 schema.json#/definitions/id"
7334             },
7335             "if": {
7336                 "description": "The OCF Interface set supported by this Resource",
7337                 "items": {
7338                     "enum": [
7339                         "oic.if.baseline",
7340                         "oic.if.s"
7341                     ],

```

```

7342         "maxLength": 64,
7343         "type": "string"
7344     },
7345     "minItems": 2,
7346     "readOnly": true,
7347     "uniqueItems": true,
7348     "type": "array"
7349 }
7350 },
7351 "type" : "object",
7352 "required": ["value"]
7353 }
7354 }
7355 }
7356

```

7357 **6.30.5 Property definition**

7358 Table 63 defines the Properties that are part of the "oic.r.sensor.carbondioxide" Resource Type.

7359 **Table 63 – The Property definitions of the Resource with type "rt" =**  
7360 **"oic.r.sensor.carbondioxide".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type
value	boolean	Yes	Read Only	The carbon dioxide indicator, true = sensed, false = not sensed.
measurement	number	No	Read Only	Measured value for this sensor, units are in ppm
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

7361 **6.30.6 CRUDN behaviour**

7362 Table 64 defines the CRUDN operations that are supported on the "oic.r.sensor.carbondioxide"  
7363 Resource Type.

7364 **Table 64 – The CRUDN operations of the Resource with type "rt" =**  
7365 **"oic.r.sensor.carbondioxide".**

Create	Read	Update	Delete	Notify
	get			observe

7366 **6.31 Carbon Monoxide Sensor**

7367 **6.31.1 Introduction**

7368 This Resource describes whether carbon monoxide has been sensed or not.

7369 The Property "value" is a boolean.

7370 A value of 'true' means that carbon monoxide has been detected.

7371 A value of 'false' means that carbon monoxide has not been detected.

7372 **6.31.2 Example URI**

7373 /CarbonMonoxideResURI

7374 **6.31.3 Resource type**

7375 The Resource Type is defined as: "oic.r.sensor.carbonmonoxide".

7376 **6.31.4 OpenAPI 2.0 definition**

```
7377 {
7378   "swagger": "2.0",
7379   "info": {
7380     "title": "Carbon Monoxide Sensor",
7381     "version": "20191118",
7382     "license": {
7383       "name": "OCF Data Model License",
7384       "url":
7385         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
7386         CENSE.md",
7387       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
7388         reserved."
7389     },
7390     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
7391   },
7392   "schemes": ["http"],
7393   "consumes": ["application/json"],
7394   "produces": ["application/json"],
7395   "paths": {
7396     "/CarbonMonoxideResURI" : {
7397       "get": {
7398         "description": "This Resource describes whether carbon monoxide has been sensed or not.\nThe
7399         Property \"value\" is a boolean.\nA value of 'true' means that carbon monoxide has been detected.\nA
7400         value of 'false' means that carbon monoxide has not been detected.",
7401         "parameters": [
7402           { "$ref": "#/parameters/interface" }
7403         ],
7404         "responses": {
7405           "200": {
7406             "description": "",
7407             "x-example":
7408               {
7409                 "rt": ["oic.r.sensor.carbonmonoxide"],
7410                 "id": "unique_example_id",
7411                 "value": true
7412               },
7413             "schema": { "$ref": "#/definitions/CO" }
7414           }
7415         }
7416       }
7417     }
7418   },
7419   "parameters": {
7420     "interface" : {
7421       "in" : "query",
7422       "name" : "if",
7423       "type" : "string",
7424       "enum" : ["oic.if.s", "oic.if.baseline"]
7425     }
7426   },
7427   "definitions": {
7428     "CO": {
```



```

7429     "properties": {
7430       "rt": {
7431         "description": "Resource Type",
7432         "items": {
7433           "maxLength": 64,
7434           "type": "string",
7435           "enum": ["oic.r.sensor.carbonmonoxide"]
7436         },
7437         "minItems": 1,
7438         "readOnly": true,
7439         "uniqueItems": true,
7440         "type": "array"
7441       },
7442       "value": {
7443         "description": "The carbon monoxide indicator, true = sensed, false = not sensed.",
7444         "readOnly": true,
7445         "type": "boolean"
7446       },
7447       "measurement": {
7448         "type": "number",
7449         "description": "Measured value for this sensor, units are in ppm",
7450         "readOnly": true
7451       },
7452       "precision": {
7453         "$ref":
7454         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
7455         schema.json#/definitions/precision"
7456       },
7457       "n": {
7458         "$ref":
7459         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7460         schema.json#/definitions/n"
7461       },
7462       "range": {
7463         "$ref":
7464         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
7465         schema.json#/definitions/range_number"
7466       },
7467       "step": {
7468         "$ref":
7469         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
7470         schema.json#/definitions/step_number"
7471       },
7472       "id": {
7473         "$ref":
7474         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7475         schema.json#/definitions/id"
7476       },
7477       "if": {
7478         "description": "The OCF Interface set supported by this Resource",
7479         "items": {
7480           "enum": [
7481             "oic.if.baseline",
7482             "oic.if.s"
7483           ],
7484           "maxLength": 64,
7485           "type": "string"
7486         },
7487         "minItems": 1,
7488         "uniqueItems": true,
7489         "readOnly": true,
7490         "type": "array"
7491       }
7492     },
7493     "type": "object",
7494     "required": ["value"]
7495   }
7496 }
7497 }
7498

```

7499 **6.31.5 Property definition**

7500 Table 65 defines the Properties that are part of the "oic.r.sensor.carbonmonoxide" Resource Type.

7501 **Table 65 – The Property definitions of the Resource with type "rt" =**  
 7502 **"oic.r.sensor.carbonmonoxide".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
value	boolean	Yes	Read Only	The carbon monoxide indicator, true = sensed, false = not sensed.
measurement	number	No	Read Only	Measured value for this sensor, units are in ppm
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

7503 **6.31.6 CRUDN behaviour**

7504 Table 66 defines the CRUDN operations that are supported on the "oic.r.sensor.carbonmonoxide"  
 7505 Resource Type.

7506 **Table 66 – The CRUDN operations of the Resource with type "rt" =**  
 7507 **"oic.r.sensor.carbonmonoxide".**

Create	Read	Update	Delete	Notify
	get			observe

7508 **6.32 Auto White Balance**

7509 **6.32.1 Introduction**

7510 This Resource describes an auto balance on/off feature.

7511 The Property "autoWhiteBalance" is a boolean.

7512 An AutoWhiteBalance value of 'true' means that the auto white balance feature is on.

7513 An AutoWhiteBalance value of 'false' means that the auto white balance feature is off.

7514

7515 **6.32.2 Example URI**

7516 /AutoWhiteBalanceResURI

7517 **6.32.3 Resource type**

7518 The Resource Type is defined as: "oic.r.colour.autowhitebalance".

### 7519 6.32.4 OpenAPI 2.0 definition

```
7520 {
7521   "swagger": "2.0",
7522   "info": {
7523     "title": "Auto White Balance",
7524     "version": "20190222",
7525     "license": {
7526       "name": "OCF Data Model License",
7527       "url":
7528         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
7529 CENSE.md",
7530       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
7531     },
7532     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
7533   },
7534   "schemes": ["http"],
7535   "consumes": ["application/json"],
7536   "produces": ["application/json"],
7537   "paths": {
7538     "/AutoWhiteBalanceResURI" : {
7539       "get": {
7540         "description": "This Resource describes an auto balance on/off feature.\n\nThe Property
7541 \n\"autoWhiteBalance\" is a boolean.\n\nAn AutoWhiteBalance value of 'true' means that the auto white
7542 balance feature is on.\n\nAn AutoWhiteBalance value of 'false' means that the auto white balance
7543 feature is off.\n\n",
7544         "parameters": [
7545           { "$ref": "#/parameters/interface" }
7546         ],
7547         "responses": {
7548           "200": {
7549             "description": "",
7550             "x-example":
7551               {
7552                 "rt": ["oic.r.colour.autowhitebalance"],
7553                 "if": ["oic.if.a", "oic.if.baseline"],
7554                 "autoWhiteBalance": false
7555               },
7556             "schema": { "$ref": "#/definitions/AutoWhiteBalance" }
7557           }
7558         }
7559       },
7560       "post": {
7561         "description": "",
7562         "parameters": [
7563           { "$ref": "#/parameters/interface" },
7564           {
7565             "name": "body",
7566             "in": "body",
7567             "required": true,
7568             "schema": { "$ref": "#/definitions/AutoWhiteBalance" },
7569             "x-example":
7570               {
7571                 "autoWhiteBalance": true
7572               }
7573           }
7574         ],
7575         "responses": {
7576           "200": {
7577             "description": "",
7578             "x-example":
7579               {
7580                 "autoWhiteBalance": true
7581               },
7582             "schema": { "$ref": "#/definitions/AutoWhiteBalance" }
7583           }
7584         }
7585       }
7586     }
7587   },
7588   "parameters": {
7589     "interface" : {
```

```

7590     "in": "query",
7591     "name": "if",
7592     "type": "string",
7593     "enum": ["oic.if.a", "oic.if.baseline"]
7594   }
7595 },
7596 "definitions": {
7597   "AutoWhiteBalance" : {
7598     "properties": {
7599       "rt": {
7600         "description": "The Resource Type.",
7601         "items": {
7602           "enum": ["oic.r.colour.autowhitebalance"],
7603           "maxLength": 64,
7604           "type": "string"
7605         },
7606         "minItems": 1,
7607         "uniqueItems": true,
7608         "readOnly": true,
7609         "type": "array"
7610       },
7611       "autoWhiteBalance": {
7612         "description": "The status of the Auto White balance feature.",
7613         "type": "boolean"
7614       },
7615       "n": {
7616         "$ref":
7617         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7618         schema.json#/definitions/n"
7619       },
7620       "id": {
7621         "$ref":
7622         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7623         schema.json#/definitions/id"
7624       },
7625       "if": {
7626         "description": "The OCF Interface set supported by this Resource.",
7627         "items": {
7628           "enum": [
7629             "oic.if.a",
7630             "oic.if.baseline"
7631           ],
7632           "type": "string"
7633         },
7634         "minItems": 2,
7635         "uniqueItems": true,
7636         "readOnly": true,
7637         "type": "array"
7638       }
7639     },
7640     "type": "object",
7641     "required": ["autoWhiteBalance"]
7642   }
7643 }
7644 }
7645

```

### 7646 6.32.5 Property definition

7647 Table 67 defines the Properties that are part of the "oic.r.colour.autowhitebalance" Resource Type.

7648 **Table 67 – The Property definitions of the Resource with type "rt" =**  
7649 **"oic.r.colour.autowhitebalance".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
autoWhiteBalance	boolean	Yes	Read Write	The status of the Auto White balance feature.

n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

7650 **6.32.6 CRUDN behaviour**

7651 Table 68 defines the CRUDN operations that are supported on the "oic.r.colour.autowhitebalance"  
7652 Resource Type.

7653 **Table 68 – The CRUDN operations of the Resource with type "rt" =**  
7654 **"oic.r.colour.autowhitebalance".**

Create	Read	Update	Delete	Notify
	get	post		observe

7655 **6.33 Colour Saturation**

7656 **6.33.1 Introduction**

7657 This Resource describes a Colour saturation value.  
7658 The Property "colourSaturation" is an integer.  
7659 A "colourSaturation" has a range of [0,100].  
7660 A "colourSaturation" value of 0 means producing black and white images.  
7661 A "colourSaturation" value of 50 means producing device specific normal colour images.  
7662 A "colourSaturation" value of 100 means producing device very full colour images.  
7663

7664 **6.33.2 Example URI**

7665 /ColourSaturationResURI

7666 **6.33.3 Resource type**

7667 The Resource Type is defined as: "oic.r.colour.saturation".

7668 **6.33.4 OpenAPI 2.0 definition**

```
7669 {
7670   "swagger": "2.0",
7671   "info": {
7672     "title": "Colour Saturation",
7673     "version": "20190215",
7674     "license": {
7675       "name": "OCF Data Model License",
7676       "url":
7677       "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
7678       CENSE.md",
7679       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
7680       reserved."
7681     },
7682     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
7683   },
7684   "schemes": ["http"],
7685   "consumes": ["application/json"],
7686   "produces": ["application/json"],
7687   "paths": {
7688     "/ColourSaturationResURI" : {
7689       "get": {
7690         "description": "This Resource describes a Colour saturation value.\nThe Property
7691         \"colourSaturation\" is an integer.\nA \"colourSaturation\" has a range of [0,100].\nA
7692         \"colourSaturation\" value of 0 means producing black and white images.\nA \"colourSaturation\"
7693         value of 50 means producing device specific normal colour images.\nA \"colourSaturation\" value of
```

```

7694 100 means producing device very full colour images.\n",
7695     "parameters": [
7696       {"$ref": "#/parameters/interface"}
7697     ],
7698     "responses": {
7699       "200": {
7700         "description": "",
7701         "x-example":
7702           {
7703             "rt": ["oic.r.colour.saturation"],
7704             "if": ["oic.if.a", "oic.if.baseline"],
7705             "colourSaturation": 50
7706           },
7707         "schema": { "$ref": "#/definitions/Saturation" }
7708       }
7709     },
7710   },
7711   "post": {
7712     "description": "",
7713     "parameters": [
7714       {"$ref": "#/parameters/interface"},
7715       {
7716         "name": "body",
7717         "in": "body",
7718         "required": true,
7719         "schema": { "$ref": "#/definitions/Saturation" },
7720         "x-example":
7721           {
7722             "colourSaturation": 60
7723           }
7724       }
7725     ],
7726     "responses": {
7727       "200": {
7728         "description": "",
7729         "x-example":
7730           {
7731             "colourSaturation": 60
7732           }
7733       },
7734       "schema": { "$ref": "#/definitions/Saturation" }
7735     }
7736   }
7737 },
7738 },
7739 },
7740 "parameters": {
7741   "interface": {
7742     "in": "query",
7743     "name": "if",
7744     "type": "string",
7745     "enum": ["oic.if.a", "oic.if.baseline"]
7746   }
7747 },
7748 "definitions": {
7749   "Saturation": {
7750     "properties": {
7751       "rt": {
7752         "description": "The Resource Type.",
7753         "items": {
7754           "enum": ["oic.r.colour.saturation"],
7755           "maxLength": 64,
7756           "type": "string"
7757         },
7758         "minItems": 1,
7759         "uniqueItems": true,
7760         "readOnly": true,
7761         "type": "array"
7762       },
7763       "colourSaturation": {
7764         "description": "The colour saturation value.",
7765         "maximum": 100,

```

```

7766         "minimum": 0,
7767         "type": "integer"
7768     },
7769     "n": {
7770         "$ref":
7771         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7772         schema.json#/definitions/n"
7773     },
7774     "id": {
7775         "$ref":
7776         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7777         schema.json#/definitions/id"
7778     },
7779     "if": {
7780         "description": "The OCF Interface set supported by this Resource.",
7781         "items": {
7782             "enum": [
7783                 "oic.if.a",
7784                 "oic.if.baseline"
7785             ],
7786             "type": "string"
7787         },
7788         "minItems": 2,
7789         "uniqueItems": true,
7790         "readOnly": true,
7791         "type": "array"
7792     }
7793 },
7794 "type": "object",
7795 "required": ["colourSaturation"]
7796 }
7797 }
7798 }
7799

```

7800 **6.33.5 Property definition**

7801 Table 69 defines the Properties that are part of the "oic.r.colour.saturation" Resource Type.

7802 **Table 69 – The Property definitions of the Resource with type "rt" =**  
7803 **"oic.r.colour.saturation".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
colourSaturation	integer	Yes	Read Write	The colour saturation value.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

7804 **6.33.6 CRUDN behaviour**

7805 Table 70 defines the CRUDN operations that are supported on the "oic.r.colour.saturation"  
7806 Resource Type.

7807 **Table 70 – The CRUDN operations of the Resource with type "rt" =**  
7808 **"oic.r.colour.saturation".**

Create	Read	Update	Delete	Notify
	get	post		observe

## 7809 6.34 Contact Sensor

### 7810 6.34.1 Introduction

7811 This Resource describes whether a contact sensor has been tripped or not.

7812 Typical use case is in Security Systems detecting window or door open.

7813 The Property "value" is a boolean.

7814 A value of 'true' means that contact has been broken (open).

7815 A value of 'false' means that contact is in place (closed).

7816

### 7817 6.34.2 Example URI

7818 /ContactResURI

### 7819 6.34.3 Resource type

7820 The Resource Type is defined as: "oic.r.sensor.contact".

### 7821 6.34.4 OpenAPI 2.0 definition

```
7822 {
7823   "swagger": "2.0",
7824   "info": {
7825     "title": "Contact Sensor",
7826     "version": "20190215",
7827     "license": {
7828       "name": "OCF Data Model License",
7829       "url":
7830 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
7831 CENSE.md",
7832       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
7833 reserved."
7834     },
7835     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
7836   },
7837   "schemes": ["http"],
7838   "consumes": ["application/json"],
7839   "produces": ["application/json"],
7840   "paths": {
7841     "/ContactResURI" : {
7842       "get": {
7843         "description": "This Resource describes whether a contact sensor has been tripped or
7844 not.\nTypical use case is in Security Systems detecting window or door open.\nThe Property \"value\"
7845 is a boolean.\nA value of 'true' means that contact has been broken (open).\nA value of 'false'
7846 means that contact is in place (closed).\n",
7847         "parameters": [
7848           {"$ref": "#/parameters/interface"}
7849         ],
7850         "responses": {
7851           "200": {
7852             "description": "",
7853             "x-example":
7854             {
7855               "rt": ["oic.r.sensor.contact"],
7856               "if": ["oic.if.s", "oic.if.baseline"],
7857               "value": true
7858             },
7859             "schema": { "$ref": "#/definitions/Contact" }
7860           }
7861         }
7862       }
7863     },
7864     "parameters": {
7865       "interface" : {
7866         "in": "query",
7867         "name": "if",
7868         "type": "string",
7869         "enum": ["oic.if.s", "oic.if.baseline"]
7870       }
7871     }
7872   }
7873 }
```



```

7872 },
7873 "definitions": {
7874   "Contact": {
7875     "properties": {
7876       "rt": {
7877         "description": "The Resource Type.",
7878         "items": {
7879           "enum": ["oic.r.sensor.contact"],
7880           "maxLength": 64,
7881           "type": "string"
7882         },
7883         "minItems": 1,
7884         "uniqueItems": true,
7885         "readOnly": true,
7886         "type": "array"
7887       },
7888       "value": {
7889         "description": "The contact indication, true = broken (open), false = in place (closed).",
7890         "readOnly": true,
7891         "type": "boolean"
7892       },
7893       "n": {
7894         "$ref":
7895         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7896         schema.json#/definitions/n"
7897       },
7898       "id": {
7899         "$ref":
7900         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7901         schema.json#/definitions/id"
7902       },
7903       "if": {
7904         "description": "The OCF Interface set supported by this Resource.",
7905         "items": {
7906           "enum": [
7907             "oic.if.s",
7908             "oic.if.baseline"
7909           ],
7910           "type": "string"
7911         },
7912         "minItems": 2,
7913         "uniqueItems": true,
7914         "readOnly": true,
7915         "type": "array"
7916       }
7917     },
7918     "type": "object",
7919     "required": ["value"]
7920   }
7921 }
7922 }
7923

```

### 7924 6.34.5 Property definition

7925 Table 71 defines the Properties that are part of the "oic.r.sensor.contact" Resource Type.

7926 **Table 71 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.contact".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
value	boolean	Yes	Read Only	The contact indication, true = broken (open), false = in place (closed).
n	multiple types: see schema	No	Read Write	

id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

7927 **6.34.6 CRUDN behaviour**

7928 Table 72 defines the CRUDN operations that are supported on the "oic.r.sensor.contact" Resource  
7929 Type.

7930 **Table 72 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.contact".**

Create	Read	Update	Delete	Notify
	get			observe

7931 **6.35 Demand Response Load Control (DRLC).**

7932 **6.35.1 Introduction**

7933 This Resource describes any to be applied or currently being applied DRLC signal.  
7934 The Property "DRType" is the ApplianceLoadReductionType defined in Zigbee/HA Smart Energy  
7935 Profile 2.0.  
7936 The Property "start" is a string containing an RFC3339 encoded start time.  
7937 The Property "duration" value is in minutes.  
7938 The Property "Override" indicates whether the consumer has overridden the request (true) or not  
7939 (false).  
7940 The Resource provides the current DRLC action that is being applied.  
7941 A duration of 0 (zero) means that no DRLC is currently active.

7942 **6.35.2 Example URI**

7943 /DRLCResURI

7944 **6.35.3 Resource type**

7945 The Resource Type is defined as: "oic.r.energy.drlc".

7946 **6.35.4 OpenAPI 2.0 definition**

```
7947 {
7948   "swagger": "2.0",
7949   "info": {
7950     "title": "Demand Response Load Control (DRLC).",
7951     "version": "20190709",
7952     "license": {
7953       "name": "OCF Data Model License",
7954       "url":
7955         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
7956         CENSE.md",
7957       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
7958         reserved."
7959     },
7960     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
7961   },
7962   "schemes": ["http"],
7963   "consumes": ["application/json"],
7964   "produces": ["application/json"],
7965   "paths": {
7966     "/DRLCResURI" : {
7967       "get": {
7968         "description": "This Resource describes any to be applied or currently being applied DRLC
7969         signal.\nThe Property \"DRType\" is the ApplianceLoadReductionType defined in Zigbee/HA Smart Energy
7970         Profile 2.0.\nThe Property \"start\" is a string containing an RFC3339 encoded start time.\nThe
7971         Property \"duration\" value is in minutes.\nThe Property \"Override\" indicates whether the consumer
7972         has overridden the request (true) or not (false).\nThe Resource provides the current DRLC action
7973         that is being applied.\nA duration of 0 (zero) means that no DRLC is currently active.",
```

```

7974     "parameters": [
7975       { "$ref": "#/parameters/interface" }
7976     ],
7977     "responses": {
7978       "200": {
7979         "description": "",
7980         "x-example":
7981           {
7982             "rt": ["oic.r.energy.drlc"],
7983             "if": ["oic.if.a", "oic.if.baseline"],
7984             "DRType": 1,
7985             "start": "2015-01-09T16:45:00Z",
7986             "duration": 10,
7987             "override": false,
7988             "drlevel": 2,
7989             "mandate": true
7990           },
7991       "schema": { "$ref": "#/definitions/DRLC" }
7992     }
7993   },
7994 },
7995 "post": {
7996   "description": "Provides the DRLC action to be applied to the device or updates an existing
7997   action.",
7998   "parameters": [
7999     { "$ref": "#/parameters/interface" },
8000     {
8001       "name": "body",
8002       "in": "body",
8003       "required": true,
8004       "schema": { "$ref": "#/definitions/DRLC" },
8005       "x-example": {
8006         "DRType": 1,
8007         "start": "2015-01-09T17:00:00Z",
8008         "duration": 10
8009       }
8010     }
8011   ],
8012   "responses": {
8013     "200": {
8014       "description" : "Indicates that the target DRLC resource was changed.\n\nThe new resource
8015       attributes are provided in the response.",
8016       "x-example": {
8017         "DRType": 1,
8018         "start": "2015-01-09T17:00:00Z",
8019         "duration": 15,
8020         "override": false
8021       },
8022       "schema": { "$ref": "#/definitions/DRLC" }
8023     }
8024   }
8025 }
8026 },
8027 },
8028 "parameters": {
8029   "interface" : {
8030     "in" : "query",
8031     "name" : "if",
8032     "type" : "string",
8033     "enum" : ["oic.if.a", "oic.if.baseline"]
8034   }
8035 },
8036 "definitions": {
8037   "DRLC" : {
8038     "properties": {
8039       "rt": {
8040         "description": "The Resource Type.",
8041         "items": {
8042           "enum": ["oic.r.energy.drlc"],
8043           "maxLength": 64,
8044           "type": "string"
8045         }

```

```

8046         "minItems": 1,
8047         "uniqueItems": true,
8048         "readOnly": true,
8049         "type": "array"
8050     },
8051     "start": {
8052         "description": "The start time for the application of DR.",
8053         "type": "string",
8054         "format": "date-time"
8055     },
8056     "duration": {
8057         "description": "The duration of the to be applied DR type in minutes. A value of 0 means
8058 no applied DR.",
8059         "type": "integer",
8060         "minimum": 0
8061     },
8062     "override": {
8063         "description": "Whether the consumer has overridden the application of DR.",
8064         "type": "boolean"
8065     },
8066     "DRType": {
8067         "description": "The to be applied demand-response type.",
8068         "type": "integer"
8069     },
8070     "drlevel": {
8071         "type": "integer",
8072         "minimum": 0,
8073         "maximum": 3,
8074         "description": "Indicator of the strength of the DR response that is requested; 0-0%, 1-
8075 30%, 2-50%, 3-70%"
8076     },
8077     "mandate" : {
8078         "type": "boolean",
8079         "description": "Whether overriding the DR request by the consumer is allowed"
8080     },
8081     "n": {
8082         "$ref":
8083 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8084 schema.json#/definitions/n"
8085     },
8086     "id": {
8087         "$ref":
8088 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8089 schema.json#/definitions/id"
8090     },
8091     "if": {
8092         "description": "The OCF Interface set supported by this Resource.",
8093         "items": {
8094             "enum": [
8095                 "oic.if.a",
8096                 "oic.if.baseline"
8097             ],
8098             "type": "string"
8099         },
8100         "minItems": 2,
8101         "uniqueItems": true,
8102         "readOnly": true,
8103         "type": "array"
8104     }
8105 },
8106 "type": "object",
8107 "required": ["DRType"]
8108 }
8109 }
8110 }
8111

```

### 8112 6.35.5 Property definition

8113 Table 73 defines the Properties that are part of the "oic.r.energy.drlc" Resource Type.

8114 **Table 73 – The Property definitions of the Resource with type "rt" = "oic.r.energy.drlc".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
start	string	No	Read Write	The start time for the application of DR.
duration	integer	No	Read Write	The duration of the to be applied DR type in minutes. A value of 0 means no applied DR.
override	boolean	No	Read Write	Whether the consumer has overridden the application of DR.
DRType	integer	Yes	Read Write	The to be applied demand-response type.
drlevel	integer	No	Read Write	Indicator of the strength of the DR response that is requested; 0-0%, 1-30%, 2-50%, 3-70%
mandate	boolean	No	Read Write	Whether overriding the DR request by the consumer is allowed
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

8115 **6.35.6 CRUDN behaviour**

8116 Table 74 defines the CRUDN operations that are supported on the "oic.r.energy.drlc" Resource  
8117 Type.

8118 **Table 74 – The CRUDN operations of the Resource with type "rt" = "oic.r.energy.drlc".**

Create	Read	Update	Delete	Notify
	get	post		observe

8119 **6.36 Energy Overload/Circuit Breaker**

8120 **6.36.1 Introduction**

8121 This Resource describes whether an energy overload detector/circuit breaker is currently tripped.  
8122 The Property "value" is a boolean.  
8123 A value of 'true' means that energy overload has been tripped.  
8124 A value of 'false' means that energy overload has not been tripped.  
8125

8126 **6.36.2 Example URI**

8127 /EnergyOverloadResURI

### 8128 6.36.3 Resource type

8129 The Resource Type is defined as: "oic.r.energy.overload".

### 8130 6.36.4 OpenAPI 2.0 definition

```
8131 {
8132   "swagger": "2.0",
8133   "info": {
8134     "title": "Energy Overload/Circuit Breaker",
8135     "version": "20190215",
8136     "license": {
8137       "name": "OCF Data Model License",
8138       "url":
8139 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
8140 CENSE.md",
8141       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
8142 reserved."
8143     },
8144     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
8145   },
8146   "schemes": ["http"],
8147   "consumes": ["application/json"],
8148   "produces": ["application/json"],
8149   "paths": {
8150     "/EnergyOverloadResURI" : {
8151       "get": {
8152         "description": "This Resource describes whether an energy overload detector/circuit breaker
8153 is currently tripped.\n\nThe Property \"value\" is a boolean.\n\nA value of 'true' means that energy
8154 overload has been tripped.\n\nA value of 'false' means that energy overload has not been tripped.\n\n",
8155         "parameters": [
8156           { "$ref": "#/parameters/interface" }
8157         ],
8158         "responses": {
8159           "200": {
8160             "description": "",
8161             "x-example":
8162             {
8163               "rt": ["oic.r.energy.overload"],
8164               "if": ["oic.if.s", "oic.if.baseline"],
8165               "value": true
8166             },
8167             "schema": { "$ref": "#/definitions/EnergyOverload" }
8168           }
8169         }
8170       }
8171     }
8172   },
8173   "parameters": {
8174     "interface": {
8175       "in": "query",
8176       "name": "if",
8177       "type": "string",
8178       "enum": ["oic.if.s", "oic.if.baseline"]
8179     }
8180   },
8181   "definitions": {
8182     "EnergyOverload" : {
8183       "properties": {
8184         "rt": {
8185           "description": "The Resource Type.",
8186           "items": {
8187             "enum": ["oic.r.energy.overload"],
8188             "maxLength": 64,
8189             "type": "string"
8190           },
8191           "minItems": 1,
8192           "uniqueItems": true,
8193           "readOnly": true,
8194           "type": "array"
8195         },
8196         "value": {
```

```

8197         "description": "The energy overload indication,true = tripped, false = not tripped.",
8198         "readOnly": true,
8199         "type": "boolean"
8200     },
8201     "n": {
8202         "$ref":
8203         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8204         schema.json#/definitions/n"
8205     },
8206     "id": {
8207         "$ref":
8208         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8209         schema.json#/definitions/id"
8210     },
8211     "if": {
8212         "description": "The OCF Interface set supported by this Resource.",
8213         "items": {
8214             "enum": [
8215                 "oic.if.s",
8216                 "oic.if.baseline"
8217             ],
8218             "type": "string"
8219         },
8220         "minItems": 2,
8221         "uniqueItems": true,
8222         "readOnly": true,
8223         "type": "array"
8224     }
8225 },
8226 "type": "object",
8227 "required": ["value"]
8228 }
8229 }
8230 }
8231

```

### 8232 6.36.5 Property definition

8233 Table 75 defines the Properties that are part of the "oic.r.energy.overload" Resource Type.

8234 **Table 75 – The Property definitions of the Resource with type "rt" =**  
8235 **"oic.r.energy.overload".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
value	boolean	Yes	Read Only	The energy overload indication,true = tripped, false = not tripped.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

### 8236 6.36.6 CRUDN behaviour

8237 Table 76 defines the CRUDN operations that are supported on the "oic.r.energy.overload"  
8238 Resource Type.

8239 **Table 76 – The CRUDN operations of the Resource with type "rt" = "oic.r.energy.overload".**

Create	Read	Update	Delete	Notify
	get			observe

8240 **6.37 Generic Sensor**

8241 **6.37.1 Introduction**

8242 This Resource describes whether some value or property or entity has been sensed or not.  
 8243 The Property "value" is a boolean.  
 8244 A value of 'true' means that the target has been sensed.  
 8245 A value of 'false' means that the target has not been sensed.

8246 **6.37.2 Example URI**

8247 /GenericSensorResURI

8248 **6.37.3 Resource type**

8249 The Resource Type is defined as: "oic.r.sensor".

8250 **6.37.4 OpenAPI 2.0 definition**

```

8251 {
8252   "swagger": "2.0",
8253   "info": {
8254     "title": "Generic Sensor",
8255     "version": "20191118",
8256     "license": {
8257       "name": "OCF Data Model License",
8258       "url":
8259         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
8260         CENSE.md",
8261       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
8262         reserved."
8263     },
8264     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
8265   },
8266   "schemes": ["http"],
8267   "consumes": ["application/json"],
8268   "produces": ["application/json"],
8269   "paths": {
8270     "/GenericSensorResURI" : {
8271       "get": {
8272         "description": "This Resource describes whether some value or property or entity has been
8273         sensed or not.\n\nThe Property \"value\" is a boolean.\n\nA value of 'true' means that the target has
8274         been sensed.\n\nA value of 'false' means that the target has not been sensed.",
8275         "parameters": [
8276           { "$ref": "#/parameters/interface" }
8277         ],
8278         "responses": {
8279           "200": {
8280             "description": "",
8281             "x-example": {
8282               "rt": ["oic.r.sensor"],
8283               "id": "unique_example_id",
8284               "value": true
8285             },
8286             "schema": { "$ref": "#/definitions/Sensor" }
8287           }
8288         }
8289       }
8290     }
8291   },
8292   "parameters": {
8293     "interface" : {
8294       "in" : "query",
8295       "name" : "if",
8296       "type" : "string",

```



```

8297     "enum" : ["oic.if.s", "oic.if.baseline"]
8298   }
8299 },
8300 "definitions": {
8301   "Sensor": {
8302     "properties": {
8303       "rt": {
8304         "description": "The Resource Type",
8305         "items": {
8306           "maxLength": 64,
8307           "type": "string",
8308           "enum": ["oic.r.sensor"]
8309         },
8310         "minItems": 1,
8311         "uniqueItems": true,
8312         "readOnly": true,
8313         "type": "array"
8314       },
8315       "value": {
8316         "description": "true = sensed, false = not sensed.",
8317         "readOnly": true,
8318         "type": "boolean"
8319       },
8320       "measurement": {
8321         "type": "number",
8322         "description": "Measured value for this sensor, units depend on the specific type of
8323 sensor",
8324         "readOnly": true
8325       },
8326       "precision": {
8327         "$ref":
8328 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
8329 schema.json#/definitions/precision"
8330       },
8331       "n": {
8332         "$ref":
8333 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8334 schema.json#/definitions/n"
8335       },
8336       "range": {
8337         "$ref":
8338 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
8339 schema.json#/definitions/range_number"
8340       },
8341       "step": {
8342         "$ref":
8343 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
8344 schema.json#/definitions/step_number"
8345       },
8346       "id": {
8347         "$ref":
8348 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8349 schema.json#/definitions/id"
8350       },
8351       "if" : {
8352         "description": "The OCF Interface set supported by this Resource",
8353         "items": {
8354           "enum": [
8355             "oic.if.baseline",
8356             "oic.if.s"
8357           ],
8358           "maxLength": 64,
8359           "type": "string"
8360         },
8361         "minItems": 1,
8362         "uniqueItems": true,
8363         "readOnly": true,
8364         "type": "array"
8365       }
8366     },
8367     "type" : "object",
8368     "required": ["value"]

```

8369 }  
 8370 }  
 8371 }  
 8372 }

8373 **6.37.5 Property definition**

8374 Table 77 defines the Properties that are part of the "oic.r.sensor" Resource Type.

8375 **Table 77 – The Property definitions of the Resource with type "rt" = "oic.r.sensor".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type
value	boolean	Yes	Read Only	true = sensed, false = not sensed.
measurement	number	No	Read Only	Measured value for this sensor, units depend on the specific type of sensor
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

8376 **6.37.6 CRUDN behaviour**

8377 Table 78 defines the CRUDN operations that are supported on the "oic.r.sensor" Resource Type.

8378 **Table 78 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor".**

Create	Read	Update	Delete	Notify
	get			observe

8379 **6.38 Glass Break Sensor**

8380 **6.38.1 Introduction**

8381 This Resource describes a glass break sensor.

8382 The Property "value" is a boolean.

8383 A value of 'true' means that glass break has been sensed.

8384 A value of 'false' means that glass break not been sensed.

8385 **6.38.2 Example URI**

8386 /GlassBreakResURI

8387 **6.38.3 Resource type**

8388 The Resource Type is defined as: "oic.r.sensor.glassbreak".

#### 8389 6.38.4 OpenAPI 2.0 definition

```
8390 {
8391   "swagger": "2.0",
8392   "info": {
8393     "title": "Glass Break Sensor",
8394     "version": "20190215",
8395     "license": {
8396       "name": "OCF Data Model License",
8397       "url":
8398         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
8399         CENSE.md",
8400       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
8401         reserved."
8402     },
8403     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
8404   },
8405   "schemes": ["http"],
8406   "consumes": ["application/json"],
8407   "produces": ["application/json"],
8408   "paths": {
8409     "/GlassBreakResURI" : {
8410       "get": {
8411         "description": "This Resource describes a glass break sensor.\nThe Property \"value\" is a
8412         boolean.\nA value of 'true' means that glass break has been sensed.\nA value of 'false' means that
8413         glass break not been sensed.",
8414         "parameters": [
8415           { "$ref": "#/parameters/interface" }
8416         ],
8417         "responses": {
8418           "200": {
8419             "description": "",
8420             "x-example":
8421               {
8422                 "rt": ["oic.r.sensor.glassbreak"],
8423                 "if": ["oic.if.s", "oic.if.baseline"],
8424                 "value": true
8425               },
8426             "schema": { "$ref": "#/definitions/GlassBreak" }
8427           }
8428         }
8429       }
8430     },
8431   },
8432   "parameters": {
8433     "interface": {
8434       "in": "query",
8435       "name": "if",
8436       "type": "string",
8437       "enum": ["oic.if.s", "oic.if.baseline"]
8438     }
8439   },
8440   "definitions": {
8441     "GlassBreak" : {
8442       "properties": {
8443         "rt": {
8444           "description": "The Resource Type.",
8445           "items": {
8446             "enum": ["oic.r.sensor.glassbreak"],
8447             "maxLength": 64,
8448             "type": "string"
8449           },
8450           "minItems": 1,
8451           "uniqueItems": true,
8452           "readOnly": true,
8453           "type": "array"
8454         },
8455         "value": {
8456           "description": "The glassbreak indication, true = glass break sensed, false = glass break
8457           not sensed.",
8458           "readOnly": true,
8459           "type": "boolean"

```

```

8460     },
8461     "n": {
8462         "$ref":
8463         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8464         schema.json#/definitions/n"
8465     },
8466     "id": {
8467         "$ref":
8468         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8469         schema.json#/definitions/id"
8470     },
8471     "if": {
8472         "description": "The OCF Interface set supported by this Resource.",
8473         "items": {
8474             "enum": [
8475                 "oic.if.s",
8476                 "oic.if.baseline"
8477             ],
8478             "type": "string"
8479         },
8480         "minItems": 2,
8481         "uniqueItems": true,
8482         "readOnly": true,
8483         "type": "array"
8484     }
8485 },
8486 "type": "object",
8487 "required": ["value"]
8488 }
8489 }
8490 }
8491

```

### 8492 6.38.5 Property definition

8493 Table 79 defines the Properties that are part of the "oic.r.sensor.glassbreak" Resource Type.

8494 **Table 79 – The Property definitions of the Resource with type "rt" =**  
8495 **"oic.r.sensor.glassbreak".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
value	boolean	Yes	Read Only	The glassbreak indication, true = glass break sensed, false = glass break not sensed.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

### 8496 6.38.6 CRUDN behaviour

8497 Table 80 defines the CRUDN operations that are supported on the "oic.r.sensor.glassbreak"  
8498 Resource Type.

8499 **Table 80 – The CRUDN operations of the Resource with type "rt" =**  
8500 **"oic.r.sensor.glassbreak".**

Create	Read	Update	Delete	Notify
	get			observe

## 8501 6.39 Heart Rate Zone

### 8502 6.39.1 Introduction

8503 This Resource describes a measured heart rate by the current Zone using the Zoladz method.  
8504 The Zoladz method defines Zones based on maximum heart rate; Zone 1 is the lowest, Zone 5 is  
8505 the highest.

8506 The heartRateZone is an enumeration containing one of: "Zone1", "Zone2", "Zone3", "Zone4",  
8507 and "Zone5".  
8508

### 8509 6.39.2 Example URI

8510 /HeartRateZoneResURI

### 8511 6.39.3 Resource type

8512 The Resource Type is defined as: "oic.r.sensor.heart.zone".

### 8513 6.39.4 OpenAPI 2.0 definition

```
8514 {  
8515   "swagger": "2.0",  
8516   "info": {  
8517     "title": "Heart Rate Zone",  
8518     "version": "2019-03-28",  
8519     "license": {  
8520       "name": "OCF Data Model License",  
8521       "url":  
8522         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
8523         CENSE.md",  
8524         "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
8525         reserved."  
8526       },  
8527       "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
8528     },  
8529     "schemes": ["http"],  
8530     "consumes": ["application/json"],  
8531     "produces": ["application/json"],  
8532     "paths": {  
8533       "/HeartRateZoneResURI" : {  
8534         "get": {  
8535           "description": "This Resource describes a measured heart rate by the current Zone using the  
8536           Zoladz method. The Zoladz method defines Zones based on maximum heart rate; Zone 1 is the lowest,  
8537           Zone 5 is the highest.\n\nThe heartRateZone is an enumeration containing one of: \"Zone1\", \"Zone2\",  
8538           \"Zone3\", \"Zone4\", and \"Zone5\".\n\n",  
8539           "parameters": [  
8540             {"$ref": "#/parameters/interface"}  
8541           ],  
8542           "responses": {  
8543             "200": {  
8544               "description": "",  
8545               "x-example":  
8546                 {  
8547                   "rt": ["oic.r.sensor.heart.zone"],  
8548                   "heartRateZone": "Zone3"  
8549                 },  
8550               "schema": {"$ref": "#/definitions/heartRateZone"}  
8551             }  
8552           }  
8553         }  
8554       }  
8555     },  
8556     "parameters": {  
8557       "interface" : {  
8558         "in" : "query",  
8559         "name" : "if",  
8560         "type" : "string",  
8561         "enum" : ["oic.if.s", "oic.if.baseline"]  
8562       }  
8563     },  
8564   }
```

```

8564     "definitions": {
8565         "heartRateZone" : {
8566             "properties": {
8567                 "rt": {
8568                     "description": "Resource Type",
8569                     "items": {
8570                         "enum": ["oic.r.sensor.heart.zone"],
8571                         "maxLength": 64,
8572                         "type": "string"
8573                     },
8574                     "minItems": 1,
8575                     "readOnly": true,
8576                     "uniqueItems": true,
8577                     "type": "array"
8578                 },
8579                 "n": {
8580                     "$ref":
8581 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8582 schema.json#/definitions/n"
8583                 },
8584                 "id": {
8585                     "$ref":
8586 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8587 schema.json#/definitions/id"
8588                 },
8589                 "heartRateZone": {
8590                     "description": "Current heart rate zone based on the Zoladz system.",
8591                     "enum": [
8592                         "Zone1",
8593                         "Zone2",
8594                         "Zone3",
8595                         "Zone4",
8596                         "Zone5"
8597                     ],
8598                     "readOnly": true,
8599                     "type": "string"
8600                 },
8601                 "if": {
8602                     "description": "The OCF Interface set supported by this Resource",
8603                     "items": {
8604                         "enum": [
8605                             "oic.if.s",
8606                             "oic.if.baseline"
8607                         ],
8608                         "type": "string",
8609                         "maxLength": 64
8610                     },
8611                     "minItems": 1,
8612                     "readOnly": true,
8613                     "uniqueItems": true,
8614                     "type": "array"
8615                 }
8616             },
8617             "type" : "object",
8618             "required": ["heartRateZone"]
8619         }
8620     }
8621 }
8622

```

### 8623 6.39.5 Property definition

8624 Table 81 defines the Properties that are part of the "oic.r.sensor.heart.zone" Resource Type.

8625 **Table 81 – The Property definitions of the Resource with type "rt" =**  
8626 **"oic.r.sensor.heart.zone".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type

n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
heartRateZone	string	Yes	Read Only	Current heart rate zone based on the Zoladz system.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

8627 **6.39.6 CRUDN behaviour**

8628 Table 82 defines the CRUDN operations that are supported on the "oic.r.sensor.heart.zone"  
8629 Resource Type.

8630 **Table 82 – The CRUDN operations of the Resource with type "rt" =**  
8631 **"oic.r.sensor.heart.zone".**

Create	Read	Update	Delete	Notify
	get			observe

8632 **6.40 Illuminance Sensor**

8633 **6.40.1 Introduction**

8634 This Resource describes an illuminance sensor.  
8635 The Property "illuminance" is a float and represents the sensed luminous flux per unit area in lux.

8636 **6.40.2 Example URI**

8637 /IlluminanceSensorResURI

8638 **6.40.3 Resource type**

8639 The Resource Type is defined as: "oic.r.sensor.illuminance".

8640 **6.40.4 OpenAPI 2.0 definition**

```

8641 {
8642     "swagger": "2.0",
8643     "info": {
8644         "title": "Illuminance Sensor",
8645         "version": "20190808",
8646         "license": {
8647             "name": "OCF Data Model License",
8648             "url":
8649 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
8650 CENSE.md",
8651             "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc.
8652 All rights reserved."
8653         },
8654         "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
8655     },
8656     "schemes": ["http"],
8657     "consumes": ["application/json"],
8658     "produces": ["application/json"],
8659     "paths": {
8660         "/IlluminanceSensorResURI": {
8661             "get": {
8662                 "description": "This Resource describes an illuminance sensor.\nThe
8663 Property \"illuminance\" is a float and represents the sensed luminous flux per unit area in lux.",
8664                 "parameters": [
8665                     {"$ref": "#/parameters/interface"}
8666                 ],
8667                 "responses": {
8668                     "200": {

```

```

8669         "description": "",
8670         "x-example": {
8671             "rt": ["oic.r.sensor.illuminance"],
8672             "if": ["oic.if.s", "oic.if.baseline"],
8673             "illuminance": 450.0,
8674             "range": [100.0, 500.0]
8675         },
8676         "schema": {"$ref": "#/definitions/Illuminance"}
8677     }
8678 }
8679 }
8680 }
8681 },
8682 "parameters": {
8683     "interface": {
8684         "in": "query",
8685         "name": "if",
8686         "type": "string",
8687         "enum": ["oic.if.s", "oic.if.baseline"]
8688     }
8689 },
8690 "definitions": {
8691     "Illuminance": {
8692         "properties": {
8693             "rt": {
8694                 "description": "The Resource Type.",
8695                 "items": {
8696                     "enum": ["oic.r.sensor.illuminance"],
8697                     "maxLength": 64,
8698                     "type": "string"
8699                 },
8700                 "minItems": 1,
8701                 "uniqueItems": true,
8702                 "readOnly": true,
8703                 "type": "array"
8704             },
8705             "illuminance": {
8706                 "description": "The sensed luminous flux per unit area in
8707 lux.",
8708                 "readOnly": true,
8709                 "type": "number"
8710             },
8711             "n": {
8712                 "$ref":
8713 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8714 schema.json#/definitions/n"
8715             },
8716             "id": {
8717                 "$ref":
8718 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8719 schema.json#/definitions/id"
8720             },
8721             "range": {
8722                 "$ref":
8723 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
8724 schema.json#/definitions/range_number"
8725             },
8726             "if": {
8727                 "description": "The OCF Interface set supported by this
8728 Resource.",
8729                 "items": {
8730                     "enum": [
8731                         "oic.if.s",
8732                         "oic.if.baseline"
8733                     ],
8734                     "type": "string"
8735                 },
8736                 "minItems": 2,
8737                 "uniqueItems": true,
8738                 "readOnly": true,
8739                 "type": "array"
8740             }
8741         }
8742     }
8743 }

```



```

8741     },
8742     "type": "object",
8743     "required": ["illuminance"]
8744   }
8745 }
8746 }

```

#### 8747 6.40.5 Property definition

8748 Table 83 defines the Properties that are part of the "oic.r.sensor.illuminance" Resource Type.

8749 **Table 83 – The Property definitions of the Resource with type "rt" =**  
8750 **"oic.r.sensor.illuminance".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
illuminance	number	Yes	Read Only	The sensed luminous flux per unit area in lux.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

#### 8751 6.40.6 CRUDN behaviour

8752 Table 84 defines the CRUDN operations that are supported on the "oic.r.sensor.illuminance"  
8753 Resource Type.

8754 **Table 84 – The CRUDN operations of the Resource with type "rt" =**  
8755 **"oic.r.sensor.illuminance".**

Create	Read	Update	Delete	Notify
	get			observe

### 8756 6.41 Magnetic Field Direction Sensor

#### 8757 6.41.1 Introduction

8758 This Resource describes the direction of the Earth's magnetic field at the observer's current point  
8759 in space.

8760 Typical use case includes measurement of compass readings on a personal device.

8761 The Property "value" is an array containing Hx, Hy, Hz (in that order) each of which are floats.

8762 Each of Hx, Hy and Hz are expressed in A/m (Amperes per metre).

#### 8763 6.41.2 Example URI

8764 /MagneticFieldDirectionResURI

#### 8765 6.41.3 Resource type

8766 The Resource Type is defined as: "oic.r.sensor.magneticfielddirection".

#### 8767 6.41.4 OpenAPI 2.0 definition

```

8768 {
8769   "swagger": "2.0",
8770   "info": {
8771     "title": "Magnetic Field Direction Sensor",

```

```

8772     "version": "20190215",
8773     "license": {
8774         "name": "OCF Data Model License",
8775         "url":
8776 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
8777 CENSE.md",
8778         "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
8779 reserved."
8780     },
8781     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
8782 },
8783     "schemes": ["http"],
8784     "consumes": ["application/json"],
8785     "produces": ["application/json"],
8786     "paths": {
8787         "/MagneticFieldDirectionResURI" : {
8788             "get": {
8789                 "description": "This Resource describes the direction of the Earth's magnetic field at the
8790 observer's current point in space.\nTypical use case includes measurement of compass readings on a
8791 personal device.\nThe Property \"value\" is an array containing Hx, Hy, Hz (in that order) each of
8792 which are floats.\nEach of Hx, Hy and Hz are expressed in A/m (Amperes per metre).",
8793                 "parameters": [
8794                     {"$ref": "#/parameters/interface"}
8795                 ],
8796                 "responses": {
8797                     "200": {
8798                         "description": "",
8799                         "x-example":
8800                         {
8801                             "rt": ["oic.r.sensor.magneticfielddirection"],
8802                             "if": ["oic.if.s", "oic.if.baseline"],
8803                             "value": [100.0, 15.0, 90.0]
8804                         },
8805                         "schema": { "$ref": "#/definitions/magneticFieldDirection" }
8806                     }
8807                 }
8808             }
8809         }
8810     },
8811     "parameters": {
8812         "interface" : {
8813             "in" : "query",
8814             "name" : "if",
8815             "type" : "string",
8816             "enum" : ["oic.if.s", "oic.if.baseline"]
8817         }
8818     },
8819     "definitions": {
8820         "magneticFieldDirection" : {
8821             "properties": {
8822                 "rt": {
8823                     "description": "The Resource Type.",
8824                     "items": {
8825                         "enum": ["oic.r.sensor.magneticfielddirection"],
8826                         "maxLength": 64,
8827                         "type": "string"
8828                     },
8829                     "minItems": 1,
8830                     "uniqueItems": true,
8831                     "readOnly": true,
8832                     "type": "array"
8833                 },
8834                 "value": {
8835                     "description": "The array containing Hx, Hy, Hz.",
8836                     "items": {
8837                         "type": "number"
8838                     },
8839                     "maxItems": 3,
8840                     "minItems": 3,
8841                     "readOnly": true,
8842                     "type": "array"
8843                 }
8844             }
8845         }
8846     }

```

```

8844     "n": {
8845         "$ref":
8846         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8847         schema.json#/definitions/n"
8848     },
8849     "id": {
8850         "$ref":
8851         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8852         schema.json#/definitions/id"
8853     },
8854     "if": {
8855         "description": "The OCF Interface set supported by this Resource.",
8856         "items": {
8857             "enum": [
8858                 "oic.if.s",
8859                 "oic.if.baseline"
8860             ],
8861             "type": "string"
8862         },
8863         "minItems": 2,
8864         "uniqueItems": true,
8865         "readOnly": true,
8866         "type": "array"
8867     }
8868 },
8869 "type": "object",
8870 "required": ["value"]
8871 }
8872 }
8873 }
8874

```

8875 **6.41.5 Property definition**

8876 Table 85 defines the Properties that are part of the "oic.r.sensor.magneticfielddirection" Resource  
8877 Type.

8878 **Table 85 – The Property definitions of the Resource with type "rt" =**  
8879 **"oic.r.sensor.magneticfielddirection".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
value	array: see schema	Yes	Read Only	The array containing Hx, Hy, Hz.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

8880 **6.41.6 CRUDN behaviour**

8881 Table 86 defines the CRUDN operations that are supported on the  
8882 "oic.r.sensor.magneticfielddirection" Resource Type.

8883 **Table 86 – The CRUDN operations of the Resource with type "rt" =**  
8884 **"oic.r.sensor.magneticfielddirection".**

Create	Read	Update	Delete	Notify
	get			observe

## 8885 6.42 Media

### 8886 6.42.1 Introduction

8887 This Resource specifies the media types that an OCF Server supports.

8888 The resource is an array of media elements. Each element contains:

8889 A URL at which the specified media type can be accessed.

8890 A string array containing the definition of the media using SDP.

8891 Each entry in the sdp array is an SDP line.

8892 Each line shall follow the SDP description syntax as defined in the SDP specification.

8893 The SDP specification can be found at <http://tools.ietf.org/html/rfc4566>.

### 8894 6.42.2 Example URI

8895 /MediaResURI

### 8896 6.42.3 Resource type

8897 The Resource Type is defined as: "oic.r.media".

### 8898 6.42.4 OpenAPI 2.0 definition

```
8899 {
8900   "swagger": "2.0",
8901   "info": {
8902     "title": "Media",
8903     "version": "20190508",
8904     "license": {
8905       "name": "OCF Data Model License",
8906       "url":
8907 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
8908 CENSE.md",
8909       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
8910 reserved."
8911     },
8912     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
8913   },
8914   "schemes": ["http"],
8915   "consumes": ["application/json"],
8916   "produces": ["application/json"],
8917   "paths": {
8918     "/MediaResURI" : {
8919       "get": {
8920         "description": "This Resource specifies the media types that an OCF Server supports.\n\nThe
8921 resource is an array of media elements. Each element contains:\n\n  A URL at which the specified
8922 media type can be accessed.\n\n  A string array containing the definition of the media using SDP.\n\n
8923 Each entry in the sdp array is an SDP line.\n\n  Each line shall follow the SDP description syntax
8924 as defined in the SDP specification.\n\nThe SDP specification can be found at
8925 http://tools.ietf.org/html/rfc4566.",
8926         "parameters": [
8927           {"$ref": "#/parameters/interface"}
8928         ],
8929         "responses": {
8930           "200": {
8931             "description": "RETRIEVES the current media resource.",
8932             "x-example":
8933             {
8934               "rt": ["oic.r.media"],
8935               "if": ["oic.if.a", "oic.if.baseline"],
8936               "media": [
8937                 {
8938                   "url": "some example url",
8939                   "sdp": [
8940                     "m=video 1 RTP/AVP 96",
8941                     "a=rtpmap:96 H264/9000",
8942                     "a=fmtp:96 profile-level-id=42A028;packetization-mode=1"
8943                   ]
8944                 },
8945                 {
8946                   "url": "some other example1 url",
```

```

8947         "sdp": [
8948             "m=audio 2 RTP/AVP 97",
8949             "a=rtpmap:97 MP4A-LATM/90000"
8950         ]
8951     },
8952     {
8953         "url": "some other example2 url",
8954         "sdp": [
8955             "m=video 3 RTP/AVP 98",
8956             "a=rtpmap:98 jpeg/90000",
8957             "a=fmtp:98 sampling=YCbCr-4:2:0;width=256;height=256"
8958         ]
8959     }
8960 ]
8961 },
8962 "schema": { "$ref": "#/definitions/Media" }
8963 }
8964 },
8965 },
8966 "post": {
8967     "description": "This is to change the URL that can be played back by the device. Note that
8968 some devices do not have the capability to set the URL to be played back",
8969     "parameters": [
8970         { "$ref": "#/parameters/interface" },
8971         {
8972             "name": "body",
8973             "in": "body",
8974             "required": true,
8975             "schema": { "$ref": "#/definitions/Media" },
8976             "x-example":
8977                 {
8978                     "media": [
8979                         {
8980                             "url": "new example url for playback",
8981                             "sdp": [
8982                                 "m=video 1 RTP/AVP 100",
8983                                 "a=rtpmap:100 H264/90000",
8984                                 "a=fmtp:100 profile-level-id=42A028;packetization-mode=1"
8985                             ]
8986                         }
8987                     ]
8988                 }
8989         }
8990     ],
8991     "responses": {
8992         "200": {
8993             "description": "The current media resource.",
8994             "x-example":
8995                 {
8996                     "rt": ["oic.r.media"],
8997                     "if": ["oic.if.a", "oic.if.baseline"],
8998                     "media": [
8999                         {
9000                             "url": "new example url for playback",
9001                             "sdp": [
9002                                 "m=video 1 RTP/AVP 100",
9003                                 "a=rtpmap:100 H264/90000",
9004                                 "a=fmtp:100 profile-level-id=42A028;packetization-mode=1"
9005                             ]
9006                         }
9007                     ]
9008                 }
9009             "schema": { "$ref": "#/definitions/Media" }
9010         }
9011     }
9012 },
9013 },
9014 },
9015 "parameters": {
9016     "interface": {
9017         "in": "query",
9018         "name": "if",

```

```

9019     "type": "string",
9020     "enum": ["oic.if.a", "oic.if.baseline"]
9021   },
9022 },
9023 "definitions": {
9024   "Media" : {
9025     "properties": {
9026       "rt": {
9027         "description": "The Resource Type.",
9028         "items": {
9029           "enum": ["oic.r.media"],
9030           "maxLength": 64,
9031           "type": "string"
9032         },
9033         "minItems": 1,
9034         "uniqueItems": true,
9035         "readOnly": true,
9036         "type": "array"
9037       },
9038       "media": {
9039         "items": {
9040           "properties": {
9041             "sdp": {
9042               "description": "The array of strings, one per SDP line.",
9043               "items": {
9044                 "description": "SDP media or attribute line",
9045                 "type": "string"
9046               },
9047               "type": "array"
9048             },
9049             "url": {
9050               "description": "The url for the media instance.",
9051               "type": "string"
9052             }
9053           },
9054           "type": "object"
9055         },
9056         "type": "array"
9057       },
9058       "n": {
9059         "$ref":
9060         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9061         schema.json#/definitions/n"
9062       },
9063       "id": {
9064         "$ref":
9065         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9066         schema.json#/definitions/id"
9067       },
9068       "if": {
9069         "description": "The OCF Interface set supported by this Resource.",
9070         "items": {
9071           "enum": [
9072             "oic.if.a",
9073             "oic.if.s",
9074             "oic.if.baseline"
9075           ],
9076           "type": "string"
9077         },
9078         "minItems": 2,
9079         "uniqueItems": true,
9080         "readOnly": true,
9081         "type": "array"
9082       }
9083     },
9084     "type": "object",
9085     "required": ["media"]
9086   }
9087 }
9088 }
9089

```

9090 **6.42.5 Property definition**

9091 Table 87 defines the Properties that are part of the "oic.r.media" Resource Type.

9092 **Table 87 – The Property definitions of the Resource with type "rt" = "oic.r.media".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
media	array: see schema	Yes	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

9093 **6.42.6 CRUDN behaviour**

9094 Table 88 defines the CRUDN operations that are supported on the "oic.r.media" Resource Type.

9095 **Table 88 – The CRUDN operations of the Resource with type "rt" = "oic.r.media".**

Create	Read	Update	Delete	Notify
	get	post		observe

9096 **6.43 Media Source**

9097 **6.43.1 Introduction**

9098 This Resource defines a single media source that exists on a device.

9099 The source can be an input source or output source, this resource is agnostic of that.

9100 The Property "sourceName" specifies a pre-defined media input or output (e.g. "HDMI", "DVI").

9101 The Property "sourceNumber" is a label to specify the instance (e.g. "PC", "1").

9102 The Property "sourceType" is an enumeration defining whether the source is audio, video or both.

9103 The Property "status" is a boolean that determines if the specific source instance is selected or not.

9105 A status of true means that the source instance is selected.

9106 A status of false means that the source instance is not selected.

9107 **6.43.2 Example URI**

9108 /mediaSourceResURI

9109 **6.43.3 Resource type**

9110 The Resource Type is defined as: "oic.r.mediasource".

9111 **6.43.4 OpenAPI 2.0 definition**

```

9112 {
9113   "swagger": "2.0",
9114   "info": {
9115     "title": "Media Source",
9116     "version": "20190215",
9117     "license": {
9118       "name": "OCF Data Model License",
9119       "url":
9120 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
9121 CENSE.md",
9122       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
9123 reserved."
9124     },
9125     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"

```

```

9126     },
9127     "schemes": ["http"],
9128     "consumes": ["application/json"],
9129     "produces": ["application/json"],
9130     "paths": {
9131         "/mediaSourceResURI" : {
9132             "get": {
9133                 "description": "This Resource defines a single media source that exists on a device.\nThe
9134 source can be an input source or output source, this resource is agnostic of that.\nThe Property
9135 \"sourceName\" specifies a pre-defined media input or output (e.g.\n\"HDMI\", \"DVI\").\nThe Property
9136 \"sourceNumber\" is a label to specify the instance (e.g. \"PC\", \"1\").\nThe Property
9137 \"sourceType\" is an enumeration defining whether the source is audio, video or both.\nThe Property
9138 \"status\" is a boolean that determines if the specific source instance is selected or not.\nA
9139 status of true means that the source instance is selected.\nA status of false means that the source
9140 instance is not selected.",
9141                 "parameters": [
9142                     { "$ref": "#/parameters/interface" }
9143                 ],
9144                 "responses": {
9145                     "200": {
9146                         "description": "",
9147                         "x-example":
9148                             {
9149                                 "rt": ["oic.r.mediasource"],
9150                                 "if": ["oic.if.a", "oic.if.baseline"],
9151                                 "sourceName": "HDMI-CEC",
9152                                 "sourceNumber": "1",
9153                                 "sourceType": "audioPlusVideo",
9154                                 "status": true
9155                             },
9156                         "schema": { "$ref": "#/definitions/mediaSource" }
9157                     }
9158                 }
9159             },
9160             "post": {
9161                 "description": "Changes the status of the source.\nAllows changes of the \"sourceName\" and
9162 the \"status\".",
9163                 "parameters": [
9164                     { "$ref": "#/parameters/interface" },
9165                     {
9166                         "name": "body",
9167                         "in": "body",
9168                         "required": true,
9169                         "schema": { "$ref": "#/definitions/mediaSource" },
9170                         "x-example":
9171                             {
9172                                 "sourceName": "my new name",
9173                                 "status": true
9174                             }
9175                     }
9176                 ],
9177                 "responses": {
9178                     "200": {
9179                         "description": "",
9180                         "x-example":
9181                             {
9182                                 "sourceName": "my new name",
9183                                 "sourceNumber": "1",
9184                                 "sourceType": "audioPlusVideo",
9185                                 "status": true
9186                             },
9187                         "schema": { "$ref": "#/definitions/mediaSource" }
9188                     }
9189                 }
9190             }
9191         }
9192     },
9193     "parameters": {
9194         "interface": {
9195             "in": "query",
9196             "name": "if",
9197             "type": "string",

```



```

9198     "enum": ["oic.if.a", "oic.if.baseline"]
9199   }
9200 },
9201 "definitions": {
9202   "mediaSource": {
9203     "properties": {
9204       "rt": {
9205         "description": "The Resource Type.",
9206         "items": {
9207           "enum": ["oic.r.mediasource"],
9208           "maxLength": 64,
9209           "type": "string"
9210         },
9211         "minItems": 1,
9212         "uniqueItems": true,
9213         "readOnly": true,
9214         "type": "array"
9215       },
9216       "status": {
9217         "description": "Specifies if the specific source instance is selected or not.",
9218         "type": "boolean"
9219       },
9220       "sourceType": {
9221         "description": "Specifies the type of the source.",
9222         "enum": [
9223           "audioOnly",
9224           "videoOnly",
9225           "audioPlusVideo"
9226         ],
9227         "readOnly": true,
9228         "type": "string"
9229       },
9230       "sourceName": {
9231         "description": "Specifies a pre-defined media input or output.",
9232         "type": "string"
9233       },
9234       "sourceNumber": {
9235         "description": "Label to specify the instance.",
9236         "type": "string"
9237       },
9238       "n": {
9239         "$ref":
9240         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9241         schema.json#/definitions/n"
9242       },
9243       "id": {
9244         "$ref":
9245         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9246         schema.json#/definitions/id"
9247       },
9248       "if": {
9249         "description": "The OCF Interface set supported by this Resource.",
9250         "items": {
9251           "enum": [
9252             "oic.if.a",
9253             "oic.if.baseline"
9254           ],
9255           "type": "string"
9256         },
9257         "minItems": 2,
9258         "uniqueItems": true,
9259         "readOnly": true,
9260         "type": "array"
9261       }
9262     },
9263     "type": "object",
9264     "required": ["sourceName", "status"]
9265   }
9266 }
9267 }
9268

```

9269 **6.43.5 Property definition**

9270 Table 89 defines the Properties that are part of the "oic.r.mediasource" Resource Type.

9271 **Table 89 – The Property definitions of the Resource with type "rt" = "oic.r.mediasource".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
status	boolean	Yes	Read Write	Specifies if the specific source instance is selected or not.
sourceType	string	No	Read Only	Specifies the type of the source.
sourceName	string	Yes	Read Write	Specifies a pre-defined media input or output.
sourceNumber	string	No	Read Write	Label to specify the instance.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

9272 **6.43.6 CRUDN behaviour**

9273 Table 90 defines the CRUDN operations that are supported on the "oic.r.mediasource" Resource  
9274 Type.

9275 **Table 90 – The CRUDN operations of the Resource with type "rt" = "oic.r.mediasource".**

Create	Read	Update	Delete	Notify
	get	post		observe

9276 **6.44 Media Source List**

9277 **6.44.1 Introduction**

9278 This Resource provides the list of all media sources available on the Device (input and/or output).  
9279 The sources are an array of mediaSource(s) as separately defined see Resource Type  
9280 "oic.r.mediasource"

9281 **6.44.2 Example URI**

9282 /mediaSourceListResURI

9283 **6.44.3 Resource type**

9284 The Resource Type is defined as: "oic.r.mediasourcelist".

9285 **6.44.4 OpenAPI 2.0 definition**

```
9286 {
9287   "swagger": "2.0",
9288   "info": {
9289     "title": "Media Source List",
9290     "version": "20190729",
9291     "license": {
9292       "name": "OCF Data Model License",
9293       "url":
```

```

9294 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
9295 CENSE.md",
9296 "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
9297 reserved."
9298 },
9299 "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
9300 },
9301 "schemes": ["http"],
9302 "consumes": ["application/json"],
9303 "produces": ["application/json"],
9304 "paths": {
9305 "/mediaSourceListResURI" : {
9306 "get": {
9307 "description": "This Resource provides the list of all media sources available on the Device
9308 (input and/or output).\nThe sources are an array of mediaSource(s) as separately defined see
9309 Resource Type \"oic.r.mediasource\"",
9310 "parameters": [
9311 {"$ref": "#/parameters/interface"}
9312 ],
9313 "responses": {
9314 "200": {
9315 "description": "",
9316 "x-example":
9317 {
9318 "rt": ["oic.r.mediasourcelist"],
9319 "if": ["oic.if.a", "oic.if.baseline"],
9320 "sources": [
9321 {
9322 "sourceName": "HDMI-CEC",
9323 "sourceNumber": "1",
9324 "sourceType": "audioPlusVideo",
9325 "status": true
9326 },
9327 {
9328 "sourceName": "dualRCA",
9329 "sourceNumber": "1",
9330 "sourceType": "audioOnly",
9331 "status": false
9332 }
9333 ]
9334 },
9335 "schema": { "$ref": "#/definitions/mediaSourceList" }
9336 }
9337 },
9338 },
9339 "post": {
9340 "description": "Changes the status of the source(s).\nAllows changes of the sourceName and
9341 the status.",
9342 "parameters": [
9343 {"$ref": "#/parameters/interface"},
9344 {
9345 "name": "body",
9346 "in": "body",
9347 "required": true,
9348 "schema": { "$ref": "#/definitions/mediaSourceList" },
9349 "x-example":
9350 {
9351 "sources": [
9352 {
9353 "sourceName": "my new name",
9354 "status": true
9355 },
9356 {
9357 "sourceName": "dualRCA"
9358 }
9359 ]
9360 }
9361 },
9362 ],
9363 "responses": {
9364 "200": {
9365 "description": "",

```

```

9366         "x-example":
9367         {
9368             "sources": [
9369                 {
9370                     "sourceName": "my new name",
9371                     "sourceNumber": "1",
9372                     "sourceType": "audioPlusVideo",
9373                     "status": true
9374                 },
9375                 {
9376                     "sourceName": "dualRCA",
9377                     "sourceNumber": "1",
9378                     "sourceType": "audioOnly",
9379                     "status": false
9380                 }
9381             ]
9382         },
9383         "schema": { "$ref": "#/definitions/mediaSourceList" }
9384     }
9385 }
9386 }
9387 }
9388 },
9389 "parameters": {
9390     "interface": {
9391         "in": "query",
9392         "name": "if",
9393         "type": "string",
9394         "enum": ["oic.if.a", "oic.if.baseline"]
9395     }
9396 },
9397 "definitions": {
9398     "mediaSourceList" : {
9399         "properties": {
9400             "rt": {
9401                 "description": "The Resource Type.",
9402                 "items": {
9403                     "enum": ["oic.r.mediasourcelist"],
9404                     "maxLength": 64,
9405                     "type": "string"
9406                 },
9407                 "minItems": 1,
9408                 "uniqueItems": true,
9409                 "readOnly": true,
9410                 "type": "array"
9411             },
9412             "sources": {
9413                 "items": {
9414                     "properties": {
9415                         "sourceName": {
9416                             "description": "Specifies a pre-defined media input or output.",
9417                             "type": "string"
9418                         },
9419                         "sourceNumber": {
9420                             "description": "Label to specify the instance.",
9421                             "readOnly": true,
9422                             "type": "string"
9423                         },
9424                         "sourceType": {
9425                             "description": "Specifies the type of the source.",
9426                             "enum": [
9427                                 "audioOnly",
9428                                 "videoOnly",
9429                                 "audioPlusVideo"
9430                             ],
9431                             "readOnly": true,
9432                             "type": "string"
9433                         },
9434                         "status": {
9435                             "description": "Specifies if the specific source instance is selected or not.",
9436                             "type": "boolean"
9437                     }

```

```

9438         },
9439         "type": "object"
9440     },
9441     "type": "array"
9442 },
9443 "n": {
9444     "$ref":
9445 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9446 schema.json#/definitions/n"
9447 },
9448 "id": {
9449     "$ref":
9450 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9451 schema.json#/definitions/id"
9452 },
9453 "if": {
9454     "description": "The OCF Interface set supported by this Resource.",
9455     "items": {
9456         "enum": [
9457             "oic.if.a",
9458             "oic.if.baseline"
9459         ],
9460         "type": "string"
9461     },
9462     "minItems": 2,
9463     "uniqueItems": true,
9464     "readOnly": true,
9465     "type": "array"
9466 },
9467 },
9468 "type": "object",
9469 "required": ["sources"]
9470 }
9471 }
9472 }
9473

```

#### 6.44.5 Property definition

Table 91 defines the Properties that are part of the "oic.r.mediasourcelist" Resource Type.

**Table 91 – The Property definitions of the Resource with type "rt" = "oic.r.mediasourcelist".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
sources	array: see schema	Yes	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

#### 6.44.6 CRUDN behaviour

Table 92 defines the CRUDN operations that are supported on the "oic.r.mediasourcelist" Resource Type.

**Table 92 – The CRUDN operations of the Resource with type "rt" = "oic.r.mediasourcelist".**

Create	Read	Update	Delete	Notify
	get	post		observe

## 9482 6.45 Media Source Input

### 9483 6.45.1 Introduction

9484 This Resource provides the list of input media sources available on the device.  
9485 The sources are an array of Media Source(s) see Resource Type "oic.r.mediasource"  
9486

### 9487 6.45.2 Example URI

9488 /mediaSourceInputResURI

### 9489 6.45.3 Resource type

9490 The Resource Type is defined as: "oic.r.media.input".

### 9491 6.45.4 OpenAPI 2.0 definition

```
9492 {
9493   "swagger": "2.0",
9494   "info": {
9495     "title": "Media Source Input",
9496     "version": "20190729",
9497     "license": {
9498       "name": "OCF Data Model License",
9499       "url":
9500 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
9501 CENSE.md",
9502       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
9503 reserved."
9504     },
9505     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
9506   },
9507   "schemes": ["http"],
9508   "consumes": ["application/json"],
9509   "produces": ["application/json"],
9510   "paths": {
9511     "/mediaSourceInputResURI" : {
9512       "get": {
9513         "description": "This Resource provides the list of input media sources available on the
9514 device.\n\nThe sources are an array of Media Source(s) see Resource Type \"oic.r.mediasource\"\n\n",
9515         "parameters": [
9516           { "$ref": "#/parameters/interface" }
9517         ],
9518         "responses": {
9519           "200": {
9520             "description" : "",
9521             "x-example": {
9522               "rt": ["oic.r.media.input"],
9523               "if": ["oic.if.a", "oic.if.baseline"],
9524               "sources": [
9525                 {
9526                   "sourceName": "HDMI-CEC",
9527                   "sourceNumber": "1",
9528                   "sourceType": "audioPlusVideo",
9529                   "status": true
9530                 },
9531                 {
9532                   "sourceName": "dualRCA",
9533                   "sourceNumber": "1",
9534                   "sourceType": "audioOnly",
9535                   "status": false
9536                 }
9537               ]
9538             },
9539             "schema": { "$ref": "#/definitions/mediaSourceList" }
9540           }
9541         }
9542       },
9543       "post": {
9544         "description": "Changes the status of the source(s).\n\nAllows changes of the sourceName and
9545 the status.",
```

```

9546     "parameters": [
9547         { "$ref": "#/parameters/interface" },
9548     ],
9549     {
9550         "name": "body",
9551         "in": "body",
9552         "required": true,
9553         "schema": { "$ref": "#/definitions/mediaSourceList" },
9554         "x-example": {
9555             "sources": [
9556                 {
9557                     "sourceName": "my new name",
9558                     "status": true
9559                 },
9560                 {
9561                     "sourceName": "dualRCA"
9562                 }
9563             ]
9564         }
9565     ],
9566     "responses": {
9567         "200": {
9568             "description": "",
9569             "x-example": {
9570                 "sources": [
9571                     {
9572                         "sourceName": "my new name",
9573                         "sourceNumber": "1",
9574                         "sourceType": "audioPlusVideo",
9575                         "status": true
9576                     },
9577                     {
9578                         "sourceName": "dualRCA",
9579                         "sourceNumber": "1",
9580                         "sourceType": "audioOnly",
9581                         "status": false
9582                     }
9583                 ]
9584             },
9585             "schema": { "$ref": "#/definitions/mediaSourceList" }
9586         }
9587     }
9588 },
9589 ],
9590 },
9591 "parameters": {
9592     "interface": {
9593         "in": "query",
9594         "name": "if",
9595         "type": "string",
9596         "enum": ["oic.if.a", "oic.if.baseline"]
9597     }
9598 },
9599 "definitions": {
9600     "mediaSourceList": {
9601         "properties": {
9602             "rt": {
9603                 "description": "Resource Type",
9604                 "items": {
9605                     "enum": ["oic.r.media.input"],
9606                     "maxLength": 64,
9607                     "type": "string"
9608                 },
9609                 "minItems": 1,
9610                 "uniqueItems": true,
9611                 "readOnly": true,
9612                 "type": "array"
9613             },
9614             "sources": {
9615                 "items": {
9616                     "properties": {
9617                         "sourceName": {

```

```

9618         "description": "Specifies a pre-defined media input or output",
9619         "type": "string"
9620     },
9621     "sourceNumber": {
9622         "description": "Label to specify the instance",
9623         "readOnly": true,
9624         "type": "string"
9625     },
9626     "sourceType": {
9627         "description": "Specifies the type of the source",
9628         "enum": [
9629             "audioOnly",
9630             "videoOnly",
9631             "audioPlusVideo"
9632         ],
9633         "readOnly": true,
9634         "type": "string"
9635     },
9636     "status": {
9637         "description": "Specifies if the specific source instance is selected or not",
9638         "type": "boolean"
9639     }
9640 },
9641 "type": "object"
9642 },
9643 "type": "array"
9644 },
9645 "n": {
9646     "$ref":
9647     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9648     schema.json#/definitions/n"
9649 },
9650 "id": {
9651     "$ref":
9652     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9653     schema.json#/definitions/id"
9654 },
9655 "if": {
9656     "description": "The OCF Interface set supported by this Resource",
9657     "items": {
9658         "enum": [
9659             "oic.if.a",
9660             "oic.if.baseline"
9661         ],
9662         "type": "string"
9663     },
9664     "minItems": 2,
9665     "uniqueItems": true,
9666     "readOnly": true,
9667     "type": "array"
9668 }
9669 },
9670 "type": "object",
9671 "required": ["sources"]
9672 }
9673 }
9674 }
9675

```

#### 9676 6.45.5 Property definition

9677 Table 93 defines the Properties that are part of the "oic.r.media.input" Resource Type.

9678 **Table 93 – The Property definitions of the Resource with type "rt" = "oic.r.media.input".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
sources	array: see schema	Yes	Read Write	



n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

9679 **6.45.6 CRUDN behaviour**

9680 Table 94 defines the CRUDN operations that are supported on the "oic.r.media.input" Resource  
9681 Type.

9682 **Table 94 – The CRUDN operations of the Resource with type "rt" = "oic.r.media.input".**

Create	Read	Update	Delete	Notify
	get	post		observe

9683 **6.46 Media Source Output**

9684 **6.46.1 Introduction**

9685 This Resource provides the list of output media sources available on the device.  
9686 The sources are an array of Media Source(s) see Resource Type "oic.r.mediasource"  
9687

9688 **6.46.2 Example URI**

9689 /mediaSourceOutputResURI

9690 **6.46.3 Resource type**

9691 The Resource Type is defined as: "oic.r.media.output".

9692 **6.46.4 OpenAPI 2.0 definition**

```

9693 {
9694   "swagger": "2.0",
9695   "info": {
9696     "title": "Media Source Output",
9697     "version": "20190729",
9698     "license": {
9699       "name": "OCF Data Model License",
9700       "url":
9701         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
9702         CENSE.md",
9703       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
9704         reserved."
9705     },
9706     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
9707   },
9708   "schemes": ["http"],
9709   "consumes": ["application/json"],
9710   "produces": ["application/json"],
9711   "paths": {
9712     "/mediaSourceOutputResURI" : {
9713       "get": {
9714         "description": "This Resource provides the list of output media sources available on the
9715         device.\n\nThe sources are an array of Media Source(s) see Resource Type \"oic.r.mediasource\"\n\n",
9716         "parameters": [
9717           {"$ref": "#/parameters/interface"}
9718         ],
9719         "responses": {
9720           "200": {
9721             "description": "",
9722             "x-example": {
9723               "rt": ["oic.r.media.output"],
9724               "if": ["oic.if.a", "oic.if.baseline"],

```

```

9725         "sources": [
9726             {
9727                 "sourceName": "HDMI-CEC",
9728                 "sourceNumber": "1",
9729                 "sourceType": "audioPlusVideo",
9730                 "status": true
9731             },
9732             {
9733                 "sourceName": "dualRCA",
9734                 "sourceNumber": "1",
9735                 "sourceType": "audioOnly",
9736                 "status": false
9737             }
9738         ],
9739     },
9740     "schema": { "$ref": "#/definitions/mediaSourceList" }
9741 }
9742 },
9743 "post": {
9744     "description": "Changes the status of the source(s).\nAllows changes of the sourceName and
9745 the status.",
9746     "parameters": [
9747         { "$ref": "#/parameters/interface" },
9748         {
9749             "name": "body",
9750             "in": "body",
9751             "required": true,
9752             "schema": { "$ref": "#/definitions/mediaSourceList" },
9753             "x-example": {
9754                 "sources": [
9755                     {
9756                         "sourceName": "my new name",
9757                         "status": true
9758                     },
9759                     {
9760                         "sourceName": "dualRCA"
9761                     }
9762                 ]
9763             }
9764         }
9765     ],
9766     "responses": {
9767         "200": {
9768             "description": "",
9769             "x-example": {
9770                 "sources": [
9771                     {
9772                         "sourceName": "my new name",
9773                         "sourceNumber": "1",
9774                         "sourceType": "audioPlusVideo",
9775                         "status": true
9776                     },
9777                     {
9778                         "sourceName": "dualRCA",
9779                         "sourceNumber": "1",
9780                         "sourceType": "audioOnly",
9781                         "status": false
9782                     }
9783                 ]
9784             },
9785             "schema": { "$ref": "#/definitions/mediaSourceList" }
9786         }
9787     }
9788 },
9789 },
9790 },
9791 },
9792 "parameters": {
9793     "interface": {
9794         "in": "query",
9795         "name": "if",
9796         "type": "string",

```

```

9797     "enum": ["oic.if.a", "oic.if.baseline"]
9798   }
9799 },
9800 "definitions": {
9801   "mediaSourceList" : {
9802     "properties": {
9803       "rt": {
9804         "description": "Resource Type",
9805         "items": {
9806           "enum": ["oic.r.media.output"],
9807           "maxLength": 64,
9808           "type": "string"
9809         },
9810         "minItems": 1,
9811         "uniqueItems": true,
9812         "readOnly": true,
9813         "type": "array"
9814       },
9815       "sources": {
9816         "items": {
9817           "properties": {
9818             "sourceName": {
9819               "description": "Specifies a pre-defined media input or output",
9820               "type": "string"
9821             },
9822             "sourceNumber": {
9823               "description": "Label to specify the instance",
9824               "readOnly": true,
9825               "type": "string"
9826             },
9827             "sourceType": {
9828               "description": "Specifies the type of the source",
9829               "enum": [
9830                 "audioOnly",
9831                 "videoOnly",
9832                 "audioPlusVideo"
9833               ],
9834               "readOnly": true,
9835               "type": "string"
9836             },
9837             "status": {
9838               "description": "Specifies if the specific source instance is selected or not",
9839               "type": "boolean"
9840             }
9841           },
9842           "type": "object"
9843         },
9844         "type": "array"
9845       },
9846       "n": {
9847         "$ref":
9848         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9849         schema.json#/definitions/n"
9850       },
9851       "id": {
9852         "$ref":
9853         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9854         schema.json#/definitions/id"
9855       },
9856       "if": {
9857         "description": "The OCF Interface set supported by this Resource",
9858         "items": {
9859           "enum": [
9860             "oic.if.a",
9861             "oic.if.baseline"
9862           ],
9863           "type": "string"
9864         },
9865         "minItems": 2,
9866         "uniqueItems": true,
9867         "readOnly": true,
9868         "type": "array"

```

```

9869     }
9870     },
9871     "type": "object",
9872     "required": ["sources"]
9873   }
9874 }
9875 }
9876 }

```

### 9877 6.46.5 Property definition

9878 Table 95 defines the Properties that are part of the "oic.r.media.output" Resource Type.

9879 **Table 95 – The Property definitions of the Resource with type "rt" = "oic.r.media.output".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
sources	array: see schema	Yes	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

### 9880 6.46.6 CRUDN behaviour

9881 Table 96 defines the CRUDN operations that are supported on the "oic.r.media.output" Resource  
 9882 Type.

9883 **Table 96 – The CRUDN operations of the Resource with type "rt" = "oic.r.media.output".**

Create	Read	Update	Delete	Notify
	get	post		observe

## 9884 6.47 Motion Sensor

### 9885 6.47.1 Introduction

9886 This Resource describes whether motion has been sensed or not.

9887 The Property "value" is a boolean.

9888 A value of 'true' means that motion has been sensed.

9889 A value of 'false' means that motion not been sensed.

9890

### 9891 6.47.2 Example URI

9892 /MotionResURI

### 9893 6.47.3 Resource type

9894 The Resource Type is defined as: "oic.r.sensor.motion".

### 9895 6.47.4 OpenAPI 2.0 definition

```

9896 {
9897   "swagger": "2.0",
9898   "info": {
9899     "title": "Motion Sensor",
9900     "version": "20190215",
9901     "license": {
9902       "name": "OCF Data Model License",
9903       "url":
9904         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI

```

```

9905 CENSE.md",
9906     "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
9907 reserved."
9908 },
9909     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
9910 },
9911     "schemes": ["http"],
9912     "consumes": ["application/json"],
9913     "produces": ["application/json"],
9914     "paths": {
9915         "/MotionResURI" : {
9916             "get": {
9917                 "description": "This Resource describes whether motion has been sensed or not.\n
9918 \The Property
9919 \\"value\" is a boolean.\n
9920 \A value of 'true' means that motion has been sensed.\n
9921 \A value of 'false'
9922 \means that motion not been sensed.\n",
9923                 "parameters": [
9924                     { "$ref": "#/parameters/interface" }
9925                 ],
9926                 "responses": {
9927                     "200": {
9928                         "description": "",
9929                         "x-example":
9930                         {
9931                             "rt": ["oic.r.sensor.motion"],
9932                             "if": ["oic.if.s", "oic.if.baseline"],
9933                             "value": true
9934                         },
9935                         "schema": { "$ref": "#/definitions/Motion" }
9936                     }
9937                 }
9938             }
9939         }
9940     },
9941     "parameters": {
9942         "interface" : {
9943             "in" : "query",
9944             "name" : "if",
9945             "type" : "string",
9946             "enum" : ["oic.if.s", "oic.if.baseline"]
9947         }
9948     },
9949     "definitions": {
9950         "Motion" : {
9951             "properties": {
9952                 "rt": {
9953                     "description": "The Resource Type.",
9954                     "items": {
9955                         "enum": ["oic.r.sensor.motion"],
9956                         "maxLength": 64,
9957                         "type": "string"
9958                     },
9959                     "minItems": 1,
9960                     "uniqueItems": true,
9961                     "readOnly": true,
9962                     "type": "array"
9963                 },
9964                 "value": {
9965                     "description": "The motion sensor, true = motion sensed, false = motion not sensed.",
9966                     "readOnly": true,
9967                     "type": "boolean"
9968                 },
9969                 "n": {
9970                     "$ref":
9971                     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9972                     schema.json#/definitions/n"
9973                 },
9974                 "id": {
9975                     "$ref":
9976                     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9977                     schema.json#/definitions/id"
9978                 },
9979                 "if": {

```

```

9977     "description": "The OCF Interface set supported by this Resource.",
9978     "items": {
9979         "enum": [
9980             "oic.if.s",
9981             "oic.if.baseline"
9982         ],
9983         "type": "string"
9984     },
9985     "minItems": 2,
9986     "uniqueItems": true,
9987     "readOnly": true,
9988     "type": "array"
9989 }
9990 },
9991 "type": "object",
9992 "required": ["value"]
9993 }
9994 }
9995 }
9996

```

9997 **6.47.5 Property definition**

9998 Table 97 defines the Properties that are part of the "oic.r.sensor.motion" Resource Type.

9999 **Table 97 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.motion".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
value	boolean	Yes	Read Only	The motion sensor, true = motion sensed, false = motion not sensed.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

10000 **6.47.6 CRUDN behaviour**

10001 Table 98 defines the CRUDN operations that are supported on the "oic.r.sensor.motion" Resource  
 10002 Type.

10003 **Table 98 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.motion".**

Create	Read	Update	Delete	Notify
	get			observe

10004 **6.48 Night Mode**

10005 **6.48.1 Introduction**

10006 This Resource describes a night mode on/off feature.  
 10007 A nightMode value of 'true' means that the feature is on.  
 10008 A nightMode value of 'false' means that the feature is off.

10009 **6.48.2 Example URI**

10010 /NightModeResURI

10011 **6.48.3 Resource type**

10012 The Resource Type is defined as: "oic.r.nightmode".

10013 **6.48.4 OpenAPI 2.0 definition**

```
10014 {
10015   "swagger": "2.0",
10016   "info": {
10017     "title": "Night Mode",
10018     "version": "20190215",
10019     "license": {
10020       "name": "OCF Data Model License",
10021       "url":
10022 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
10023 CENSE.md",
10024     "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
10025 reserved."
10026   },
10027   "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
10028 },
10029 "schemas": ["http"],
10030 "consumes": ["application/json"],
10031 "produces": ["application/json"],
10032 "paths": {
10033   "/NightModeResURI" : {
10034     "get": {
10035       "description": "This Resource describes a night mode on/off feature.\nA nightMode value of
10036 'true' means that the feature is on.\nA nightMode value of 'false' means that the feature is off.",
10037       "parameters": [
10038         { "$ref": "#/parameters/interface" }
10039       ],
10040       "responses": {
10041         "200": {
10042           "description": "",
10043           "x-example":
10044             {
10045               "rt": ["oic.r.nightmode"],
10046               "if": ["oic.if.a", "oic.if.baseline"],
10047               "nightMode": false
10048             },
10049           "schema": { "$ref": "#/definitions/NightMode" }
10050         }
10051       }
10052     },
10053     "post": {
10054       "description": "",
10055       "parameters": [
10056         { "$ref": "#/parameters/interface" },
10057         {
10058           "name": "body",
10059           "in": "body",
10060           "required": true,
10061           "schema": { "$ref": "#/definitions/NightMode" },
10062           "x-example":
10063             {
10064               "nightMode": true
10065             }
10066         }
10067       ],
10068       "responses": {
10069         "200": {
10070           "description": "",
10071           "x-example":
10072             {
10073               "nightMode": true
10074             },
10075           "schema": { "$ref": "#/definitions/NightMode" }
10076         }
10077       }
10078     }
10079   }
}
```

```

10080 },
10081 "parameters": {
10082   "interface": {
10083     "in": "query",
10084     "name": "if",
10085     "type": "string",
10086     "enum": ["oic.if.a", "oic.if.baseline"]
10087   }
10088 },
10089 "definitions": {
10090   "NightMode": {
10091     "properties": {
10092       "rt": {
10093         "description": "The Resource Type.",
10094         "items": {
10095           "enum": ["oic.r.nightmode"],
10096           "maxLength": 64,
10097           "type": "string"
10098         },
10099         "minItems": 1,
10100         "uniqueItems": true,
10101         "readOnly": true,
10102         "type": "array"
10103       },
10104       "nightMode": {
10105         "description": "The status of the Night Mode.",
10106         "type": "boolean"
10107       },
10108       "n": {
10109         "$ref":
10110         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10111         schema.json#/definitions/n"
10112       },
10113       "id": {
10114         "$ref":
10115         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10116         schema.json#/definitions/id"
10117       },
10118       "if": {
10119         "description": "The OCF Interface set supported by this Resource.",
10120         "items": {
10121           "enum": [
10122             "oic.if.a",
10123             "oic.if.baseline"
10124           ],
10125           "type": "string"
10126         },
10127         "minItems": 2,
10128         "uniqueItems": true,
10129         "readOnly": true,
10130         "type": "array"
10131       }
10132     },
10133     "type": "object",
10134     "required": ["nightMode"]
10135   }
10136 }
10137 }
10138

```

### 10139 6.48.5 Property definition

10140 Table 99 defines the Properties that are part of the "oic.r.nightmode" Resource Type.

10141 **Table 99 – The Property definitions of the Resource with type "rt" = "oic.r.nightmode".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
nightMode	boolean	Yes	Read Write	The status of the Night Mode.



n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

10142 **6.48.6 CRUDN behaviour**

10143 Table 100 defines the CRUDN operations that are supported on the "oic.r.nightmode" Resource  
10144 Type.

10145 **Table 100 – The CRUDN operations of the Resource with type "rt" = "oic.r.nightmode".**

Create	Read	Update	Delete	Notify
	get	post		observe

10146 **6.49 Presence Sensor**

10147 **6.49.1 Introduction**

10148 This Resource describes whether presence has been sensed or not.

10149 The Property "value" is a boolean.

10150 A value of 'true' means that presence has been sensed.

10151 A value of 'false' means that presence not been sensed.

10152 **6.49.2 Example URI**

10153 /PresenceResURI

10154 **6.49.3 Resource type**

10155 The Resource Type is defined as: "oic.r.sensor.presence".

10156 **6.49.4 OpenAPI 2.0 definition**

```

10157 {
10158   "swagger": "2.0",
10159   "info": {
10160     "title": "Presence Sensor",
10161     "version": "20190215",
10162     "license": {
10163       "name": "OCF Data Model License",
10164       "url":
10165         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
10166         CENSE.md",
10167       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
10168         reserved."
10169     },
10170     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
10171   },
10172   "schemes": ["http"],
10173   "consumes": ["application/json"],
10174   "produces": ["application/json"],
10175   "paths": {
10176     "/PresenceResURI" : {
10177       "get": {
10178         "description": "This Resource describes whether presence has been sensed or not.\nThe
10179         Property \"value\" is a boolean.\nA value of 'true' means that presence has been sensed.\nA value of
10180         'false' means that presence not been sensed.",
10181         "parameters": [
10182           { "$ref": "#/parameters/interface" }
10183         ],
10184         "responses": {
10185           "200": {
10186             "description": ""

```

```

10187         "x-example":
10188             {
10189                 "rt": ["oic.r.sensor.presence"],
10190                 "if": ["oic.if.s", "oic.if.baseline"],
10191                 "value": true
10192             },
10193         "schema": { "$ref": "#/definitions/Presence" }
10194     }
10195 }
10196 }
10197 }
10198 },
10199 "parameters": {
10200     "interface": {
10201         "in": "query",
10202         "name": "if",
10203         "type": "string",
10204         "enum": ["oic.if.s", "oic.if.baseline"]
10205     },
10206 },
10207 "definitions": {
10208     "Presence": {
10209         "properties": {
10210             "rt": {
10211                 "description": "The Resource Type.",
10212                 "items": {
10213                     "enum": ["oic.r.sensor.presence"],
10214                     "maxLength": 64,
10215                     "type": "string"
10216                 },
10217                 "minItems": 1,
10218                 "uniqueItems": true,
10219                 "readOnly": true,
10220                 "type": "array"
10221             },
10222             "value": {
10223                 "description": "The presences sensor, true = precense sensed, false = precensentot
10224 sensed.",
10225                 "readOnly": true,
10226                 "type": "boolean"
10227             },
10228             "n": {
10229                 "$ref":
10230 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10231 schema.json#/definitions/n"
10232             },
10233             "id": {
10234                 "$ref":
10235 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10236 schema.json#/definitions/id"
10237             },
10238             "if": {
10239                 "description": "The OCF Interface set supported by this Resource.",
10240                 "items": {
10241                     "enum": [
10242                         "oic.if.s",
10243                         "oic.if.baseline"
10244                     ],
10245                     "type": "string"
10246                 },
10247                 "minItems": 2,
10248                 "uniqueItems": true,
10249                 "readOnly": true,
10250                 "type": "array"
10251             }
10252         },
10253         "type": "object",
10254         "required": ["value"]
10255     }
10256 }
10257 }
10258

```

10259 **6.49.5 Property definition**

10260 Table 101 defines the Properties that are part of the "oic.r.sensor.presence" Resource Type.

10261 **Table 101 – The Property definitions of the Resource with type "rt" =**  
 10262 **"oic.r.sensor.presence".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
value	boolean	Yes	Read Only	The presences sensor, true = precense sensed, false = precensenot sensed.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

10263 **6.49.6 CRUDN behaviour**

10264 Table 102 defines the CRUDN operations that are supported on the "oic.r.sensor.presence"  
 10265 Resource Type.

10266 **Table 102 – The CRUDN operations of the Resource with type "rt" =**  
 10267 **"oic.r.sensor.presence".**

Create	Read	Update	Delete	Notify
	get			observe

10268 **6.50 Pan Tilt Zoom Movement**

10269 **6.50.1 Introduction**

10270 This Resource specifies the pan tilt and zoom capabilities of a device.  
 10271 The Resource Type is dynamic and reflects whether the values apply to  
 10272 physical movement of the device or digital/virtual enhancements to the image.  
 10273 For physical movement the Resource Type is "oic.r.movement.ptz".  
 10274 For digital/virtual image enhancements the Resource Type is "oic.r.image.ptz".  
 10275 The Properties "pan" and "tilt" are specified in degrees.  
 10276 The Property "zoomFactor" is a value in the range 1-100 for linear (optical) zoom.  
 10277 The zoom factor is a value in the range [1x, 2x, 4x, 8x, 16x, 32x] for digital zoom.  
 10278 If there is no zoom value to set the zoom factor shall be '1x'.  
 10279 The value 0 degrees means neutral, this is a vendor defined setting.  
 10280 Note that this resource also can be used to create an offset for physical movement.  
 10281 When that is the case, the Resource Type value is: "oic.r.movement.offset.ptz"  
 10282 Note that this resource also can be used to create an offset for image movement.  
 10283 When that is the case, the Resource Type value is: "oic.r.image.offset.ptz".  
 10284 When the Property "pan\_range" value is omitted, then the range is [-180.0,180.0].  
 10285 If "pan" is not supported then the range shall be [0.0,0.0]  
 10286 When the Property "tilt\_range" value is omitted, then the range is [-180.0,180.0].  
 10287 If "tilt" is not supported then the range shall be [0.0,0.0].

10288 **6.50.2 Example URI**

10289 /PanTiltZoomResURI

10290 **6.50.3 Resource type**

10291 The Resource Type is defined as: "oic.r.ptz".

10292 **6.50.4 OpenAPI 2.0 definition**

```
10293 {
10294   "swagger": "2.0",
10295   "info": {
10296     "title": "Pan Tilt Zoom Movement",
10297     "version": "20190215",
10298     "license": {
10299       "name": "OCF Data Model License",
10300       "url":
10301 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
10302 CENSE.md",
10303       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
10304 reserved."
10305     },
10306     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
10307   },
10308   "schemes": ["http"],
10309   "consumes": ["application/json"],
10310   "produces": ["application/json"],
10311   "paths": {
10312     "/PanTiltZoomResURI" : {
10313       "get": {
10314         "description": "This Resource specifies the pan tilt and zoom capabilities of a device.\nThe
10315 Resource Type is dynamic and reflects whether the values apply to\n physical movement of the device
10316 or digital/virtual enhancements to the image.\nFor physical movement the Resource Type is
10317 \"oic.r.movement.ptz\".\nFor digital/virtual image enhancements the Resource Type is
10318 \"oic.r.image.ptz\".\n\nThe Properties \"pan\" and \"tilt\" are specified in degrees.\n\nThe Property
10319 \"zoomFactor\" is a value in the range 1-100 for linear (optical) zoom.\n\nThe zoom factor is a value
10320 in the range [1x, 2x, 4x, 8x, 16x, 32x] for digital zoom.\n\nIf there is no zoom value to set the zoom
10321 factor shall be '1x'.\n\nThe value 0 degrees means neutral, this is a vendor defined setting.\n\nNote
10322 that this resource also can be used to create an offset for physical movement.\n\nWhen that is the
10323 case, the Resource Type value is: \"oic.r.movement.offset.ptz\"\n\nNote that this resource also can be
10324 used to create an offset for image movement.\n\nWhen that is the case, the Resource Type value is:
10325 \"oic.r.image.offset.ptz\".\n\nWhen the Property \"pan_range\" value is omitted, then the range is [-
10326 180.0,180.0].\n\nIf \"pan\" is not supported then the range shall be [0.0,0.0]\n\nWhen the Property
10327 \"tilt_range\" value is omitted, then the range is [-180.0,180.0].\n\nIf \"tilt\" is not supported
10328 then the range shall be [0.0,0.0].",
10329         "parameters": [
10330           { "$ref": "#/parameters/interface" }
10331         ],
10332         "responses": {
10333           "200": {
10334             "description": "Retrieves the current pan, tilt and zoom setting.",
10335             "x-example":
10336             {
10337               "rt": ["oic.r.ptz"],
10338               "if": ["oic.if.a", "oic.if.baseline"],
10339               "pan": 0.0,
10340               "tilt": 0.0,
10341               "zoomFactor": "2x"
10342             },
10343             "schema": { "$ref": "#/definitions/PanTiltZoom" }
10344           }
10345         }
10346       },
10347       "post": {
10348         "description": "Sets the current pan, tilt and zoom value.",
10349         "parameters": [
10350           { "$ref": "#/parameters/interface" },
10351           {
10352             "name": "body",
10353             "in": "body",
10354             "required": true,
10355             "schema": { "$ref": "#/definitions/PanTiltZoom" },
10356             "x-example":
10357             {
10358               "pan": 10.0,
```

```

10359         "tilt": -10.0,
10360         "zoomFactor": "4x"
10361     }
10362 }
10363 ],
10364 "responses": {
10365     "200": {
10366         "description": "",
10367         "x-example":
10368             {
10369                 "pan": 10.0,
10370                 "tilt": -10.0,
10371                 "zoomFactor": "4x"
10372             },
10373         "schema": { "$ref": "#/definitions/PanTiltZoom" }
10374     }
10375 }
10376 }
10377 },
10378 },
10379 "parameters": {
10380     "interface": {
10381         "in": "query",
10382         "name": "if",
10383         "type": "string",
10384         "enum": ["oic.if.a", "oic.if.baseline"]
10385     }
10386 },
10387 "definitions": {
10388     "PanTiltZoom": {
10389         "properties": {
10390             "rt": {
10391                 "description": "The Resource Type.",
10392                 "items": {
10393                     "enum": ["oic.r.ptz"],
10394                     "maxLength": 64,
10395                     "type": "string"
10396                 },
10397                 "minItems": 1,
10398                 "uniqueItems": true,
10399                 "readOnly": true,
10400                 "type": "array"
10401             },
10402             "tilt_range": {
10403                 "$ref":
10404 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
10405 schema.json#/definitions/range_number"
10406             },
10407             "zoomFactor": {
10408                 "description": "The zoom factor value.",
10409                 "type": "string"
10410             },
10411             "tilt": {
10412                 "description": "The vertical tilt in degrees.",
10413                 "type": "number"
10414             },
10415             "precision": {
10416                 "$ref":
10417 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
10418 schema.json#/definitions/precision"
10419             },
10420             "pan_range": {
10421                 "$ref":
10422 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
10423 schema.json#/definitions/range_number"
10424             },
10425             "zoomFactorRange": {
10426                 "description": "The allowed Zoom Factor values. Linear equates to a 1-100 min/max.",
10427                 "enum": [
10428                     "linear",
10429                     "1x",
10430                     "2x",

```

```

10431         "4x",
10432         "8x",
10433         "16x",
10434         "32x"
10435     ],
10436     "readOnly": true,
10437     "type": "string"
10438 },
10439 "pan": {
10440     "description": "The horizontal pan in degrees.",
10441     "type": "number"
10442 },
10443 "n": {
10444     "$ref":
10445 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10446 schema.json#/definitions/n"
10447 },
10448 "id": {
10449     "$ref":
10450 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10451 schema.json#/definitions/id"
10452 },
10453 "if": {
10454     "description": "The OCF Interface set supported by this Resource.",
10455     "items": {
10456         "enum": [
10457             "oic.if.a",
10458             "oic.if.baseline"
10459         ],
10460         "type": "string"
10461     },
10462     "minItems": 2,
10463     "uniqueItems": true,
10464     "readOnly": true,
10465     "type": "array"
10466 },
10467 },
10468 "type": "object",
10469 "required": ["pan", "tilt", "zoomFactor"]
10470 }
10471 }
10472 }
10473

```

### 10474 6.50.5 Property definition

10475 Table 103 defines the Properties that are part of the "oic.r.ptz" Resource Type.

10476 **Table 103 – The Property definitions of the Resource with type "rt" = "oic.r.ptz".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
tilt_range	multiple types: see schema	No	Read Write	
zoomFactor	string	Yes	Read Write	The zoom factor value.
tilt	number	Yes	Read Write	The vertical tilt in degrees.
precision	multiple types: see schema	No	Read Write	
pan_range	multiple types: see schema	No	Read Write	
zoomFactorRange	string	No	Read Only	The allowed Zoom Factor values. Linear equates to a 1-100 min/max.

pan	number	Yes	Read Write	The horizontal pan in degrees.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

10477 **6.50.6 CRUDN behaviour**

10478 Table 104 defines the CRUDN operations that are supported on the "oic.r.ptz" Resource Type.

10479 **Table 104 – The CRUDN operations of the Resource with type "rt" = "oic.r.ptz".**

Create	Read	Update	Delete	Notify
	get	post		observe

10480 **6.51 Signal Strength**

10481 **6.51.1 Introduction**

10482 This Resource describes the strength of a signal by means of lqi and rssi.

10483 The Property "lqi" is a floating point number that represents Link Quality Indicator.

10484 The Property "rssi" is a floating point number that represents the received signal strength  
10485 indicator.

10486 **6.51.2 Example URI**

10487 /SignalStrengthResURI

10488 **6.51.3 Resource type**

10489 The Resource Type is defined as: "oic.r.signalstrength".

10490 **6.51.4 OpenAPI 2.0 definition**

```

10491 {
10492   "swagger": "2.0",
10493   "info": {
10494     "title": "Signal Strength",
10495     "version": "20190215",
10496     "license": {
10497       "name": "OCF Data Model License",
10498       "url":
10499 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
10500 CENSE.md",
10501     "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
10502 reserved."
10503   },
10504   "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
10505 },
10506 "schemes": ["http"],
10507 "consumes": ["application/json"],
10508 "produces": ["application/json"],
10509 "paths": {
10510   "/SignalStrengthResURI" : {
10511     "get": {
10512       "description": "This Resource describes the strength of a signal by means of lqi and
10513 rssi.\nThe Property \"lqi\" is a floating point number that represents Link Quality Indicator.\nThe
10514 Property \"rssi\" is a floating point number that represents the received signal strength
10515 indicator.",
10516       "parameters": [
10517         {"$ref": "#/parameters/interface"}
10518       ],
10519       "responses": {

```

```

10520         "200": {
10521             "description": "",
10522             "x-example":
10523                 {
10524                     "rt": ["oic.r.signalstrength"],
10525                     "if": ["oic.if.s", "oic.if.baseline"],
10526                     "lqi": 10.0,
10527                     "rssi": 55.0
10528                 }
10529             ,
10530             "schema": { "$ref": "#/definitions/SignalStrength" }
10531         }
10532     }
10533 }
10534 },
10535 },
10536 "parameters": {
10537     "interface": {
10538         "in": "query",
10539         "name": "if",
10540         "type": "string",
10541         "enum": ["oic.if.s", "oic.if.baseline"]
10542     }
10543 },
10544 "definitions": {
10545     "SignalStrength" : {
10546         "properties": {
10547             "rt": {
10548                 "description": "The Resource Type.",
10549                 "items": {
10550                     "enum": ["oic.r.signalstrength"],
10551                     "maxLength": 64,
10552                     "type": "string"
10553                 },
10554                 "minItems": 1,
10555                 "uniqueItems": true,
10556                 "readOnly": true,
10557                 "type": "array"
10558             },
10559             "lqi": {
10560                 "description": "The current value of Link Quality Indicator.",
10561                 "readOnly": true,
10562                 "type": "number"
10563             },
10564             "rssi": {
10565                 "description": "The current value of Received Signal Strength Indicator.",
10566                 "readOnly": true,
10567                 "type": "number"
10568             },
10569             "n": {
10570                 "$ref":
10571                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10572                 schema.json#/definitions/n"
10573             },
10574             "id": {
10575                 "$ref":
10576                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10577                 schema.json#/definitions/id"
10578             },
10579             "if": {
10580                 "description": "The OCF Interface set supported by this Resource.",
10581                 "items": {
10582                     "enum": [
10583                         "oic.if.s",
10584                         "oic.if.baseline"
10585                     ],
10586                     "type": "string"
10587                 },
10588                 "minItems": 2,
10589                 "uniqueItems": true,
10590                 "readOnly": true,
10591                 "type": "array"

```



```

10592     }
10593   },
10594   "type": "object",
10595   "required": ["lqi", "rssi"]
10596 }
10597 }
10598 }
10599

```

### 10600 6.51.5 Property definition

10601 Table 105 defines the Properties that are part of the "oic.r.signalstrength" Resource Type.

10602 **Table 105 – The Property definitions of the Resource with type "rt" = "oic.r.signalstrength".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
lqi	number	Yes	Read Only	The current value of Link Quality Indicator.
rssi	number	Yes	Read Only	The current value of Received Signal Strength Indicator.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

### 10603 6.51.6 CRUDN behaviour

10604 Table 106 defines the CRUDN operations that are supported on the "oic.r.signalstrength" Resource  
 10605 Type.

10606 **Table 106 – The CRUDN operations of the Resource with type "rt" = "oic.r.signalstrength".**

Create	Read	Update	Delete	Notify
	get			observe

## 10607 6.52 Speech Synthesis-TTS

### 10608 6.52.1 Introduction

10609 This Resource may be created on the OCF Server that is capable of rendering speech by an OCF  
 10610 Client and allows the client to provide an SSML document with text to render  
 10611 or may be created on the OIC Server by some resident application.

10612 The audio rendered is at this stage local to the Server (i.e. not streamed).

10613 The utterance is an SSML document.

10614 The supportedLanguages is an array of the RFC5646 defined language tags that are supported.

10615 The supportedVoices is an SSML document fragment indicating the voices that are supported.

10616 Utterance in the example shall be a properly escaped (JSON rules) SSML document. An  
 10617 example:

```
10618 "<?xml version="1.0" encoding="ISO-8859-1"?>
```

```
10619
```

```
10620
```

```
10621 <speak version="1.1" xmlns="http://www.w3.org/2001/10/synthesis"
```

```
10622
```

```
10623
```

```
10624     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
```



```

10684 \xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"\n\r\n
10685 \txsi:schemaLocation="http://www.w3.org/2001/10/synthesis\n\r\n
10686 \thttp://www.w3.org/TR/speech-synthesis11/synthesis.xsd"\n\r\n \txml:lang="en-US">\n\r\n
10687 \n\r\n \tThe title of the movie is:\n\r\n \t"Monty Pythons The Meaning of Life"\n\r\n \twhich
10688 is directed by Terry Jones.\n\r\n </speak"\n",
10689 "parameters": [
10690 {"$ref": "#/parameters/interface"}
10691 ],
10692 "responses": {
10693 "200": {
10694 "description": "",
10695 "x-example":
10696 {
10697 "rt": ["oic.r.speech.tts"],
10698 "if": ["oic.if.a", "oic.if.baseline"],
10699 "utterance": "Strange women lying in ponds distributing swords is no basis for a
10700 system of government.",
10701 "supportedLanguages": ["en-US", "en-GB", "fr-CA"],
10702 "supportedVoices": "<voice gender="female" variant="2"></voice>\n\r<voice
10703 name="Mike"></voice>"
10704 },
10705 "schema": { "$ref": "#/definitions/Speech" }
10706 }
10707 },
10708 },
10709 "post": {
10710 "description": "Changes the utterance being rendered.\nExample shows a change in language
10711 selected.\n",
10712 "parameters": [
10713 {"$ref": "#/parameters/interface"},
10714 {
10715 "name": "body",
10716 "in": "body",
10717 "required": true,
10718 "schema": { "$ref": "#/definitions/Speech" },
10719 "x-example":
10720 {
10721 "utterance": "Alright, but apart from the sanitation, the medicine, education, wine,
10722 public order, irrigation, roads, the fresh-water system, and public health, what have the Romans
10723 ever done for us?"
10724 }
10725 }
10726 ],
10727 "responses": {
10728 "200": {
10729 "description": "",
10730 "x-example":
10731 {
10732 "utterance": "Alright, but apart from the sanitation, the medicine, education,
10733 wine, public order, irrigation, roads, the fresh-water system, and public health, what have the
10734 Romans ever done for us?"
10735 },
10736 "schema": { "$ref": "#/definitions/Speech" }
10737 }
10738 }
10739 }
10740 },
10741 },
10742 "parameters": {
10743 "interface": {
10744 "in": "query",
10745 "name": "if",
10746 "type": "string",
10747 "enum": ["oic.if.a", "oic.if.baseline"]
10748 }
10749 },
10750 "definitions": {
10751 "Speech": {
10752 "properties": {
10753 "rt": {
10754 "description": "The Resource Type.",
10755 "items": {

```

```

10756         "enum": ["oic.r.speech.tts"],
10757         "maxLength": 64,
10758         "type": "string"
10759     },
10760     "minItems": 1,
10761     "uniqueItems": true,
10762     "readOnly": true,
10763     "type": "array"
10764 },
10765 "supportedLanguages": {
10766     "description": "The array of supported language tags.",
10767     "items": {
10768         "type": "string"
10769     },
10770     "readOnly": true,
10771     "type": "array"
10772 },
10773 "supportedVoices": {
10774     "description": "The SSML document fragment indicating supported voices.",
10775     "readOnly": true,
10776     "maxLength": 1024,
10777     "type": "string"
10778 },
10779 "utterance": {
10780     "description": "The SSML document including the speech body.",
10781     "maxLength": 1024,
10782     "type": "string"
10783 },
10784 "n": {
10785     "$ref":
10786     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10787     schema.json#/definitions/n"
10788 },
10789 "id": {
10790     "$ref":
10791     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10792     schema.json#/definitions/id"
10793 },
10794 "if": {
10795     "description": "The OCF Interface set supported by this Resource.",
10796     "items": {
10797         "enum": [
10798             "oic.if.a",
10799             "oic.if.baseline"
10800         ],
10801         "type": "string"
10802     },
10803     "minItems": 2,
10804     "uniqueItems": true,
10805     "readOnly": true,
10806     "type": "array"
10807 }
10808 },
10809 "type": "object",
10810 "required": ["utterance"]
10811 }
10812 }
10813 }
10814

```

10815 **6.52.5 Property definition**

10816 Table 107 defines the Properties that are part of the "oic.r.speech.tts" Resource Type.

10817 **Table 107 – The Property definitions of the Resource with type "rt" = "oic.r.speech.tts".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.

supportedLanguages	array: see schema	No	Read Only	The array of supported language tags.
supportedVoices	string	No	Read Only	The SSML document fragment indicating supported voices.
utterance	string	Yes	Read Write	The SSML document including the speech body.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

10818 **6.52.6 CRUDN behaviour**

10819 Table 108 defines the CRUDN operations that are supported on the "oic.r.speech.tts" Resource  
10820 Type.

10821 **Table 108 – The CRUDN operations of the Resource with type "rt" = "oic.r.speech.tts".**

Create	Read	Update	Delete	Notify
	get	post		observe

10822 **6.53 Touch Sensor**

10823 **6.53.1 Introduction**

10824 This Resource describes whether a touch has been sensed or not.

10825 The Property "value" is a boolean.

10826 A value of 'true' means that touch has been sensed.

10827 A value of 'false' means that touch not been sensed.

10828

10829 **6.53.2 Example URI**

10830 /TouchResURI

10831 **6.53.3 Resource type**

10832 The Resource Type is defined as: "oic.r.sensor.touch".

10833 **6.53.4 OpenAPI 2.0 definition**

```
10834 {
10835   "swagger": "2.0",
10836   "info": {
10837     "title": "Touch Sensor",
10838     "version": "20190215",
10839     "license": {
10840       "name": "OCF Data Model License",
10841       "url":
10842         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
10843         CENSE.md",
10844       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
10845         reserved."
10846     },
10847     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
10848   },
10849   "schemes": ["http"],
10850   "consumes": ["application/json"],
10851   "produces": ["application/json"],
```

```

10852     "paths": {
10853         "/TouchResURI" : {
10854             "get": {
10855                 "description": "This Resource describes whether a touch has been sensed or not.\nThe
10856 Property \"value\" is a boolean.\nA value of 'true' means that touch has been sensed.\nA value of
10857 'false' means that touch not been sensed.\n",
10858                 "parameters": [
10859                     { "$ref": "#/parameters/interface" }
10860                 ],
10861                 "responses": {
10862                     "200": {
10863                         "description": "",
10864                         "x-example":
10865                             {
10866                                 "rt": ["oic.r.sensor.touch"],
10867                                 "if": ["oic.if.s", "oic.if.baseline"],
10868                                 "value": true
10869                             },
10870                     "schema": { "$ref": "#/definitions/Touch" }
10871                 }
10872             }
10873         }
10874     },
10875     "parameters": {
10876         "interface" : {
10877             "in" : "query",
10878             "name" : "if",
10879             "type" : "string",
10880             "enum" : ["oic.if.s", "oic.if.baseline"]
10881         }
10882     },
10883     "definitions": {
10884         "Touch" : {
10885             "properties": {
10886                 "rt": {
10887                     "description": "The Resource Type.",
10888                     "items": {
10889                         "enum": ["oic.r.sensor.touch"],
10890                         "maxLength": 64,
10891                         "type": "string"
10892                     },
10893                     "minItems": 1,
10894                     "uniqueItems": true,
10895                     "readOnly": true,
10896                     "type": "array"
10897                 },
10898                 "value": {
10899                     "description": "The touch sensor, true = sensed, false = not sensed.",
10900                     "readOnly": true,
10901                     "type": "boolean"
10902                 },
10903                 "n": {
10904                     "$ref":
10905                         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10906 schema.json#/definitions/n"
10907                 },
10908                 "id": {
10909                     "$ref":
10910                         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10911 schema.json#/definitions/id"
10912                 },
10913                 "if": {
10914                     "description": "The OCF Interface set supported by this Resource.",
10915                     "items": {
10916                         "enum": [
10917                             "oic.if.s",
10918                             "oic.if.baseline"
10919                         ],
10920                         "type": "string"
10921                     },
10922                     "minItems": 2,

```

```

10924         "uniqueItems": true,
10925         "readOnly": true,
10926         "type": "array"
10927     }
10928 },
10929     "type": "object",
10930     "required": ["value"]
10931 }
10932 }
10933 }
10934

```

### 10935 6.53.5 Property definition

10936 Table 109 defines the Properties that are part of the "oic.r.sensor.touch" Resource Type.

10937 **Table 109 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.touch".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
value	boolean	Yes	Read Only	The touch sensor, true = sensed, false = not sensed.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

### 10938 6.53.6 CRUDN behaviour

10939 Table 110 defines the CRUDN operations that are supported on the "oic.r.sensor.touch" Resource  
 10940 Type.

10941 **Table 110 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.touch".**

Create	Read	Update	Delete	Notify
	get			observe

## 10942 6.54 UV Radiation

### 10943 6.54.1 Introduction

10944 This Resource specifies UV radiation measurement.  
 10945 The Property "measurement" is the current measured UV Index

### 10946 6.54.2 Example URI

10947 /UVRadiationResURI

### 10948 6.54.3 Resource type

10949 The Resource Type is defined as: "oic.r.sensor.radiation.uv".

### 10950 6.54.4 OpenAPI 2.0 definition

```

10951 {
10952     "swagger": "2.0",
10953     "info": {
10954         "title": "UV Radiation",
10955         "version": "20190215",
10956         "license": {
10957             "name": "OCF Data Model License",
10958             "url":

```

```

10959 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
10960 CENSE.md",
10961   "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
10962 reserved."
10963   },
10964   "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
10965   },
10966   "schemes": ["http"],
10967   "consumes": ["application/json"],
10968   "produces": ["application/json"],
10969   "paths": {
10970     "/UVRadiationResURI" : {
10971       "get": {
10972         "description": "This Resource specifies UV radiation measurement.\nThe Property
10973 \measurement\" is the current measured UV Index",
10974         "parameters": [
10975           { "$ref": "#/parameters/interface" }
10976         ],
10977         "responses": {
10978           "200": {
10979             "description": "",
10980             "x-example":
10981               {
10982                 "rt": ["oic.r.sensor.radiation.uv"],
10983                 "if": ["oic.if.s", "oic.if.baseline"],
10984                 "measurement": 3.5
10985               }
10986             ,
10987             "schema": { "$ref": "#/definitions/UVRadiation" }
10988           }
10989         }
10990       }
10991     }
10992   },
10993   "parameters": {
10994     "interface": {
10995       "in": "query",
10996       "name": "if",
10997       "type": "string",
10998       "enum": ["oic.if.s", "oic.if.baseline"]
10999     }
11000   },
11001   "definitions": {
11002     "UVRadiation" : {
11003       "properties": {
11004         "rt": {
11005           "description": "The Resource Type.",
11006           "items": {
11007             "enum": ["oic.r.sensor.radiation.uv"],
11008             "maxLength": 64,
11009             "type": "string"
11010           },
11011           "minItems": 1,
11012           "uniqueItems": true,
11013           "readOnly": true,
11014           "type": "array"
11015         },
11016         "measurement": {
11017           "description": "The measured UV Index.",
11018           "readOnly": true,
11019           "type": "number"
11020         },
11021         "n": {
11022           "$ref":
11023 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11024 schema.json#/definitions/n"
11025         },
11026         "id": {
11027           "$ref":
11028 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11029 schema.json#/definitions/id"
11030         }
11031       }
11032     }
11033   }

```



```

11031     "if" :
11032     {
11033         "description": "The OCF Interface set supported by this Resource.",
11034         "items": {
11035             "enum": [
11036                 "oic.if.s",
11037                 "oic.if.baseline"
11038             ],
11039             "type": "string"
11040         },
11041         "minItems": 2,
11042         "uniqueItems": true,
11043         "readOnly": true,
11044         "type": "array"
11045     }
11046 },
11047 "type": "object",
11048 "required": ["measurement"]
11049 }
11050 }
11051 }
11052

```

### 11053 6.54.5 Property definition

11054 Table 111 defines the Properties that are part of the "oic.r.sensor.radiation.uv" Resource Type.

11055 **Table 111 – The Property definitions of the Resource with type "rt" =**  
11056 **"oic.r.sensor.radiation.uv".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
measurement	number	Yes	Read Only	The measured UV Index.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

### 11057 6.54.6 CRUDN behaviour

11058 Table 112 defines the CRUDN operations that are supported on the "oic.r.sensor.radiation.uv"  
11059 Resource Type.

11060 **Table 112 – The CRUDN operations of the Resource with type "rt" =**  
11061 **"oic.r.sensor.radiation.uv".**

Create	Read	Update	Delete	Notify
	get			observe

## 11062 6.55 Water Sensor

### 11063 6.55.1 Introduction

11064 This Resource describes whether water has been sensed or not.

11065 The Property "value" is a boolean.

11066 A value of 'true' means that water has been sensed.

11067 A value of 'false' means that water not been sensed.

### 11068 6.55.2 Example URI

11069 /WaterResURI

### 11070 6.55.3 Resource type

11071 The Resource Type is defined as: "oic.r.sensor.water".

### 11072 6.55.4 OpenAPI 2.0 definition

```
11073 {
11074   "swagger": "2.0",
11075   "info": {
11076     "title": "Water Sensor",
11077     "version": "20191118",
11078     "license": {
11079       "name": "OCF Data Model License",
11080       "url":
11081 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
11082 CENSE.md",
11083       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
11084 reserved."
11085     },
11086     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
11087   },
11088   "schemes": ["http"],
11089   "consumes": ["application/json"],
11090   "produces": ["application/json"],
11091   "paths": {
11092     "/WaterResURI" : {
11093       "get": {
11094         "description": "This Resource describes whether water has been sensed or not.\nThe Property
11095 \"value\" is a boolean.\nA value of 'true' means that water has been sensed.\nA value of 'false'
11096 means that water not been sensed.",
11097         "parameters": [
11098           {"$ref": "#/parameters/interface"}
11099         ],
11100         "responses": {
11101           "200": {
11102             "description" : "",
11103             "x-example": {
11104               "rt": ["oic.r.sensor.water"],
11105               "id": "unique_example_id",
11106               "value": true
11107             },
11108             "schema": {"$ref": "#/definitions/Water" }
11109           }
11110         }
11111       }
11112     }
11113   },
11114   "parameters": {
11115     "interface" : {
11116       "in" : "query",
11117       "name" : "if",
11118       "type" : "string",
11119       "enum" : ["oic.if.s", "oic.if.baseline"]
11120     }
11121   },
11122   "definitions": {
11123     "Water": {
11124       "properties": {
11125         "rt": {
11126           "description": "The Resource Type",
11127           "items": {
11128             "maxLength": 64,
11129             "type": "string",
11130             "enum": ["oic.r.sensor.water"]
11131           },
11132           "minItems": 1,
11133           "uniqueItems": true,
11134           "readOnly": true,
11135           "type": "array"
11136         },
11137         "value": {
11138           "description": "true = sensed, false = not sensed.",
```

```

11139         "readOnly": true,
11140         "type": "boolean"
11141     },
11142     "measurement": {
11143         "type": "number",
11144         "description": "Measured value for this sensor in units of litres/hr",
11145         "readOnly": true
11146     },
11147     "precision": {
11148         "$ref":
11149 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11150 schema.json#/definitions/precision"
11151     },
11152     "n": {
11153         "$ref":
11154 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11155 schema.json#/definitions/n"
11156     },
11157     "range": {
11158         "$ref":
11159 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11160 schema.json#/definitions/range_number"
11161     },
11162     "step": {
11163         "$ref":
11164 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11165 schema.json#/definitions/step_number"
11166     },
11167     "id": {
11168         "$ref":
11169 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11170 schema.json#/definitions/id"
11171     },
11172     "if": {
11173         "description": "The OCF Interface set supported by this Resource",
11174         "items": {
11175             "enum": [
11176                 "oic.if.baseline",
11177                 "oic.if.s"
11178             ],
11179             "maxLength": 64,
11180             "type": "string"
11181         },
11182         "minItems": 1,
11183         "uniqueItems": true,
11184         "readOnly": true,
11185         "type": "array"
11186     }
11187 },
11188 "type" : "object",
11189 "required": ["value"]
11190 }
11191 }
11192 }
11193

```

### 11194 6.55.5 Property definition

11195 Table 113 defines the Properties that are part of the "oic.r.sensor.water" Resource Type.

11196 **Table 113 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.water".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type
value	boolean	Yes	Read Only	true = sensed, false = not sensed.
measurement	number	No	Read Only	Measured value for this sensor in units of litres/hr

precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

11197 **6.55.6 CRUDN behaviour**

11198 Table 114 defines the CRUDN operations that are supported on the "oic.r.sensor.water" Resource  
11199 Type.

11200 **Table 114 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.water".**

Create	Read	Update	Delete	Notify
	get			observe

11201 **6.56 Acceleration Sensor**

11202 **6.56.1 Introduction**

11203 This Resource provides a measure of proper acceleration (g force) as opposed to co-ordinate  
11204 acceleration (which is dependent on the co-ordinate system and the observer).

11205 The Property "value" is a float which describes the acceleration experienced by the object in "g".

11206 **6.56.2 Example URI**

11207 /AccelerationResURI

11208 **6.56.3 Resource type**

11209 The Resource Type is defined as: "oic.r.sensor.acceleration".

11210 **6.56.4 OpenAPI 2.0 definition**

```

11211 {
11212   "swagger": "2.0",
11213   "info": {
11214     "title": "Acceleration Sensor",
11215     "version": "20190215",
11216     "license": {
11217       "name": "OCF Data Model License",
11218       "url":
11219         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
11220         CENSE.md",
11221       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
11222     },
11223     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
11224   },
11225   "schemes": ["http"],
11226   "consumes": ["application/json"],
11227   "produces": ["application/json"],
11228   "paths": {
11229     "/AccelerationResURI" : {
11230       "get": {
11231         "description": "This Resource provides a measure of proper acceleration (g force) as opposed
11232         to co-ordinate acceleration (which is dependent on the co-ordinate system and the observer).\nThe
11233         Property \"value\" is a float which describes the acceleration experienced by the object in \"g\".",

```

```

11234     "parameters": [
11235       { "$ref": "#/parameters/interface" }
11236     ],
11237     "responses": {
11238       "200": {
11239         "description": "",
11240         "x-example":
11241           {
11242             "rt": ["oic.r.sensor.acceleration"],
11243             "if": ["oic.if.s", "oic.if.baseline"],
11244             "acceleration": 0.5
11245           },
11246         "schema": { "$ref": "#/definitions/acceleration" }
11247       }
11248     }
11249   }
11250 },
11251 },
11252 "parameters": {
11253   "interface": {
11254     "in": "query",
11255     "name": "if",
11256     "type": "string",
11257     "enum": ["oic.if.s", "oic.if.baseline"]
11258   }
11259 },
11260 "definitions": {
11261   "acceleration": {
11262     "properties": {
11263       "rt": {
11264         "description": "Resource Type",
11265         "items": {
11266           "maxLength": 64,
11267           "type": "string",
11268           "enum": ["oic.r.sensor.acceleration"]
11269         },
11270         "minItems": 1,
11271         "uniqueItems": true,
11272         "readOnly": true,
11273         "type": "array"
11274       },
11275       "acceleration": {
11276         "description": "The sensed acceleration experienced in 'g'.",
11277         "readOnly": true,
11278         "type": "number"
11279       },
11280       "n": {
11281         "$ref":
11282           "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11283           schema.json#/definitions/n"
11284       },
11285       "id": {
11286         "$ref":
11287           "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11288           schema.json#/definitions/id"
11289       },
11290       "range": {
11291         "$ref":
11292           "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11293           schema.json#/definitions/range_number"
11294       },
11295       "step": {
11296         "$ref":
11297           "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11298           schema.json#/definitions/step_number"
11299       },
11300       "precision": {
11301         "$ref":
11302           "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11303           schema.json#/definitions/precision"
11304       },
11305       "if": {

```

```

11306         "description": "The OCF Interface set supported by this Resource.",
11307         "items": {
11308             "enum": [
11309                 "oic.if.s",
11310                 "oic.if.baseline"
11311             ],
11312             "type": "string"
11313         },
11314         "minItems": 2,
11315         "readOnly": true,
11316         "uniqueItems": true,
11317         "type": "array"
11318     }
11319 },
11320 "type": "object",
11321 "required": ["acceleration"]
11322 }
11323 }
11324 }
11325

```

### 11326 6.56.5 Property definition

11327 Table 115 defines the Properties that are part of the "oic.r.sensor.acceleration" Resource Type.

11328 **Table 115 – The Property definitions of the Resource with type "rt" =**  
11329 **"oic.r.sensor.acceleration".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
acceleration	number	Yes	Read Only	The sensed acceleration experienced in 'g'.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

### 11330 6.56.6 CRUDN behaviour

11331 Table 116 defines the CRUDN operations that are supported on the "oic.r.sensor.acceleration"  
11332 Resource Type.

11333 **Table 116 – The CRUDN operations of the Resource with type "rt" =**  
11334 **"oic.r.sensor.acceleration".**

Create	Read	Update	Delete	Notify
	get			observe

11335 **6.57 Movement**

11336 **6.57.1 Introduction**

11337 This Resource specifies linear movement.

11338 The Property "movementSettings" is an array of strings containing possible movement values  
11339 (e.g. spin, stop, left, right).

11340 The Property "movement" is the currently selected movement value.

11341 The Property "movementModifier" is a modifier to the movement value (e.g. "spin", "90")

11342

11343 **6.57.2 Example URI**

11344 /MovementResURI

11345 **6.57.3 Resource type**

11346 The Resource Type is defined as: "oic.r.movement.linear".

11347 **6.57.4 OpenAPI 2.0 definition**

```
11348 {
11349   "swagger": "2.0",
11350   "info": {
11351     "title": "Movement",
11352     "version": "20190215",
11353     "license": {
11354       "name": "OCF Data Model License",
11355       "url":
11356         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
11357         CENSE.md",
11358       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
11359         reserved."
11360     },
11361     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
11362   },
11363   "schemes": ["http"],
11364   "consumes": ["application/json"],
11365   "produces": ["application/json"],
11366   "paths": {
11367     "/MovementResURI" : {
11368       "get": {
11369         "description": "This Resource specifies linear movement.\nThe Property \"movementSettings\"
11370         is an array of strings containing possible movement values (e.g. spin, stop, left, right).\nThe
11371         Property \"movement\" is the currently selected movement value.\nThe Property \"movementModifier\"
11372         is a modifier to the movement value (e.g. \"spin\", \"90\")\n",
11373         "parameters": [
11374           {"$ref": "#/parameters/interface"}
11375         ],
11376         "responses": {
11377           "200": {
11378             "description": "",
11379             "x-example":
11380               {
11381                 "rt": ["oic.r.movement.linear"],
11382                 "if": ["oic.if.s", "oic.if.baseline"],
11383                 "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
11384                 "movement": "rotate",
11385                 "movementModifier": "90"
11386               },
11387             "schema": { "$ref": "#/definitions/movement" }
11388           }
11389         }
11390       },
11391       "post": {
11392         "description": "Sets the current device movement.",
11393         "parameters": [
11394           {"$ref": "#/parameters/interface"},
11395           {
11396             "name": "body",
11397             "in": "body",
```

```

11398         "required": true,
11399         "schema": { "$ref": "#/definitions/movement" },
11400         "x-example":
11401             {
11402                 "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
11403                 "movement": "stop"
11404             }
11405     },
11406 ],
11407 "responses": {
11408     "200": {
11409         "description": "",
11410         "x-example":
11411             {
11412                 "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
11413                 "movement": "stop"
11414             },
11415         "schema": { "$ref": "#/definitions/movement" }
11416     }
11417 }
11418 },
11419 },
11420 },
11421 "parameters": {
11422     "interface": {
11423         "in": "query",
11424         "name": "if",
11425         "type": "string",
11426         "enum": ["oic.if.s", "oic.if.baseline"]
11427     }
11428 },
11429 "definitions": {
11430     "movement": {
11431         "properties": {
11432             "rt": {
11433                 "description": "The Resource Type.",
11434                 "items": {
11435                     "enum": ["oic.r.movement.linear"],
11436                     "maxLength": 64,
11437                     "type": "string"
11438                 },
11439                 "minItems": 1,
11440                 "uniqueItems": true,
11441                 "readOnly": true,
11442                 "type": "array"
11443             },
11444             "movementSettings": {
11445                 "description": "The array of possible movement values.",
11446                 "items": {
11447                     "type": "string"
11448                 },
11449                 "readOnly": true,
11450                 "type": "array"
11451             },
11452             "movementModifier": {
11453                 "description": "The modifier to the movement value (e.g. spin-90, left-20), units are
11454 device dependent.",
11455                 "type": "string"
11456             },
11457             "movement": {
11458                 "description": "The current movement value.",
11459                 "type": "string"
11460             },
11461             "n": {
11462                 "$ref":
11463 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11464 schema.json#/definitions/n"
11465             },
11466             "id": {
11467                 "$ref":
11468 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11469 schema.json#/definitions/id"

```



```

11470     },
11471     "if": {
11472       "description": "The OCF Interface set supported by this Resource.",
11473       "items": {
11474         "enum": [
11475           "oic.if.s",
11476           "oic.if.baseline"
11477         ],
11478         "type": "string"
11479       },
11480       "minItems": 2,
11481       "uniqueItems": true,
11482       "readOnly": true,
11483       "type": "array"
11484     }
11485   },
11486   "type": "object",
11487   "required": ["movementSettings", "movement"]
11488 }
11489 }
11490 }
11491

```

### 11492 6.57.5 Property definition

11493 Table 117 defines the Properties that are part of the "oic.r.movement.linear" Resource Type.

11494 **Table 117 – The Property definitions of the Resource with type "rt" =**  
 11495 **"oic.r.movement.linear".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
movementSettings	array: see schema	Yes	Read Only	The array of possible movement values.
movementModifier	string	No	Read Write	The modifier to the movement value (e.g. spin-90, left-20), units are device dependent.
movement	string	Yes	Read Write	The current movement value.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

### 11496 6.57.6 CRUDN behaviour

11497 Table 118 defines the CRUDN operations that are supported on the "oic.r.movement.linear"  
 11498 Resource Type.

11499 **Table 118 – The CRUDN operations of the Resource with type "rt" =**  
 11500 **"oic.r.movement.linear".**

Create	Read	Update	Delete	Notify
	get	post		observe

11501 **6.58 Sleep Sensor**

11502 **6.58.1 Introduction**

11503 This Resource describes whether human sleep has been sensed or not.

11504 The Property "value" is a boolean.

11505 A value of 'true' means that sleep has been sensed.

11506 A value of 'false' means that sleep not been sensed.

11507

11508 **6.58.2 Example URI**

11509 /SleepSensorResURI

11510 **6.58.3 Resource type**

11511 The Resource Type is defined as: "oic.r.sensor.sleep".

11512 **6.58.4 OpenAPI 2.0 definition**

```
11513 {
11514   "swagger": "2.0",
11515   "info": {
11516     "title": "Sleep Sensor",
11517     "version": "20190215",
11518     "license": {
11519       "name": "OCF Data Model License",
11520       "url":
11521 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
11522 CENSE.md",
11523     "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
11524 reserved."
11525   },
11526   "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
11527 },
11528   "schemes": ["http"],
11529   "consumes": ["application/json"],
11530   "produces": ["application/json"],
11531   "paths": {
11532     "/SleepSensorResURI" : {
11533       "get": {
11534         "description": "This Resource describes whether human sleep has been sensed or not.\nThe
11535 Property \"value\" is a boolean.\nA value of 'true' means that sleep has been sensed.\nA value of
11536 'false' means that sleep not been sensed.\n",
11537         "parameters": [
11538           {"$ref": "#/parameters/interface"}
11539         ],
11540         "responses": {
11541           "200": {
11542             "description": "",
11543             "x-example":
11544               {
11545                 "rt": ["oic.r.sensor.sleep"],
11546                 "if": ["oic.if.s", "oic.if.baseline"],
11547                 "value": true
11548               },
11549             "schema": { "$ref": "#/definitions/sleep" }
11550           }
11551         }
11552       }
11553     }
11554   },
11555   "parameters": {
11556     "interface": {
11557       "in": "query",
11558       "name": "if",
11559       "type": "string",
11560       "enum": ["oic.if.s", "oic.if.baseline"]
11561     }
11562   },
11563   "definitions": {
```

```

11564     "sleep" : {
11565         "properties": {
11566             "rt": {
11567                 "description": "The Resource Type.",
11568                 "items": {
11569                     "enum": ["oic.r.sensor.sleep"],
11570                     "maxLength": 64,
11571                     "type": "string"
11572                 },
11573                 "minItems": 1,
11574                 "uniqueItems": true,
11575                 "readOnly": true,
11576                 "type": "array"
11577             },
11578             "value": {
11579                 "description": "The sleep sensor, true = sleep sensed, false = sleep not sensed.",
11580                 "readOnly": true,
11581                 "type": "boolean"
11582             },
11583             "n": {
11584                 "$ref":
11585                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11586                 schema.json#/definitions/n"
11587             },
11588             "id": {
11589                 "$ref":
11590                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11591                 schema.json#/definitions/id"
11592             },
11593             "if": {
11594                 "description": "The OCF Interface set supported by this Resource.",
11595                 "items": {
11596                     "enum": [
11597                         "oic.if.s",
11598                         "oic.if.baseline"
11599                     ],
11600                     "type": "string"
11601                 },
11602                 "minItems": 2,
11603                 "uniqueItems": true,
11604                 "readOnly": true,
11605                 "type": "array"
11606             }
11607         },
11608         "type": "object",
11609         "required": ["value"]
11610     }
11611 }
11612 }
11613

```

### 11614 6.58.5 Property definition

11615 Table 119 defines the Properties that are part of the "oic.r.sensor.sleep" Resource Type.

11616 **Table 119 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.sleep".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
value	boolean	Yes	Read Only	The sleep sensor, true = sleep sensed, false = sleep not sensed.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	

if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
----	-------------------	----	-----------	---

11617 **6.58.6 CRUDN behaviour**

11618 Table 120 defines the CRUDN operations that are supported on the "oic.r.sensor.sleep" Resource  
 11619 Type.

11620 **Table 120 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.sleep".**

Create	Read	Update	Delete	Notify
	get			observe

11621 **6.59 Smoke Sensor**

11622 **6.59.1 Introduction**

11623 This Resource describes whether smoke has been sensed or not.  
 11624 The Property "value" is a boolean.  
 11625 A value of 'true' means that smoke has been sensed.  
 11626 A value of 'false' means that smoke not been sensed.

11627 **6.59.2 Example URI**

11628 /SmokeSensorResURI

11629 **6.59.3 Resource type**

11630 The Resource Type is defined as: "oic.r.sensor.smoke".

11631 **6.59.4 OpenAPI 2.0 definition**

```

11632 {
11633   "swagger": "2.0",
11634   "info": {
11635     "title": "Smoke Sensor",
11636     "version": "20191118",
11637     "license": {
11638       "name": "OCF Data Model License",
11639       "url":
11640         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
11641 CENSE.md",
11642       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
11643 reserved."
11644     },
11645     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
11646   },
11647   "schemes": ["http"],
11648   "consumes": ["application/json"],
11649   "produces": ["application/json"],
11650   "paths": {
11651     "/SmokeSensorResURI" : {
11652       "get": {
11653         "description": "This Resource describes whether smoke has been sensed or not.\nThe Property
11654 \n\"value\" is a boolean.\nA value of 'true' means that smoke has been sensed.\nA value of 'false'
11655 means that smoke not been sensed.",
11656         "parameters": [
11657           {"$ref": "#/parameters/interface"}
11658         ],
11659         "responses": {
11660           "200": {
11661             "description" : "",
11662             "x-example": {
11663               "rt": ["oic.r.sensor.smoke"],
11664               "id": "unique_example_id",
11665               "value": true
11666             },
11667             "schema": {"$ref": "#/definitions/smoke"}

```

```

11668     }
11669   }
11670 }
11671 }
11672 },
11673 "parameters": {
11674   "interface": {
11675     "in": "query",
11676     "name": "if",
11677     "type": "string",
11678     "enum": ["oic.if.s", "oic.if.baseline"]
11679   }
11680 },
11681 "definitions": {
11682   "smoke": {
11683     "properties": {
11684       "rt": {
11685         "description": "The Resource Type",
11686         "items": {
11687           "maxLength": 64,
11688           "type": "string",
11689           "enum": ["oic.r.sensor.smoke"]
11690         },
11691         "minItems": 1,
11692         "uniqueItems": true,
11693         "readOnly": true,
11694         "type": "array"
11695       },
11696       "value": {
11697         "description": "The smoke indicator, true = sensed, false = not sensed.",
11698         "readOnly": true,
11699         "type": "boolean"
11700       },
11701       "measurement": {
11702         "type": "number",
11703         "description": "Measured value for this sensor, this is a percentage",
11704         "readOnly": true
11705       },
11706       "precision": {
11707         "$ref":
11708 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11709 schema.json#/definitions/precision"
11710       },
11711       "n": {
11712         "$ref":
11713 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11714 schema.json#/definitions/n"
11715       },
11716       "range": {
11717         "$ref":
11718 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11719 schema.json#/definitions/range_number"
11720       },
11721       "step": {
11722         "$ref":
11723 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11724 schema.json#/definitions/step_number"
11725       },
11726       "id": {
11727         "$ref":
11728 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11729 schema.json#/definitions/id"
11730       },
11731       "if": {
11732         "description": "The OCF Interface set supported by this Resource",
11733         "items": {
11734           "enum": [
11735             "oic.if.baseline",
11736             "oic.if.s"
11737           ],
11738           "type": "string",
11739           "maxLength": 64

```

```

11740     },
11741     "minItems": 1,
11742     "readOnly": true,
11743     "uniqueItems": true,
11744     "type": "array"
11745   }
11746 },
11747 "type" : "object",
11748 "required": ["value"]
11749 }
11750 }
11751 }
11752

```

### 11753 6.59.5 Property definition

11754 Table 121 defines the Properties that are part of the "oic.r.sensor.smoke" Resource Type.

11755 **Table 121 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.smoke".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type
value	boolean	Yes	Read Only	The smoke indicator, true = sensed, false = not sensed.
measurement	number	No	Read Only	Measured value for this sensor, this is a percentage
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

### 11756 6.59.6 CRUDN behaviour

11757 Table 122 defines the CRUDN operations that are supported on the "oic.r.sensor.smoke" Resource  
 11758 Type.

11759 **Table 122 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.smoke".**

Create	Read	Update	Delete	Notify
	get			observe

## 11760 6.60 Three Axis Sensor

### 11761 6.60.1 Introduction

11762 This Resource provides a representation of the measurement from a three-axis sensor.  
 11763 The Property "orientation" is an array of numbers representing x-plane, y-plane and z-plane  
 11764 values.  
 11765 The unit of measurement for each pane is 'g'.

11766 **6.60.2 Example URI**

11767 /ThreeAxisResURI

11768 **6.60.3 Resource type**

11769 The Resource Type is defined as: "oic.r.sensor.threeaxis".

11770 **6.60.4 OpenAPI 2.0 definition**

```
11771 {
11772   "swagger": "2.0",
11773   "info": {
11774     "title": "Three Axis Sensor",
11775     "version": "20190215",
11776     "license": {
11777       "name": "OCF Data Model License",
11778       "url":
11779         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
11780 CENSE.md",
11781       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
11782 reserved."
11783     },
11784     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
11785   },
11786   "schemes": ["http"],
11787   "consumes": ["application/json"],
11788   "produces": ["application/json"],
11789   "paths": {
11790     "/ThreeAxisResURI" : {
11791       "get": {
11792         "description": "This Resource provides a representation of the measurement from a three-axis
11793 sensor.\n\nThe Property \"orientation\" is an array of numbers representing x-plane, y-plane and z-
11794 plane values.\n\nThe unit of measurement for each pane is 'g'.",
11795         "parameters": [
11796           { "$ref": "#/parameters/interface" }
11797         ],
11798         "responses": {
11799           "200": {
11800             "description": "",
11801             "x-example":
11802               {
11803                 "rt": ["oic.r.sensor.threeaxis"],
11804                 "if": ["oic.if.s", "oic.if.baseline"],
11805                 "orientation": [0.7, 1.1, -0.2]
11806               },
11807             "schema": { "$ref": "#/definitions/threeAxis" }
11808           }
11809         }
11810       }
11811     }
11812   },
11813   "parameters": {
11814     "interface": {
11815       "in": "query",
11816       "name": "if",
11817       "type": "string",
11818       "enum": ["oic.if.s", "oic.if.baseline"]
11819     }
11820   },
11821   "definitions": {
11822     "threeAxis" : {
11823       "properties": {
11824         "rt": {
11825           "description": "The Resource Type.",
11826           "items": {
11827             "enum": ["oic.r.sensor.threeaxis"],
11828             "maxLength": 64,
11829             "type": "string"
11830           },
11831           "minItems": 1,
11832           "uniqueItems": true,
```

```

11833         "readOnly": true,
11834         "type": "array"
11835     },
11836     "orientation": {
11837         "description": "The array containing x-plane, y-plane and z-plane orientation in 'g'.",
11838         "items": {
11839             "type": "number"
11840         },
11841         "maxItems": 3,
11842         "minItems": 3,
11843         "readOnly": true,
11844         "type": "array"
11845     },
11846     "n": {
11847         "$ref":
11848         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11849         schema.json#/definitions/n"
11850     },
11851     "id": {
11852         "$ref":
11853         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11854         schema.json#/definitions/id"
11855     },
11856     "if": {
11857         "description": "The OCF Interface set supported by this Resource.",
11858         "items": {
11859             "enum": [
11860                 "oic.if.s",
11861                 "oic.if.baseline"
11862             ],
11863             "type": "string"
11864         },
11865         "minItems": 2,
11866         "uniqueItems": true,
11867         "readOnly": true,
11868         "type": "array"
11869     }
11870 },
11871 "type": "object",
11872 "required": ["orientation"]
11873 }
11874 }
11875 }
11876

```

### 6.60.5 Property definition

Table 123 defines the Properties that are part of the "oic.r.sensor.threeaxis" Resource Type.

**Table 123 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.threeaxis".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
orientation	array: see schema	Yes	Read Only	The array containing x-plane, y-plane and z-plane orientation in 'g'.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.



11881 **6.60.6 CRUDN behaviour**

11882 Table 124 defines the CRUDN operations that are supported on the "oic.r.sensor.threeaxis"  
11883 Resource Type.

11884 **Table 124 – The CRUDN operations of the Resource with type "rt" =**  
11885 **"oic.r.sensor.threeaxis".**

Create	Read	Update	Delete	Notify
	get			observe

11886 **6.61 Altimeter**

11887 **6.61.1 Introduction**

11888 This Resource describes the properties associated with altimeter.  
11889 The Property "alt" is the distance (metres) above or below 'local' sea-level.

11890 **6.61.2 Example URI**

11891 /AltimeterResURI

11892 **6.61.3 Resource type**

11893 The Resource Type is defined as: "oic.r.altimeter".

11894 **6.61.4 OpenAPI 2.0 definition**

```
11895 {  
11896   "swagger": "2.0",  
11897   "info": {  
11898     "title": "Altimeter",  
11899     "version": "20190225",  
11900     "license": {  
11901       "name": "OCF Data Model License",  
11902       "url":  
11903 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
11904 CENSE.md",  
11905       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
11906 reserved."  
11907     },  
11908     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
11909   },  
11910   "schemes": ["http"],  
11911   "consumes": ["application/json"],  
11912   "produces": ["application/json"],  
11913   "paths": {  
11914     "/AltimeterResURI" : {  
11915       "get": {  
11916         "description": "This Resource describes the properties associated with altimeter.\n  
11917 Property \"alt\" is the distance (metres) above or below 'local' sea-level.",  
11918         "parameters": [  
11919           {"$ref": "#/parameters/interface"}  
11920         ],  
11921         "responses": {  
11922           "200": {  
11923             "description": "RETRIEVES the current the distance (metres) above or below 'local'  
11924 sea-level.",  
11925             "x-example":  
11926               {  
11927                 "rt": ["oic.r.altimeter"],  
11928                 "if": ["oic.if.s", "oic.if.baseline"],  
11929                 "alt": 1500.0  
11930               },  
11931             "schema": { "$ref": "#/definitions/Altimeter" }  
11932           }  
11933         }  
11934       }  
11935     }  
11936   },
```

```

11937     "parameters": {
11938       "interface" : {
11939         "in": "query",
11940         "name": "if",
11941         "type": "string",
11942         "enum": ["oic.if.s", "oic.if.baseline"]
11943       }
11944     },
11945     "definitions": {
11946       "Altimeter" : {
11947         "properties": {
11948           "rt": {
11949             "description": "The Resource Type.",
11950             "items": {
11951               "enum": ["oic.r.altimeter"],
11952               "maxLength": 64,
11953               "type": "string"
11954             },
11955             "minItems": 1,
11956             "uniqueItems": true,
11957             "readOnly": true,
11958             "type": "array"
11959           },
11960           "alt" :
11961             {
11962               "description": "The current distance (metres) above or below 'local' sea-level.",
11963               "readOnly": true,
11964               "type": "number"
11965             },
11966           "n": {
11967             "$ref":
11968               "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11969               schema.json#/definitions/n"
11970           },
11971           "id": {
11972             "$ref":
11973               "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11974               schema.json#/definitions/id"
11975           },
11976           "precision": {
11977             "$ref":
11978               "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11979               schema.json#/definitions/precision"
11980           },
11981           "range": {
11982             "$ref":
11983               "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11984               schema.json#/definitions/range_number"
11985           },
11986           "step": {
11987             "$ref":
11988               "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11989               schema.json#/definitions/step_number"
11990           },
11991           "if": {
11992             "description": "The OCF Interface set supported by this Resource.",
11993             "items": {
11994               "enum": [
11995                 "oic.if.s",
11996                 "oic.if.baseline"
11997               ],
11998               "type": "string"
11999             },
12000             "minItems": 2,
12001             "uniqueItems": true,
12002             "readOnly": true,
12003             "type": "array"
12004           }
12005         },
12006         "type": "object",
12007         "required": ["alt"]
12008       }

```

12009 }  
 12010 }  
 12011 }

### 12012 6.61.5 Property definition

12013 Table 125 defines the Properties that are part of the "oic.r.altimeter" Resource Type.

12014 **Table 125 – The Property definitions of the Resource with type "rt" = "oic.r.altimeter".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
alt	number	Yes	Read Only	The current distance (metres) above or below 'local' sea-level.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

### 12015 6.61.6 CRUDN behaviour

12016 Table 126 defines the CRUDN operations that are supported on the "oic.r.altimeter" Resource Type.

12017 **Table 126 – The CRUDN operations of the Resource with type "rt" = "oic.r.altimeter".**

Create	Read	Update	Delete	Notify
	get			observe

## 12018 6.62 Clock

### 12019 6.62.1 Introduction

12020 This Resource describes the properties associated with clock and time.

12021 Clock is a time information.

12022 The Property "datetime" is using RFC3339 datetime format (e.g: "2007-04-05T14:30Z")  
 12023 (Time+Date+Timezone)

12024 The Property "countdown" is the desired total seconds for countdown.

### 12025 6.62.2 Example URI

12026 /ClockResURI

### 12027 6.62.3 Resource type

12028 The Resource Type is defined as: "oic.r.clock".

### 12029 6.62.4 OpenAPI 2.0 definition

```
12030 {
12031   "swagger": "2.0",
12032   "info": {
12033     "title": "Clock",
```

```

12034     "version": "20190327",
12035     "license": {
12036         "name": "OCF Data Model License",
12037         "url":
12038 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
12039 CENSE.md",
12040         "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
12041 reserved."
12042     },
12043     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
12044 },
12045     "schemes": ["http"],
12046     "consumes": ["application/json"],
12047     "produces": ["application/json"],
12048     "paths": {
12049         "/ClockResURI" : {
12050             "get": {
12051                 "description": "This Resource describes the properties associated with clock and
12052 time.\nClock is a time information.\nThe Property \"datetime\" is using RFC3339 datetime format
12053 (e.g: \"2007-04-05T14:30Z\") (Time+Date+Timezone)\nThe Property \"countdown\" is the desired total
12054 seconds for countdown.",
12055                 "parameters": [
12056                     {"$ref": "#/parameters/interface"}
12057                 ],
12058                 "responses": {
12059                     "200": {
12060                         "description": "",
12061                         "x-example":
12062                         {
12063                             "rt": ["oic.r.clock"],
12064                             "if": ["oic.if.a", "oic.if.baseline"],
12065                             "datetime": "2015-11-05T14:30:00Z",
12066                             "countdown": 0.0
12067                         },
12068                         "schema": { "$ref": "#/definitions/Clock" }
12069                     }
12070                 }
12071             },
12072             "post": {
12073                 "description": "Sets the desired datetime.\n",
12074                 "parameters": [
12075                     {"$ref": "#/parameters/interface"},
12076                     {
12077                         "name": "body",
12078                         "in": "body",
12079                         "required": true,
12080                         "schema": { "$ref": "#/definitions/Clock" },
12081                         "x-example":
12082                         {
12083                             "datetime": "2015-11-05T14:30:00Z",
12084                             "countdown": 0.0
12085                         }
12086                     }
12087                 ],
12088                 "responses": {
12089                     "200": {
12090                         "description": "Indicates that the datetime value was successfully changed.\nThe new
12091 datetime value is provided in the response.\n",
12092                         "x-example":
12093                         {
12094                             "datetime": "2015-11-05T14:30:00Z",
12095                             "countdown": 0.0
12096                         }
12097                     },
12098                     "schema": { "$ref": "#/definitions/Clock" }
12099                 },
12100                 "403": {
12101                     "description": "Indicates that OIC client sent an invalid property value to the
12102 server.\nThe server responds with the required input representation.\n",
12103                     "x-example":
12104                     {
12105                         "datetime": "2015-11-05T14:30:00Z",

```

```

12106         "countdown": 0.0
12107     }
12108     ,
12109     "schema": { "$ref": "#/definitions/Clock" }
12110 }
12111 }
12112 }
12113 }
12114 },
12115 "parameters": {
12116     "interface": {
12117         "in": "query",
12118         "name": "if",
12119         "type": "string",
12120         "enum": ["oic.if.a", "oic.if.baseline"]
12121     }
12122 },
12123 "definitions": {
12124     "Clock": {
12125         "properties": {
12126             "rt": {
12127                 "description": "The Resource Type.",
12128                 "items": {
12129                     "enum": ["oic.r.clock"],
12130                     "maxLength": 64,
12131                     "type": "string"
12132                 },
12133                 "minItems": 1,
12134                 "readOnly": true,
12135                 "type": "array"
12136             },
12137             "countdown": {
12138                 "description": "The desired total seconds for countdown.",
12139                 "minimum": 0,
12140                 "type": "number"
12141             },
12142             "datetime": {
12143                 "description": "Rhe date time using RFC3339 datetime format (e.g: 2007-04-05T14:30:00Z,
12144 2007-04-05T14:30:00+09:00).",
12145                 "type": "string",
12146                 "format": "date-time"
12147             },
12148             "n": {
12149                 "$ref":
12150 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12151 schema.json#/definitions/n"
12152             },
12153             "id": {
12154                 "$ref":
12155 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12156 schema.json#/definitions/id"
12157             },
12158             "if": {
12159                 "description": "The OCF Interface set supported by this Resource.",
12160                 "items": {
12161                     "enum": [
12162                         "oic.if.a",
12163                         "oic.if.baseline"
12164                     ],
12165                     "type": "string"
12166                 },
12167                 "minItems": 2,
12168                 "uniqueItems": true,
12169                 "readOnly": true,
12170                 "type": "array"
12171             }
12172         },
12173         "type": "object",
12174         "required": ["datetime"]
12175     }
12176 }

```

12177 }  
12178

### 12179 6.62.5 Property definition

12180 Table 127 defines the Properties that are part of the "oic.r.clock" Resource Type.

12181 **Table 127 – The Property definitions of the Resource with type "rt" = "oic.r.clock".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
countdown	number	No	Read Write	The desired total seconds for countdown.
datetime	string	Yes	Read Write	The date time using RFC3339 datetime format (e.g: 2007-04-05T14:30:00Z, 2007-04-05T14:30:00+09:00).
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

### 12182 6.62.6 CRUDN behaviour

12183 Table 128 defines the CRUDN operations that are supported on the "oic.r.clock" Resource Type.

12184 **Table 128 – The CRUDN operations of the Resource with type "rt" = "oic.r.clock".**

Create	Read	Update	Delete	Notify
	get	post		observe

## 12185 6.63 Geolocation

### 12186 6.63.1 Introduction

12187 This Resource describes the properties associated with the current geolocation coordinate.

12188 Geolocation is a geolocation coordinate data.

12189 The Property "latitude" is a device's current Latitude coordinate (degrees).

12190 The Property "longitude" is a device's current Longitude coordinate (degrees).

12191 The Property "alt" is a device's current distance (metres) above or below 'local' sea-level.

12192 The Property "accuracy" is the accuracy level of the latitude and longitude coordinates (metres).

12193 The Property "altitudeAccuracy" is the accuracy level of the altitude coordinates (metres).

12194 The Property "heading" is a direction of travel of device (degree).

12195 The Property "speed" is a device's current velocity (metres per second).

### 12196 6.63.2 Example URI

12197 /GeolocationResURI

### 12198 6.63.3 Resource type

12199 The Resource Type is defined as: "oic.r.sensor.geolocation".

### 12200 6.63.4 OpenAPI 2.0 definition

12201 {  
12202 "swagger": "2.0",

```

12203     "info": {
12204         "title": "Geolocation",
12205         "version": "20190215",
12206         "license": {
12207             "name": "OCF Data Model License",
12208             "url":
12209 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
12210 CENSE.md",
12211             "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
12212 reserved."
12213         },
12214         "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
12215     },
12216     "schemes": ["http"],
12217     "consumes": ["application/json"],
12218     "produces": ["application/json"],
12219     "paths": {
12220         "/GeolocationResURI" : {
12221             "get": {
12222                 "description": "This Resource describes the properties associated with the current
12223 geolocation coordinate.\nGeolocation is a geolocation coordinate data.\nThe Property \"latitude\" is
12224 a device's current Latitude coordinate (degrees).\nThe Property \"longitude\" is a device's current
12225 Longitude coordinate (degrees).\nThe Property \"alt\" is a device's current distance (metres) above
12226 or below 'local' sea-level.\nThe Property \"accuracy\" is the accuracy level of the latitude and
12227 longitude coordinates (metres).\nThe Property \"altitudeAccuracy\" is the accuracy level of the
12228 altitude coordinates (metres).\nThe Property \"heading\" is a direction of travel of device
12229 (degree).\nThe Property \"speed\" is a device's current velocity (metres per second).",
12230                 "parameters": [
12231                     { "$ref": "#/parameters/interface" }
12232                 ],
12233                 "responses": {
12234                     "200": {
12235                         "description": "RETRIEVES the current geolocation coordinates.",
12236                         "x-example":
12237                         {
12238                             "rt": ["oic.r.sensor.geolocation"],
12239                             "if": ["oic.if.s", "oic.if.baseline"],
12240                             "latitude": 55.070859,
12241                             "longitude": -3.60512,
12242                             "alt": 12.07,
12243                             "accuracy": 65.0,
12244                             "altitudeAccuracy": 0.0,
12245                             "heading": 90.0,
12246                             "speed": 0.0
12247                         },
12248                         "schema": { "$ref": "#/definitions/Geolocation" }
12249                     }
12250                 }
12251             }
12252         }
12253     },
12254     "parameters": {
12255         "interface": {
12256             "in": "query",
12257             "name": "if",
12258             "type": "string",
12259             "enum": ["oic.if.s", "oic.if.baseline"]
12260         }
12261     },
12262     "definitions": {
12263         "Geolocation" : {
12264             "properties": {
12265                 "rt": {
12266                     "description": "The Resource Type.",
12267                     "items": {
12268                         "enum": ["oic.r.sensor.geolocation"],
12269                         "maxLength": 64,
12270                         "type": "string"
12271                     },
12272                     "minItems": 1,
12273                     "uniqueItems": true,
12274                     "readOnly": true,

```

```

12275         "type": "array"
12276     },
12277     "longitude": {
12278         "description": "The Device's Current Longitude coordinate (degrees).",
12279         "readOnly": true,
12280         "type": "number"
12281     },
12282     "heading": {
12283         "description": "The direction of travel of the Device (degree).",
12284         "maximum": 360,
12285         "minimum": 0,
12286         "readOnly": true,
12287         "type": "number"
12288     },
12289     "latitude": {
12290         "description": "The Device's Current Latitude coordinate (degrees).",
12291         "readOnly": true,
12292         "type": "number"
12293     },
12294     "altitudeAccuracy": {
12295         "description": "The accuracy level of the altitude coordinates (metres).",
12296         "minimum": 0,
12297         "readOnly": true,
12298         "type": "number"
12299     },
12300     "alt": {
12301         "description": "The current distance (metres) above or below 'local' sea-level.",
12302         "readOnly": true,
12303         "type": "number"
12304     },
12305     "accuracy": {
12306         "description": "The accuracy level of the latitude and longitude coordinates (metres).",
12307         "minimum": 0,
12308         "readOnly": true,
12309         "type": "number"
12310     },
12311     "speed": {
12312         "description": "The Device's current velocity (metres per second).",
12313         "minimum": 0,
12314         "readOnly": true,
12315         "type": "number"
12316     },
12317     "n": {
12318         "$ref":
12319         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12320         schema.json#/definitions/n"
12321     },
12322     "id": {
12323         "$ref":
12324         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12325         schema.json#/definitions/id"
12326     },
12327     "if": {
12328         "description": "The OCF Interface set supported by this Resource.",
12329         "items": {
12330             "enum": [
12331                 "oic.if.s",
12332                 "oic.if.baseline"
12333             ],
12334             "type": "string"
12335         },
12336         "minItems": 2,
12337         "uniqueItems": true,
12338         "readOnly": true,
12339         "type": "array"
12340     }
12341 },
12342 "type": "object",
12343 "required": ["latitude", "longitude", "alt"]
12344 }
12345 }

```



12346 }  
12347

### 12348 6.63.5 Property definition

12349 Table 129 defines the Properties that are part of the "oic.r.sensor.geolocation" Resource Type.

12350 **Table 129 – The Property definitions of the Resource with type "rt" =**  
12351 **"oic.r.sensor.geolocation".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
longitude	number	Yes	Read Only	The Device's Current Longitude coordinate (degrees).
heading	number	No	Read Only	The direction of travel of the Device (degree).
latitude	number	Yes	Read Only	The Device's Current Latitude coordinate (degrees).
altitudeAccuracy	number	No	Read Only	The accuracy level of the altitude coordinates (metres).
alt	number	Yes	Read Only	The current distance (metres) above or below 'local' sea-level.
accuracy	number	No	Read Only	The accuracy level of the latitude and longitude coordinates (metres).
speed	number	No	Read Only	The Device's current velocity (metres per second).
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

### 12352 6.63.6 CRUDN behaviour

12353 Table 130 defines the CRUDN operations that are supported on the "oic.r.sensor.geolocation"  
12354 Resource Type.

12355 **Table 130 – The CRUDN operations of the Resource with type "rt" =**  
12356 **"oic.r.sensor.geolocation".**

Create	Read	Update	Delete	Notify
	get			observe

## 12357 **6.64 Height**

### 12358 **6.64.1 Introduction**

12359 This Resource describes the Properties associated with height of an object's physical size.

12360 The unit is a single value that is one of m, cm, ft or in.

12361 If the unit Property is missing the default is meters [m].

12362 The unit Property is a read-only value that is provided by the server.

12363 When range is omitted the default is 0 to +MAXFLOAT.

### 12364 **6.64.2 Example URI**

12365 /HeightResURI

### 12366 **6.64.3 Resource type**

12367 The Resource Type is defined as: "oic.r.height".

### 12368 **6.64.4 OpenAPI 2.0 definition**

```
12369 {
12370   "swagger": "2.0",
12371   "info": {
12372     "title": "Height",
12373     "version": "2019-03-22",
12374     "license": {
12375       "name": "OCF Data Model License",
12376       "url":
12377         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
12378         CENSE.md",
12379       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
12380     },
12381     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
12382   },
12383   "schemes": [
12384     "http"
12385   ],
12386   "consumes": [
12387     "application/json"
12388   ],
12389   "produces": [
12390     "application/json"
12391   ],
12392   "paths": {
12393     "/HeightResURI": {
12394       "get": {
12395         "description": "This Resource describes the Properties associated with height of an object's
12396         physical size.\n\nThe unit is a single value that is one of m, cm, ft or in.\n\nIf the unit Property is
12397         missing the default is meters [m].\n\nThe unit Property is a read-only value that is provided by the
12398         server.\n\nWhen range is omitted the default is 0 to +MAXFLOAT.",
12399         "parameters": [
12400           {
12401             "$ref": "#/parameters/interface"
12402           }
12403         ],
12404         "responses": {
12405           "200": {
12406             "description": "",
12407             "x-example": {
12408               "rt": [
12409                 "oic.r.height"
12410               ],
12411               "height": 1.8,
12412               "units": "m"
12413             },
12414             "schema": {
12415               "$ref": "#/definitions/Height"
12416             }
12417           }
12418         }
12419       }
12420     }
12421   }
12422 }
```

```

12420     "post": {
12421         "description": "Sets the height.",
12422         "parameters": [
12423             {
12424                 "$ref": "#/parameters/interface"
12425             },
12426             {
12427                 "name": "body",
12428                 "in": "body",
12429                 "required": true,
12430                 "schema": {
12431                     "$ref": "#/definitions/Height"
12432                 },
12433                 "x-example": {
12434                     "height": 1.75,
12435                     "units": "m"
12436                 }
12437             }
12438         ],
12439         "responses": {
12440             "200": {
12441                 "description": "Indicates that the height was successfully changed.\n\nThe new height is
12442 provided in the response.",
12443                 "x-example": {
12444                     "height": 1.75,
12445                     "units": "m"
12446                 },
12447                 "schema": {
12448                     "$ref": "#/definitions/Height"
12449                 }
12450             },
12451             "403": {
12452                 "description": "Indicates that OCF Client sent an invalid Property value to the
12453 Server.\n\nThe Server responds with the current Resource representation.",
12454                 "x-example": {
12455                     "height": 1.8,
12456                     "units": "m"
12457                 },
12458                 "schema": {
12459                     "$ref": "#/definitions/Height"
12460                 }
12461             }
12462         }
12463     }
12464 },
12465 },
12466 "parameters": {
12467     "interface": {
12468         "in": "query",
12469         "name": "if",
12470         "type": "string",
12471         "enum": [
12472             "oic.if.a",
12473             "oic.if.s",
12474             "oic.if.baseline"
12475         ]
12476     }
12477 },
12478 "definitions": {
12479     "Height": {
12480         "properties": {
12481             "rt": {
12482                 "description": "Resource Type",
12483                 "items": {
12484                     "enum": [
12485                         "oic.r.height"
12486                     ],
12487                     "type": "string",
12488                     "maxLength": 64
12489                 },
12490                 "minItems": 1,
12491                 "uniqueItems": true,

```

```

12492         "readOnly": true,
12493         "type": "array"
12494     },
12495     "height": {
12496         "description": "Height of an object",
12497         "minimum": 0,
12498         "type": "number"
12499     },
12500     "units": {
12501         "description": "Height unit",
12502         "enum": [
12503             "m",
12504             "cm",
12505             "ft",
12506             "in"
12507         ],
12508         "readOnly": true,
12509         "type": "string",
12510         "default": "m"
12511     },
12512     "range": {
12513         "$ref":
12514         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
12515         schema.json#/definitions/range_number"
12516     },
12517     "step": {
12518         "$ref":
12519         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
12520         schema.json#/definitions/step_number"
12521     },
12522     "precision": {
12523         "$ref":
12524         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
12525         schema.json#/definitions/precision"
12526     },
12527     "n": {
12528         "$ref":
12529         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12530         schema.json#/definitions/n"
12531     },
12532     "id": {
12533         "$ref":
12534         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12535         schema.json#/definitions/id"
12536     },
12537     "if": {
12538         "description": "The OCF Interface set supported by this Resource",
12539         "items": {
12540             "enum": [
12541                 "oic.if.a",
12542                 "oic.if.s",
12543                 "oic.if.baseline"
12544             ],
12545             "type": "string",
12546             "maxLength": 64
12547         },
12548         "minItems": 1,
12549         "readOnly": true,
12550         "uniqueItems": true,
12551         "type": "array"
12552     }
12553 },
12554 "type": "object",
12555 "required": [
12556     "height"
12557 ]
12558 }
12559 }
12560 }
12561

```

12562 **6.64.5 Property definition**

12563 Table 131 defines the Properties that are part of the "oic.r.height" Resource Type.

12564 **Table 131 – The Property definitions of the Resource with type "rt" = "oic.r.height".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
height	number	Yes	Read Write	Height of an object
units	string	No	Read Only	Height unit
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

12565 **6.64.6 CRUDN behaviour**

12566 Table 132 defines the CRUDN operations that are supported on the "oic.r.height" Resource Type.

12567 **Table 132 – The CRUDN operations of the Resource with type "rt" = "oic.r.height".**

Create	Read	Update	Delete	Notify
	get	post		observe

12568 **6.65 Weight**

12569 **6.65.1 Introduction**

12570 This Resource describes the Properties associated with weight of an object.

12571 The unit is a single value that is one of kg, g, lb or oz.

12572 If the unit Property is missing the default is kilograms [kg].

12573 The unit Property is a read-only value that is provided by the server.

12574 When range is omitted the default is 0 to +MAXFLOAT.

12575 **6.65.2 Example URI**

12576 /WeightResURI

12577 **6.65.3 Resource type**

12578 The Resource Type is defined as: "oic.r.weight".

12579 **6.65.4 OpenAPI 2.0 definition**

```

12580 {
12581   "swagger": "2.0",
12582   "info": {
12583     "title": "Weight",
12584     "version": "2019-03-22",
12585     "license": {
12586       "name": "OCF Data Model License",
12587       "url":
12588 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI

```

```

12589 CENSE.md",
12590   "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
12591   },
12592   "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
12593   },
12594   "schemes": [
12595     "http"
12596   ],
12597   "consumes": [
12598     "application/json"
12599   ],
12600   "produces": [
12601     "application/json"
12602   ],
12603   "paths": {
12604     "/WeightResURI": {
12605       "get": {
12606         "description": "This Resource describes the Properties associated with weight of an
12607 object.\nThe unit is a single value that is one of kg, g, lb or oz.\nIf the unit Property is missing
12608 the default is kilograms [kg].\nThe unit Property is a read-only value that is provided by the
12609 server.\nWhen range is omitted the default is 0 to +MAXFLOAT.",
12610         "parameters": [
12611           {
12612             "$ref": "#/parameters/interface"
12613           }
12614         ],
12615         "responses": {
12616           "200": {
12617             "description": "",
12618             "x-example": {
12619               "rt": [
12620                 "oic.r.weight"
12621               ],
12622               "weight": 80.0,
12623               "units": "kg"
12624             },
12625             "schema": {
12626               "$ref": "#/definitions/Weight"
12627             }
12628           }
12629         }
12630       },
12631       "post": {
12632         "description": "Sets the Weight.",
12633         "parameters": [
12634           {
12635             "$ref": "#/parameters/interface"
12636           },
12637           {
12638             "name": "body",
12639             "in": "body",
12640             "required": true,
12641             "schema": {
12642               "$ref": "#/definitions/Weight"
12643             },
12644             "x-example": {
12645               "weight": 75.0,
12646               "units": "kg"
12647             }
12648           }
12649         ],
12650         "responses": {
12651           "200": {
12652             "description": "Indicates that the weight was successfully changed.\nThe new weight is
12653 provided in the response.",
12654             "x-example": {
12655               "weight": 75.0,
12656               "units": "kg"
12657             },
12658             "schema": {
12659               "$ref": "#/definitions/Weight"
12660             }
12661           }
12662         }
12663       }
12664     }
12665   }

```

```

12661     },
12662     "403": {
12663         "description": "Indicates that OCF client sent an invalid Property value to the
12664 Server.\nThe Server responds with the current resource representation.",
12665         "x-example": {
12666             "weight": 80.0,
12667             "units": "kg"
12668         },
12669         "schema": {
12670             "$ref": "#/definitions/Weight"
12671         }
12672     }
12673 }
12674 }
12675 },
12676 },
12677 "parameters": {
12678     "interface": {
12679         "in": "query",
12680         "name": "if",
12681         "type": "string",
12682         "enum": [
12683             "oic.if.s",
12684             "oic.if.a",
12685             "oic.if.baseline"
12686         ]
12687     }
12688 },
12689 "definitions": {
12690     "Weight": {
12691         "properties": {
12692             "rt": {
12693                 "description": "Resource Type",
12694                 "items": {
12695                     "enum": [
12696                         "oic.r.weight"
12697                     ],
12698                 "type": "string",
12699                 "maxLength": 64
12700             },
12701             "minItems": 1,
12702             "uniqueItems": true,
12703             "readOnly": true,
12704             "type": "array"
12705         },
12706         "weight": {
12707             "description": "Weight of an object",
12708             "minimum": 0.0,
12709             "type": "number"
12710         },
12711         "units": {
12712             "description": "Weight unit",
12713             "enum": [
12714                 "kg",
12715                 "g",
12716                 "lb",
12717                 "oz"
12718             ],
12719             "readOnly": true,
12720             "type": "string",
12721             "default": "kg"
12722         },
12723         "range": {
12724             "$ref":
12725 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
12726 schema.json#/definitions/range_number"
12727         },
12728         "step": {
12729             "$ref":
12730 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
12731 schema.json#/definitions/step_number"
12732         },

```

```

12733     "precision": {
12734         "$ref":
12735         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
12736         schema.json#/definitions/precision"
12737     },
12738     "n": {
12739         "$ref":
12740         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12741         schema.json#/definitions/n"
12742     },
12743     "id": {
12744         "$ref":
12745         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12746         schema.json#/definitions/id"
12747     },
12748     "if": {
12749         "description": "The OCF Interface set supported by this Resource",
12750         "items": {
12751             "enum": [
12752                 "oic.if.s",
12753                 "oic.if.a",
12754                 "oic.if.baseline"
12755             ],
12756             "type": "string",
12757             "maxLength": 64
12758         },
12759         "minItems": 1,
12760         "readOnly": true,
12761         "uniqueItems": true,
12762         "type": "array"
12763     }
12764 },
12765 "type": "object",
12766 "required": [
12767     "weight",
12768     "units"
12769 ]
12770 }
12771 }
12772 }
12773

```

### 12774 6.65.5 Property definition

12775 Table 133 defines the Properties that are part of the "oic.r.weight" Resource Type.

12776 **Table 133 – The Property definitions of the Resource with type "rt" = "oic.r.weight".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
weight	number	Yes	Read Write	Weight of an object
units	string	Yes	Read Only	Weight unit
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource



12777 **6.65.6 CRUDN behaviour**

12778 Table 134 defines the CRUDN operations that are supported on the "oic.r.weight" Resource Type.

12779 **Table 134 – The CRUDN operations of the Resource with type "rt" = "oic.r.weight".**

Create	Read	Update	Delete	Notify
	get	post		observe

12780 **6.66 Air Quality**

12781 **6.66.1 Introduction**

12782 This Resource describes a qualitative or measured contaminant that can be used to infer Air  
12783 Quality.

12784 The Property "valueType" indicates a qualitative or measured reading within the  
12785 contaminantvalue Property.

12786 The Property "contaminantvalue" can contain the actual sensed value with units per contaminant  
12787 type.

12788 Qualitative is a representative value within the range provided where the minimum value is  
12789 minimum contamination and maximum value is maximum contamination for the specific  
12790 contaminant.

12791 The Property "contaminantvalue" contains the actual measured or qualitative level.

12792 The Property "range" contains the allowed range for the value that is being reported.

12793 If valueType is 'Measured' then the units for the contaminant types are as follows:

12794 Methanol (also known as Formaldehyde): CH<sub>2</sub>O (ug/m<sup>3</sup>),

12795 Carbon Dioxide: CO<sub>2</sub> (ppm),

12796 Carbon Monoxide: CO (ppm),

12797 Particulate Matter (less than 1 micron in diameter): PM<sub>1</sub> (ug/m<sup>3</sup>),

12798 Particulate Matter (less than 2.5 microns in diameter): PM<sub>2.5</sub> (ug/m<sup>3</sup>),

12799 Particulate Matter (less than 10 microns in diameter): PM<sub>10</sub> (ug/m<sup>3</sup>),

12800 Volatile Organic Compounds: VOC (ug/m<sup>3</sup>).

12801 **6.66.2 Example URI**

12802 /AirQualityResURI

12803 **6.66.3 Resource type**

12804 The Resource Type is defined as: "oic.r.airquality".

12805 **6.66.4 OpenAPI 2.0 definition**

```
12806 {
12807   "swagger": "2.0",
12808   "info": {
12809     "title": "Air Quality",
12810     "version": "20190613",
12811     "license": {
12812       "name": "OCF Data Model License",
12813       "url":
12814         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
12815         CENSE.md",
12816       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
12817       reserved."
12818     },
12819     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
12820   },
12821   "schemes": ["http"],
12822   "consumes": ["application/json"],
12823   "produces": ["application/json"],
12824   "paths": {
12825     "/AirQualityResURI" : {
12826       "get": {
12827         "description": "This Resource describes a qualitative or measured contaminant that can be
12828         used to infer Air Quality.\n\nThe Property \"valueType\" indicates a qualitative or measured reading
```

```

12829 within the contaminantvalue Property.\nThe Property \"contaminantvalue\" can contain the actual
12830 sensed value with units per contaminant type.\nQualitative is a representative value within the
12831 range provided where the minimum value is minimum contamination and maximum value is maximum
12832 contamination for the specific contaminant.\nThe Property \"contaminantvalue\" contains the actual
12833 measured or qualitative level.\nThe Property \"range\" contains the allowed range for the value that
12834 is being reported.\nIf valueType is 'Measured' then the units for the contaminant types are as
12835 follows:\nMethanol (also known as Formaldehyde): CH2O (ug/m^3),\nCarbon Dioxide: CO2 (ppm),\n
12836 Carbon Monoxide: CO (ppm),\nParticulate Matter (less than 1 micron in diameter): PM1 (ug/m^3),\n
12837 Particulate Matter (less than 2.5 microns in diameter): PM2.5 (ug/m^3),\nParticulate Matter (less
12838 than 10 microns in diameter): PM10 (ug/m^3),\nVolatile Organic Compounds: VOC (ug/m^3).",
12839     "parameters": [
12840         {"$ref": "#/parameters/interface"}
12841     ],
12842     "responses": {
12843         "200": {
12844             "description": "",
12845             "x-example":
12846                 {
12847                     "rt": ["oic.r.airquality"],
12848                     "if": ["oic.if.s", "oic.if.baseline"],
12849                     "contaminanttype": "CO",
12850                     "valuetype": "Measured",
12851                     "contaminantvalue": 10,
12852                     "range": [0,500]
12853                 },
12854             "schema": { "$ref": "#/definitions/AirQuality" }
12855         }
12856     }
12857 },
12858 },
12859 },
12860 "parameters": {
12861     "interface" : {
12862         "in" : "query",
12863         "name" : "if",
12864         "type" : "string",
12865         "enum" : ["oic.if.s", "oic.if.baseline"]
12866     }
12867 },
12868 "definitions": {
12869     "AirQuality" : {
12870         "properties": {
12871             "rt" : {
12872                 "description": "The Resource Type.",
12873                 "items": {
12874                     "enum": ["oic.r.airquality"],
12875                     "maxLength": 64,
12876                     "type": "string"
12877                 },
12878                 "minItems": 1,
12879                 "uniqueItems": true,
12880                 "readOnly": true,
12881                 "type": "array"
12882             },
12883             "contaminanttype": {
12884                 "description": "The contaminant being measured.",
12885                 "enum": [
12886                     "CH2O",
12887                     "CO2",
12888                     "CO",
12889                     "PM1",
12890                     "PM2.5",
12891                     "PM10",
12892                     "VOC",
12893                     "Smoke",
12894                     "Odor",
12895                     "AirPollution"
12896                 ],
12897                 "readOnly": true,
12898                 "type": "string"
12899             },
12900             "valuetype": {

```

```

12901         "description": "The property that indicates whether the provided value is qualitative or
12902 measured.",
12903         "enum": [
12904             "Qualitative",
12905             "Measured"
12906         ],
12907         "readOnly": true,
12908         "type": "string"
12909     },
12910     "contaminantvalue": {
12911         "description": "The measured or qualitative value for the contaminant.",
12912         "readOnly": true,
12913         "type": "integer"
12914     },
12915     "n": {
12916         "$ref":
12917 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12918 schema.json#/definitions/n"
12919     },
12920     "id": {
12921         "$ref":
12922 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12923 schema.json#/definitions/id"
12924     },
12925     "range": {
12926         "$ref":
12927 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
12928 schema.json#/definitions/range_integer"
12929     },
12930     "if" : {
12931         "description": "The OCF Interface set supported by this Resource.",
12932         "items": {
12933             "enum": [
12934                 "oic.if.s",
12935                 "oic.if.baseline"
12936             ],
12937             "type": "string"
12938         },
12939         "minItems": 2,
12940         "uniqueItems": true,
12941         "readOnly": true,
12942         "type": "array"
12943     }
12944 },
12945 "type": "object",
12946 "required": ["contaminantvalue", "contaminanttype", "valuetype"]
12947 }
12948 }
12949 }
12950

```

### 12951 6.66.5 Property definition

12952 Table 135 defines the Properties that are part of the "oic.r.airquality" Resource Type.

12953 **Table 135 – The Property definitions of the Resource with type "rt" = "oic.r.airquality".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
contaminanttype	string	Yes	Read Only	The contaminant being measured.
valuetype	string	Yes	Read Only	The property that indicates whether the provided value is qualitative or measured.

contaminantvalue	integer	Yes	Read Only	The measured or qualitative value for the contaminant.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

12954 **6.66.6 CRUDN behaviour**

12955 Table 136 defines the CRUDN operations that are supported on the "oic.r.airquality" Resource  
12956 Type.

12957 **Table 136 – The CRUDN operations of the Resource with type "rt" = "oic.r.airquality".**

Create	Read	Update	Delete	Notify
	get			observe

12958 **6.67 Air Quality Collection**

12959 **6.67.1 Introduction**

12960 This resource describes a sensor that provides the qualitative or measured Air Quality.  
12961 The resource is a collection of instances of oic.r.airquality detailing the individual exposed  
12962 contaminant measures  
12963 There is one collection entry per contaminant type supported by the device. A device must  
12964 expose at least one measured or qualitative value.  
12965 Retrieves the current air quality.  
12966

12967 **6.67.2 Example URI**

12968 /AirQualityCollectionResURI

12969 **6.67.3 Resource type**

12970 The Resource Type is defined as: "oic.r.airqualitycollection, oic.wk.col".

12971 **6.67.4 OpenAPI 2.0 definition**

```

12972 {
12973   "swagger": "2.0",
12974   "info": {
12975     "title": "Air Quality Collection",
12976     "version": "20190307",
12977     "license": {
12978       "name": "OCF Data Model License",
12979       "url":
12980 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
12981 CENSE.md",
12982       "x-copyright": "copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
12983     },
12984     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
12985   },
12986   "schemes": ["http"],
12987   "consumes": ["application/json"],
12988   "produces": ["application/json"],
12989   "paths": {
12990     "/AirQualityCollectionResURI?if=oic.if.ll" : {
12991       "get": {

```

```

12992     "description": "This resource describes a sensor that provides the qualitative or measured
12993 Air Quality.\nThe resource is a collection of instances of oic.r.airquality detailing the individual
12994 exposed contaminant measures\nThere is one collection entry per contaminant type supported by the
12995 device. A device must expose at least one measured or qualitative value.\nRetrieves the current air
12996 quality.\n",
12997     "parameters": [
12998       {"$ref": "#/parameters/interface-all"}
12999     ],
13000     "responses": {
13001       "200": {
13002         "description": "",
13003         "x-example":
13004           [
13005             {"href": "/myCOMeasureResURI", "rt": ["oic.r.airquality"], "if":
13006 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::bld6]:1122"}]},
13007             {"href": "/myCO2ResURI", "rt": ["oic.r.airquality"], "if":
13008 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::bld6]:1122"}]}
13009           ],
13010         "schema": { "$ref": "#/definitions/AirQuality-11" }
13011       }
13012     }
13013   },
13014   "/AirQualityCollectionResURI?if=oic.if.b": {
13015     "get": {
13016       "description": "This resource describes a sensor that provides the qualitative or measured
13017 Air Quality.\nThe resource is a collection of instances of oic.r.airquality detailing the individual
13018 exposed contaminant measures\nThere is one collection entry per contaminant type supported by the
13019 device. A device must expose at least one measured or qualitative value.\nRetrieves the current air
13020 quality.\n",
13021       "parameters": [
13022         {"$ref": "#/parameters/interface-all"}
13023       ],
13024       "responses": {
13025         "200": {
13026           "description": "",
13027           "x-example": [
13028             {
13029               "href": "/AirQualityCOResURI",
13030               "rep": {
13031                 "contaminanttype": "CO",
13032                 "valuetype": "Measured",
13033                 "contaminantvalue": 10,
13034                 "range": [0,500]
13035               }
13036             },
13037             {
13038               "href": "/AirQualitySmokeResURI",
13039               "rep": {
13040                 "contaminanttype": "Smoke",
13041                 "valuetype": "Measured",
13042                 "contaminantvalue": 100,
13043                 "range": [0,5000]
13044               }
13045             }
13046           ]
13047         },
13048         "schema": { "$ref": "#/definitions/AirQualityCollectionBatch-Retrieve" }
13049       }
13050     }
13051   },
13052   "/AirQualityCollectionResURI?if=oic.if.baseline" : {
13053     "get": {
13054       "description": "This resource describes a sensor that provides the qualitative or measured
13055 Air Quality.\nThe resource is a collection of instances of oic.r.airquality detailing the individual
13056 exposed contaminant measures\nThere is one collection entry per contaminant type supported by the
13057 device. A device must expose at least one measured or qualitative value.\nRetrieves the current air
13058 quality.\n",
13059       "parameters": [
13060         {"$ref": "#/parameters/interface-all"}
13061       ],
13062       "responses": {

```

```

13064         "200": {
13065             "description" : "",
13066             "x-example":
13067                 {
13068                     "rt": ["oic.r.airqualitycollection","oic.wk.col"],
13069                     "if": ["oic.if.baseline","oic.if.ll"],
13070                     "links": [
13071                         {
13072                             "href": "/myCOMeasureResURI", "rt": ["oic.r.airquality"], "if":
13073                             ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::bld6]:1122"}]},
13074                             {
13075                                 "href": "/myCO2ResURI", "rt": ["oic.r.airquality"], "if":
13076                                 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::bld6]:1122"}]}
13077                             ]
13078                         },
13079                     "schema": { "$ref": "#/definitions/AirQuality" }
13080                 }
13081             }
13082         },
13083         "parameters": {
13084             "interface-all" : {
13085                 "in" : "query",
13086                 "name" : "if",
13087                 "type" : "string",
13088                 "enum" : ["oic.if.ll", "oic.if.b","oic.if.baseline"]
13089             }
13090         },
13091         "definitions": {
13092             "AirQuality-ll": {
13093                 "items": {
13094                     "$ref": "#/definitions/oic.oic-link"
13095                 },
13096                 "type": "array"
13097             },
13098             "oic.oic-link": {
13099                 "type": "object",
13100                 "properties": {
13101                     "anchor": {
13102                         "$ref":
13103                         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13104                         schema.json#/definitions/anchor"
13105                     },
13106                     "di": {
13107                         "$ref":
13108                         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13109                         schema.json#/definitions/di"
13110                     },
13111                     "eps": {
13112                         "$ref":
13113                         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13114                         schema.json#/definitions/eps"
13115                     },
13116                     "href": {
13117                         "$ref":
13118                         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13119                         schema.json#/definitions/href"
13120                     },
13121                     "ins": {
13122                         "$ref":
13123                         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13124                         schema.json#/definitions/ins"
13125                     },
13126                     "p": {
13127                         "$ref":
13128                         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13129                         schema.json#/definitions/p"
13130                     },
13131                     "rel": {
13132                         "$ref":
13133                         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13134                         schema.json#/definitions/rel_array"
13135                     }
13136                 }
13137             }
13138         }
13139     }
13140 }

```

```

13136         "title": {
13137             "$ref":
13138 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13139 schema.json#/definitions/title"
13140         },
13141         "type": {
13142             "$ref":
13143 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13144 schema.json#/definitions/type"
13145         },
13146         "if": {
13147             "description": "The OCF Interfaces supported by the target Resource",
13148             "items": {
13149                 "enum": [
13150                     "oic.if.s",
13151                     "oic.if.baseline"
13152                 ],
13153                 "type": "string",
13154                 "maxLength": 64
13155             },
13156             "minItems": 2,
13157             "uniqueItems": true,
13158             "type": "array",
13159             "readOnly": true
13160         },
13161         "rt": {
13162             "description": "Resource Type of the target Resource",
13163             "items": {
13164                 "maxLength": 64,
13165                 "type": "string",
13166                 "enum": ["oic.r.airquality"]
13167             },
13168             "minItems": 1,
13169             "type": "array",
13170             "uniqueItems": true,
13171             "readOnly": true
13172         }
13173     },
13174     "required": [
13175         "href",
13176         "rt",
13177         "if"
13178     ]
13179 },
13180 "AirQuality": {
13181     "type": "object",
13182     "properties": {
13183         "rt": {
13184             "items": {
13185                 "enum": [
13186                     "oic.r.airqualitycollection",
13187                     "oic.wk.col"
13188                 ],
13189                 "type": "string",
13190                 "maxLength": 64
13191             },
13192             "minItems": 2,
13193             "type": "array",
13194             "uniqueItems": true
13195         },
13196         "links": {
13197             "description": "A set of simple or individual OCF Links.",
13198             "type": "array",
13199             "items": {
13200                 "$ref": "#/definitions/oic.oic-link"
13201             }
13202         },
13203         "n": {
13204             "$ref":
13205 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13206 schema.json#/definitions/n"
13207         },

```

```

13208         "id": {
13209             "$ref" :
13210 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13211 schema.json#/definitions/id"
13212         },
13213         "rts": {
13214             "items": {
13215                 "enum": ["oic.r.airquality"],
13216                 "type": "string",
13217                 "maxLength": 64
13218             },
13219             "minItems": 1,
13220             "type": "array",
13221             "uniqueItems": true
13222         },
13223         "if": {
13224             "description": "The OCF Interfaces supported by this Resource",
13225             "items": {
13226                 "enum": [
13227                     "oic.if.ll",
13228                     "oic.if.b",
13229                     "oic.if.baseline"
13230                 ],
13231                 "type": "string",
13232                 "maxLength": 64
13233             },
13234             "minItems": 1,
13235             "readOnly": true,
13236             "uniqueItems": true,
13237             "type": "array"
13238         }
13239     }
13240 },
13241 "AirQualityCollectionBatch-Retrieve" : {
13242     "type": "array",
13243     "minItems": 1,
13244     "uniqueItems": true,
13245     "items": {
13246         "type": "object",
13247         "additionalProperties": true,
13248         "properties": {
13249             "href": {
13250                 "$ref":
13251 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13252 schema.json#/definitions/href"
13253             },
13254             "rep": {
13255                 "$ref":
13256 "https://openconnectivityfoundation.github.io/IoTDataModels/AirQualityResURI.swagger.json#/definitio
13257 ns/AirQuality"
13258             }
13259         },
13260         "required": [
13261             "href",
13262             "rep"
13263         ]
13264     }
13265 }
13266 }
13267 }
13268

```

### 13269 6.67.5 Property definition

13270 Table 137 defines the Properties that are part of the "oic.r.airqualitycollection, oic.wk.col" Resource  
13271 Type.



13272  
13273

**Table 137 – The Property definitions of the Resource with type "rt" = "oic.r.airqualitycollection, oic.wk.col".**

Property name	Value type	Mandatory	Access mode	Description
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	
if	array: see schema	Yes	Read Only	The OCF Interfaces supported by the target Resource
rt	array: see schema	Yes	Read Only	Resource Type of the target Resource
rt	array: see schema		Read Write	
links	array: see schema		Read Write	A set of simple or individual OCF Links.
n	multiple types: see schema		Read Write	
id	multiple types: see schema		Read Write	
rts	array: see schema		Read Write	
if	array: see schema		Read Only	The OCF Interfaces supported by this Resource
href	multiple types: see schema	Yes	Read Write	
rep	multiple types: see schema	Yes	Read Write	

13274 **6.67.6 CRUDN behaviour**

13275 Table 138 defines the CRUDN operations that are supported on the "oic.r.airqualitycollection,  
13276 oic.wk.col" Resource Type.

**Table 138 – The CRUDN operations of the Resource with type "rt" = "oic.r.airqualitycollection, oic.wk.col".**

13277  
13278

Create	Read	Update	Delete	Notify
	get			observe

13279 **6.68 Consumable**

13280 **6.68.1 Introduction**

13281 This Resource specifies a thing that can be consumed such as filter material, printer toner etc  
13282 The Property "typeofconsumable" is an enumeration defining the thing being consumed as defined  
13283 by the Smart Home Device Specification  
13284 The Property "remaining" is an integer capturing the percentatge remaining life  
13285 The Property "orderpercentage" is an integer capturing the percentage life at which replacement  
13286 or replenishment is recommended by the manufacturer  
13287 The Property "url" is a string containing a URL at which further information may be obtained with  
13288 respect to the consumable.

13289 **6.68.2 Example URI**

13290 /ConsumableResURI

13291 **6.68.3 Resource type**

13292 The Resource Type is defined as: "oic.r.consumable".

13293 **6.68.4 OpenAPI 2.0 definition**

```
13294 {
13295   "swagger": "2.0",
13296   "info": {
13297     "title": "Consumable",
13298     "version": "20190215",
13299     "license": {
13300       "name": "OCF Data Model License",
13301       "url":
13302         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
13303         CENSE.md",
13304       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
13305         reserved."
13306     },
13307     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
13308   },
13309   "schemes": ["http"],
13310   "consumes": ["application/json"],
13311   "produces": ["application/json"],
13312   "paths": {
13313     "/ConsumableResURI" : {
13314       "get": {
13315         "description": "This Resource specifies a thing that can be consumed such as filter
13316         material, printer toner etc\nThe Propert \"typeofconsumable\" is an enumeration defining the thing
13317         being consumed as defined by the Smart Home Device Specification\nThe Property \"remaining\" is an
13318         integer capturing the percentatge remaining life\nThe Property \"orderpercentage\" is an integer
13319         capturing the percentage life at which replacement or replenishment is recommended by the
13320         manufacturer\nThe Property \"url\" is a string containing a URL at which further information may be
13321         obtained with respect to the consumable.",
13322         "parameters": [
13323           { "$ref": "#/parameters/interface" }
13324         ],
13325         "responses": {
13326           "200": {
13327             "description": "",
13328             "x-example":
13329               {
13330                 "rt": ["oic.r.consumable"],
13331                 "if": ["oic.if.s", "oic.if.baseline"],
13332                 "typeofconsumable": "tonerBlack",
13333                 "remaining": 20,
13334                 "orderpercentage": 10,
13335                 "url": "http://myreorderURL"
13336               },
13337             "schema": { "$ref": "#/definitions/consumable" }
13338           }
13339         }
13340       }
13341     }
13342   }
}
```

```

13341     }
13342   },
13343   "parameters": {
13344     "interface": {
13345       "in": "query",
13346       "name": "if",
13347       "type": "string",
13348       "enum": ["oic.if.s", "oic.if.baseline"]
13349     }
13350   },
13351   "definitions": {
13352     "consumable": {
13353       "properties": {
13354         "rt": {
13355           "description": "The Resource Type.",
13356           "items": {
13357             "enum": ["oic.r.consumable"],
13358             "maxLength": 64,
13359             "type": "string"
13360           },
13361           "minItems": 1,
13362           "uniqueItems": true,
13363           "readOnly": true,
13364           "type": "array"
13365         },
13366         "remaining": {
13367           "description": "The percentage remaining lifespan.",
13368           "maximum": 100,
13369           "minimum": 0,
13370           "readOnly": true,
13371           "type": "integer"
13372         },
13373         "typeofconsumable": {
13374           "description": "The thing that is being consumed.",
13375           "readOnly": true,
13376           "type": "string"
13377         },
13378         "url": {
13379           "description": "The URL at which additional ordering information may be found.",
13380           "format": "uri",
13381           "readOnly": true,
13382           "type": "string"
13383         },
13384         "orderpercentage": {
13385           "description": "The percentage at which re-ordering is recommended by the manufacturer.",
13386           "maximum": 100,
13387           "minimum": 0,
13388           "readOnly": true,
13389           "type": "integer"
13390         },
13391         "n": {
13392           "$ref":
13393             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13394             schema.json#/definitions/n"
13395         },
13396         "id": {
13397           "$ref":
13398             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13399             schema.json#/definitions/id"
13400         },
13401         "if": {
13402           "description": "The OCF Interface set supported by this Resource.",
13403           "items": {
13404             "enum": [
13405               "oic.if.s",
13406               "oic.if.baseline"
13407             ],
13408             "type": "string"
13409           },
13410           "minItems": 2,
13411           "uniqueItems": true,
13412           "readOnly": true,

```

```

13413         "type": "array"
13414     },
13415 },
13416     "type": "object",
13417     "required": ["typeofconsumable", "remaining"]
13418 }
13419 }
13420 }
13421

```

## 13422 6.68.5 Property definition

13423 Table 139 defines the Properties that are part of the "oic.r.consumable" Resource Type.

13424 **Table 139 – The Property definitions of the Resource with type "rt" = "oic.r.consumable".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
remaining	integer	Yes	Read Only	The percentage remaining lifespan.
typeofconsumable	string	Yes	Read Only	The thing that is being consumed.
url	string	No	Read Only	The URL at which additional ordering information may be found.
orderpercentage	integer	No	Read Only	The percentage at which re-ordering is recommended by the manufacturer.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

## 13425 6.68.6 CRUDN behaviour

13426 Table 140 defines the CRUDN operations that are supported on the "oic.r.consumable" Resource  
 13427 Type.

13428 **Table 140 – The CRUDN operations of the Resource with type "rt" = "oic.r.consumable".**

Create	Read	Update	Delete	Notify
	get			observe

## 13429 6.69 Consumables

### 13430 6.69.1 Introduction

13431 This Resource specifies things that can be consumed such as filter material, printer toner etc  
 13432 The resource is a Collection of instances of oic.r.consumable detailing the individual consumed  
 13433 items

13434 supportedconsumables is the set of consumable types that this instance of the Resource  
 13435 supports

13436

### 13437 6.69.2 Example URI

13438 /ConsumablesResURI

13439 **6.69.3 Resource type**

13440 The Resource Type is defined as: "oic.r.consumablecollection, oic.wk.col".

13441 **6.69.4 OpenAPI 2.0 definition**

```
13442 {
13443   "swagger": "2.0",
13444   "info": {
13445     "title": "Consumables",
13446     "version": "20190613",
13447     "license": {
13448       "name": "OCF Data Model License",
13449       "url":
13450 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
13451 CENSE.md",
13452       "x-copyright": "copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
13453     },
13454     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
13455   },
13456   "schemes": ["http"],
13457   "consumes": ["application/json"],
13458   "produces": ["application/json"],
13459   "paths": {
13460     "/ConsumablesResURI?if=oic.if.ll" : {
13461       "get": {
13462         "description": "This Resource specifies things that can be consumed such as filter material,
13463 printer toner etc\nThe resource is a Collection of instances of oic.r.consumable detailing the
13464 individual consumed items\nsupportedconsumables is the set of consumable types that this instance of
13465 the Resource supports\n",
13466         "parameters": [
13467           {"$ref": "#/parameters/interface-all"}
13468         ],
13469         "responses": {
13470           "200": {
13471             "description" : "",
13472             "x-example":
13473             [
13474               {"href": "/myTonerBlackResURI", "rt": ["oic.r.consumable"], "if":
13475 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
13476               {"href": "/myTonerCyanResURI", "rt": ["oic.r.consumable"], "if":
13477 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
13478               {"href": "/myTonerMagentaResURI", "rt": ["oic.r.consumable"], "if":
13479 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
13480               {"href": "/myTonerYellowResURI", "rt": ["oic.r.consumable"], "if":
13481 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
13482             ],
13483             "schema": { "$ref": "#/definitions/consumables-ll" }
13484           }
13485         }
13486       }
13487     },
13488     "/ConsumablesResURI?if=oic.if.b": {
13489       "get": {
13490         "description": "This Resource specifies things that can be consumed such as filter material,
13491 printer toner etc\nThe resource is a Collection of instances of oic.r.consumable detailing the
13492 individual consumed items\nsupportedconsumables is the set of consumable types that this instance of
13493 the Resource supports\n",
13494         "parameters": [
13495           {"$ref": "#/parameters/interface-all"}
13496         ],
13497         "responses": {
13498           "200": {
13499             "description" : "",
13500             "x-example": [
13501               {
13502                 "href": "/tonerCyanResURI",
13503                 "rep": {
13504                   "typeofconsumable": "tonerCyan",
13505                   "remaining": 70,
13506                   "orderpercentage": 10,
13507                   "url": "http://myreorderURL"

```

```

13508     }
13509     },
13510     {
13511         "href": "/tonerBlackResURI",
13512         "rep": {
13513             "typeofconsumable": "tonerBlack",
13514             "remaining": 20,
13515             "orderpercentage": 10,
13516             "url": "http://myreorderURL"
13517         }
13518     }
13519 ],
13520 "schema": { "$ref": "#/definitions/ConsumableCollectionBatch-Retrieve" }
13521 }
13522 }
13523 },
13524 "/ConsumablesResURI?if=oic.if.baseline" : {
13525     "get": {
13526         "description": "This Resource specifies things that can be consumed such as filter material,
13527 printer toner etc\nThe resource is a Collection of instances of oic.r.consumable detailing the
13528 individual consumed items\nsupportedconsumables is the set of consumable types that this instance of
13529 the Resource supports\n",
13530         "parameters": [
13531             {"$ref": "#/parameters/interface-all"}
13532         ],
13533         "responses": {
13534             "200": {
13535                 "description": "",
13536                 "x-example": {
13537                     "rt": [ "oic.r.consumablecollection", "oic.wk.col" ],
13538                     "if": [ "oic.if.ll", "oic.if.b", "oic.if.baseline" ],
13539                     "rts": [ "oic.r.consumable" ],
13540                     "supportedconsumables": [ "tonerBlack", "tonerCyan", "tonerMagenta", "tonerYellow" ],
13541                     "links": [
13542                         { "href": "/myTonerBlackResURI", "rt": [ "oic.r.consumable" ], "if":
13543 ["oic.if.s", "oic.if.baseline"], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] },
13544                         { "href": "/myTonerCyanResURI", "rt": [ "oic.r.consumable" ], "if":
13545 ["oic.if.s", "oic.if.baseline"], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] },
13546                         { "href": "/myTonerMagentaResURI", "rt": [ "oic.r.consumable" ], "if":
13547 ["oic.if.s", "oic.if.baseline"], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] },
13548                         { "href": "/myTonerYellowResURI", "rt": [ "oic.r.consumable" ], "if":
13549 ["oic.if.s", "oic.if.baseline"], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] }
13550                     ]
13551                 },
13552             },
13553             "schema": { "$ref": "#/definitions/consumables" }
13554         }
13555     }
13556 },
13557 },
13558 },
13559 "parameters": {
13560     "interface-all" : {
13561         "in" : "query",
13562         "name" : "if",
13563         "type" : "string",
13564         "enum" : [ "oic.if.ll", "oic.if.b", "oic.if.baseline" ]
13565     }
13566 },
13567 "definitions": {
13568     "consumables-ll" : {
13569         "items": {
13570             "$ref": "#/definitions/oic.oic-link"
13571         },
13572         "type": "array"
13573     },
13574     "consumables": {
13575         "properties": {
13576             "rt": {
13577                 "items": {
13578                     "enum": [
13579                         "oic.r.consumablecollection",

```

```

13580         "oic.wk.col"
13581     ],
13582     "type": "string",
13583     "maxLength": 64
13584 },
13585     "minItems": 2,
13586     "type": "array",
13587     "readOnly": true,
13588     "uniqueItems": true
13589 },
13590     "supportedconsumables": {
13591         "description": "Array of possible consumables the device measures.",
13592         "items": {
13593             "type": "string"
13594         },
13595         "readOnly": true,
13596         "type": "array"
13597     },
13598     "links": {
13599         "description": "A set of simple or individual OCF Links.",
13600         "items": {
13601             "$ref": "#/definitions/oic.oic-link"
13602         },
13603         "type": "array"
13604     },
13605     "n": {
13606         "$ref" :
13607         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13608         schema.json#/definitions/n"
13609     },
13610     "id": {
13611         "$ref" :
13612         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13613         schema.json#/definitions/id"
13614     },
13615     "rts": {
13616         "items": {
13617             "enum": ["oic.r.consumable"],
13618             "type": "string",
13619             "maxLength": 64
13620         },
13621         "minItems": 1,
13622         "type": "array",
13623         "readOnly": true,
13624         "uniqueItems": true
13625     },
13626     "if": {
13627         "description": "The OCF Interfaces supported by this Resource",
13628         "items": {
13629             "enum": [
13630                 "oic.if.ll",
13631                 "oic.if.b",
13632                 "oic.if.baseline"
13633             ],
13634             "type": "string",
13635             "maxLength": 64
13636         },
13637         "minItems": 1,
13638         "readOnly": true,
13639         "uniqueItems": true,
13640         "type": "array"
13641     }
13642 },
13643     "type" : "object"
13644 },
13645     "ConsumableCollectionBatch-Retrieve" : {
13646         "type": "array",
13647         "minItems": 1,
13648         "uniqueItems": true,
13649         "items": {
13650             "type": "object",
13651             "additionalProperties": true,

```

```

13652         "properties": {
13653             "href": {
13654                 "$ref":
13655 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13656 schema.json#/definitions/href"
13657             },
13658             "rep": {
13659                 "$ref":
13660 "https://openconnectivityfoundation.github.io/IoTDataModels/ConsumableResURI.swagger.json#/definitio
13661 ns/consumable"
13662             }
13663         },
13664         "required": [
13665             "href",
13666             "rep"
13667         ]
13668     }
13669 },
13670     "oic.oic-link": {
13671         "type": "object",
13672         "properties": {
13673             "anchor": {
13674                 "$ref":
13675 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13676 schema.json#/definitions/anchor"
13677             },
13678             "di": {
13679                 "$ref":
13680 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13681 schema.json#/definitions/di"
13682             },
13683             "eps": {
13684                 "$ref":
13685 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13686 schema.json#/definitions/eps"
13687             },
13688             "href": {
13689                 "$ref":
13690 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13691 schema.json#/definitions/href"
13692             },
13693             "ins": {
13694                 "$ref":
13695 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13696 schema.json#/definitions/ins"
13697             },
13698             "p": {
13699                 "$ref":
13700 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13701 schema.json#/definitions/p"
13702             },
13703             "rel": {
13704                 "$ref":
13705 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13706 schema.json#/definitions/rel_array"
13707             },
13708             "title": {
13709                 "$ref":
13710 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13711 schema.json#/definitions/title"
13712             },
13713             "type": {
13714                 "$ref":
13715 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13716 schema.json#/definitions/type"
13717             },
13718             "if": {
13719                 "description": "The OCF Interfaces supported by the target Resource",
13720                 "items": {
13721                     "enum": [
13722                         "oic.if.s",
13723                         "oic.if.baseline"

```



```

13724     ],
13725     "type": "string",
13726     "maxLength": 64
13727   },
13728   "minItems": 2,
13729   "uniqueItems": true,
13730   "type": "array",
13731   "readOnly": true
13732 },
13733 "rt": {
13734   "description": "Resource Type of the target Resource",
13735   "items": {
13736     "maxLength": 64,
13737     "type": "string",
13738     "enum": ["oic.r.consumable"]
13739   },
13740   "minItems": 1,
13741   "type": "array",
13742   "uniqueItems": true,
13743   "readOnly": true
13744 }
13745 },
13746 "required": [
13747   "href",
13748   "rt",
13749   "if"
13750 ]
13751 }
13752 }
13753 }
13754

```

13755 **6.69.5 Property definition**

13756 Table 141 defines the Properties that are part of the "oic.r.consumablecollection, oic.wk.col"  
 13757 Resource Type.

13758 **Table 141 – The Property definitions of the Resource with type "rt" =**  
 13759 **"oic.r.consumablecollection, oic.wk.col".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema		Read Only	
supportedconsumables	array: see schema		Read Only	Array of possible consumables the device measures.
links	array: see schema		Read Write	A set of simple or individual OCF Links.
n	multiple types: see schema		Read Write	
id	multiple types: see schema		Read Write	
rts	array: see schema		Read Only	
if	array: see schema		Read Only	The OCF Interfaces supported by this Resource
href	multiple types: see schema	Yes	Read Write	
rep	multiple types: see schema	Yes	Read Write	
anchor	multiple types: see schema	No	Read Write	

di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	
if	array: see schema	Yes	Read Only	The OCF Interfaces supported by the target Resource
rt	array: see schema	Yes	Read Only	Resource Type of the target Resource

13760 **6.69.6 CRUDN behaviour**

13761 Table 142 defines the CRUDN operations that are supported on the "oic.r.consumablecollection,  
13762 oic.wk.col" Resource Type.

13763 **Table 142 – The CRUDN operations of the Resource with type "rt" =**  
13764 **"oic.r.consumablecollection, oic.wk.col".**

Create	Read	Update	Delete	Notify
	get			observe

13765 **6.70 Delay Defrost**

13766 **6.70.1 Introduction**

13767 This Resource describes the delay defrost function as defined by the US Energy Star  
13768 Specifications.

13769 See Energy Star Refrigerator Requirements Version 5 Section 4).

13770 (<https://www.energystar.gov/sites/default/files/specs//private/ENERGY%20STAR%20Final%20Version%205.0%20Residential%20Refrigerators%20and%20Freezers%20Program%20Requirements.pdf>)

13771  
13772  
13773 The Property "status" is a boolean indicating whether the function is on, if off then defrost is  
13774 scheduled as part of normal device operation.

13775 The Property "startTime" is an ISO8601 encoded start time for the interval in which defrost shall  
13776 not occur.

13777 The Property "stopTime" is an ISO8601 encoded stop time for the interval in which defrost shall  
13778 not occur.

13779 The Property "interval" with additional range restrictions is the time in minutes of the period that  
13780 starts at starttime (if not present the default is 240).

13781 The Properties "stopTime" and "interval" are mutually exclusive; they cannot both be present in a  
13782 Resource instance.

13783 **6.70.2 Example URI**

13784 /DelayDefrostResURI

13785 **6.70.3 Resource type**

13786 The Resource Type is defined as: "oic.r.delaydefrost".

13787 **6.70.4 OpenAPI 2.0 definition**

```
13788 {
13789   "swagger": "2.0",
13790   "info": {
13791     "title": "Delay Defrost",
13792     "version": "20190215",
13793     "license": {
13794       "name": "OCF Data Model License",
13795       "url":
13796 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
13797 CENSE.md",
13798     "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
13799 reserved."
13800   },
13801   "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
13802 },
13803   "schemes": ["http"],
13804   "consumes": ["application/json"],
13805   "produces": ["application/json"],
13806   "paths": {
13807     "/DelayDefrostResURI" : {
13808       "get": {
13809         "description": "This Resource describes the delay defrost function as defined by the US
13810 Energy Star Specifications.\nSee Energy Star Refrigerator Requirements Version 5 Section
13811 4).\n(https://www.energystar.gov/sites/default/files/specs//private/ENERGY%20STAR%20Final%20Version%
13812 205.0%20Residential%20Refrigerators%20and%20Freezers%20Program%20Requirements.pdf)\n\nThe Property
13813 \"status\" is a boolean indicating whether the function is on, if off then defrost is scheduled as
13814 part of normal device operation.\n\nThe Property \"startTime\" is an ISO8601 encoded start time for
13815 the interval in which defrost shall not occur.\n\nThe Property \"stopTime\" is an ISO8601 encoded stop
13816 time for the interval in which defrost shall not occur.\n\nThe Property \"interval\" with additional
13817 range restrictions is the time in minutes of the period that starts at starttime (if not present the
13818 default is 240).\n\nThe Properties \"stopTime\" and \"interval\" are mutually exclusive; they cannot
13819 both be present in a Resource instance.",
13820         "parameters": [
13821           { "$ref": "#/parameters/interface" }
13822         ],
13823         "responses": {
13824           "200": {
13825             "description": "",
13826             "x-example":
13827             {
13828               "rt": ["oic.r.delaydefrost"],
13829               "if": ["oic.if.a", "oic.if.baseline"],
13830               "startTime": "T06:00:00Z",
13831               "status": false
13832             },
13833             "schema": { "$ref": "#/definitions/DelayDefrost" }
13834           }
13835         }
13836       },
13837       "post": {
13838         "description": "Activates the desired Delay Defrost functions\n",
13839         "parameters": [
13840           { "$ref": "#/parameters/interface" },
13841           {
13842             "name": "body",
13843             "in": "body",
13844             "required": true,
13845             "schema": { "$ref": "#/definitions/DelayDefrost" },
13846             "x-example":
13847             {
13848               "status": true,
13849               "startTime": "T06:00:00Z",
13850               "interval": 180
13851             }
13852           }
13853         ]
13854       }
13855     }
13856   }
13857 }
```

```

13854         "responses": {
13855             "200": {
13856                 "description": "Indicates that the DelayDefrost function was changed.\nThe new
13857 representation may be provided in the response.\n",
13858                 "x-example":
13859                     {
13860                         "status": true,
13861                         "startTime": "T06:00:00Z",
13862                         "interval": 180
13863                     }
13864                 ,
13865                 "schema": { "$ref": "#/definitions/DelayDefrost" }
13866             },
13867             "403": {
13868                 "description": "Indicates the update to the time properties was rejected.\nReasons
13869 for rejection:\n invalid time entry\nThe current unchanged representation may be provided in the
13870 response.\n",
13871                 "x-example":
13872                     {
13873                         "status": true,
13874                         "startTime": "T06:00:00Z",
13875                         "interval": 180
13876                     }
13877                 ,
13878                 "schema": { "$ref": "#/definitions/DelayDefrost" }
13879             }
13880         }
13881     },
13882 },
13883 "parameters": {
13884     "interface": {
13885         "in": "query",
13886         "name": "if",
13887         "type": "string",
13888         "enum": ["oic.if.a", "oic.if.baseline"]
13889     }
13890 },
13891 "definitions": {
13892     "DelayDefrost" : {
13893         "properties": {
13894             "rt": {
13895                 "description": "The Resource Type.",
13896                 "items": {
13897                     "enum": ["oic.r.delaydefrost"],
13898                     "maxLength": 64,
13899                     "type": "string"
13900                 },
13901                 "minItems": 1,
13902                 "uniqueItems": true,
13903                 "readOnly": true,
13904                 "type": "array"
13905             },
13906             "status": {
13907                 "description": "Indicates whether any supported delay defrost function is active.",
13908                 "type": "boolean"
13909             },
13910             "interval": {
13911                 "description": "Defrost interval as defined by Energy Star.",
13912                 "minimum": 1,
13913                 "maximum": 1440,
13914                 "default": 240,
13915                 "type": "integer"
13916             },
13917             "stopTime": {
13918                 "description": "Stop time for the time period, if present interval cannot be present.
13919 This is the time of day at which the delay interval stops.",
13920                 "type": "string",
13921                 "pattern": "^[T]([0-2][0-9]:[0-5][0-9]:[0-5][0-9])([zZ]|([\\+\\-])([01]\\d|2[0-3])?:([0-
13922 5]\\d\\d))$",
13923             },
13924             "startTime": {
13925                 "description": "Start time for the time period. This is the time of day at which the delay

```

```

13926 interval starts.",
13927     "type": "string",
13928     "pattern": "^[T]([0-2][0-9]:[0-5][0-9]:[0-5][0-9])([zZ]|([\\+-])([01]\\d|2[0-3])?:?([0-
13929 5]\\d))$"
13930   },
13931   "n": {
13932     "$ref":
13933     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13934     schema.json#/definitions/n"
13935   },
13936   "id": {
13937     "$ref":
13938     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13939     schema.json#/definitions/id"
13940   },
13941   "if": {
13942     "description": "The OCF Interface set supported by this Resource.",
13943     "items": {
13944       "enum": [
13945         "oic.if.a",
13946         "oic.if.baseline"
13947       ],
13948       "type": "string"
13949     },
13950     "minItems": 2,
13951     "uniqueItems": true,
13952     "readOnly": true,
13953     "type": "array"
13954   }
13955 },
13956 "type": "object"
13957 }
13958 }
13959 }
13960

```

### 13961 6.70.5 Property definition

13962 Table 143 defines the Properties that are part of the "oic.r.delaydefrost" Resource Type.

13963 **Table 143 – The Property definitions of the Resource with type "rt" = "oic.r.delaydefrost".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema		Read Only	The Resource Type.
status	boolean		Read Write	Indicates whether any supported delay defrost function is active.
interval	integer		Read Write	Defrost interval as defined by Energy Star.
stopTime	string		Read Write	Stop time for the time period, if present interval cannot be present. This is the time of day at which the delay interval stops.
startTime	string		Read Write	Start time for the time period. This is the time of day at which the delay interval starts.
n	multiple types: see schema		Read Write	

id	multiple types: see schema		Read Write	
if	array: see schema		Read Only	The OCF Interface set supported by this Resource.

13964 **6.70.6 CRUDN behaviour**

13965 Table 144 defines the CRUDN operations that are supported on the "oic.r.delaydefrost" Resource  
13966 Type.

13967 **Table 144 – The CRUDN operations of the Resource with type "rt" = "oic.r.delaydefrost".**

Create	Read	Update	Delete	Notify
	get	post		observe

13968 **6.71 Eco Mode**

13969 **6.71.1 Introduction**

13970 This Resource specifies the supported and currently active Eco Mode of a Device  
13971 The Resource is a derivative of the Mode Resource (oic.r.mode) with a restriction that the  
13972 population of supportedmodes and modes Properties is restricted to the set of values:  
13973 "disabled","enabled","notsupported".  
13974 The adminforced Property indicates that the value has been set by another party (e.g. via some  
13975 offboard Smart Energy interaction)  
13976

13977 **6.71.2 Example URI**

13978 /EcomodeResURI

13979 **6.71.3 Resource type**

13980 The Resource Type is defined as: "oic.r.ecomode".

13981 **6.71.4 OpenAPI 2.0 definition**

```
13982 {
13983   "swagger": "2.0",
13984   "info": {
13985     "title": "Eco Mode",
13986     "version": "20190215",
13987     "license": {
13988       "name": "OCF Data Model License",
13989       "url":
13990 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
13991 CENSE.md",
13992       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
13993 reserved."
13994     },
13995     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
13996   },
13997   "schemes": ["http"],
13998   "consumes": ["application/json"],
13999   "produces": ["application/json"],
14000   "paths": {
14001     "/EcomodeResURI" : {
14002       "get": {
14003         "description": "This Resource specifies the supported and currently active Eco Mode of a
14004 Device\nThe Resource is a derivative of the Mode Resource (oic.r.mode) with a restriction that the
14005 population of supportedmodes and modes Properties is restricted to the set of
14006 values:\n\n\"disabled\", \"enabled\", \"notsupported\".\n\nThe adminforced Property indicates that the
14007 value has been set by another party (e.g. via some offboard Smart Energy interaction)\n",
14008         "parameters": [
14009           {"$ref": "#/parameters/interface"}
14010         ],

```

```

14011     "responses": {
14012         "200": {
14013             "description": "",
14014             "x-example":
14015                 {
14016                     "rt": ["oic.r.ecomode"],
14017                     "if": ["oic.if.a", "oic.if.baseline"],
14018                     "supportedModes": ["disabled", "enabled"],
14019                     "modes": ["disabled"],
14020                     "adminforced": false
14021                 },
14022             "schema": { "$ref": "#/definitions/ecomode" }
14023         }
14024     },
14025     "post": {
14026         "description": "",
14027         "parameters": [
14028             { "$ref": "#/parameters/interface" },
14029             {
14030                 "name": "body",
14031                 "in": "body",
14032                 "required": true,
14033                 "schema": { "$ref": "#/definitions/ecomode-update" },
14034                 "x-example":
14035                     {
14036                         "modes": ["enabled"]
14037                     }
14038             }
14039         ],
14040         "responses": {
14041             "200": {
14042                 "description": "",
14043                 "x-example":
14044                     {
14045                         "modes": ["enabled"]
14046                     },
14047                 "schema": { "$ref": "#/definitions/ecomode-update" }
14048             }
14049         }
14050     }
14051 },
14052 },
14053 },
14054 "parameters": {
14055     "interface": {
14056         "in": "query",
14057         "name": "if",
14058         "type": "string",
14059         "enum": ["oic.if.a", "oic.if.baseline"]
14060     }
14061 },
14062 "definitions": {
14063     "ecomode": {
14064         "properties": {
14065             "rt": {
14066                 "description": "The Resource Type.",
14067                 "items": {
14068                     "enum": ["oic.r.ecomode"],
14069                     "maxLength": 64,
14070                     "type": "string"
14071                 },
14072                 "minItems": 1,
14073                 "uniqueItems": true,
14074                 "readOnly": true,
14075                 "type": "array"
14076             },
14077             "modes": {
14078                 "description": "The array of the currently active mode(s).",
14079                 "items": {
14080                     "enum": ["disabled", "enabled", "notsupported"],
14081                     "type": "string"
14082                 },

```

```

14083         "uniqueItems": true,
14084         "type": "array"
14085     },
14086     "supportedModes": {
14087         "description": "The array of possible modes the device supports.",
14088         "items": {
14089             "enum": ["disabled", "enabled", "notsupported"],
14090             "type": "string"
14091         },
14092         "readOnly": true,
14093         "type": "array"
14094     },
14095     "adminforced": {
14096         "description": "The indicator that the current mode of operation has been forced by admin
14097 action.",
14098         "readOnly": true,
14099         "type": "boolean"
14100     },
14101     "n": {
14102         "$ref":
14103 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14104 schema.json#/definitions/n"
14105     },
14106     "id": {
14107         "$ref":
14108 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14109 schema.json#/definitions/id"
14110     },
14111     "if": {
14112         "description": "The OCF Interface set supported by this Resource.",
14113         "items": {
14114             "enum": [
14115                 "oic.if.a",
14116                 "oic.if.baseline"
14117             ],
14118             "type": "string"
14119         },
14120         "minItems": 2,
14121         "uniqueItems": true,
14122         "readOnly": true,
14123         "type": "array"
14124     }
14125 },
14126 "type" : "object",
14127 "required": ["supportedModes", "modes"]
14128 },
14129 "ecomode-update" : {
14130     "properties": {
14131         "modes": {
14132             "description": "The desired mode.",
14133             "items": {
14134                 "enum": ["disabled", "enabled", "notsupported"],
14135                 "type": "string"
14136             },
14137             "type": "array"
14138         }
14139     },
14140     "type": "object",
14141     "required": ["modes"]
14142 }
14143 }
14144 }
14145

```

### 14146 6.71.5 Property definition

14147 Table 145 defines the Properties that are part of the "oic.r.ecomode" Resource Type.



14148 **Table 145 – The Property definitions of the Resource with type "rt" = "oic.r.ecomode".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
modes	array: see schema	Yes	Read Write	The array of the currently active mode(s).
supportedModes	array: see schema	Yes	Read Only	The array of possible modes the device supports.
adminforced	boolean	No	Read Only	The indicator that the current mode of operation has been forced by admin action.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
modes	array: see schema	Yes	Read Write	The desired mode.

14149 **6.71.6 CRUDN behaviour**

14150 Table 146 defines the CRUDN operations that are supported on the "oic.r.ecomode" Resource  
 14151 Type.

14152 **Table 146 – The CRUDN operations of the Resource with type "rt" = "oic.r.ecomode".**

Create	Read	Update	Delete	Notify
	get	post		observe

14153 **6.72 Heating Zone**

14154 **6.72.1 Introduction**

14155 This Resource provides information about the status of a (single) heating zone of a Cook-Top.  
 14156 It describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the device  
 14157 implements pot recognition).

14158 The Property "maxheatinglevel" defines the max level for the heating zone

14159 The Property "heatinglevel" is the current heating level of the zone

14160 For each element, the value range is from 0 (indication that the zone is not heating) to  
 14161 "maxheatinglevel".

14162 **6.72.2 Example URI**

14163 /HeatingZoneResURI

14164 **6.72.3 Resource type**

14165 The Resource Type is defined as: "oic.r.heatingzone".

14166 **6.72.4 OpenAPI 2.0 definition**

```

14167 {
14168   "swagger": "2.0",
14169   "info": {
14170     "title": "Heating Zone",
14171     "version": "20190215",
14172     "license": {

```

```

14173         "name": "OCF Data Model License",
14174         "url":
14175 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
14176 CENSE.md",
14177         "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
14178 reserved."
14179     },
14180     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
14181 },
14182 "schemes": ["http"],
14183 "consumes": ["application/json"],
14184 "produces": ["application/json"],
14185 "paths": {
14186     "/HeatingZoneResURI" : {
14187         "get": {
14188             "description": "This Resource provides information about the status of a (single) heating
14189 zone of a Cook-Top.\nIt describes the case of a Cook-Top whose zones can be activated dynamically
14190 (i.e. the device implements pot recognition).\nThe Property \"maxheatinglevel\" defines the max
14191 level for the heating zone\nThe Property \"heatinglevel\" is the current heating level of the zone\n
14192 For each element, the value range is from 0 (indication that the zone is not heating) to
14193 \"maxheatinglevel\".",
14194             "parameters": [
14195                 {"$ref": "#/parameters/interface"}
14196             ],
14197             "responses": {
14198                 "200": {
14199                     "description": "RETRIEVES the current heating zone information.",
14200                     "x-example":
14201                     {
14202                         "rt": ["oic.r.heatingzone"],
14203                         "if": ["oic.if.s", "oic.if.baseline"],
14204                         "maxheatinglevel": 6,
14205                         "heatinglevel": 0
14206                     },
14207                     "schema": { "$ref": "#/definitions/HeatingZone" }
14208                 }
14209             }
14210         }
14211     }
14212 },
14213 "parameters": {
14214     "interface": {
14215         "in": "query",
14216         "name": "if",
14217         "type": "string",
14218         "enum": ["oic.if.s", "oic.if.baseline"]
14219     }
14220 },
14221 "definitions": {
14222     "HeatingZone" : {
14223         "properties": {
14224             "rt": {
14225                 "description": "The Resource Type.",
14226                 "items": {
14227                     "enum": ["oic.r.heatingzone"],
14228                     "maxLength": 64,
14229                     "type": "string"
14230                 },
14231                 "minItems": 1,
14232                 "uniqueItems": true,
14233                 "readOnly": true,
14234                 "type": "array"
14235             },
14236             "heatinglevel": {
14237                 "description": "The current heating level for the zone.",
14238                 "readOnly": true,
14239                 "type": "integer"
14240             },
14241             "maxheatinglevel": {
14242                 "description": "The maximum heating level for the zone.",
14243                 "readOnly": true,
14244                 "type": "integer"

```

```

14245     },
14246     "n": {
14247         "$ref":
14248         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14249         schema.json#/definitions/n"
14250     },
14251     "id": {
14252         "$ref":
14253         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14254         schema.json#/definitions/id"
14255     },
14256     "if": {
14257         "description": "The OCF Interface set supported by this Resource.",
14258         "items": {
14259             "enum": [
14260                 "oic.if.s",
14261                 "oic.if.baseline"
14262             ],
14263             "type": "string"
14264         },
14265         "minItems": 2,
14266         "uniqueItems": true,
14267         "readOnly": true,
14268         "type": "array"
14269     }
14270 },
14271 "type": "object",
14272 "required": ["maxheatinglevel", "heatinglevel"]
14273 }
14274 }
14275 }
14276

```

14277 **6.72.5 Property definition**

14278 Table 147 defines the Properties that are part of the "oic.r.heatingzone" Resource Type.

14279 **Table 147 – The Property definitions of the Resource with type "rt" = "oic.r.heatingzone".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
heatinglevel	integer	Yes	Read Only	The current heating level for the zone.
maxheatinglevel	integer	Yes	Read Only	The maximum heating level for the zone.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

14280 **6.72.6 CRUDN behaviour**

14281 Table 148 defines the CRUDN operations that are supported on the "oic.r.heatingzone" Resource  
 14282 Type.

14283 **Table 148 – The CRUDN operations of the Resource with type "rt" = "oic.r.heatingzone".**

Create	Read	Update	Delete	Notify
	get			observe

14284 **6.73 Heating Zone Collection**

14285 **6.73.1 Introduction**

14286 This Resource provides information about the status of the heating zones of a Cook-Top.  
14287 It describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the device  
14288 implements pot recognition).

14289 The resource is a Collection of instances of oic.r.heatingzone detailing the individual cooktop  
14290 zones

14291 Retrieves the current heating zone information.

14292

14293 **6.73.2 Example URI**

14294 /HeatingZoneResURI

14295 **6.73.3 Resource type**

14296 The Resource Type is defined as: "oic.r.heatingzonecollection, oic.wk.col".

14297 **6.73.4 OpenAPI 2.0 definition**

```
14298 {
14299   "swagger": "2.0",
14300   "info": {
14301     "title": "Heating Zone Collection",
14302     "version": "20190613",
14303     "license": {
14304       "name": "OCF Data Model License",
14305       "url":
14306 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
14307 CENSE.md",
14308       "x-copyright": "copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
14309     },
14310     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
14311   },
14312   "schemes": ["http"],
14313   "consumes": ["application/json"],
14314   "produces": ["application/json"],
14315   "paths": {
14316     "/HeatingZoneResURI?if=oic.if.ll" : {
14317       "get": {
14318         "description": "This Resource provides information about the status of the heating zones of
14319 a Cook-Top.\nIt describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the
14320 device implements pot recognition).\nThe resource is a Collection of instances of oic.r.heatingzone
14321 detailing the individual cooktop zones\n",
14322         "parameters": [
14323           { "$ref": "#/parameters/interface-all" }
14324         ],
14325         "responses": {
14326           "200": {
14327             "description" : "",
14328             "x-example":
14329 [
14330           { "href": "/myZone1ResURI", "rt": ["oic.r.heatingzone"], "if":
14331 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
14332           { "href": "/myZone2ResURI", "rt": ["oic.r.heatingzone"], "if":
14333 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
14334           { "href": "/myZone3ResURI", "rt": ["oic.r.heatingzone"], "if":
14335 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
14336           { "href": "/myZone4ResURI", "rt": ["oic.r.heatingzone"], "if":
14337 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
14338         ],
14339         "schema": { "$ref": "#/definitions/HeatingZone-11" }
14340       }
14341     }
14342   },
14343 },
14344 "/HeatingZoneResURI?if=oic.if.b" : {
14345   "get": {
```

```

14346         "description": "This Resource provides information about the status of the heating zones of
14347 a Cook-Top.\nIt describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the
14348 device implements pot recognition).\nThe resource is a Collection of instances of oic.r.heatingzone
14349 detailing the individual cooktop zones\n",
14350         "parameters": [
14351             { "$ref": "#/parameters/interface-all" }
14352         ],
14353         "responses": {
14354             "200": {
14355                 "description" : "",
14356                 "x-example": [
14357                     {
14358                         "href": "/heatingZoneLeftResURI",
14359                         "rep": {
14360                             "maxheatinglevel": 6,
14361                             "heatinglevel": 0
14362                         }
14363                     },
14364                     {
14365                         "href": "/heatingZoneRightResURI",
14366                         "rep": {
14367                             "maxheatinglevel": 6,
14368                             "heatinglevel": 3
14369                         }
14370                     }
14371                 ],
14372                 "schema": { "$ref": "#/definitions/HeatingZoneCollectionBatch-Retrieve" }
14373             }
14374         }
14375     },
14376     "/HeatingZoneResURI?if=oic.if.baseline" : {
14377         "get": {
14378             "description": "This Resource provides information about the status of the heating zones of
14379 a Cook-Top.\nIt describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the
14380 device implements pot recognition).\nThe resource is a Collection of instances of oic.r.heatingzone
14381 detailing the individual cooktop zones\nRetrieves the current heating zone information.\n",
14382             "parameters": [
14383                 { "$ref": "#/parameters/interface-all" }
14384             ],
14385             "responses": {
14386                 "200": {
14387                     "description" : "",
14388                     "x-example":
14389                     {
14390                         "rt": [ "oic.r.heatingzonecollection", "oic.wk.col" ],
14391                         "if": [ "oic.if.ll", "oic.if.b", "oic.if.baseline" ],
14392                         "rts": [ "oic.r.heatingzone" ],
14393                         "links": [
14394                             { "href": "/myZone1ResURI", "rt": [ "oic.r.heatingzone" ], "if":
14395 [ "oic.if.s", "oic.if.baseline" ], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] },
14396                             { "href": "/myZone2ResURI", "rt": [ "oic.r.heatingzone" ], "if":
14397 [ "oic.if.s", "oic.if.baseline" ], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] },
14398                             { "href": "/myZone3ResURI", "rt": [ "oic.r.heatingzone" ], "if":
14399 [ "oic.if.s", "oic.if.baseline" ], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] },
14400                             { "href": "/myZone4ResURI", "rt": [ "oic.r.heatingzone" ], "if":
14401 [ "oic.if.s", "oic.if.baseline" ], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] }
14402                         ]
14403                     }
14404                 },
14405                 "schema": { "$ref": "#/definitions/HeatingZone" }
14406             }
14407         }
14408     }
14409 },
14410 "parameters": {
14411     "interface-all" : {
14412         "in" : "query",
14413         "name" : "if",
14414         "type" : "string",
14415         "enum" : [ "oic.if.ll", "oic.if.b", "oic.if.baseline" ]
14416     }
14417 }

```

```

14418 },
14419 "definitions": {
14420   "HeatingZone-ll" : {
14421     "items": {
14422       "$ref": "#/definitions/oic.oic-link"
14423     },
14424     "type": "array",
14425     "minItems": 1,
14426     "uniqueItems": true,
14427     "readOnly": true
14428   },
14429   "oic.oic-link": {
14430     "type": "object",
14431     "properties": {
14432       "anchor": {
14433         "$ref":
14434         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
14435         schema.json#/definitions/anchor"
14436       },
14437       "di": {
14438         "$ref":
14439         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
14440         schema.json#/definitions/di"
14441       },
14442       "eps": {
14443         "$ref":
14444         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
14445         schema.json#/definitions/eps"
14446       },
14447       "href": {
14448         "$ref":
14449         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
14450         schema.json#/definitions/href"
14451       },
14452       "ins": {
14453         "$ref":
14454         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
14455         schema.json#/definitions/ins"
14456       },
14457       "p": {
14458         "$ref":
14459         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
14460         schema.json#/definitions/p"
14461       },
14462       "rel": {
14463         "$ref":
14464         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
14465         schema.json#/definitions/rel_array"
14466       },
14467       "title": {
14468         "$ref":
14469         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
14470         schema.json#/definitions/title"
14471       },
14472       "type": {
14473         "$ref":
14474         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
14475         schema.json#/definitions/type"
14476       },
14477       "if": {
14478         "description": "The OCF Interfaces supported by the target Resource",
14479         "items": {
14480           "enum": [
14481             "oic.if.s",
14482             "oic.if.baseline"
14483           ],
14484           "type": "string",
14485           "maxLength": 64
14486         },
14487         "minItems": 2,
14488         "uniqueItems": true,
14489         "type": "array",

```

```

14490         "readOnly": true
14491     },
14492     "rt": {
14493         "description": "Resource Type of the target Resource",
14494         "items": {
14495             "maxLength": 64,
14496             "type": "string",
14497             "enum": ["oic.r.heatingzone"]
14498         },
14499         "minItems": 1,
14500         "type": "array",
14501         "uniqueItems": true,
14502         "readOnly": true
14503     }
14504 },
14505 "required": [
14506     "href",
14507     "rt",
14508     "if"
14509 ]
14510 },
14511 "HeatingZone" : {
14512     "properties": {
14513         "rt": {
14514             "items": {
14515                 "enum": [
14516                     "oic.r.heatingzonecollection",
14517                     "oic.wk.col"
14518                 ],
14519                 "type": "string",
14520                 "maxLength": 64
14521             },
14522             "minItems": 2,
14523             "type": "array",
14524             "uniqueItems": true
14525         },
14526         "links": {
14527             "items": {
14528                 "$ref": "#/definitions/oic.oic-link"
14529             },
14530             "type": "array",
14531             "minItems": 1,
14532             "uniqueItems": true,
14533             "readOnly": true
14534         },
14535         "n": {
14536             "$ref" :
14537 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14538 schema.json#/definitions/n"
14539         },
14540         "id": {
14541             "$ref" :
14542 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14543 schema.json#/definitions/id"
14544         },
14545         "rts": {
14546             "items": {
14547                 "enum": ["oic.r.heatingzone"],
14548                 "type": "string",
14549                 "maxLength": 64
14550             },
14551             "minItems": 1,
14552             "type": "array",
14553             "readOnly": true,
14554             "uniqueItems": true
14555         },
14556         "if": {
14557             "description": "The OCF Interfaces supported by this Resource",
14558             "items": {
14559                 "enum": [
14560                     "oic.if.ll",
14561                     "oic.if.b",

```

```

14562         "oic.if.baseline"
14563     ],
14564     "type": "string",
14565     "maxLength": 64
14566 },
14567 "minItems": 1,
14568 "readOnly": true,
14569 "uniqueItems": true,
14570 "type": "array"
14571 }
14572 },
14573 "type" : "object"
14574 },
14575 "HeatingZoneCollectionBatch-Retrieve" : {
14576     "type": "array",
14577     "minItems": 1,
14578     "uniqueItems": true,
14579     "items": {
14580         "type": "object",
14581         "additionalProperties": true,
14582         "properties": {
14583             "href": {
14584                 "$ref":
14585 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
14586 schema.json#/definitions/href"
14587             },
14588             "rep": {
14589                 "$ref":
14590 "https://openconnectivityfoundation.github.io/IoTDataModels/HeatingZoneResURI.swagger.json#/definiti
14591 ons/HeatingZone"
14592             }
14593         },
14594         "required": [
14595             "href",
14596             "rep"
14597         ]
14598     }
14599 }
14600 }
14601 }
14602

```

### 14603 6.73.5 Property definition

14604 Table 149 defines the Properties that are part of the "oic.r.heatingzonecollection, oic.wk.col"  
14605 Resource Type.

14606 **Table 149 – The Property definitions of the Resource with type "rt" =**  
14607 **"oic.r.heatingzonecollection, oic.wk.col".**

Property name	Value type	Mandatory	Access mode	Description
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	



title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	
if	array: see schema	Yes	Read Only	The OCF Interfaces supported by the target Resource
rt	array: see schema	Yes	Read Only	Resource Type of the target Resource
rt	array: see schema		Read Write	
links	array: see schema		Read Only	
n	multiple types: see schema		Read Write	
id	multiple types: see schema		Read Write	
rts	array: see schema		Read Only	
if	array: see schema		Read Only	The OCF Interfaces supported by this Resource
href	multiple types: see schema	Yes	Read Write	
rep	multiple types: see schema	Yes	Read Write	

14608 **6.73.6 CRUDN behaviour**

14609 Table 150 defines the CRUDN operations that are supported on the "oic.r.heatingzonecollection,  
14610 oic.wk.col" Resource Type.

14611 **Table 150 – The CRUDN operations of the Resource with type "rt" =**  
14612 **"oic.r.heatingzonecollection, oic.wk.col".**

Create	Read	Update	Delete	Notify
	get			observe

14613 **6.74 Selectable Levels**

14614 **6.74.1 Introduction**

14615 This Resource provides a set of device defined levels that can be selected for an operation.  
14616 For example where a humidifier has a discrete set that model different humidity levels that can be  
14617 set.

14618 The Property "availablelevels" is an array of the levels that can be selected, these can be a  
14619 number or an integer (as subset of integer).

14620 The Property "targetlevel" is the level that has currently been selected and is written to in order to  
14621 select a new level.

14622 When retrieved the targetlevel provides the actual value that has been selected.

14623 **6.74.2 Example URI**

14624 /SelectableLevelsResURI

14625 **6.74.3 Resource type**

14626 The Resource Type is defined as: "oic.r.selectablelevels".

#### 14627 6.74.4 OpenAPI 2.0 definition

```
14628 {
14629   "swagger": "2.0",
14630   "info": {
14631     "title": "Selectable Levels",
14632     "version": "20190215",
14633     "license": {
14634       "name": "OCF Data Model License",
14635       "url":
14636         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
14637         CENSE.md",
14638       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
14639         reserved."
14640     },
14641     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
14642   },
14643   "schemes": ["http"],
14644   "consumes": ["application/json"],
14645   "produces": ["application/json"],
14646   "paths": {
14647     "/SelectableLevelsResURI" : {
14648       "get": {
14649         "description": "This Resource provides a set of device defined levels that can be selected
14650         for an operation.\nFor example where a humidifier has a discrete set that model different humidity
14651         levels that can be set.\nThe Property \"availablelevels\" is an array of the levels that can be
14652         selected, these can be a number or an integer (as subset of integer).\nThe Property \"targetlevel\"
14653         is the level that has currently been selected and is written to in order to select a new
14654         level.\nWhen retrieved the targetlevel provides the actual value that has been selected.",
14655         "parameters": [
14656           {"$ref": "#/parameters/interface"}
14657         ],
14658         "responses": {
14659           "200": {
14660             "description": "Example is using integers for selection levels.",
14661             "x-example":
14662               {
14663                 "rt": ["oic.r.selectablelevels"],
14664                 "if": ["oic.if.a", "oic.if.baseline"],
14665                 "availablelevels": [0, 2, 4, 6, 8],
14666                 "targetlevel": 2
14667               },
14668             "schema": { "$ref": "#/definitions/SelectableLevels" }
14669           }
14670         }
14671       },
14672       "post": {
14673         "description": "Sets the current level from the set \"availablelevels\".",
14674         "parameters": [
14675           {"$ref": "#/parameters/interface"},
14676           {
14677             "name": "body",
14678             "in": "body",
14679             "required": true,
14680             "schema": { "$ref": "#/definitions/UpdateSchema" },
14681             "x-example":
14682               {
14683                 "targetlevel": 4
14684               }
14685           }
14686         ],
14687         "responses": {
14688           "200": {
14689             "description": "",
14690             "x-example":
14691               {
14692                 "targetlevel": 4
14693               },
14694             "schema": { "$ref": "#/definitions/UpdateSchema" }
14695           },
14696           "403": {
14697             "description": "Generated by a OCF Server when an attempt is made to update to a
```

```

14698 targetlevel that is not in the set of availablelevels",
14699     "x-example":
14700     {
14701         "availablelevels":[0, 2, 4, 6, 8],
14702         "targetlevel": 2
14703     },
14704     "schema": { "$ref": "#/definitions/SelectableLevels" }
14705     }
14706 }
14707 }
14708 },
14709 },
14710 "parameters": {
14711     "interface": {
14712         "in": "query",
14713         "name": "if",
14714         "type": "string",
14715         "enum": ["oic.if.a", "oic.if.baseline"]
14716     },
14717 },
14718 "definitions": {
14719     "SelectableLevels" : {
14720         "properties": {
14721             "rt": {
14722                 "description": "The Resource Type.",
14723                 "items": {
14724                     "enum": ["oic.r.selectablelevels"],
14725                     "maxLength": 64,
14726                     "type": "string"
14727                 },
14728                 "minItems": 1,
14729                 "uniqueItems": true,
14730                 "readOnly": true,
14731                 "type": "array"
14732             },
14733             "targetlevel": {
14734                 "description": "The target level from the available selectable set.",
14735                 "type": "number"
14736             },
14737             "availablelevels": {
14738                 "description": "The set of levels to select from.",
14739                 "items": {
14740                     "type": "number"
14741                 },
14742                 "readOnly": true,
14743                 "type": "array"
14744             },
14745             "if": {
14746                 "description": "The OCF Interface set supported by this Resource.",
14747                 "items": {
14748                     "enum": [
14749                         "oic.if.a",
14750                         "oic.if.baseline"
14751                     ],
14752                     "type": "string"
14753                 },
14754                 "minItems": 2,
14755                 "uniqueItems": true,
14756                 "readOnly": true,
14757                 "type": "array"
14758             }
14759         },
14760         "type" : "object",
14761         "required": ["availablelevels", "targetlevel"]
14762     },
14763     "UpdateSchema" : {
14764         "properties": {
14765             "targetlevel": {
14766                 "description": "The target level from the available selectable set",
14767                 "type": "number"
14768             }
14769         },

```

```

14770     "type": "object",
14771     "required": ["targetlevel"]
14772   }
14773 }
14774 }
14775

```

14776 **6.74.5 Property definition**

14777 Table 151 defines the Properties that are part of the "oic.r.selectablelevels" Resource Type.

14778 **Table 151 – The Property definitions of the Resource with type "rt" =**  
14779 **"oic.r.selectablelevels".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
targetlevel	number	Yes	Read Write	The target level from the available selectable set.
availablelevels	array: see schema	Yes	Read Only	The set of levels to select from.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
targetlevel	number	Yes	Read Write	The target level from the available selectable set

14780 **6.74.6 CRUDN behaviour**

14781 Table 152 defines the CRUDN operations that are supported on the "oic.r.selectablelevels"  
14782 Resource Type.

14783 **Table 152 – The CRUDN operations of the Resource with type "rt" =**  
14784 **"oic.r.selectablelevels".**

Create	Read	Update	Delete	Notify
	get	post		observe

14785 **6.75 Value Conditional**

14786 **6.75.1 Introduction**

14787 This Resource specifies conditions that can be applied to an observed value in any Resource.  
14788 These conditions are applied by the OCF Server exposing the Resource to any generated  
14789 notifications because of subscriptions to the Resource.

14790 A unicast RETRIEVE to the Resource will receive the most recent value; which may not be the  
14791 most recent notified value.

14792 An OCF Server exposes this Resource in association with the Resource conveying the observed  
14793 value.

14794 This is done by means of a new Resource instance with an RT of ["oic.r.<thing being observed>",  
14795 "oic.r.value.conditional"], e.g ["oic.r.temperature", "oic.r.value.conditional"].

14796 The Property "threshold" is the amount by which the thing being observed must change before a  
14797 notification is sent.

14798 The Property "minnotifyperiod" is the minimum time in ms (milliseconds) that must elapse before  
14799 a notification is sent.

14800 If the maxnotifyperiod (time in ms (milliseconds)) elapses then a notification must be sent.

14801 The Property "maxnotifyperiod" is a timer that resets each time a notification is sent.

14802 A value of '0' for any of "threshold", "minnotifyperiod" or "maxnotifyperiod" means that the  
14803 capability is supported but not active.

14804 **6.75.2 Example URI**

14805 /ValueConditionalResURI

14806 **6.75.3 Resource type**

14807 The Resource Type is defined as: "oic.r.value.conditional".

14808 **6.75.4 OpenAPI 2.0 definition**

```
14809 {
14810   "swagger": "2.0",
14811   "info": {
14812     "title": "Value Conditional",
14813     "version": "20190215",
14814     "license": {
14815       "name": "OCF Data Model License",
14816       "url":
14817         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
14818         CENSE.md",
14819       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
14820       reserved."
14821     },
14822     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
14823   },
14824   "schemes": ["http"],
14825   "consumes": ["application/json"],
14826   "produces": ["application/json"],
14827   "paths": {
14828     "/ValueConditionalResURI" : {
14829       "get": {
14830         "description": "This Resource specifies conditions that can be applied to an observed value
14831         in any Resource.\nThese conditions are applied by the OCF Server exposing the Resource to any
14832         generated notifications because of subscriptions to the Resource.\nA unicast RETRIEVE to the
14833         Resource will receive the most recent value; which may not be the most recent notified value.\nAn
14834         OCF Server exposes this Resource in association with the Resource conveying the observed
14835         value.\nThis is done by means of a new Resource instance with an RT of ["oic.r.<thing being
14836         observed>\", \"oic.r.value.conditional\"], e.g [\"oic.r.temperature\",
14837         \"oic.r.value.conditional\"].\nThe Property \"threshold\" is the amount by which the thing being
14838         observed must change before a notification is sent.\nThe Property \"minnotifyperiod\" is the minimum
14839         time in ms (milliseconds) that must elapse before a notification is sent.\nIf the maxnotifyperiod
14840         (time in ms (milliseconds)) elapses then a notification must be sent.\nThe Property
14841         \"maxnotifyperiod\" is a timer that resets each time a notification is sent.\nA value of '0' for any
14842         of \"threshold\", \"minnotifyperiod\" or \"maxnotifyperiod\" means that the capability is supported
14843         but not active.",
14844         "parameters": [
14845           {"$ref": "#/parameters/interface"}
14846         ],
14847         "responses": {
14848           "200": {
14849             "description": "",
14850             "x-example":
14851               {
14852                 "rt": ["oic.r.value.conditional"],
14853                 "if": ["oic.if.rw", "oic.if.baseline"],
14854                 "threshold": 2,
14855                 "minnotifyperiod": 2000,
14856                 "maxnotifyperiod": 5000
14857               },
14858             "schema": { "$ref": "#/definitions/valueconditional" }
14859           }
14860         }
14861       },
14862       "post": {
14863         "description": "",
14864         "parameters": [
14865           {"$ref": "#/parameters/interface"},
14866           {
14867             "name": "body",
14868             "in": "body",
14869             "required": true,
14870             "schema": { "$ref": "#/definitions/valueconditional" },

```

```

14871         "x-example":
14872             {
14873                 "threshold": 2,
14874                 "minnotifyperiod": 1500
14875             }
14876         },
14877     ],
14878     "responses": {
14879         "200": {
14880             "description": "",
14881             "x-example":
14882                 {
14883                     "threshold": 2,
14884                     "minnotifyperiod": 1500
14885                 },
14886             "schema": { "$ref": "#/definitions/valueconditional" }
14887         }
14888     }
14889 }
14890 },
14891 },
14892 "parameters": {
14893     "interface": {
14894         "in": "query",
14895         "name": "if",
14896         "type": "string",
14897         "enum": ["oic.if.rw", "oic.if.baseline"]
14898     }
14899 },
14900 "definitions": {
14901     "valueconditional": {
14902         "properties": {
14903             "rt": {
14904                 "description": "The Resource Type.",
14905                 "items": {
14906                     "maxLength": 64,
14907                     "type": "string",
14908                     "enum": ["oic.r.value.conditional"]
14909                 },
14910                 "minItems": 1,
14911                 "uniqueItems": true,
14912                 "readOnly": true,
14913                 "type": "array"
14914             },
14915             "maxnotifyperiod": {
14916                 "description": "The maximum elapsed time in ms before a notification must be sent.",
14917                 "minimum": 0,
14918                 "type": "integer"
14919             },
14920             "minnotifyperiod": {
14921                 "description": "The minimum elapsed time in ms before a notification is sent.",
14922                 "minimum": 0,
14923                 "type": "integer"
14924             },
14925             "threshold": {
14926                 "description": "The amount by which the measured value must change before a notification
14927 is sent.",
14928                 "minimum": 0,
14929                 "type": "number"
14930             },
14931             "n": {
14932                 "$ref":
14933 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14934 schema.json#/definitions/n"
14935             },
14936             "id": {
14937                 "$ref":
14938 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14939 schema.json#/definitions/id"
14940             },
14941             "if": {
14942                 "description": "The OCF Interface set supported by this Resource.",

```

```

14943     "items": {
14944         "enum": [
14945             "oic.if.rw",
14946             "oic.if.baseline"
14947         ],
14948         "type": "string",
14949         "maxLength": 64
14950     },
14951     "minItems": 2,
14952     "uniqueItems": true,
14953     "readOnly": true,
14954     "type": "array"
14955 }
14956 },
14957 "anyOf": [
14958     {
14959         "required": ["threshold"]
14960     },
14961     {
14962         "required": ["minnotifyperiod"]
14963     },
14964     {
14965         "required": ["maxnotifyperiod"]
14966     }
14967 ],
14968 "type": "object"
14969 }
14970 }
14971 }
14972

```

14973 **6.75.5 Property definition**

14974 Table 153 defines the Properties that are part of the "oic.r.value.conditional" Resource Type.

14975 **Table 153 – The Property definitions of the Resource with type "rt" =**  
14976 **"oic.r.value.conditional".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
maxnotifyperiod	integer	Yes	Read Write	The maximum elapsed time in ms before a notification must be sent.
minnotifyperiod	integer	No	Read Write	The minimum elapsed time in ms before a notification is sent.
threshold	number	No	Read Write	The amount by which the measured value must change before a notification is sent.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

14977 **6.75.6 CRUDN behaviour**

14978 Table 154 defines the CRUDN operations that are supported on the "oic.r.value.conditional"  
14979 Resource Type.

14980  
14981

**Table 154 – The CRUDN operations of the Resource with type "rt" = "oic.r.value.conditional".**

Create	Read	Update	Delete	Notify
	get	post		observe

14982 **6.76 Colour Space Coordinates**

14983 **6.76.1 Introduction**

14984 This Resource describes the colour using colour space co-ordinates.  
14985 The Property "csc" is the colour space coordinates in CIE colour space.  
14986 The first item in the array is the X coordinate.  
14987 The second item in the array is the Y coordinate.  
14988 If the Property "precision" is provided it applies to both the X and Y coordinates.  
14989 The Resource provides the colour using colour space coordinates.  
14990

14991 **6.76.2 Example URI**

14992 /example/ColourSpaceCoordinatesResURI

14993 **6.76.3 Resource type**

14994 The Resource Type is defined as: "oic.r.colour.csc".

14995 **6.76.4 OpenAPI 2.0 definition**

```
14996 {  
14997   "swagger": "2.0",  
14998   "info": {  
14999     "title": "Colour Space Coordinates",  
15000     "version": "20190215",  
15001     "license": {  
15002       "name": "OCF Data Model License",  
15003       "url":  
15004         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
15005         CENSE.md",  
15006       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
15007       reserved."  
15008     },  
15009     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
15010   },  
15011   "schemes": ["http"],  
15012   "consumes": ["application/json"],  
15013   "produces": ["application/json"],  
15014   "paths": {  
15015     "/example/ColourSpaceCoordinatesResURI" : {  
15016       "get": {  
15017         "description": "This Resource describes the colour using colour space co-ordinates.\nThe  
15018         Property \"csc\" is the colour space coordinates in CIE colour space.\n The first item in the array  
15019         is the X coordinate.\n The second item in the array is the Y coordinate.\n If the Property  
15020         \"precision\" is provided it applies to both the X and Y coordinates.\nThe Resource provides the  
15021         colour using colour space coordinates.\n",  
15022         "parameters": [  
15023           { "$ref": "#/parameters/interface" }  
15024         ],  
15025         "responses": {  
15026           "200": {  
15027             "description": "",  
15028             "x-example":  
15029               {  
15030                 "rt": ["oic.r.colour.csc"],  
15031                 "if": ["oic.if.a", "oic.if.baseline"],  
15032                 "csc": [0.41, 0.51]  
15033               },  
15034             "schema": { "$ref": "#/definitions/ColourCSC" }  
15035           }  
15036         }  
15037       }  
15038     }  
15039   }  
15040 }
```



```

15037     },
15038     "post": {
15039         "description": "Sets current colour space coordinates\n",
15040         "parameters": [
15041             { "$ref": "#/parameters/interface" },
15042             {
15043                 "name": "body",
15044                 "in": "body",
15045                 "required": true,
15046                 "schema": { "$ref": "#/definitions/ColourCSC" },
15047                 "x-example":
15048                     {
15049                         "csc": [0.40, 0.70]
15050                     }
15051             }
15052         ],
15053         "responses": {
15054             "200": {
15055                 "description": "",
15056                 "x-example":
15057                     {
15058                         "csc": [0.40, 0.70]
15059                     },
15060                 "schema": { "$ref": "#/definitions/ColourCSC" }
15061             }
15062         }
15063     }
15064 },
15065 },
15066 "parameters": {
15067     "interface": {
15068         "in": "query",
15069         "name": "if",
15070         "type": "string",
15071         "enum": ["oic.if.a", "oic.if.baseline"]
15072     }
15073 },
15074 "definitions": {
15075     "ColourCSC": {
15076         "properties": {
15077             "rt": {
15078                 "description": "The Resource Type.",
15079                 "items": {
15080                     "enum": ["oic.r.colour.csc"],
15081                     "maxLength": 64,
15082                     "type": "string"
15083                 },
15084                 "minItems": 1,
15085                 "uniqueItems": true,
15086                 "readOnly": true,
15087                 "type": "array"
15088             },
15089             "csc": {
15090                 "description": "The X and Y coordinates of the colour in CIE colour space.",
15091                 "items": {
15092                     "maximum": 1,
15093                     "minimum": 0,
15094                     "type": "number"
15095                 },
15096                 "maxItems": 2,
15097                 "minItems": 2,
15098                 "type": "array"
15099             },
15100             "n": {
15101                 "$ref":
15102                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15103                 schema.json#/definitions/n"
15104             },
15105             "id": {
15106                 "$ref":
15107                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15108                 schema.json#/definitions/id"

```

```

15109     },
15110     "precision": {
15111         "$ref":
15112         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
15113         schema.json#/definitions/precision"
15114     },
15115     "if": {
15116         "description": "The OCF Interface set supported by this Resource.",
15117         "items": {
15118             "enum": [
15119                 "oic.if.a",
15120                 "oic.if.baseline"
15121             ],
15122             "type": "string"
15123         },
15124         "minItems": 2,
15125         "uniqueItems": true,
15126         "readOnly": true,
15127         "type": "array"
15128     }
15129 },
15130 "type": "object",
15131 "required": ["csc"]
15132 }
15133 }
15134 }
15135

```

15136 **6.76.5 Property definition**

15137 Table 155 defines the Properties that are part of the "oic.r.colour.csc" Resource Type.

15138 **Table 155 – The Property definitions of the Resource with type "rt" = "oic.r.colour.csc".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
csc	array: see schema	Yes	Read Write	The X and Y coordinates of the colour in CIE colour space.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

15139 **6.76.6 CRUDN behaviour**

15140 Table 156 defines the CRUDN operations that are supported on the "oic.r.colour.csc" Resource  
 15141 Type.

15142 **Table 156 – The CRUDN operations of the Resource with type "rt" = "oic.r.colour.csc".**

Create	Read	Update	Delete	Notify
	get	post		observe

15143 **6.77 Colour Temperature**

15144 **6.77.1 Introduction**

15145 This Resource describes the colour using colour temperature conventions.  
15146 The Property "ct" is the Mired colour temperature.  
15147 The equivalent value in Kelvin is obtained by  $\text{Colour Temp(K)} = 1,000,000/\text{Colour Temp(Mired)}$   
15148 The Resource provides the colour using colour temperature conventions.

15149 **6.77.2 Example URI**

15150 /example/ColourTemperatureResURI

15151 **6.77.3 Resource type**

15152 The Resource Type is defined as: "oic.r.colour.colourtemperature".

15153 **6.77.4 OpenAPI 2.0 definition**

```
15154 {  
15155   "swagger": "2.0",  
15156   "info": {  
15157     "title": "Colour Temperature",  
15158     "version": "20190215",  
15159     "license": {  
15160       "name": "OCF Data Model License",  
15161       "url":  
15162       "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
15163       CENSE.md",  
15164       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
15165       reserved."  
15166     },  
15167     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
15168   },  
15169   "schemes": ["http"],  
15170   "consumes": ["application/json"],  
15171   "produces": ["application/json"],  
15172   "paths": {  
15173     "/example/ColourTemperatureResURI" : {  
15174       "get": {  
15175         "description": "This Resource describes the colour using colour temperature  
15176         conventions.\n\nThe Property \"ct\" is the Mired colour temperature.\n\nThe equivalent value in Kelvin  
15177         is obtained by Colour Temp(K) = 1,000,000/Colour Temp(Mired)\n\nThe Resource provides the colour using  
15178         colour temperature conventions.",  
15179         "parameters": [  
15180           { "$ref": "#/parameters/interface" }  
15181         ],  
15182         "responses": {  
15183           "200": {  
15184             "description": "",  
15185             "x-example":  
15186               {  
15187                 "rt": ["oic.r.colour.colourtemperature"],  
15188                 "if": ["oic.if.a", "oic.if.baseline"],  
15189                 "ct": 457  
15190               },  
15191             "schema": { "$ref": "#/definitions/ColourTemp" }  
15192           }  
15193         }  
15194       },  
15195       "post": {  
15196         "description": "Sets current colour temperature value\n",  
15197         "parameters": [  
15198           { "$ref": "#/parameters/interface" },  
15199           {  
15200             "name": "body",  
15201             "in": "body",  
15202             "required": true,  
15203             "schema": { "$ref": "#/definitions/ColourTemp" },  
15204             "x-example":  
15205               {
```

```

15206         "ct": 457
15207     }
15208 }
15209 ],
15210 "responses": {
15211     "200": {
15212         "description": "",
15213         "x-example":
15214         {
15215             "ct": 467
15216         },
15217         "schema": { "$ref": "#/definitions/ColourTemp" }
15218     }
15219 }
15220 }
15221 }
15222 },
15223 "parameters": {
15224     "interface": {
15225         "in": "query",
15226         "name": "if",
15227         "type": "string",
15228         "enum": ["oic.if.a", "oic.if.baseline"]
15229     }
15230 },
15231 "definitions": {
15232     "ColourTemp": {
15233         "properties": {
15234             "rt":
15235             {
15236                 "description": "The Resource Type.",
15237                 "items": {
15238                     "maxLength": 64,
15239                     "type": "string",
15240                     "enum": ["oic.r.colour.colourtemperature"]
15241                 },
15242                 "minItems": 1,
15243                 "uniqueItems": true,
15244                 "readOnly": true,
15245                 "type": "array"
15246             },
15247             "ct": {
15248                 "description": "The Mired colour temperature.",
15249                 "minimum": 0,
15250                 "type": "integer"
15251             },
15252             "n": {
15253                 "$ref":
15254                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15255                 schema.json#/definitions/n"
15256             },
15257             "id": {
15258                 "$ref":
15259                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15260                 schema.json#/definitions/id"
15261             },
15262             "range": {
15263                 "$ref":
15264                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
15265                 schema.json#/definitions/range_integer"
15266             },
15267             "step": {
15268                 "$ref":
15269                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
15270                 schema.json#/definitions/step_integer"
15271             },
15272             "if": {
15273                 "description": "The OCF Interface set supported by this Resource.",
15274                 "items": {
15275                     "enum": [
15276                         "oic.if.a",
15277                         "oic.if.baseline"

```

```

15278         ],
15279         "type": "string"
15280     },
15281     "minItems": 2,
15282     "uniqueItems": true,
15283     "readOnly": true,
15284     "type": "array"
15285 }
15286 },
15287 "type": "object",
15288 "required": ["ct"]
15289 }
15290 }
15291 }
15292

```

15293 **6.77.5 Property definition**

15294 Table 157 defines the Properties that are part of the "oic.r.colour.colourtemperature" Resource  
 15295 Type.

15296 **Table 157 – The Property definitions of the Resource with type "rt" =**  
 15297 **"oic.r.colour.colourtemperature".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
ct	integer	Yes	Read Write	The Mired colour temperature.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

15298 **6.77.6 CRUDN behaviour**

15299 Table 158 defines the CRUDN operations that are supported on the  
 15300 "oic.r.colour.colourtemperature" Resource Type.

15301 **Table 158 – The CRUDN operations of the Resource with type "rt" =**  
 15302 **"oic.r.colour.colourtemperature".**

Create	Read	Update	Delete	Notify
	get	post		observe

15303 **6.78 Colour Hue and Saturation**

15304 **6.78.1 Introduction**

15305 This Resource describes the colour using hue-saturation conventions.  
 15306 The Property "hue" is the hue angle, it is a number value as defined by the CIECAM02 model  
 15307 definition (see reference [CIE CIE159:2004]).  
 15308 A Device that does not support fractional hue angles can provide integer values.  
 15309 If Property "precision" is provided it applies to the hue angle.  
 15310 The Property "saturation" is an integer value as defined by the CIECAM02 model definition (see  
 15311 reference [CIE CIE159:2004]).

15312 The Property "saturation" can be converted to a percentage by saturation/maximumsaturation X  
15313 100; where maximumsaturation is 32767 if the Property itself is not present.  
15314 The Property "maximumsaturation" is the upper bound on the saturation supported by the Device.  
15315 If not present the maximum value for saturation is 32767.  
15316 The Resource provides the colour using hue and saturation conventions.  
15317

## 15318 **6.78.2 Example URI**

15319 /example/ColourHueSaturationResURI

## 15320 **6.78.3 Resource type**

15321 The Resource Type is defined as: "oic.r.colour.hs".

## 15322 **6.78.4 OpenAPI 2.0 definition**

```
15323 {  
15324   "swagger": "2.0",  
15325   "info": {  
15326     "title": "Colour Hue and Saturation",  
15327     "version": "20190215",  
15328     "license": {  
15329       "name": "OCF Data Model License",  
15330       "url":  
15331         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
15332         CENSE.md",  
15333         "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
15334         reserved."  
15335       },  
15336       "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
15337     },  
15338     "schemes": ["http"],  
15339     "consumes": ["application/json"],  
15340     "produces": ["application/json"],  
15341     "paths": {  
15342       "/example/ColourHueSaturationResURI" : {  
15343         "get": {  
15344           "description": "This Resource describes the colour using hue-saturation conventions.\nThe  
15345           Property \"hue\" is the hue angle, it is a number value as defined by the CIECAM02 model definition  
15346           (see reference [CIE CIE159:2004]).\nA Device that does not support fractional hue angles can provide  
15347           integer values.\nIf Property \"precision\" is provided it applies to the hue angle.\nThe Property  
15348           \"saturation\" is an integer value as defined by the CIECAM02 model definition (see reference [CIE  
15349           CIE159:2004]).\n The Property \"saturation\" can be converted to a percentage by  
15350           saturation/maximumsaturation X 100; where maximumsaturation is 32767 if the Property itself is not  
15351           present.\nThe Property \"maximumsaturation\" is the upper bound on the saturation supported by the  
15352           Device.\nIf not present the maximum value for saturation is 32767.\nThe Resource provides the colour  
15353           using hue and saturation conventions.\n",  
15354           "parameters": [  
15355             {"$ref": "#/parameters/interface"}  
15356           ],  
15357           "responses": {  
15358             "200": {  
15359               "description": "",  
15360               "x-example":  
15361                 {  
15362                   "rt": ["oic.r.colour.hs"],  
15363                   "if": ["oic.if.a", "oic.if.baseline"],  
15364                   "hue": 300.0,  
15365                   "saturation": 212,  
15366                   "maximumsaturation": 1000  
15367                 },  
15368               "schema": { "$ref": "#/definitions/ColourHS" }  
15369             }  
15370           }  
15371         },  
15372         "post": {  
15373           "description": "Sets current colour hue and saturation values.\nAt least one of hue or  
15374           saturation shall be provided in the payload.\n",  
15375           "parameters": [  

```

```

15376         {"$ref": "#/parameters/interface"},
15377         {
15378             "name": "body",
15379             "in": "body",
15380             "required": true,
15381             "schema": { "$ref": "#/definitions/ColourHS" },
15382             "x-example":
15383                 {
15384                     "hue": 300.0,
15385                     "saturation": 212
15386                 }
15387         },
15388     ],
15389     "responses": {
15390         "200": {
15391             "description": "",
15392             "x-example":
15393                 {
15394                     "hue": 300.0,
15395                     "saturation": 212
15396                 },
15397             "schema": { "$ref": "#/definitions/ColourHS" }
15398         }
15399     }
15400 },
15401 },
15402 },
15403 "parameters": {
15404     "interface" : {
15405         "in": "query",
15406         "name": "if",
15407         "type": "string",
15408         "enum": ["oic.if.a", "oic.if.baseline"]
15409     }
15410 },
15411 "definitions": {
15412     "ColourHS" : {
15413         "properties": {
15414             "rt": {
15415                 "description": "The Resource Type.",
15416                 "items": {
15417                     "enum": ["oic.r.colour.hs"],
15418                     "maxLength": 64,
15419                     "type": "string"
15420                 },
15421                 "minItems": 1,
15422                 "uniqueItems": true,
15423                 "readOnly": true,
15424                 "type": "array"
15425             },
15426             "hue": {
15427                 "description": "The hue angle as defined by the CIECAM02 model definition.",
15428                 "maximum": 360.0,
15429                 "minimum": 0.0,
15430                 "type": "number"
15431             },
15432             "saturation": {
15433                 "description": "The saturation as defined by the CIECAM02 model definition.",
15434                 "maximum": 32767,
15435                 "minimum": 0,
15436                 "type": "integer"
15437             },
15438             "maximalsaturation": {
15439                 "description": "The maximum supported value of \"saturation\" for this Device.",
15440                 "maximum": 32767,
15441                 "minimum": 0,
15442                 "readOnly": true,
15443                 "type": "integer"
15444             },
15445             "n": {
15446                 "$ref":

```

["https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-](https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-)

```

15448 schema.json#/definitions/n"
15449     },
15450     "id": {
15451       "$ref":
15452       "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15453       schema.json#/definitions/id"
15454     },
15455     "precision": {
15456       "$ref":
15457       "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
15458       schema.json#/definitions/precision"
15459     },
15460     "if": {
15461       "description": "The OCF Interface set supported by this Resource.",
15462       "items": {
15463         "enum": [
15464           "oic.if.a",
15465           "oic.if.baseline"
15466         ],
15467         "type": "string"
15468       },
15469       "minItems": 2,
15470       "uniqueItems": true,
15471       "readOnly": true,
15472       "type": "array"
15473     }
15474   },
15475   "type": "object",
15476   "required": ["hue", "saturation"]
15477 }
15478 }
15479 }
15480

```

## 15481 6.78.5 Property definition

15482 Table 159 defines the Properties that are part of the "oic.r.colour.hs" Resource Type.

15483 **Table 159 – The Property definitions of the Resource with type "rt" = "oic.r.colour.hs".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
hue	number	Yes	Read Write	The hue angle as defined by the CIECAM02 model definition.
saturation	integer	Yes	Read Write	The saturation as defined by the CIECAM02 model definition.
maximumsaturation	integer	No	Read Only	The maximum supported value of "saturation" for this Device.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.



15484 **6.78.6 CRUDN behaviour**

15485 Table 160 defines the CRUDN operations that are supported on the "oic.r.colour.hs" Resource  
15486 Type.

15487 **Table 160 – The CRUDN operations of the Resource with type "rt" = "oic.r.colour.hs".**

Create	Read	Update	Delete	Notify
	get	post		observe

15488 **6.79 Battery Material**

15489 **6.79.1 Introduction**

15490 This Resource describes the battery material represented as an enumerated set of strings.

15491 **6.79.2 Example URI**

15492 /BatteryMaterialResURI

15493 **6.79.3 Resource type**

15494 The Resource Type is defined as: "oic.r.batterymaterial".

15495 **6.79.4 OpenAPI 2.0 definition**

```
15496 {  
15497   "swagger": "2.0",  
15498   "info": {  
15499     "title": "Battery Material",  
15500     "version": "20190222",  
15501     "license": {  
15502       "name": "OCF Data Model License",  
15503       "url":  
15504         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
15505         CENSE.md",  
15506       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."  
15507     },  
15508     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
15509   },  
15510   "schemes": ["http"],  
15511   "consumes": ["application/json"],  
15512   "produces": ["application/json"],  
15513   "paths": {  
15514     "/BatteryMaterialResURI" : {  
15515       "get": {  
15516         "description": "This Resource describes the battery material represented as an enumerated  
15517         set of strings.",  
15518         "parameters": [  
15519           {"$ref": "#/parameters/interface"}  
15520         ],  
15521         "responses": {  
15522           "200": {  
15523             "description": "",  
15524             "x-example":  
15525               {  
15526                 "rt": ["oic.r.batterymaterial"],  
15527                 "if": ["oic.if.s", "oic.if.baseline"],  
15528                 "material": "Alkaline"  
15529               },  
15530             "schema": { "$ref": "#/definitions/BatteryMaterial" }  
15531           }  
15532         }  
15533       }  
15534     }  
15535   },  
15536   "parameters": {  
15537     "interface" : {  
15538       "in": "query",  
15539       "name": "if",
```

```

15540     "type": "string",
15541     "enum": ["oic.if.s", "oic.if.baseline"]
15542   },
15543 },
15544 "definitions": {
15545   "BatteryMaterial" : {
15546     "properties": {
15547       "rt": {
15548         "description": "The Resource Type.",
15549         "items": {
15550           "enum": ["oic.r.batterymaterial"],
15551           "maxLength": 64,
15552           "type": "string"
15553         },
15554         "minItems": 1,
15555         "uniqueItems": true,
15556         "readOnly": true,
15557         "type": "array"
15558       },
15559       "material": {
15560         "description": "The battery construction material (type).",
15561         "enum": [
15562           "Alkaline",
15563           "Aluminium Air",
15564           "Aluminium Ion",
15565           "Atomic Betavoltaics",
15566           "Atomic Optoelectric Nuclear",
15567           "Atomic Nuclear",
15568           "Bunsen Cell",
15569           "Chromic Acid Cell",
15570           "Poggendorff Cell",
15571           "Clark Cell",
15572           "Daniell Cell",
15573           "Dry Cell",
15574           "Earth",
15575           "Flow",
15576           "Flow Vanadium Redox",
15577           "Flow Zinc Bromine",
15578           "Flow Zinc Cerium",
15579           "Frog",
15580           "Fuel",
15581           "Galvanic Cell",
15582           "Glass",
15583           "Grove Cell",
15584           "Lead Acid",
15585           "Lead Acid Deep Cycle",
15586           "Lead Acid VRLA",
15587           "Lead Acid AGM",
15588           "Lead Acid Gel",
15589           "Leclanche Cell",
15590           "Lemon Potato",
15591           "Lithium",
15592           "Lithium Air",
15593           "Lithium Ion",
15594           "Lithium Ion Cobalt Oxide (ICR)",
15595           "Lithium Ion Manganese Oxide (IMR)",
15596           "Lithium Ion Polymer",
15597           "Lithium Iron Phosphate",
15598           "Lithium Sulfur",
15599           "Lithium Titanate",
15600           "Lithium Ion Thin Film",
15601           "Magnesium",
15602           "Magnesium Ion",
15603           "Mercury",
15604           "Molten Salt",
15605           "Nickel Cadmium",
15606           "Nickel Cadmium Vented Cell",
15607           "Nickel Hydrogen",
15608           "Nickel Iron ",
15609           "Nickel Metal Hydride",
15610           "Nickel Metal Hydride Low Self-Discharge",
15611           "Nickel Oxyhydroxide",

```

```

15612         "Nickel Oxyride",
15613         "Nickel Zinc",
15614         "Organic Radical",
15615         "Paper",
15616         "Polymer Based",
15617         "Polysulfide Bromide",
15618         "Potassium Ion",
15619         "Pulvermachers Chain",
15620         "Silicon Air",
15621         "Silver Calcium",
15622         "Silver Oxide",
15623         "Silver Zinc",
15624         "Sodium Ion",
15625         "Sodium Sulfur",
15626         "Solid State",
15627         "Sugar",
15628         "Super Iron",
15629         "UltraBattery",
15630         "Voltaic Pile",
15631         "Voltaic Pile Penny",
15632         "Voltaic Pile Trough",
15633         "Water Activated",
15634         "Weston Cell",
15635         "Zinc Air",
15636         "Zinc Carbon",
15637         "Zinc Chloride",
15638         "Zinc Ion",
15639         "Unknown"
15640     ],
15641     "readOnly": true,
15642     "type": "string"
15643 },
15644 "n": {
15645     "$ref":
15646     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15647     schema.json#/definitions/n"
15648 },
15649 "id": {
15650     "$ref":
15651     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15652     schema.json#/definitions/id"
15653 },
15654 "if": {
15655     "description": "The OCF Interface set supported by this Resource.",
15656     "items": {
15657         "enum": [
15658             "oic.if.s",
15659             "oic.if.baseline"
15660         ],
15661         "type": "string"
15662     },
15663     "minItems": 2,
15664     "uniqueItems": true,
15665     "readOnly": true,
15666     "type": "array"
15667 }
15668 },
15669 "type": "object",
15670 "required": ["material"]
15671 }
15672 }
15673 }
15674

```

### 15675 6.79.5 Property definition

15676 Table 161 defines the Properties that are part of the "oic.r.batterymaterial" Resource Type.

15677  
15678

**Table 161 – The Property definitions of the Resource with type "rt" = "oic.r.batterymaterial".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
material	string	Yes	Read Only	The battery construction material (type).
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

15679 **6.79.6 CRUDN behaviour**

15680 Table 162 defines the CRUDN operations that are supported on the "oic.r.batterymaterial"  
15681 Resource Type.

15682 **Table 162 – The CRUDN operations of the Resource with type "rt" = "oic.r.batterymaterial".**

Create	Read	Update	Delete	Notify
	get			observe

15683 **6.80 Brewing**

15684 **6.80.1 Introduction**

15685 This Resource describes the attributes associated with brewing. This resource is used for  
15686 configuration only. The Operation of the Device is handled independently of this Resource. The  
15687 amount requested is in ml. The strength of a brewed drink is an integer, the range of which may  
15688 be enforced by the presence of a strengthrange Property.

15689 **6.80.2 Example URI**

15690 /BrewingResURI

15691 **6.80.3 Resource type**

15692 The Resource Type is defined as: "oic.r.brewing".

15693 **6.80.4 OpenAPI 2.0 definition**

```

15694 {
15695   "swagger": "2.0",
15696   "info": {
15697     "title": "Brewing",
15698     "version": "20190222",
15699     "license": {
15700       "name": "OCF Data Model License",
15701       "url":
15702         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
15703         CENSE.md",
15704       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
15705     },
15706     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
15707   },
15708   "schemes": ["http"],
15709   "consumes": ["application/json"],
15710   "produces": ["application/json"],
15711   "paths": {
15712     "/BrewingResURI" : {
15713       "get": {

```

```

15714         "description": "This Resource describes the attributes associated with brewing. This
15715 resource is used for configuration only. The Operation of the Device is handled independently of
15716 this Resource. The amount requested is in ml. The strength of a brewed drink is an integer, the
15717 range of which may be enforced by the presence of a strengthrange Property.",
15718         "parameters": [
15719             { "$ref": "#/parameters/interface" }
15720         ],
15721         "responses": {
15722             "200": {
15723                 "description": "",
15724                 "x-example":
15725                     {
15726                         "rt": ["oic.r.brewing"],
15727                         "if": ["oic.if.rw", "oic.if.baseline"],
15728                         "amountrequested": 120,
15729                         "strength": 8,
15730                         "strengthrange": [1, 10]
15731                     },
15732                 "schema": { "$ref": "#/definitions/Brewing" }
15733             }
15734         },
15735     },
15736     "post": {
15737         "description": "Sets the brewing values\n",
15738         "parameters": [
15739             { "$ref": "#/parameters/interface" },
15740             {
15741                 "name": "body",
15742                 "in": "body",
15743                 "required": true,
15744                 "schema": { "$ref": "#/definitions/Brewing" },
15745                 "x-example":
15746                     {
15747                         "amountrequested": 120,
15748                         "strength": 8
15749                     }
15750             }
15751         ],
15752         "responses": {
15753             "200": {
15754                 "description": "",
15755                 "x-example":
15756                     {
15757                         "amountrequested": 120,
15758                         "strength": 8
15759                     }
15760             }
15761         }
15762     },
15763 },
15764 },
15765 "parameters": {
15766     "interface" : {
15767         "in": "query",
15768         "name": "if",
15769         "type": "string",
15770         "enum": ["oic.if.rw", "oic.if.baseline"]
15771     }
15772 },
15773 "definitions": {
15774     "Brewing" : {
15775         "properties": {
15776             "rt": {
15777                 "description": "The Resource Type.",
15778                 "items": {
15779                     "enum": ["oic.r.brewing"],
15780                     "maxLength": 64,
15781                     "type": "string"
15782                 },
15783                 "minItems": 1,
15784                 "uniqueItems": true,
15785                 "readOnly": true,

```

```

15786         "type": "array"
15787     },
15788     "strength": {
15789         "description": "The strength of a brewed drink.",
15790         "type": "integer"
15791     },
15792     "amountrequested": {
15793         "description": "The amount requested in ml.",
15794         "type": "integer"
15795     },
15796     "strengthrange": {
15797         "items": {
15798             "type": "integer"
15799         },
15800         "maxItems": 2,
15801         "minItems": 2,
15802         "readOnly": true,
15803         "type": "array"
15804     },
15805     "n": {
15806         "$ref":
15807         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15808         schema.json#/definitions/n"
15809     },
15810     "id": {
15811         "$ref":
15812         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15813         schema.json#/definitions/id"
15814     },
15815     "if": {
15816         "description": "The OCF Interface set supported by this Resource.",
15817         "items": {
15818             "enum": [
15819                 "oic.if.rw",
15820                 "oic.if.baseline"
15821             ],
15822             "type": "string"
15823         },
15824         "minItems": 2,
15825         "uniqueItems": true,
15826         "readOnly": true,
15827         "type": "array"
15828     }
15829 },
15830 "type": "object",
15831 "required": ["amountrequested"]
15832 }
15833 }
15834 }
15835

```

### 15836 6.80.5 Property definition

15837 Table 163 defines the Properties that are part of the "oic.r.brewing" Resource Type.

15838 **Table 163 – The Property definitions of the Resource with type "rt" = "oic.r.brewing".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
strength	integer	No	Read Write	The strength of a brewed drink.
amountrequested	integer	Yes	Read Write	The amount requested in ml.
strengthrange	array: see schema	No	Read Only	
n	multiple types: see schema	No	Read Write	

id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

15839 **6.80.6 CRUDN behaviour**

15840 Table 164 defines the CRUDN operations that are supported on the "oic.r.brewing" Resource Type.

15841 **Table 164 – The CRUDN operations of the Resource with type "rt" = "oic.r.brewing".**

Create	Read	Update	Delete	Notify
	get	post		observe

15842 **6.81 Energy**

15843 **6.81.1 Introduction**

15844 This Resource describes the attributes associated with electrical energy. This Resource can be  
 15845 used for either rated (read-only), desired (read-write) or measured (read-only) energy. The  
 15846 Property "voltage" is in Volts (V), The Property "current" in Amps (A), and The Property  
 15847 "frequency" is in Hertz (Hz).

15848 **6.81.2 Example URI**

15849 /EnergyResURI

15850 **6.81.3 Resource type**

15851 The Resource Type is defined as: "oic.r.energy.electrical".

15852 **6.81.4 OpenAPI 2.0 definition**

```

15853 {
15854   "swagger": "2.0",
15855   "info": {
15856     "title": "Energy",
15857     "version": "20190215",
15858     "license": {
15859       "name": "OCF Data Model License",
15860       "url":
15861         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
15862         CENSE.md",
15863       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
15864       reserved."
15865     },
15866     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
15867   },
15868   "schemes": ["http"],
15869   "consumes": ["application/json"],
15870   "produces": ["application/json"],
15871   "paths": {
15872     "/EnergyResURI" : {
15873       "get": {
15874         "description": "This Resource describes the attributes associated with electrical energy.
15875         This Resource can be used for either rated (read-only), desired (read-write) or measured (read-only)
15876         energy. The Property \"voltage\" is in Volts (V), The Property \"current\" in Amps (A), and The
15877         Property \"frequency\" is in Hertz (Hz).",
15878         "parameters": [
15879           {"$ref": "#/parameters/interface"}
15880         ],
15881         "responses": {
15882           "200": {
15883             "description": "Retrieves the current energy.",
15884             "x-example":
15885               {
15886                 "rt": ["oic.r.energy.electrical"],

```

```

15887         "if": ["oic.if.rw", "oic.if.baseline"],
15888         "voltage": 120.0,
15889         "current": 5.0,
15890         "frequency": 60.0
15891     },
15892     "schema": { "$ref": "#/definitions/Energy" }
15893 }
15894 }
15895 },
15896 "post": {
15897     "description": "Sets the desired energy values\n",
15898     "parameters": [
15899         { "$ref": "#/parameters/interface" },
15900         {
15901             "name": "body",
15902             "in": "body",
15903             "required": true,
15904             "schema": { "$ref": "#/definitions/EnergyUpdate" },
15905             "x-example":
15906                 {
15907                     "desiredvoltage": 130.0,
15908                     "desiredcurrent": 6.0
15909                 }
15910         }
15911     ],
15912     "responses": {
15913         "200": {
15914             "description": "",
15915             "x-example":
15916                 {
15917                     "desiredvoltage": 130.0,
15918                     "desiredcurrent": 6.0
15919                 }
15920         }
15921     }
15922 }
15923 }
15924 },
15925 "parameters": {
15926     "interface": {
15927         "in": "query",
15928         "name": "if",
15929         "type": "string",
15930         "enum": ["oic.if.rw", "oic.if.baseline"]
15931     }
15932 },
15933 "definitions": {
15934     "Energy": {
15935         "properties": {
15936             "rt": {
15937                 "description": "The Resource Type.",
15938                 "items": {
15939                     "enum": ["oic.r.energy.electrical"],
15940                     "maxLength": 64,
15941                     "type": "string"
15942                 },
15943                 "minItems": 1,
15944                 "uniqueItems": true,
15945                 "readOnly": true,
15946                 "type": "array"
15947             },
15948             "desiredcurrent": {
15949                 "description": "The desired electric current in Amps (A).",
15950                 "type": "number"
15951             },
15952             "current": {
15953                 "description": "The electric current in Amps (A).",
15954                 "readOnly": true,
15955                 "type": "number"
15956             },
15957             "frequency": {
15958                 "description": "The electric frequency in Hertz (Hz).",

```



```

15959         "readOnly": true,
15960         "type": "number"
15961     },
15962     "voltage": {
15963         "description": "The electric voltage in Volts (V).",
15964         "readOnly": true,
15965         "type": "number"
15966     },
15967     "desiredfrequency": {
15968         "description": "The desired electric frequency in Hertz (Hz).",
15969         "type": "number"
15970     },
15971     "desiredvoltage": {
15972         "description": "The desired electric voltage in Volts (V).",
15973         "type": "number"
15974     },
15975     "n": {
15976         "$ref":
15977         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15978         schema.json#/definitions/n"
15979     },
15980     "id": {
15981         "$ref":
15982         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15983         schema.json#/definitions/id"
15984     },
15985     "if": {
15986         "description": "The OCF Interface set supported by this Resource.",
15987         "items": {
15988             "enum": [
15989                 "oic.if.rw",
15990                 "oic.if.baseline"
15991             ],
15992             "type": "string"
15993         },
15994         "minItems": 2,
15995         "uniqueItems": true,
15996         "readOnly": true,
15997         "type": "array"
15998     }
15999 },
16000 "type" : "object",
16001 "required": ["voltage", "current", "frequency"]
16002 }
16003 ,
16004 "EnergyUpdate" : {
16005     "properties": {
16006         "desiredcurrent": {
16007             "description": "The desired electric current in Amps (A).",
16008             "type": "number"
16009         },
16010         "desiredfrequency": {
16011             "description": "The desired electric frequency in Hertz (Hz).",
16012             "type": "number"
16013         },
16014         "desiredvoltage": {
16015             "description": "The desired electric voltage in Volts (V).",
16016             "type": "number"
16017         }
16018     },
16019     "anyOf": [
16020         {
16021             "required": ["desiredvoltage"]
16022         },
16023         {
16024             "required": ["desiredcurrent"]
16025         },
16026         {
16027             "required": ["desiredfrequency"]
16028         }
16029     ],
16030     "type": "object"

```

16031 }  
 16032 }  
 16033 }  
 16034 }

16035 **6.81.5 Property definition**

16036 Table 165 defines the Properties that are part of the "oic.r.energy.electrical" Resource Type.

16037 **Table 165 – The Property definitions of the Resource with type "rt" =**  
 16038 **"oic.r.energy.electrical".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
desiredcurrent	number	No	Read Write	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	No	Read Write	The desired electric frequency in Hertz (Hz).
desiredvoltage	number	No	Read Write	The desired electric voltage in Volts (V).
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
desiredcurrent	number	No	Read Write	The desired electric current in Amps (A).
desiredfrequency	number	Yes	Read Write	The desired electric frequency in Hertz (Hz).
desiredvoltage	number	No	Read Write	The desired electric voltage in Volts (V).

16039 **6.81.6 CRUDN behaviour**

16040 Table 166 defines the CRUDN operations that are supported on the "oic.r.energy.electrical"  
 16041 Resource Type.

16042 **Table 166 – The CRUDN operations of the Resource with type "rt" =**  
 16043 **"oic.r.energy.electrical".**

Create	Read	Update	Delete	Notify
	get	post		observe

16044 **6.82 Energy Generation**

16045 **6.82.1 Introduction**

16046 This Resource describes the attributes associated with energy generation  
16047 The Property "energygenerated" is a number that provides the energy generated in Watt-  
16048 hour(Wh).

16049 **6.82.2 Example URI**

16050 /EnergyGenerationResURI

16051 **6.82.3 Resource type**

16052 The Resource Type is defined as: "oic.r.energy.generation".

16053 **6.82.4 OpenAPI 2.0 definition**

```
16054 {  
16055   "swagger": "2.0",  
16056   "info": {  
16057     "title": "Energy Generation",  
16058     "version": "20190215",  
16059     "license": {  
16060       "name": "OCF Data Model License",  
16061       "url":  
16062       "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
16063       CENSE.md",  
16064       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
16065       reserved."  
16066     },  
16067     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
16068   },  
16069   "schemes": ["http"],  
16070   "consumes": ["application/json"],  
16071   "produces": ["application/json"],  
16072   "paths": {  
16073     "/EnergyGenerationResURI" : {  
16074       "get": {  
16075         "description": "This Resource describes the attributes associated with energy  
16076         generation\nThe Property \"energygenerated\" is a number that provides the energy generated in Watt-  
16077         hour(Wh).",  
16078         "parameters": [  
16079           { "$ref": "#/parameters/interface" }  
16080         ],  
16081         "responses": {  
16082           "200": {  
16083             "description": "",  
16084             "x-example":  
16085               {  
16086                 "rt": ["oic.r.energy.generation"],  
16087                 "if": ["oic.if.s", "oic.if.baseline"],  
16088                 "energygenerated": 3000.00  
16089               },  
16090             "schema": { "$ref": "#/definitions/EnergyGeneration" }  
16091           }  
16092         }  
16093       }  
16094     }  
16095   },  
16096   "parameters": {  
16097     "interface" : {  
16098       "in" : "query",  
16099       "name" : "if",  
16100       "type" : "string",  
16101       "enum" : ["oic.if.s", "oic.if.baseline"]  
16102     }  
16103   },  
16104   "definitions": {  
16105     "EnergyGeneration" : {  
16106       "properties": {  
16107         "rt": {
```

```

16108         "description": "The Resource Type.",
16109         "items": {
16110             "enum": ["oic.r.energy.generation"],
16111             "maxLength": 64,
16112             "type": "string"
16113         },
16114         "minItems": 1,
16115         "uniqueItems": true,
16116         "readOnly": true,
16117         "type": "array"
16118     },
16119     "energygenerated": {
16120         "description": "The energy generated in Watt-hour(Wh).",
16121         "readOnly": true,
16122         "type": "number"
16123     },
16124     "n": {
16125         "$ref":
16126         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16127         schema.json#/definitions/n"
16128     },
16129     "id": {
16130         "$ref":
16131         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16132         schema.json#/definitions/id"
16133     },
16134     "if": {
16135         "description": "The OCF Interface set supported by this Resource.",
16136         "items": {
16137             "enum": [
16138                 "oic.if.s",
16139                 "oic.if.baseline"
16140             ],
16141             "type": "string"
16142         },
16143         "minItems": 2,
16144         "uniqueItems": true,
16145         "readOnly": true,
16146         "type": "array"
16147     }
16148 },
16149 "type": "object",
16150 "required": ["energygenerated"]
16151 }
16152 }
16153 }
16154

```

### 16155 6.82.5 Property definition

16156 Table 167 defines the Properties that are part of the "oic.r.energy.generation" Resource Type.

16157 **Table 167 – The Property definitions of the Resource with type "rt" =**  
16158 **"oic.r.energy.generation".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
energygenerated	number	Yes	Read Only	The energy generated in Watt-hour(Wh).
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

16159 **6.82.6 CRUDN behaviour**

16160 Table 168 defines the CRUDN operations that are supported on the "oic.r.energy.generation"  
16161 Resource Type.

16162 **Table 168 – The CRUDN operations of the Resource with type "rt" =**  
16163 **"oic.r.energy.generation".**

Create	Read	Update	Delete	Notify
	get			observe

16164 **6.83 Foaming**

16165 **6.83.1 Introduction**

16166 This Resource describes the attributes associated with foaming. The Property "foamstrength" of  
16167 the liquid is represented as an integer.  
16168 The foam strength is an integer, the range of which may be enforced by the presence of the  
16169 Property "range".

16170 **6.83.2 Example URI**

16171 /FoamingResURI

16172 **6.83.3 Resource type**

16173 The Resource Type is defined as: "oic.r.foaming".

16174 **6.83.4 OpenAPI 2.0 definition**

```
16175 {  
16176   "swagger": "2.0",  
16177   "info": {  
16178     "title": "Foaming",  
16179     "version": "20190215",  
16180     "license": {  
16181       "name": "OCF Data Model License",  
16182       "url":  
16183       "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
16184       CENSE.md",  
16185       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
16186       reserved."  
16187     },  
16188     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
16189   },  
16190   "schemes": ["http"],  
16191   "consumes": ["application/json"],  
16192   "produces": ["application/json"],  
16193   "paths": {  
16194     "/FoamingResURI" : {  
16195       "get": {  
16196         "description": "This Resource describes the attributes associated with foaming. The Property  
16197         \"foamstrength\" of the liquid is represented as an integer.\n\nThe foam strength is an integer, the  
16198         range of which may be enforced by the presence of the Property \"range\".",  
16199         "parameters": [  
16200           {"$ref": "#/parameters/interface"}  
16201         ],  
16202         "responses": {  
16203           "200": {  
16204             "description": "RETRIEVES the state of foaming.",  
16205             "x-example":  
16206               {  
16207                 "rt": ["oic.r.foaming"],  
16208                 "if": ["oic.if.rw", "oic.if.baseline"],  
16209                 "foamstrength": 50,  
16210                 "range": [0, 100]  
16211               },  
16212             "schema": { "$ref": "#/definitions/Foaming" }  
16213           }  
16214         }  
16215       }  
16216     }  
16217   }  
16218 }
```

```

16214     }
16215   },
16216   "post": {
16217     "description": "Sets foaming value\n",
16218     "parameters": [
16219       { "$ref": "#/parameters/interface" },
16220       {
16221         "name": "body",
16222         "in": "body",
16223         "required": true,
16224         "schema": { "$ref": "#/definitions/Foaming" },
16225         "x-example":
16226           {
16227             "foamstrength": 50
16228           }
16229       }
16230     ],
16231     "responses": {
16232       "200": {
16233         "description": "",
16234         "x-example":
16235           {
16236             "foamstrength": 50
16237           },
16238         "schema": { "$ref": "#/definitions/Foaming" }
16239       }
16240     }
16241   }
16242 },
16243 },
16244 "parameters": {
16245   "interface": {
16246     "in": "query",
16247     "name": "if",
16248     "type": "string",
16249     "enum": ["oic.if.rw", "oic.if.baseline"]
16250   }
16251 },
16252 "definitions": {
16253   "Foaming": {
16254     "properties": {
16255       "rt": {
16256         "description": "Resource Type",
16257         "items": {
16258           "enum": ["oic.r.foaming"],
16259           "maxLength": 64,
16260           "type": "string"
16261         },
16262         "minItems": 1,
16263         "uniqueItems": true,
16264         "readOnly": true,
16265         "type": "array"
16266       },
16267       "foamstrength": {
16268         "description": "The desired foaminess of the liquid.",
16269         "type": "integer"
16270       },
16271       "n": {
16272         "$ref":
16273           "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16274           schema.json#/definitions/n"
16275       },
16276       "id": {
16277         "$ref":
16278           "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16279           schema.json#/definitions/id"
16280       },
16281       "range": {
16282         "$ref":
16283           "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
16284           schema.json#/definitions/range_integer"
16285       },

```

```

16286     "step": {
16287         "$ref":
16288         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
16289         schema.json#/definitions/step_integer"
16290     },
16291     "if": {
16292         "description": "The interface set supported by this resource",
16293         "items": {
16294             "enum": [
16295                 "oic.if.rw",
16296                 "oic.if.baseline"
16297             ],
16298             "type": "string"
16299         },
16300         "minItems": 2,
16301         "uniqueItems": true,
16302         "readOnly": true,
16303         "type": "array"
16304     }
16305 },
16306 "type": "object",
16307 "required": ["foamstrength"]
16308 }
16309 }
16310 }
16311

```

### 16312 6.83.5 Property definition

16313 Table 169 defines the Properties that are part of the "oic.r.foaming" Resource Type.

16314 **Table 169 – The Property definitions of the Resource with type "rt" = "oic.r.foaming".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
foamstrength	integer	Yes	Read Write	The desired foaminess of the liquid.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The interface set supported by this resource

### 16315 6.83.6 CRUDN behaviour

16316 Table 170 defines the CRUDN operations that are supported on the "oic.r.foaming" Resource Type.

16317 **Table 170 – The CRUDN operations of the Resource with type "rt" = "oic.r.foaming".**

Create	Read	Update	Delete	Notify
	get	post		observe

## 16318 6.84 Grinder

### 16319 6.84.1 Introduction

16320 This Resource describes the attributes associated with a grinder. The Property "coarseness" of  
16321 the grounds is an integer. The higher the value, the less coarse. The Property "remaining" is a  
16322 percentage that represents the unground material left.

### 16323 6.84.2 Example URI

16324 /GrinderResURI

### 16325 6.84.3 Resource type

16326 The Resource Type is defined as: "oic.r.grinder".

### 16327 6.84.4 OpenAPI 2.0 definition

```
16328 {  
16329   "swagger": "2.0",  
16330   "info": {  
16331     "title": "Grinder",  
16332     "version": "20190215",  
16333     "license": {  
16334       "name": "OCF Data Model License",  
16335       "url":  
16336       "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
16337       CENSE.md",  
16338       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
16339       reserved."  
16340     },  
16341     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
16342   },  
16343   "schemes": ["http"],  
16344   "consumes": ["application/json"],  
16345   "produces": ["application/json"],  
16346   "paths": {  
16347     "/GrinderResURI" : {  
16348       "get": {  
16349         "description": "This Resource describes the attributes associated with a grinder. The  
16350         Property \"coarseness\" of the grounds is an integer. The higher the value, the less coarse. The  
16351         Property \"remaining\" is a percentage that represents the unground material left.",  
16352         "parameters": [  
16353           {"$ref": "#/parameters/interface"}  
16354         ],  
16355         "responses": {  
16356           "200": {  
16357             "description": "RETRIEVES the state of a grinder.",  
16358             "x-example":  
16359             {  
16360               "rt": ["oic.r.grinder"],  
16361               "if": ["oic.if.rw", "oic.if.baseline"],  
16362               "coarseness": 10,  
16363               "remaining": 50  
16364             },  
16365             "schema": { "$ref": "#/definitions/Grinder" }  
16366           }  
16367         }  
16368       },  
16369       "post": {  
16370         "description": "Sets grinding values.",  
16371         "parameters": [  
16372           {"$ref": "#/parameters/interface"},  
16373           {  
16374             "name": "body",  
16375             "in": "body",  
16376             "required": true,  
16377             "schema": { "$ref": "#/definitions/GrinderUpdate" },  
16378             "x-example":  
16379             {  
16380               "coarseness": 10  
16381             }  
16382           }  
16383         ]  
16384       }  
16385     }  
16386   }  
16387 }
```



```

16382     }
16383   ],
16384   "responses": {
16385     "200": {
16386       "description": "",
16387       "x-example":
16388         {
16389           "coarseness": 10
16390         },
16391       "schema": { "$ref": "#/definitions/GrinderUpdate" }
16392     }
16393   }
16394 }
16395 }
16396 },
16397 "parameters": {
16398   "interface": {
16399     "in": "query",
16400     "name": "if",
16401     "type": "string",
16402     "enum": ["oic.if.rw", "oic.if.baseline"]
16403   }
16404 },
16405 "definitions": {
16406   "Grinder": {
16407     "properties": {
16408       "rt": {
16409         "description": "Resource Type",
16410         "items": {
16411           "enum": ["oic.r.grinder"],
16412           "maxLength": 64,
16413           "type": "string"
16414         },
16415         "minItems": 1,
16416         "uniqueItems": true,
16417         "readOnly": true,
16418         "type": "array"
16419       },
16420       "coarseness": {
16421         "description": "The desired coarseness when grinding.",
16422         "type": "integer"
16423       },
16424       "remaining": {
16425         "description": "The percentage of unground material left.",
16426         "maximum": 100,
16427         "minimum": 0,
16428         "readOnly": true,
16429         "type": "integer"
16430       },
16431       "n": {
16432         "$ref":
16433           "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16434           schema.json#/definitions/n"
16435       },
16436       "id": {
16437         "$ref":
16438           "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16439           schema.json#/definitions/id"
16440       },
16441       "range": {
16442         "$ref":
16443           "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
16444           schema.json#/definitions/range_integer"
16445       },
16446       "step": {
16447         "$ref":
16448           "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
16449           schema.json#/definitions/step_integer"
16450       },
16451       "if": {
16452         "description": "The OCF Interface set supported by this Resource.",
16453         "items": {

```

```

16454         "enum": [
16455             "oic.if.rw",
16456             "oic.if.baseline"
16457         ],
16458         "type": "string"
16459     },
16460     "minItems": 2,
16461     "uniqueItems": true,
16462     "readOnly": true,
16463     "type": "array"
16464 }
16465 },
16466 "type": "object",
16467 "required": ["coarseness"]
16468 },
16469 "GrinderUpdate" : {
16470     "properties": {
16471         "coarseness": {
16472             "description": "The desired coarseness when grinding.",
16473             "type": "integer"
16474         }
16475     },
16476     "type": "object",
16477     "required": ["coarseness"]
16478 }
16479 }
16480 }
16481

```

16482 **6.84.5 Property definition**

16483 Table 171 defines the Properties that are part of the "oic.r.grinder" Resource Type.

16484 **Table 171 – The Property definitions of the Resource with type "rt" = "oic.r.grinder".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
coarseness	integer	Yes	Read Write	The desired coarseness when grinding.
remaining	integer	No	Read Only	The percentage of unground material left.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
coarseness	integer	Yes	Read Write	The desired coarseness when grinding.

16485 **6.84.6 CRUDN behaviour**

16486 Table 172 defines the CRUDN operations that are supported on the "oic.r.grinder" Resource Type.

16487 **Table 172 – The CRUDN operations of the Resource with type "rt" = "oic.r.grinder".**

Create	Read	Update	Delete	Notify
	get	post		observe

16488 **6.85 Liquid Level**

16489 **6.85.1 Introduction**

16490 This Resource describes the attributes associated with liquid level. The Property "currentlevel"  
 16491 and "desiredlevel" are defined in terms of a percentage. The behaviour of when the currentlevel  
 16492 and desiredlevel are not equal is determined by the device manufacturer.

16493 **6.85.2 Example URI**

16494 /LiquidLevelResURI

16495 **6.85.3 Resource type**

16496 The Resource Type is defined as: "oic.r.liquid.level".

16497 **6.85.4 OpenAPI 2.0 definition**

```

16498 {
16499   "swagger": "2.0",
16500   "info": {
16501     "title": "Liquid Level",
16502     "version": "20190215",
16503     "license": {
16504       "name": "OCF Data Model License",
16505       "url":
16506         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
16507         CENSE.md",
16508       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
16509         reserved."
16510     },
16511     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
16512   },
16513   "schemes": ["http"],
16514   "consumes": ["application/json"],
16515   "produces": ["application/json"],
16516   "paths": {
16517     "/LiquidLevelResURI" : {
16518       "get": {
16519         "description": "This Resource describes the attributes associated with liquid level. The
16520         Property \"currentlevel\" and \"desiredlevel\" are defined in terms of a percentage. The behaviour
16521         of when the currentlevel and desiredlevel are not equal is determined by the device manufacturer.",
16522         "parameters": [
16523           { "$ref": "#/parameters/interface" }
16524         ],
16525         "responses": {
16526           "200": {
16527             "description": "RETRIEVES the state of liquid level.",
16528             "x-example":
16529               {
16530                 "rt": ["oic.r.liquid.level"],
16531                 "if": ["oic.if.rw", "oic.if.r", "oic.if.baseline"],
16532                 "currentlevel": 60,
16533                 "desiredlevel": 80
16534               },
16535             "schema": { "$ref": "#/definitions/LiquidLevel" }
16536           }
16537         }
16538       },
16539       "post": {
16540         "description": "Sets liquid level value.",
16541         "parameters": [
16542           { "$ref": "#/parameters/interface-rw" },
16543           {
16544             "name": "body",

```

```

16545         "in": "body",
16546         "required": true,
16547         "schema": { "$ref": "#/definitions/LiquidLevelUpdate" },
16548         "x-example":
16549             {
16550                 "desiredlevel": 80
16551             }
16552     },
16553 ],
16554 "responses": {
16555     "200": {
16556         "description": "",
16557         "x-example":
16558             {
16559                 "desiredlevel": 80
16560             },
16561         "schema": { "$ref": "#/definitions/LiquidLevelUpdate" }
16562     }
16563 }
16564 }
16565 }
16566 },
16567 "parameters": {
16568     "interface" : {
16569         "in" : "query",
16570         "name" : "if",
16571         "type" : "string",
16572         "enum" : ["oic.if.rw", "oic.if.r", "oic.if.baseline"]
16573     },
16574     "interface-rw" : {
16575         "in" : "query",
16576         "name" : "if",
16577         "type" : "string",
16578         "enum" : ["oic.if.rw", "oic.if.baseline"]
16579     }
16580 },
16581 "definitions": {
16582     "LiquidLevel" : {
16583         "properties": {
16584             "rt": {
16585                 "description": "The Resource Type.",
16586                 "items": {
16587                     "enum": ["oic.r.liquid.level"],
16588                     "maxLength": 64,
16589                     "type": "string"
16590                 },
16591                 "minItems": 1,
16592                 "uniqueItems": true,
16593                 "readOnly": true,
16594                 "type": "array"
16595             },
16596             "currentlevel": {
16597                 "description": "The current level of the liquid in percentage.",
16598                 "maximum": 100,
16599                 "minimum": 0,
16600                 "readOnly": true,
16601                 "type": "integer"
16602             },
16603             "desiredlevel": {
16604                 "description": "The desired level of the liquid in percentage.",
16605                 "maximum": 100,
16606                 "minimum": 0,
16607                 "type": "integer"
16608             },
16609             "n": {
16610                 "$ref":
16611                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16612                 schema.json#/definitions/n"
16613             },
16614             "id": {
16615                 "$ref":
16616                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-

```

```

16617 schema.json#/definitions/id"
16618     },
16619     "step": {
16620         "$ref":
16621         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
16622         schema.json#/definitions/step_integer"
16623     },
16624     "if": {
16625         "description": "The OCF Interface set supported by this Resource.",
16626         "items": {
16627             "enum": [
16628                 "oic.if.rw",
16629                 "oic.if.r",
16630                 "oic.if.baseline"
16631             ],
16632             "type": "string"
16633         },
16634         "minItems": 2,
16635         "uniqueItems": true,
16636         "readOnly": true,
16637         "type": "array"
16638     }
16639 },
16640 "type" : "object",
16641 "required": ["currentlevel"]
16642 },
16643 "LiquidLevelUpdate" : {
16644     "properties": {
16645         "desiredlevel": {
16646             "description": "The desired level of the liquid in percentage.",
16647             "maximum": 100,
16648             "minimum": 0,
16649             "type": "integer"
16650         }
16651     },
16652     "type": "object",
16653     "required": ["desiredlevel"]
16654 }
16655 }
16656 }
16657

```

### 16658 6.85.5 Property definition

16659 Table 173 defines the Properties that are part of the "oic.r.liquid.level" Resource Type.

16660 **Table 173 – The Property definitions of the Resource with type "rt" = "oic.r.liquid.level".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
currentlevel	integer	Yes	Read Only	The current level of the liquid in percentage.
desiredlevel	integer	No	Read Write	The desired level of the liquid in percentage.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

desiredlevel	integer	Yes	Read Write	The desired level of the liquid in percentage.
--------------	---------	-----	------------	--

16661 **6.85.6 CRUDN behaviour**

16662 Table 174 defines the CRUDN operations that are supported on the "oic.r.liquid.level" Resource  
16663 Type.

16664 **Table 174 – The CRUDN operations of the Resource with type "rt" = "oic.r.liquid.level".**

Create	Read	Update	Delete	Notify
	get	post		observe

16665 **6.86 Vehicle Connector**

16666 **6.86.1 Introduction**

16667 This Resource describes the attributes associated with an electric vehicle charging connector.  
16668 The Property "connected" is a boolean indicating the status of the connector (False =  
16669 disconnected, True = connected). The Property "ratedchargingcapacity" and  
16670 "rateddischargingcapacity" are in Amps (A).

16671 **6.86.2 Example URI**

16672 /VehicleConnectorResURI

16673 **6.86.3 Resource type**

16674 The Resource Type is defined as: "oic.r.vehicle.connector".

16675 **6.86.4 OpenAPI 2.0 definition**

```

16676 {
16677   "swagger": "2.0",
16678   "info": {
16679     "title": "Vehicle Connector",
16680     "version": "20190215",
16681     "license": {
16682       "name": "OCF Data Model License",
16683       "url":
16684         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
16685         CENSE.md",
16686       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
16687         reserved."
16688     },
16689     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
16690   },
16691   "schemes": ["http"],
16692   "consumes": ["application/json"],
16693   "produces": ["application/json"],
16694   "paths": {
16695     "/VehicleConnectorResURI" : {
16696       "get": {
16697         "description": "This Resource describes the attributes associated with an electric vehicle
16698         charging connector. The Property \"connected\" is a boolean indicating the status of the connector
16699         (False = disconnected, True = connected). The Property \"ratedchargingcapacity\" and
16700         \"rateddischargingcapacity\" are in Amps (A).",
16701         "parameters": [
16702           {"$ref": "#/parameters/interface"}
16703         ],
16704         "responses": {
16705           "200": {
16706             "description": "",
16707             "x-example":
16708               {
16709                 "rt": ["oic.r.vehicle.connector"],
16710                 "if": ["oic.if.s", "oic.if.baseline"],
16711                 "connected": true,

```

```

16712         "ratedchargingcapacity": 20.0,
16713         "rateddischargingcapacity": 5.0
16714     },
16715     "schema": { "$ref": "#/definitions/VehicleConnector" }
16716 }
16717 }
16718 }
16719 }
16720 },
16721 "parameters": {
16722     "interface": {
16723         "in": "query",
16724         "name": "if",
16725         "type": "string",
16726         "enum": ["oic.if.s", "oic.if.baseline"]
16727     }
16728 },
16729 "definitions": {
16730     "VehicleConnector" : {
16731         "properties": {
16732             "rt": {
16733                 "description": "The Resource Type.",
16734                 "items": {
16735                     "enum": ["oic.r.vehicle.connector"],
16736                     "maxLength": 64,
16737                     "type": "string"
16738                 },
16739                 "minItems": 1,
16740                 "uniqueItems": true,
16741                 "readOnly": true,
16742                 "type": "array"
16743             },
16744             "connected": {
16745                 "description": "The connection state.",
16746                 "readOnly": true,
16747                 "type": "boolean"
16748             },
16749             "ratedchargingcapacity": {
16750                 "description": "The rated charging capacity in Amps (A).",
16751                 "readOnly": true,
16752                 "type": "number"
16753             },
16754             "rateddischargingcapacity": {
16755                 "description": "The rated discharging capacity in Amps (A).",
16756                 "readOnly": true,
16757                 "type": "number"
16758             },
16759             "n": {
16760                 "$ref":
16761 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16762 schema.json#/definitions/n"
16763             },
16764             "id": {
16765                 "$ref":
16766 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16767 schema.json#/definitions/id"
16768             },
16769             "if": {
16770                 "description": "The OCF Interface set supported by this Resource.",
16771                 "items": {
16772                     "enum": [
16773                         "oic.if.s",
16774                         "oic.if.baseline"
16775                     ],
16776                     "type": "string"
16777                 },
16778                 "minItems": 2,
16779                 "uniqueItems": true,
16780                 "readOnly": true,
16781                 "type": "array"
16782             }
16783         },

```

```

16784     "type": "object",
16785     "required": ["connected"]
16786   }
16787 }
16788 }
16789

```

16790 **6.86.5 Property definition**

16791 Table 175 defines the Properties that are part of the "oic.r.vehicle.connector" Resource Type.

16792 **Table 175 – The Property definitions of the Resource with type "rt" =**  
 16793 **"oic.r.vehicle.connector".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
connected	boolean	Yes	Read Only	The connection state.
ratedchargingcapacity	number	No	Read Only	The rated charging capacity in Amps (A).
rateddischargingcapacity	number	No	Read Only	The rated discharging capacity in Amps (A).
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

16794 **6.86.6 CRUDN behaviour**

16795 Table 176 defines the CRUDN operations that are supported on the "oic.r.vehicle.connector"  
 16796 Resource Type.

16797 **Table 176 – The CRUDN operations of the Resource with type "rt" =**  
 16798 **"oic.r.vehicle.connector".**

Create	Read	Update	Delete	Notify
	get			observe

16799 **6.87 Time Stamp**

16800 **6.87.1 Introduction**

16801 This Resource describes Properties associated with a timestamp.  
 16802 The "timestamp" Property is a string that captures a timestamp using the RFC3339 datetime  
 16803 format (e.g: 2007-04-05T14:30Z) (Time+Date+Timezone).

16804 **6.87.2 Example URI**

16805 /TimeStampResURI

16806 **6.87.3 Resource type**

16807 The Resource Type is defined as: "oic.r.time.stamp".



16808 **6.87.4 OpenAPI 2.0 definition**

```
16809 {
16810   "swagger": "2.0",
16811   "info": {
16812     "title": "Time Stamp",
16813     "version": "20190327",
16814     "license": {
16815       "name": "OCF Data Model License",
16816       "url":
16817         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
16818         CENSE.md",
16819       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
16820       reserved."
16821     },
16822     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
16823   },
16824   "schemes": ["http"],
16825   "consumes": ["application/json"],
16826   "produces": ["application/json"],
16827   "paths": {
16828     "/TimeStampResURI" : {
16829       "get": {
16830         "description": "This Resource describes Properties associated with a timestamp.\nThe
16831         \"timestamp\" Property is a string that captures a timestamp using the RFC3339 datetime format (e.g:
16832         2007-04-05T14:30Z) (Time+Date+Timezone).",
16833         "parameters": [
16834           { "$ref": "#/parameters/interface" }
16835         ],
16836         "responses": {
16837           "200": {
16838             "description": "",
16839             "x-example":
16840               {
16841                 "rt": ["oic.r.time.stamp"],
16842                 "if": ["oic.if.s", "oic.if.r", "oic.if.baseline"],
16843                 "timestamp": "2015-11-05T14:30:00Z"
16844               },
16845             "schema": { "$ref": "#/definitions/TimeStamp" }
16846           }
16847         }
16848       }
16849     },
16850   },
16851   "parameters": {
16852     "interface": {
16853       "in": "query",
16854       "name": "if",
16855       "type": "string",
16856       "enum": ["oic.if.s", "oic.if.r", "oic.if.baseline"]
16857     }
16858   },
16859   "definitions": {
16860     "TimeStamp" : {
16861       "properties": {
16862         "rt": {
16863           "description": "The Resource Type.",
16864           "items": {
16865             "enum": ["oic.r.time.stamp"],
16866             "maxLength": 64,
16867             "type": "string"
16868           },
16869           "minItems": 1,
16870           "uniqueItems": true,
16871           "readOnly": true,
16872           "type": "array"
16873         },
16874         "timestamp": {
16875           "description": "An RFC3339 formatted time indicating when the data was observed (e.g.:
16876           2016-02-15T09:19Z, 1996-12-19T16:39:57-08:00).",
16877           "format": "date-time",
16878           "readOnly": true,
```

```

16879         "type": "string"
16880     },
16881     "n": {
16882         "$ref":
16883         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16884         schema.json#/definitions/n"
16885     },
16886     "id": {
16887         "$ref":
16888         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16889         schema.json#/definitions/id"
16890     },
16891     "if": {
16892         "description": "The OCF Interface set supported by this Resource.",
16893         "items": {
16894             "enum": [
16895                 "oic.if.s",
16896                 "oic.if.r",
16897                 "oic.if.baseline"
16898             ],
16899             "type": "string"
16900         },
16901         "minItems": 2,
16902         "uniqueItems": true,
16903         "readOnly": true,
16904         "type": "array"
16905     }
16906 },
16907 "type": "object",
16908 "required": ["timestamp"]
16909 }
16910 }
16911 }
16912

```

### 16913 6.87.5 Property definition

16914 Table 177 defines the Properties that are part of the "oic.r.time.stamp" Resource Type.

16915 **Table 177 – The Property definitions of the Resource with type "rt" = "oic.r.time.stamp".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
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).
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

### 16916 6.87.6 CRUDN behaviour

16917 Table 178 defines the CRUDN operations that are supported on the "oic.r.time.stamp" Resource  
16918 Type.

16919 **Table 178 – The CRUDN operations of the Resource with type "rt" = "oic.r.time.stamp".**

Create	Read	Update	Delete	Notify
	get			observe

16920 **6.88 3D Printer**

16921 **6.88.1 Introduction**

16922 This Resource describes the attributes associated with 3D Printer. The type of 3D printing  
 16923 technology is specified by an enumerated string value. The maximum sizes in mm are included  
 16924 for the x, y, and z dimensions. A designation of whether the device is capable of WAN  
 16925 connectivity is represented in a boolean. The memory capacity is captured in MB.

16926 **6.88.2 Example URI**

16927 /3DPrinterResURI

16928 **6.88.3 Resource type**

16929 The Resource Type is defined as: "oic.r.printer.3d".

16930 **6.88.4 OpenAPI 2.0 definition**

```

16931 {
16932   "swagger": "2.0",
16933   "info": {
16934     "title": "3D Printer",
16935     "version": "20190222",
16936     "license": {
16937       "name": "OCF Data Model License",
16938       "url":
16939         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
16940         CENSE.md",
16941       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
16942     },
16943     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
16944   },
16945   "schemes": ["http"],
16946   "consumes": ["application/json"],
16947   "produces": ["application/json"],
16948   "paths": {
16949     "/3DPrinterResURI" : {
16950       "get": {
16951         "description": "This Resource describes the attributes associated with 3D Printer. The type
16952         of 3D printing technology is specified by an enumerated string value. The maximum sizes in mm are
16953         included for the x, y, and z dimensions. A designation of whether the device is capable of WAN
16954         connectivity is represented in a boolean. The memory capacity is captured in MB.",
16955         "parameters": [
16956           { "$ref": "#/parameters/interface" }
16957         ],
16958         "responses": {
16959           "200": {
16960             "description": "",
16961             "x-example":
16962               {
16963                 "rt": ["oic.r.printer.3d"],
16964                 "if": ["oic.if.r", "oic.if.baseline"],
16965                 "3dprinttype": "Digital Light Processing",
16966                 "printsizex": 300.00,
16967                 "printsizex": 200.50,
16968                 "printsizex": 250.75,
16969                 "wanconnected": false,
16970                 "memorysize": 120.5
16971               },
16972             "schema": { "$ref": "#/definitions/3DPrinter" }
16973           }
16974         }
16975       }
16976     }
  
```

```

16977 },
16978 "parameters": {
16979   "interface": {
16980     "in": "query",
16981     "name": "if",
16982     "type": "string",
16983     "enum": ["oic.if.r", "oic.if.baseline"]
16984   }
16985 },
16986 "definitions": {
16987   "3DPrinter": {
16988     "properties": {
16989       "rt": {
16990         "description": "The Resource Type",
16991         "items": {
16992           "maxLength": 64,
16993           "type": "string",
16994           "enum": ["oic.r.printer.3d"]
16995         },
16996         "minItems": 1,
16997         "uniqueItems": true,
16998         "readOnly": true,
16999         "type": "array"
17000       },
17001       "printsizex": {
17002         "description": "This Property represents the maximum size of printing object in the
17003 direction of X-axis. The unit is mm.",
17004         "readOnly": true,
17005         "type": "number"
17006       },
17007       "memorysize": {
17008         "description": "This Property represents the total memory size of the printer. The unit is
17009 MB(Mega Bytes)",
17010         "readOnly": true,
17011         "type": "number"
17012       },
17013       "3dprinttype": {
17014         "description": "The type of 3D printing technology.",
17015         "enum": [
17016           "Fused Filament Fabrication",
17017           "Fused Deposition Modeling",
17018           "Digital Light Processing",
17019           "Powder Bed & inkjet head 3D Printing",
17020           "Photopolymer Jetting Technology",
17021           "Laminated Object Manufacturing",
17022           "Stereolithography Apparatus",
17023           "Selective Laser Sintering",
17024           "Unknown"
17025         ],
17026         "readOnly": true,
17027         "type": "string"
17028       },
17029       "wanconnected": {
17030         "description": "This Property indicates the connectivity capability of the 3D printer. If
17031 the value is false, the printer does not have network facility to Wide Area Network such as internet
17032 and GSM. If the value is true, the printer has network connectivity",
17033         "readOnly": true,
17034         "type": "boolean"
17035       },
17036       "printsizex": {
17037         "description": "This Property represents the maximum size of printing object in the
17038 direction of X-axis. The unit is mm.",
17039         "readOnly": true,
17040         "type": "number"
17041       },
17042       "printsizex": {
17043         "description": "This Property represents the maximum size of printing object in the
17044 direction of Z-axis. The unit is mm.",
17045         "readOnly": true,
17046         "type": "number"
17047       },
17048       "n": {

```

```

17049         "$ref":
17050         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17051         schema.json#/definitions/n"
17052     },
17053     "id": {
17054         "$ref":
17055         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17056         schema.json#/definitions/id"
17057     },
17058     "if": {
17059         "description": "The OCF Interface set supported by this Resource.",
17060         "items": {
17061             "enum": [
17062                 "oic.if.r",
17063                 "oic.if.baseline"
17064             ],
17065             "type": "string"
17066         },
17067         "minItems": 2,
17068         "readOnly": true,
17069         "uniqueItems": true,
17070         "type": "array"
17071     }
17072 },
17073 "type": "object",
17074 "required": ["3dprinttype", "printsizex", "printsizex", "printsizex", "wanconnected",
17075 "memorysize"]
17076 }
17077 }
17078 }
17079

```

### 17080 6.88.5 Property definition

17081 Table 179 defines the Properties that are part of the "oic.r.printer.3d" Resource Type.

17082 **Table 179 – The Property definitions of the Resource with type "rt" = "oic.r.printer.3d".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type
printsizex	number	Yes	Read Only	This Property represents the maximum size of printing object in the direction of Y-axis. The unit is mm.
memorysize	number	Yes	Read Only	This Property 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 Property 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 Property represents the maximum size of printing object in the direction of X-axis. The unit is mm.
printsizeZ	number	Yes	Read Only	This Property represents the maximum size of printing object in the direction of Z-axis. The unit is mm.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

17083 **6.88.6 CRUDN behaviour**

17084 Table 180 defines the CRUDN operations that are supported on the "oic.r.printer.3d" Resource  
17085 Type.

17086 **Table 180 – The CRUDN operations of the Resource with type "rt" = "oic.r.printer.3d".**

Create	Read	Update	Delete	Notify
	get			observe

17087 **6.89 Blood Pressure**

17088 **6.89.1 Introduction**

17089 This Resource describes the Properties associated with a person's blood pressure.  
17090 The unit is a single value that is one of mmHg or kPa.  
17091 If the unit Property is missing the default is a millimeter of mercury [mmHg].  
17092 The bloodpressure and unit Properties are read-only values that are provided by the Server.  
17093 When range is omitted the default is 0 to +MAXFLOAT.

17094 **6.89.2 Example URI**

17095 /BloodPressureResURI

17096 **6.89.3 Resource type**

17097 The Resource Type is defined as: "oic.r.blood.pressure".

17098 **6.89.4 OpenAPI 2.0 definition**

```
17099 {
17100   "swagger": "2.0",
17101   "info": {
17102     "title": "Blood Pressure",
17103     "version": "2019-03-22",
17104     "license": {
17105       "name": "OCF Data Model License",
17106       "url":
17107         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
17108         CENSE.md",
17109       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
17110     },
17111     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
17112   },
17113   "schemes": [
17114     "http"
```

```

17115 ],
17116 "consumes": [
17117   "application/json"
17118 ],
17119 "produces": [
17120   "application/json"
17121 ],
17122 "paths": {
17123   "/BloodPressureResURI": {
17124     "get": {
17125       "description": "This Resource describes the Properties associated with a person's blood
17126 pressure.\nThe unit is a single value that is one of mmHg or kPa.\nIf the unit Property is missing
17127 the default is a millimeter of mercury [mmHg].\nThe bloodpressure and unit Properties are read-only
17128 values that are provided by the Server.\nWhen range is omitted the default is 0 to +MAXFLOAT.",
17129       "parameters": [
17130         {
17131           "$ref": "#/parameters/interface"
17132         }
17133       ],
17134       "responses": {
17135         "200": {
17136           "description": "",
17137           "x-example": {
17138             "rt": [
17139               "oic.r.blood.pressure"
17140             ],
17141             "systolic": 110.0,
17142             "diastolic": 85.0,
17143             "map": 93.0,
17144             "range": [20.0, 300.0],
17145             "step": 1.0,
17146             "units": "mmHg"
17147           },
17148           "schema": {
17149             "$ref": "#/definitions/BloodPressure"
17150           }
17151         }
17152       }
17153     }
17154   }
17155 },
17156 "parameters": {
17157   "interface": {
17158     "in": "query",
17159     "name": "if",
17160     "type": "string",
17161     "enum": [
17162       "oic.if.s",
17163       "oic.if.baseline"
17164     ]
17165   }
17166 },
17167 "definitions": {
17168   "BloodPressure": {
17169     "properties": {
17170       "rt": {
17171         "description": "Resource Type",
17172         "items": {
17173           "enum": [
17174             "oic.r.blood.pressure"
17175           ],
17176           "type": "string",
17177           "maxLength": 64
17178         },
17179         "minItems": 1,
17180         "uniqueItems": true,
17181         "readOnly": true,
17182         "type": "array"
17183       },
17184       "map": {
17185         "description": "Mean arterial pressure (MAP)",
17186         "minimum": 0.0,

```

```

17187         "readOnly": true,
17188         "type": "number"
17189     },
17190     "units": {
17191         "description": "Blood pressure unit",
17192         "enum": [
17193             "mmHg",
17194             "kPa"
17195         ],
17196         "readOnly": true,
17197         "type": "string",
17198         "default": "mmHg"
17199     },
17200     "systolic": {
17201         "description": "Systolic blood pressure",
17202         "minimum": 0.0,
17203         "readOnly": true,
17204         "type": "number"
17205     },
17206     "diastolic": {
17207         "description": "Diastolic blood pressure",
17208         "minimum": 0.0,
17209         "readOnly": true,
17210         "type": "number"
17211     },
17212     "if": {
17213         "description": "The OCF Interface set supported by this Resource",
17214         "items": {
17215             "enum": [
17216                 "oic.if.s",
17217                 "oic.if.baseline"
17218             ],
17219             "type": "string",
17220             "maxLength": 64
17221         },
17222         "minItems": 1,
17223         "readOnly": true,
17224         "uniqueItems": true,
17225         "type": "array"
17226     },
17227     "range": {
17228         "$ref":
17229         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
17230         schema.json#/definitions/range_number"
17231     },
17232     "step": {
17233         "$ref":
17234         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
17235         schema.json#/definitions/step_number"
17236     },
17237     "precision": {
17238         "$ref":
17239         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
17240         schema.json#/definitions/precision"
17241     },
17242     "n": {
17243         "$ref":
17244         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17245         schema.json#/definitions/n"
17246     }
17247 },
17248 "type": "object",
17249 "required": [
17250     "systolic",
17251     "diastolic"
17252 ]
17253 }
17254 }
17255 }
17256

```



17257 **6.89.5 Property definition**

17258 Table 181 defines the Properties that are part of the "oic.r.blood.pressure" Resource Type.

17259 **Table 181 – The Property definitions of the Resource with type "rt" =**  
 17260 **"oic.r.blood.pressure".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
map	number	No	Read Only	Mean arterial pressure (MAP)
units	string	No	Read Only	Blood pressure unit
systolic	number	Yes	Read Only	Systolic blood pressure
diastolic	number	Yes	Read Only	Diastolic blood pressure
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	

17261 **6.89.6 CRUDN behaviour**

17262 Table 182 defines the CRUDN operations that are supported on the "oic.r.blood.pressure"  
 17263 Resource Type.

17264 **Table 182 – The CRUDN operations of the Resource with type "rt" = "oic.r.blood.pressure".**

Create	Read	Update	Delete	Notify
	get			observe

17265 **6.90 Blood Pressure Monitor Atomic Measurement**

17266 **6.90.1 Introduction**

17267 This Resource describes the Properties associated with a blood pressure monitor.  
 17268 The Resource is an Atomic Measurement of blood pressure (oic.r.blood.pressure), pulse rate  
 17269 (oic.r.pulserate), observed time (oic.r.time.stamp), and user id (oic.r.userid).

17270 **6.90.2 Example URI**

17271 /BloodPressureMonitorAMResURI

17272 **6.90.3 Resource type**

17273 The Resource Type is defined as: "oic.r.bloodpressuremonitor-am, oic.wk.atomicmeasurement".

17274 **6.90.4 OpenAPI 2.0 definition**

```

17275 {
17276   "swagger": "2.0",
17277   "info": {
17278     "title": "Blood Pressure Monitor Atomic Measurement",
17279     "version": "2019-03-22",
  
```

```

17280     "license": {
17281         "name": "OCF Data Model License",
17282         "url":
17283 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
17284 CENSE.md",
17285         "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
17286     },
17287     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
17288 },
17289     "schemes": [
17290         "http"
17291     ],
17292     "consumes": [
17293         "application/json"
17294     ],
17295     "produces": [
17296         "application/json"
17297     ],
17298     "paths": {
17299         "/BloodPressureMonitorAMResURI?if=oic.if.b": {
17300             "get": {
17301                 "description": "This Resource describes the Properties associated with a blood pressure
17302 monitor.\nThe Resource is an Atomic Measurement of blood pressure (oic.r.blood.pressure), pulse
17303 rate (oic.r.pulserate), observed time (oic.r.time.stamp), and user id (oic.r.userid).",
17304                 "parameters": [
17305                     {
17306                         "$ref": "#/parameters/interface-all"
17307                     }
17308                 ],
17309                 "responses": {
17310                     "200": {
17311                         "description": "",
17312                         "x-example": [
17313                             {
17314                                 "href": "/myBloodPressureResURI",
17315                                 "rep": {
17316                                     "systolic": 120.0,
17317                                     "diastolic": 80.0,
17318                                     "map": 93.0,
17319                                     "range": [20.0, 300.0],
17320                                     "step": 1,
17321                                     "units": "mmHg"
17322                                 }
17323                             },
17324                             {
17325                                 "href": "/myPulseRateResURI",
17326                                 "rep": {
17327                                     "pulserate": 70,
17328                                     "range": [20, 220],
17329                                     "step": 1
17330                                 }
17331                             },
17332                             {
17333                                 "href": "/myUserId",
17334                                 "rep": {
17335                                     "userid": "USER1"
17336                                 }
17337                             },
17338                             {
17339                                 "href": "/myTimeStamp",
17340                                 "rep": {
17341                                     "timestamp": "2018-11-08T21:00+08:00"
17342                                 }
17343                             }
17344                         ],
17345                         "schema": {
17346                             "$ref": "#/definitions/batch-retrieve"
17347                         }
17348                     }
17349                 }
17350             }
17351         },

```

```

17352     "/BloodPressureMonitorAMResURI?if=oic.if.ll": {
17353         "get": {
17354             "description": "This Resource describes the Properties associated with a blood pressure
17355 monitor.\nThe Resource is an Atomic Measurement of blood pressure (oic.r.blood.pressure), pulse
17356 rate (oic.r.pulserate), observed time (oic.r.time.stamp), and user id (oic.r.userid).",
17357             "parameters": [
17358                 {
17359                     "$ref": "#/parameters/interface-all"
17360                 }
17361             ],
17362             "responses": {
17363                 "200": {
17364                     "description": "",
17365                     "x-example": [
17366                         {
17367                             "href": "/myBloodPressureResURI",
17368                             "rt": [
17369                                 "oic.r.blood.pressure"
17370                             ],
17371                             "if": [
17372                                 "oic.if.s",
17373                                 "oic.if.baseline"
17374                             ]
17375                         },
17376                         {
17377                             "href": "/myPulseRateResURI",
17378                             "rt": [
17379                                 "oic.r.pulserate"
17380                             ],
17381                             "if": [
17382                                 "oic.if.s",
17383                                 "oic.if.baseline"
17384                             ]
17385                         },
17386                         {
17387                             "href": "/myUserId",
17388                             "rt": [
17389                                 "oic.r.userid"
17390                             ],
17391                             "if": [
17392                                 "oic.if.r",
17393                                 "oic.if.baseline"
17394                             ]
17395                         },
17396                         {
17397                             "href": "/myTimeStamp",
17398                             "rt": [
17399                                 "oic.r.time.stamp"
17400                             ],
17401                             "if": [
17402                                 "oic.if.r",
17403                                 "oic.if.baseline"
17404                             ]
17405                         }
17406                     ],
17407                     "schema": {
17408                         "$ref": "#/definitions/links"
17409                     }
17410                 }
17411             }
17412         },
17413     },
17414     "/BloodPressureMonitorAMResURI?if=oic.if.baseline": {
17415         "get": {
17416             "description": "This Resource describes the Properties associated with a blood pressure
17417 monitor.\nThe Resource is an Atomic Measurement of blood pressure (oic.r.blood.pressure), pulse
17418 rate (oic.r.pulserate), observed time (oic.r.time.stamp), and user id (oic.r.userid).",
17419             "parameters": [
17420                 {
17421                     "$ref": "#/parameters/interface-all"
17422                 }
17423             ],

```

```

17424     "responses": {
17425         "200": {
17426             "description": "",
17427             "x-example": {
17428                 "rt": [
17429                     "oic.r.bloodpressuremonitor-am",
17430                     "oic.wk.atomicmeasurement"
17431                 ],
17432                 "if": [
17433                     "oic.if.b",
17434                     "oic.if.ll",
17435                     "oic.if.baseline"
17436                 ],
17437                 "rts-m": [
17438                     "oic.r.blood.pressure"
17439                 ],
17440                 "rts": [
17441                     "oic.r.blood.pressure",
17442                     "oic.r.pulserate",
17443                     "oic.r.userid",
17444                     "oic.r.time.stamp"
17445                 ],
17446                 "links": [
17447                     {
17448                         "href": "/myBloodPressureResURI",
17449                         "rt": [
17450                             "oic.r.blood.pressure"
17451                         ],
17452                         "if": [
17453                             "oic.if.s",
17454                             "oic.if.baseline"
17455                         ]
17456                     },
17457                     {
17458                         "href": "/myPulseRateResURI",
17459                         "rt": [
17460                             "oic.r.pulserate"
17461                         ],
17462                         "if": [
17463                             "oic.if.s",
17464                             "oic.if.baseline"
17465                         ]
17466                     },
17467                     {
17468                         "href": "/myUserId",
17469                         "rt": [
17470                             "oic.r.userid"
17471                         ],
17472                         "if": [
17473                             "oic.if.r",
17474                             "oic.if.baseline"
17475                         ]
17476                     },
17477                     {
17478                         "href": "/myTimeStamp",
17479                         "rt": [
17480                             "oic.r.time.stamp"
17481                         ],
17482                         "if": [
17483                             "oic.if.r",
17484                             "oic.if.baseline"
17485                         ]
17486                     }
17487                 ]
17488             },
17489             "schema": {
17490                 "$ref": "#/definitions/baseline"
17491             }
17492         }
17493     }
17494 }
17495

```

```

17496 },
17497 "parameters": {
17498   "interface-all": {
17499     "in": "query",
17500     "name": "if",
17501     "type": "string",
17502     "enum": [
17503       "oic.if.b",
17504       "oic.if.ll",
17505       "oic.if.baseline"
17506     ]
17507   }
17508 },
17509 "definitions": {
17510   "batch-retrieve": {
17511     "minItems": 1,
17512     "items": {
17513       "properties": {
17514         "href": {
17515           "$ref":
17516 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17517 schema.json#/definitions/href"
17518         },
17519         "rep": {
17520           "type": "object",
17521           "anyOf": [
17522             {
17523               "$ref":
17524 "https://openconnectivityfoundation.github.io/IoTDataModels/BloodPressureResURI.swagger.json#/defini-
17525 tions/BloodPressure"
17526             },
17527             {
17528               "$ref":
17529 "https://openconnectivityfoundation.github.io/IoTDataModels/PulseRateResURI.swagger.json#/definition-
17530 s/PulseRate"
17531             },
17532             {
17533               "$ref":
17534 "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/U-
17535 serID"
17536             },
17537             {
17538               "$ref":
17539 "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definition-
17540 s/TimeStamp"
17541             }
17542           ]
17543         }
17544       },
17545       "required": [
17546         "href",
17547         "rep"
17548       ],
17549       "type": "object"
17550     },
17551     "type": "array"
17552   },
17553   "links": {
17554     "type": "array",
17555     "items": {
17556       "$ref": "#/definitions/oic.oic-link"
17557     }
17558   },
17559   "baseline": {
17560     "properties": {
17561       "rt": {
17562         "items": {
17563           "enum": [
17564             "oic.r.bloodpressuremonitor-am",
17565             "oic.wk.atomicmeasurement"
17566           ],
17567           "type": "string",

```

```

17568         "maxLength": 64
17569     },
17570     "minItems": 2,
17571     "uniqueItems": true,
17572     "readOnly": true,
17573     "type": "array"
17574 },
17575 "rts": {
17576     "description": "This contains all possible Resource Types for this Atomic Measurement.",
17577     "items": {
17578         "enum": [
17579             "oic.r.blood.pressure",
17580             "oic.r.pulserate",
17581             "oic.r.userid",
17582             "oic.r.time.stamp"
17583         ],
17584         "type": "string",
17585         "maxLength": 64
17586     },
17587     "minItems": 1,
17588     "uniqueItems": true,
17589     "readOnly": true,
17590     "type": "array"
17591 },
17592 "rts-m": {
17593     "description": "This contains all mandatory Resource Types for this Atomic Measurement.",
17594     "items": {
17595         "enum": [
17596             "oic.r.blood.pressure"
17597         ],
17598         "type": "string",
17599         "maxLength": 64
17600     },
17601     "maxItems": 1,
17602     "minItems": 1,
17603     "uniqueItems": true,
17604     "readOnly": true,
17605     "type": "array"
17606 },
17607 "if": {
17608     "description": "The OCF Interface set supported by this Resource",
17609     "items": {
17610         "enum": [
17611             "oic.if.b",
17612             "oic.if.ll",
17613             "oic.if.baseline"
17614         ],
17615         "type": "string"
17616     },
17617     "minItems": 3,
17618     "uniqueItems": true,
17619     "readOnly": true,
17620     "type": "array"
17621 },
17622 "n": {
17623     "$ref":
17624     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17625     schema.json#/definitions/n"
17626 },
17627 "id": {
17628     "$ref":
17629     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17630     schema.json#/definitions/id"
17631 },
17632 "links": {
17633     "$ref": "#/definitions/links"
17634 }
17635 },
17636 "type": "object",
17637 "required": [
17638     "rt", "if", "rts", "rts-m", "links"
17639 ]

```

```

17640     },
17641     "oic.oic-link": {
17642       "properties": {
17643         "if": {
17644           "type": "array",
17645           "readOnly": true,
17646           "uniqueItems": true,
17647           "minItems": 1,
17648           "items": {
17649             "type": "string",
17650             "maxLength": 64,
17651             "enum": [
17652               "oic.if.s",
17653               "oic.if.r",
17654               "oic.if.baseline"
17655             ]
17656           }
17657         },
17658         "rt": {
17659           "type": "array",
17660           "readOnly": true,
17661           "uniqueItems": true,
17662           "minItems": 1,
17663           "items": {
17664             "type": "string",
17665             "maxLength": 64,
17666             "enum": [
17667               "oic.r.blood.pressure",
17668               "oic.r.pulserate",
17669               "oic.r.userid",
17670               "oic.r.time.stamp"
17671             ]
17672           }
17673         },
17674         "anchor": {
17675           "$ref":
17676             "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17677             schema.json#/definitions/anchor"
17678         },
17679         "di": {
17680           "$ref":
17681             "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17682             schema.json#/definitions/di"
17683         },
17684         "eps": {
17685           "$ref":
17686             "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17687             schema.json#/definitions/eps"
17688         },
17689         "href": {
17690           "$ref":
17691             "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17692             schema.json#/definitions/href"
17693         },
17694         "ins": {
17695           "$ref":
17696             "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17697             schema.json#/definitions/ins"
17698         },
17699         "p": {
17700           "$ref":
17701             "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17702             schema.json#/definitions/p"
17703         },
17704         "rel": {
17705           "$ref":
17706             "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17707             schema.json#/definitions/rel_array"
17708         },
17709         "title": {
17710           "$ref":
17711             "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-

```

```

17712 schema.json#/definitions/title"
17713     },
17714     "type": {
17715       "$ref":
17716       "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17717       schema.json#/definitions/type"
17718     }
17719   },
17720   "required": [
17721     "href",
17722     "rt",
17723     "if"
17724   ],
17725   "type": "object"
17726 }
17727 }
17728 }
17729

```

17730 **6.90.5 Property definition**

17731 Table 183 defines the Properties that are part of the "oic.r.bloodpressuremonitor-am,  
17732 oic.wk.atomicmeasurement" Resource Type.

17733 **Table 183 – The Property definitions of the Resource with type "rt" =**  
17734 **"oic.r.bloodpressuremonitor-am, oic.wk.atomicmeasurement".**

Property name	Value type	Mandatory	Access mode	Description
href	multiple types: see schema	Yes	Read Write	
rep	object: see schema	Yes	Read Write	
rt	array: see schema	Yes	Read Only	
rts	array: see schema	Yes	Read Only	This contains all possible Resource Types for this Atomic Measurement.
rts-m	array: see schema	Yes	Read Only	This contains all mandatory Resource Types for this Atomic Measurement.
if	array: see schema	Yes	Read Only	The OCF Interface set supported by this Resource
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
links	multiple types: see schema	Yes	Read Write	
if	array: see schema	Yes	Read Only	
rt	array: see schema	Yes	Read Only	
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	



href	multiple types: see schema	Yes	Read Write	
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	

17735 **6.90.6 CRUDN behaviour**

17736 Table 184 defines the CRUDN operations that are supported on the "oic.r.bloodpressuremonitor-  
17737 am, oic.wk.atomicmeasurement" Resource Type.

17738 **Table 184 – The CRUDN operations of the Resource with type "rt" =**  
17739 **"oic.r.bloodpressuremonitor-am, oic.wk.atomicmeasurement".**

Create	Read	Update	Delete	Notify
	get			observe

17740 **6.91 Body Mass Index(BMI)**

17741 **6.91.1 Introduction**

17742 This Resource describes the Properties associated with a person's Body Mass Index (BMI).  
17743 The unit, which is the default unit, is kg/m<sup>2</sup>.  
17744 The bmi and unit Properties are read-only values that are provided by the server.  
17745 When range is omitted the default is 0 to +MAXFLOAT.

17746 **6.91.2 Example URI**

17747 /BMIResURI

17748 **6.91.3 Resource type**

17749 The Resource Type is defined as: "oic.r.bmi".

17750 **6.91.4 OpenAPI 2.0 definition**

```

17751 {
17752   "swagger": "2.0",
17753   "info": {
17754     "title": "Body Mass Index(BMI)",
17755     "version": "2019-03-22",
17756     "license": {
17757       "name": "OCF Data Model License",
17758       "url":
17759 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
17760 CENSE.md",
17761       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
17762     },
17763     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
17764   },
17765   "schemes": [
17766     "http"
17767   ],
17768   "consumes": [
17769     "application/json"
17770   ],
17771   "produces": [
17772     "application/json"

```

```

17773 ],
17774 "paths": {
17775   "/BMIResURI": {
17776     "get": {
17777       "description": "This Resource describes the Properties associated with a person's Body Mass
17778 Index (BMI).\n\nThe unit, which is the default unit, is kg/m^2.\n\nThe bmi and unit Properties are read-
17779 only values that are provided by the server.\n\nWhen range is omitted the default is 0 to +MAXFLOAT.",
17780       "parameters": [
17781         {
17782           "$ref": "#/parameters/interface"
17783         }
17784       ],
17785       "responses": {
17786         "200": {
17787           "description": "",
17788           "x-example": {
17789             "rt": [
17790               "oic.r.bmi"
17791             ],
17792             "bmi": 20.0
17793           },
17794           "schema": {
17795             "$ref": "#/definitions/BMI"
17796           }
17797         }
17798       }
17799     }
17800   },
17801 },
17802 "parameters": {
17803   "interface": {
17804     "in": "query",
17805     "name": "if",
17806     "type": "string",
17807     "enum": [
17808       "oic.if.s",
17809       "oic.if.baseline"
17810     ]
17811   }
17812 },
17813 "definitions": {
17814   "BMI": {
17815     "properties": {
17816       "rt": {
17817         "description": "Resource Type",
17818         "items": {
17819           "enum": [
17820             "oic.r.bmi"
17821           ],
17822           "type": "string",
17823           "maxLength": 64
17824         },
17825         "minItems": 1,
17826         "uniqueItems": true,
17827         "readOnly": true,
17828         "type": "array"
17829       },
17830       "bmi": {
17831         "description": "Body Mass Index (BMI) in kg/m^2",
17832         "minimum": 0.0,
17833         "readOnly": true,
17834         "type": "number"
17835       },
17836       "range": {
17837         "$ref":
17838 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
17839 schema.json#/definitions/range_number"
17840       },
17841       "step": {
17842         "$ref":
17843 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
17844 schema.json#/definitions/step_number"

```

```

17845     },
17846     "precision": {
17847       "$ref":
17848       "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
17849       schema.json#/definitions/precision"
17850     },
17851     "n": {
17852       "$ref":
17853       "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17854       schema.json#/definitions/n"
17855     },
17856     "id": {
17857       "$ref":
17858       "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17859       schema.json#/definitions/id"
17860     },
17861     "if": {
17862       "description": "The OCF Interface set supported by this Resource",
17863       "items": {
17864         "enum": [
17865           "oic.if.s",
17866           "oic.if.baseline"
17867         ],
17868         "type": "string",
17869         "maxLength": 64
17870       },
17871       "minItems": 1,
17872       "readOnly": true,
17873       "uniqueItems": true,
17874       "type": "array"
17875     }
17876   },
17877   "type": "object",
17878   "required": [
17879     "bmi"
17880   ]
17881 }
17882 }
17883 }
17884

```

17885 **6.91.5 Property definition**

17886 Table 185 defines the Properties that are part of the "oic.r.bmi" Resource Type.

17887 **Table 185 – The Property definitions of the Resource with type "rt" = "oic.r.bmi".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
bmi	number	Yes	Read Only	Body Mass Index (BMI) in kg/m <sup>2</sup>
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

17888 **6.91.6 CRUDN behaviour**

17889 Table 186 defines the CRUDN operations that are supported on the "oic.r.bmi" Resource Type.

17890 **Table 186 – The CRUDN operations of the Resource with type "rt" = "oic.r.bmi".**

Create	Read	Update	Delete	Notify
	get			observe

17891 **6.92 Body Fat**

17892 **6.92.1 Introduction**

17893 This Resource describes the Properties associated with a person's body fat.

17894 The unit is a single value that is one of kg, lb or percent.

17895 If the unit Property is missing the default is kilograms [kg].

17896 The bodyfat and unit Properties are read-only values that are provided by the Server.

17897 When range is omitted the default is 0 to +MAXFLOAT.

17898 **6.92.2 Example URI**

17899 /BodyFatResURI

17900 **6.92.3 Resource type**

17901 The Resource Type is defined as: "oic.r.body.fat".

17902 **6.92.4 OpenAPI 2.0 definition**

```
17903 {
17904   "swagger": "2.0",
17905   "info": {
17906     "title": "Body Fat",
17907     "version": "2019-03-22",
17908     "license": {
17909       "name": "OCF Data Model License",
17910       "url":
17911         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
17912         CENSE.md",
17913       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
17914     },
17915     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
17916   },
17917   "schemes": [
17918     "http"
17919   ],
17920   "consumes": [
17921     "application/json"
17922   ],
17923   "produces": [
17924     "application/json"
17925   ],
17926   "paths": {
17927     "/BodyFatResURI": {
17928       "get": {
17929         "description": "This Resource describes the Properties associated with a person's body
17930         fat.\nThe unit is a single value that is one of kg, lb or percent.\nIf the unit Property is missing
17931         the default is kilograms [kg].\nThe bodyfat and unit Properties are read-only values that are
17932         provided by the Server.\nWhen range is omitted the default is 0 to +MAXFLOAT.",
17933         "parameters": [
17934           {
17935             "$ref": "#/parameters/interface"
17936           }
17937         ],
17938         "responses": {
17939           "200": {
17940             "description": "",
17941             "x-example": {
17942               "rt": [
```

```

17943         "oic.r.body.fat"
17944     ],
17945     "bodyfat": 20.0,
17946     "units": "kg"
17947 },
17948 "schema": {
17949     "$ref": "#/definitions/BodyFat"
17950 }
17951 }
17952 }
17953 }
17954 }
17955 },
17956 "parameters": {
17957     "interface": {
17958         "in": "query",
17959         "name": "if",
17960         "type": "string",
17961         "enum": [
17962             "oic.if.s",
17963             "oic.if.baseline"
17964         ]
17965     }
17966 },
17967 "definitions": {
17968     "BodyFat": {
17969         "properties": {
17970             "rt": {
17971                 "description": "Resource Type",
17972                 "items": {
17973                     "enum": [
17974                         "oic.r.body.fat"
17975                     ],
17976                     "type": "string",
17977                     "maxLength": 64
17978                 },
17979                 "minItems": 1,
17980                 "uniqueItems": true,
17981                 "readOnly": true,
17982                 "type": "array"
17983             },
17984             "bodyfat": {
17985                 "description": "Body fat.",
17986                 "minimum": 0.0,
17987                 "readOnly": true,
17988                 "type": "number"
17989             },
17990             "units": {
17991                 "description": "Body fat units",
17992                 "enum": [
17993                     "kg",
17994                     "lb",
17995                     "percent"
17996                 ],
17997                 "readOnly": true,
17998                 "type": "string",
17999                 "default": "kg"
18000             },
18001             "range": {
18002                 "$ref":
18003 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
18004 schema.json#/definitions/range_number"
18005             },
18006             "step": {
18007                 "$ref":
18008 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
18009 schema.json#/definitions/step_number"
18010             },
18011             "precision": {
18012                 "$ref":
18013 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
18014 schema.json#/definitions/precision"

```

```

18015     },
18016     "n": {
18017       "$ref":
18018       "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
18019       schema.json#/definitions/n"
18020     },
18021     "id": {
18022       "$ref":
18023       "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
18024       schema.json#/definitions/id"
18025     },
18026     "if": {
18027       "description": "The OCF Interface set supported by this Resource",
18028       "items": {
18029         "enum": [
18030           "oic.if.s",
18031           "oic.if.baseline"
18032         ],
18033         "type": "string",
18034         "maxLength": 64
18035       },
18036       "minItems": 1,
18037       "readOnly": true,
18038       "type": "array"
18039     }
18040   },
18041   "type": "object",
18042   "required": [
18043     "bodyfat"
18044   ]
18045 }
18046 }
18047 }
18048

```

### 18049 6.92.5 Property definition

18050 Table 187 defines the Properties that are part of the "oic.r.body.fat" Resource Type.

18051 **Table 187 – The Property definitions of the Resource with type "rt" = "oic.r.body.fat".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
bodyfat	number	Yes	Read Only	Body fat.
units	string	No	Read Only	Body fat units
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

### 18052 6.92.6 CRUDN behaviour

18053 Table 188 defines the CRUDN operations that are supported on the "oic.r.body.fat" Resource Type.

18054 **Table 188 – The CRUDN operations of the Resource with type "rt" = "oic.r.body.fat".**

Create	Read	Update	Delete	Notify
	get			observe

18055 **6.93 Body Fat Free Mass**

18056 **6.93.1 Introduction**

18057 This Resource describes the Properties associated with a person's body fat free mass.  
 18058 The unit is a single value that is one of kg, lb or percent.  
 18059 If the unit Property is missing the default is kilograms [kg].  
 18060 The ffm and unit Properties are read-only values that are provided by the Server.  
 18061 When range is omitted the default is 0 to +MAXFLOAT.

18062 **6.93.2 Example URI**

18063 /BodyFatFreeMassResURI

18064 **6.93.3 Resource type**

18065 The Resource Type is defined as: "oic.r.body.ffm".

18066 **6.93.4 OpenAPI 2.0 definition**

```

18067 {
18068   "swagger": "2.0",
18069   "info": {
18070     "title": "Body Fat Free Mass",
18071     "version": "2019-03-22",
18072     "license": {
18073       "name": "OCF Data Model License",
18074       "url":
18075         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
18076         CENSE.md",
18077       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
18078     },
18079     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
18080   },
18081   "schemes": [
18082     "http"
18083   ],
18084   "consumes": [
18085     "application/json"
18086   ],
18087   "produces": [
18088     "application/json"
18089   ],
18090   "paths": {
18091     "/BodyFatFreeMassResURI": {
18092       "get": {
18093         "description": "This Resource describes the Properties associated with a person's body fat
18094         free mass.\n\nThe unit is a single value that is one of kg, lb or percent.\n\nIf the unit Property is
18095         missing the default is kilograms [kg].\n\nThe ffm and unit Properties are read-only values that are
18096         provided by the Server.\n\nWhen range is omitted the default is 0 to +MAXFLOAT.",
18097         "parameters": [
18098           {
18099             "$ref": "#/parameters/interface"
18100           }
18101         ],
18102         "responses": {
18103           "200": {
18104             "description": "",
18105             "x-example": {
18106               "rt": [
18107                 "oic.r.body.ffm"
18108               ],
18109               "ffm": 40.0,
18110               "units": "kg"
18111             }
18112           }
18113         }
18114       }
18115     }
18116   }
18117 }
    
```

```

18112         "schema": {
18113             "$ref": "#/definitions/BodyFatFreeMass"
18114         }
18115     }
18116 }
18117 }
18118 },
18119 },
18120 "parameters": {
18121     "interface": {
18122         "in": "query",
18123         "name": "if",
18124         "type": "string",
18125         "enum": [
18126             "oic.if.s",
18127             "oic.if.baseline"
18128         ]
18129     }
18130 },
18131 "definitions": {
18132     "BodyFatFreeMass": {
18133         "properties": {
18134             "rt": {
18135                 "description": "Resource Type",
18136                 "items": {
18137                     "enum": [
18138                         "oic.r.body.ffm"
18139                     ],
18140                     "type": "string",
18141                     "maxLength": 64
18142                 },
18143                 "minItems": 1,
18144                 "uniqueItems": true,
18145                 "readOnly": true,
18146                 "type": "array"
18147             },
18148             "ffm": {
18149                 "description": "Body fat free mass.",
18150                 "minimum": 0.0,
18151                 "readOnly": true,
18152                 "type": "number"
18153             },
18154             "units": {
18155                 "description": "Body fat free mass units",
18156                 "enum": [
18157                     "kg",
18158                     "lb",
18159                     "percent"
18160                 ],
18161                 "readOnly": true,
18162                 "type": "string",
18163                 "default": "kg"
18164             },
18165             "range": {
18166                 "$ref":
18167 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
18168 schema.json#/definitions/range_number"
18169             },
18170             "step": {
18171                 "$ref":
18172 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
18173 schema.json#/definitions/step_number"
18174             },
18175             "precision": {
18176                 "$ref":
18177 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
18178 schema.json#/definitions/precision"
18179             },
18180             "n": {
18181                 "$ref":
18182 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
18183 schema.json#/definitions/n"

```



```

18184     },
18185     "id": {
18186       "$ref":
18187       "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
18188       schema.json#/definitions/id"
18189     },
18190     "if": {
18191       "description": "The OCF Interface set supported by this Resource",
18192       "items": {
18193         "enum": [
18194           "oic.if.s",
18195           "oic.if.baseline"
18196         ],
18197         "type": "string",
18198         "maxLength": 64
18199       },
18200       "minItems": 1,
18201       "readOnly": true,
18202       "uniqueItems": true,
18203       "type": "array"
18204     }
18205   },
18206   "type": "object",
18207   "required": [
18208     "ffm"
18209   ]
18210 }
18211 }
18212 }
18213

```

### 18214 6.93.5 Property definition

18215 Table 189 defines the Properties that are part of the "oic.r.body.ffm" Resource Type.

18216 **Table 189 – The Property definitions of the Resource with type "rt" = "oic.r.body.ffm".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
ffm	number	Yes	Read Only	Body fat free mass.
units	string	No	Read Only	Body fat free mass units
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

### 18217 6.93.6 CRUDN behaviour

18218 Table 190 defines the CRUDN operations that are supported on the "oic.r.body.ffm" Resource Type.

18219 **Table 190 – The CRUDN operations of the Resource with type "rt" = "oic.r.body.ffm".**

Create	Read	Update	Delete	Notify
	get			observe

18220 **6.94 Body Location Temperature**

18221 **6.94.1 Introduction**

18222 This Resource describes the Properties associated with body location for temperature  
18223 measurement of a person.

18224 The bloc Property is a read-only value that is provided by the Server.

18225 **6.94.2 Example URI**

18226 /BodyLocationTemperatureResURI

18227 **6.94.3 Resource type**

18228 The Resource Type is defined as: "oic.r.body.location.temperature".

18229 **6.94.4 OpenAPI 2.0 definition**

```

18230 {
18231   "swagger": "2.0",
18232   "info": {
18233     "title": "Body Location Temperature",
18234     "version": "2019-03-22",
18235     "license": {
18236       "name": "OCF Data Model License",
18237       "url":
18238 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
18239 CENSE.md",
18240       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
18241     },
18242     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
18243   },
18244   "schemes": [
18245     "http"
18246   ],
18247   "consumes": [
18248     "application/json"
18249   ],
18250   "produces": [
18251     "application/json"
18252   ],
18253   "paths": {
18254     "/BodyLocationTemperatureResURI": {
18255       "get": {
18256         "description": "This Resource describes the Properties associated with body location for
18257 temperature measurement of a person.\n\nThe bloc Property is a read-only value that is provided by the
18258 Server.",
18259         "parameters": [
18260           {
18261             "$ref": "#/parameters/interface"
18262           }
18263         ],
18264         "responses": {
18265           "200": {
18266             "description": "",
18267             "x-example": {
18268               "rt": [
18269                 "oic.r.body.location.temperature"
18270               ],
18271               "bloc": "ear"
18272             },
18273             "schema": {
18274               "$ref": "#/definitions/BodyLocationTemperature"
18275             }
18276           }
18277         }
18278       }
18279     }
18280   }

```

```

18277     }
18278   }
18279 }
18280 },
18281 "parameters": {
18282   "interface": {
18283     "in": "query",
18284     "name": "if",
18285     "type": "string",
18286     "enum": [
18287       "oic.if.s",
18288       "oic.if.baseline"
18289     ]
18290   }
18291 },
18292 "definitions": {
18293   "BodyLocationTemperature": {
18294     "properties": {
18295       "rt": {
18296         "description": "Resource Type",
18297         "items": {
18298           "enum": [
18299             "oic.r.body.location.temperature"
18300           ],
18301           "type": "string",
18302           "maxLength": 64
18303         },
18304         "minItems": 1,
18305         "uniqueItems": true,
18306         "readOnly": true,
18307         "type": "array"
18308       },
18309       "bloc": {
18310         "description": "A list specific to temperature site",
18311         "enum": [
18312           "axillary",
18313           "body",
18314           "ear",
18315           "finger",
18316           "gitract",
18317           "mouth",
18318           "rectum",
18319           "toe",
18320           "tympanum"
18321         ],
18322         "readOnly": true,
18323         "type": "string"
18324       },
18325       "n": {
18326         "$ref":
18327         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
18328         schema.json#/definitions/n"
18329       },
18330       "id": {
18331         "$ref":
18332         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
18333         schema.json#/definitions/id"
18334       },
18335       "if": {
18336         "description": "The OCF Interface set supported by this Resource",
18337         "items": {
18338           "enum": [
18339             "oic.if.s",
18340             "oic.if.baseline"
18341           ],
18342           "type": "string",
18343           "maxLength": 64
18344         },
18345         "minItems": 1,
18346         "readOnly": true,
18347         "uniqueItems": true,
18348         "type": "array"

```

```

18349     }
18350     },
18351     "type": "object",
18352     "required": [
18353         "bloc"
18354     ]
18355 }
18356 }
18357 }
18358

```

### 18359 6.94.5 Property definition

18360 Table 191 defines the Properties that are part of the "oic.r.body.location.temperature" Resource  
 18361 Type.

**Table 191 – The Property definitions of the Resource with type "rt" = "oic.r.body.location.temperature".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
bloc	string	Yes	Read Only	A list specific to temperature site
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

### 18364 6.94.6 CRUDN behaviour

18365 Table 192 defines the CRUDN operations that are supported on the  
 18366 "oic.r.body.location.temperature" Resource Type.

**Table 192 – The CRUDN operations of the Resource with type "rt" = "oic.r.body.location.temperature".**

Create	Read	Update	Delete	Notify
	get			observe

## 18369 6.95 Body Scale Atomic Measurement

### 18370 6.95.1 Introduction

18371 This Resource describes the Properties associated with body scale.  
 18372 The Resource is an Atomic Measurement of weight (oic.r.weight), body mass index (BMI)  
 18373 (oic.r.bmi), height (oic.r.height), body fat (oic.r.body.fat), body water (oic.r.body.water), body soft  
 18374 lean mass (oic.r.body.slm), body fat free mass (oic.r.body.ffmpeg), observed time (oic.r.time.stamp),  
 18375 and user id (oic.r.userid).

### 18376 6.95.2 Example URI

18377 /BodyScaleAMResURI

### 18378 6.95.3 Resource type

18379 The Resource Type is defined as: "oic.r.bodyscale-am, oic.wk.atomicmeasurement".

### 18380 6.95.4 OpenAPI 2.0 definition

```

18381 {
18382     "swagger": "2.0",

```

```

18383   "info": {
18384     "title": "Body Scale Atomic Measurement",
18385     "version": "2019-03-22",
18386     "license": {
18387       "name": "OCF Data Model License",
18388       "url":
18389 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
18390 CENSE.md",
18391       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
18392     },
18393     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
18394   },
18395   "schemes": [
18396     "http"
18397   ],
18398   "consumes": [
18399     "application/json"
18400   ],
18401   "produces": [
18402     "application/json"
18403   ],
18404   "paths": {
18405     "/BodyScaleAMResURI?if=oic.if.b": {
18406       "get": {
18407         "description": "This Resource describes the Properties associated with body scale.\nThe
18408 Resource is an Atomic Measurement of weight (oic.r.weight), body mass index (BMI) (oic.r.bmi),
18409 height (oic.r.height), body fat (oic.r.body.fat), body water (oic.r.body.water), body soft lean mass
18410 (oic.r.body.slm), body fat free mass (oic.r.body.ffm), observed time (oic.r.time.stamp), and user id
18411 (oic.r.userid).",
18412         "parameters": [
18413           {
18414             "$ref": "#/parameters/interface-all"
18415           }
18416         ],
18417         "responses": {
18418           "200": {
18419             "description": "",
18420             "x-example": [
18421               {
18422                 "href": "/myWeight",
18423                 "rep": {
18424                   "weight": 80.0,
18425                   "units": "kg"
18426                 }
18427               },
18428               {
18429                 "href": "/myBMI",
18430                 "rep": {
18431                   "bmi": 20.0
18432                 }
18433               },
18434               {
18435                 "href": "/myHeight",
18436                 "rep": {
18437                   "height": 1.8,
18438                   "units": "m"
18439                 }
18440               },
18441               {
18442                 "href": "/myBodyFat",
18443                 "rep": {
18444                   "bodyfat": 20.0,
18445                   "units": "kg"
18446                 }
18447               },
18448               {
18449                 "href": "/myBodyWater",
18450                 "rep": {
18451                   "bwater": 20.0,
18452                   "units": "kg"
18453                 }
18454             }
18455           }
18456         ]
18457       }
18458     }
18459   }

```

```

18455     {
18456         "href": "/myBodySoftLeanMass",
18457         "rep": {
18458             "slm": 20.0,
18459             "units": "kg"
18460         }
18461     },
18462     {
18463         "href": "/myBodyFatFreeMass",
18464         "rep": {
18465             "ffm": 40.0,
18466             "units": "kg"
18467         }
18468     },
18469     {
18470         "href": "/myUserId",
18471         "rep": {
18472             "userid": "USER1"
18473         }
18474     },
18475     {
18476         "href": "/myTimeStamp",
18477         "rep": {
18478             "timestamp": "2018-11-09T12:15+08:00"
18479         }
18480     }
18481 ],
18482 "schema": {
18483     "$ref": "#/definitions/batch-retrieve"
18484 }
18485 }
18486 }
18487 }
18488 },
18489 "/BodyScaleAMResURI?if=oic.if.ll": {
18490     "get": {
18491         "description": "This Resource describes the Properties associated with body scale.\nThe
18492 Resource is an Atomic Measurement of weight (oic.r.weight), body mass index (BMI) (oic.r.bmi),
18493 height (oic.r.height), body fat (oic.r.body.fat), body water (oic.r.body.water), body soft lean mass
18494 (oic.r.body.slm), body fat free mass (oic.r.body.ffm), observed time (oic.r.time.stamp), and user id
18495 (oic.r.userid).",
18496         "parameters": [
18497             {
18498                 "$ref": "#/parameters/interface-all"
18499             }
18500         ],
18501         "responses": {
18502             "200": {
18503                 "description": "",
18504                 "x-example": [
18505                     {
18506                         "href": "/myWeight",
18507                         "rt": [
18508                             "oic.r.weight"
18509                         ],
18510                         "if": [
18511                             "oic.if.s",
18512                             "oic.if.baseline"
18513                         ]
18514                     },
18515                     {
18516                         "href": "/myBMI",
18517                         "rt": [
18518                             "oic.r.bmi"
18519                         ],
18520                         "if": [
18521                             "oic.if.s",
18522                             "oic.if.baseline"
18523                         ]
18524                     }
18525                 ],
18526                 {
18527                     "href": "/myHeight",

```

```

18527         "rt": [
18528             "oic.r.height"
18529         ],
18530         "if": [
18531             "oic.if.s",
18532             "oic.if.baseline"
18533         ]
18534     },
18535     {
18536         "href": "/myBodyFat",
18537         "rt": [
18538             "oic.r.body.fat"
18539         ],
18540         "if": [
18541             "oic.if.s",
18542             "oic.if.baseline"
18543         ]
18544     },
18545     {
18546         "href": "/myBodyWater",
18547         "rt": [
18548             "oic.r.body.water"
18549         ],
18550         "if": [
18551             "oic.if.s",
18552             "oic.if.baseline"
18553         ]
18554     },
18555     {
18556         "href": "/myBodySoftLeanMass",
18557         "rt": [
18558             "oic.r.body.slm"
18559         ],
18560         "if": [
18561             "oic.if.s",
18562             "oic.if.baseline"
18563         ]
18564     },
18565     {
18566         "href": "/myBodyFatFreeMass",
18567         "rt": [
18568             "oic.r.body.ffm"
18569         ],
18570         "if": [
18571             "oic.if.s",
18572             "oic.if.baseline"
18573         ]
18574     },
18575     {
18576         "href": "/myUserId",
18577         "rt": [
18578             "oic.r.userid"
18579         ],
18580         "if": [
18581             "oic.if.r",
18582             "oic.if.baseline"
18583         ]
18584     },
18585     {
18586         "href": "/myTimeStamp",
18587         "rt": [
18588             "oic.r.time.stamp"
18589         ],
18590         "if": [
18591             "oic.if.r",
18592             "oic.if.baseline"
18593         ]
18594     }
18595 ],
18596 "schema": {
18597     "$ref": "#/definitions/links"
18598 }

```

```

18599     }
18600   }
18601 }
18602 },
18603 "/BodyScaleAMResURI?if=oic.if.baseline": {
18604   "get": {
18605     "description": "This Resource describes the Properties associated with body scale.\nThe
18606 Resource is an Atomic Measurement of weight (oic.r.weight), body mass index (BMI) (oic.r.bmi),
18607 height (oic.r.height), body fat (oic.r.body.fat), body water (oic.r.body.water), body soft lean mass
18608 (oic.r.body.slm), body fat free mass (oic.r.body.ffm), observed time (oic.r.time.stamp), and user id
18609 (oic.r.userid).",
18610     "parameters": [
18611       {
18612         "$ref": "#/parameters/interface-all"
18613       }
18614     ],
18615     "responses": {
18616       "200": {
18617         "description": "",
18618         "x-example": {
18619           "rt": [
18620             "oic.r.bodyscale-am",
18621             "oic.wk.atomicmeasurement"
18622           ],
18623           "if": [
18624             "oic.if.b",
18625             "oic.if.ll",
18626             "oic.if.baseline"
18627           ],
18628           "rts": [
18629             "oic.r.weight",
18630             "oic.r.bmi",
18631             "oic.r.height",
18632             "oic.r.body.fat",
18633             "oic.r.body.water",
18634             "oic.r.body.slm",
18635             "oic.r.body.ffm",
18636             "oic.r.userid",
18637             "oic.r.time.stamp"
18638           ],
18639           "rts-m": [
18640             "oic.r.weight"
18641           ],
18642           "links": [
18643             {
18644               "href": "/myWeight",
18645               "rt": [
18646                 "oic.r.weight"
18647               ],
18648               "if": [
18649                 "oic.if.s",
18650                 "oic.if.baseline"
18651               ]
18652             },
18653             {
18654               "href": "/myBMI",
18655               "rt": [
18656                 "oic.r.bmi"
18657               ],
18658               "if": [
18659                 "oic.if.s",
18660                 "oic.if.baseline"
18661               ]
18662             },
18663             {
18664               "href": "/myHeight",
18665               "rt": [
18666                 "oic.r.height"
18667               ],
18668               "if": [
18669                 "oic.if.s",
18670                 "oic.if.baseline"

```



```

18671     ]
18672     },
18673     {
18674         "href": "/myBodyFat",
18675         "rt": [
18676             "oic.r.body.fat"
18677         ],
18678         "if": [
18679             "oic.if.s",
18680             "oic.if.baseline"
18681         ]
18682     },
18683     {
18684         "href": "/myBodyWater",
18685         "rt": [
18686             "oic.r.body.water"
18687         ],
18688         "if": [
18689             "oic.if.s",
18690             "oic.if.baseline"
18691         ]
18692     },
18693     {
18694         "href": "/myBodySoftLeanMass",
18695         "rt": [
18696             "oic.r.body.slm"
18697         ],
18698         "if": [
18699             "oic.if.s",
18700             "oic.if.baseline"
18701         ]
18702     },
18703     {
18704         "href": "/myBodyFatFreeMass",
18705         "rt": [
18706             "oic.r.body.ffm"
18707         ],
18708         "if": [
18709             "oic.if.s",
18710             "oic.if.baseline"
18711         ]
18712     },
18713     {
18714         "href": "/myUserId",
18715         "rt": [
18716             "oic.r.userid"
18717         ],
18718         "if": [
18719             "oic.if.r",
18720             "oic.if.baseline"
18721         ]
18722     },
18723     {
18724         "href": "/myTimeStamp",
18725         "rt": [
18726             "oic.r.time.stamp"
18727         ],
18728         "if": [
18729             "oic.if.r",
18730             "oic.if.baseline"
18731         ]
18732     }
18733 ]
18734 },
18735 "schema": {
18736     "$ref": "#/definitions/baseline"
18737 }
18738 }
18739 }
18740 }
18741 }
18742 },

```

```

18743 "parameters": {
18744   "interface-all": {
18745     "in": "query",
18746     "name": "if",
18747     "type": "string",
18748     "enum": [
18749       "oic.if.b",
18750       "oic.if.ll",
18751       "oic.if.baseline"
18752     ]
18753   }
18754 },
18755 "definitions": {
18756   "links": {
18757     "type": "array",
18758     "items": {
18759       "$ref": "#/definitions/oic.oic-link"
18760     }
18761   },
18762   "baseline": {
18763     "properties": {
18764       "rt": {
18765         "items": {
18766           "enum": [
18767             "oic.r.bodyscale-am",
18768             "oic.wk.atomicmeasurement"
18769           ],
18770           "type": "string",
18771           "maxLength": 64
18772         },
18773         "minItems": 2,
18774         "uniqueItems": true,
18775         "readOnly": true,
18776         "type": "array"
18777       },
18778       "rts": {
18779         "description": "This contains all possible Resource Types for this Atomic Measurement.",
18780         "items": {
18781           "enum": [
18782             "oic.r.weight",
18783             "oic.r.bmi",
18784             "oic.r.height",
18785             "oic.r.body.fat",
18786             "oic.r.body.water",
18787             "oic.r.body.slm",
18788             "oic.r.body.ffm",
18789             "oic.r.time.stamp",
18790             "oic.r.userid"
18791           ],
18792           "type": "string",
18793           "maxLength": 64
18794         },
18795         "minItems": 1,
18796         "uniqueItems": true,
18797         "readOnly": true,
18798         "type": "array"
18799       },
18800       "rts-m": {
18801         "description": "This contains all mandatory Resource Types for this Atomic Measurement.",
18802         "items": {
18803           "enum": [
18804             "oic.r.weight"
18805           ],
18806           "type": "string",
18807           "maxLength": 64
18808         },
18809         "maxItems": 1,
18810         "minItems": 1,
18811         "uniqueItems": true,
18812         "readOnly": true,
18813         "type": "array"
18814       },

```

```

18815     "if": {
18816         "description": "The OCF Interface set supported by this Resource",
18817         "items": {
18818             "enum": [
18819                 "oic.if.b",
18820                 "oic.if.ll",
18821                 "oic.if.baseline"
18822             ],
18823             "type": "string",
18824             "maxLength": 64
18825         },
18826         "minItems": 3,
18827         "uniqueItems": true,
18828         "readOnly": true,
18829         "type": "array"
18830     },
18831     "n": {
18832         "$ref":
18833         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
18834         schema.json#/definitions/n"
18835     },
18836     "id": {
18837         "$ref":
18838         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
18839         schema.json#/definitions/id"
18840     },
18841     "links": {
18842         "$ref": "#/definitions/links"
18843     }
18844 },
18845 "type": "object",
18846 "required": [
18847     "rt", "if", "links", "rts", "rts-m"
18848 ]
18849 },
18850 "batch-retrieve": {
18851     "minItems": 1,
18852     "items": {
18853         "properties": {
18854             "href": {
18855                 "$ref":
18856                 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
18857                 schema.json#/definitions/href"
18858             },
18859             "rep": {
18860                 "type": "object",
18861                 "anyOf": [
18862                     {
18863                         "$ref":
18864                         "https://openconnectivityfoundation.github.io/IoTDataModels/WeightResURI.swagger.json#/definitions/W
18865                         eight"
18866                     },
18867                     {
18868                         "$ref":
18869                         "https://openconnectivityfoundation.github.io/IoTDataModels/BMIResURI.swagger.json#/definitions/BMI"
18870                     },
18871                     {
18872                         "$ref":
18873                         "https://openconnectivityfoundation.github.io/IoTDataModels/HeightResURI.swagger.json#/definitions/H
18874                         eight"
18875                     },
18876                     {
18877                         "$ref":
18878                         "https://openconnectivityfoundation.github.io/IoTDataModels/BodyFatResURI.swagger.json#/definitions/
18879                         BodyFat"
18880                     },
18881                     {
18882                         "$ref":
18883                         "https://openconnectivityfoundation.github.io/IoTDataModels/BodyWaterResURI.swagger.json#/definition
18884                         s/BodyWater"
18885                     }
18886                 ]

```

```

18887         "$ref":
18888         "https://openconnectivityfoundation.github.io/IoTDataModels/BodySoftLeanMassResURI.swagger.json#/def
18889         initions/BodySoftLeanMass"
18890     },
18891     {
18892         "$ref":
18893         "https://openconnectivityfoundation.github.io/IoTDataModels/BodyFatFreeMassResURI.swagger.json#/defi
18894         nitions/BodyFatFreeMass"
18895     },
18896     {
18897         "$ref":
18898         "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/U
18899         serID"
18900     },
18901     {
18902         "$ref":
18903         "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definition
18904         s/TimeStamp"
18905     }
18906 ]
18907 }
18908 },
18909 "required": [
18910     "href",
18911     "rep"
18912 ],
18913 "type": "object"
18914 },
18915 "type": "array"
18916 },
18917 "oic.oic-link": {
18918     "properties": {
18919         "rt": {
18920             "description": "Resource Type of the target Resource",
18921             "items": {
18922                 "enum": [
18923                     "oic.r.weight",
18924                     "oic.r.bmi",
18925                     "oic.r.height",
18926                     "oic.r.body.fat",
18927                     "oic.r.body.water",
18928                     "oic.r.body.slm",
18929                     "oic.r.body.ffmpeg",
18930                     "oic.r.time.stamp",
18931                     "oic.r.userid"
18932                 ],
18933                 "type": "string",
18934                 "maxLength": 64
18935             },
18936             "minItems": 1,
18937             "uniqueItems": true,
18938             "readOnly": true,
18939             "type": "array"
18940         },
18941         "if": {
18942             "description": "The OCF Interface set supported by the target Resource",
18943             "items": {
18944                 "enum": [
18945                     "oic.if.s",
18946                     "oic.if.r",
18947                     "oic.if.baseline"
18948                 ],
18949                 "type": "string",
18950                 "maxLength": 64
18951             },
18952             "minItems": 1,
18953             "uniqueItems": true,
18954             "readOnly": true,
18955             "type": "array"
18956         },
18957         "anchor": {
18958             "$ref":

```

```

18959 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
18960 schema.json#/definitions/anchor"
18961     },
18962     "di": {
18963         "$ref":
18964         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
18965         schema.json#/definitions/di"
18966     },
18967     "eps": {
18968         "$ref":
18969         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
18970         schema.json#/definitions/eps"
18971     },
18972     "href": {
18973         "$ref":
18974         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
18975         schema.json#/definitions/href"
18976     },
18977     "ins": {
18978         "$ref":
18979         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
18980         schema.json#/definitions/ins"
18981     },
18982     "p": {
18983         "$ref":
18984         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
18985         schema.json#/definitions/p"
18986     },
18987     "rel": {
18988         "$ref":
18989         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
18990         schema.json#/definitions/rel_array"
18991     },
18992     "title": {
18993         "$ref":
18994         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
18995         schema.json#/definitions/title"
18996     },
18997     "type": {
18998         "$ref":
18999         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19000         schema.json#/definitions/type"
19001     }
19002 },
19003 "required": [
19004     "href",
19005     "rt",
19006     "if"
19007 ],
19008 "type": "object"
19009 }
19010 }
19011 }
19012

```

### 19013 6.95.5 Property definition

19014 Table 193 defines the Properties that are part of the "oic.r.bodyscale-am,  
19015 oic.wk.atomicmeasurement" Resource Type.

19016 **Table 193 – The Property definitions of the Resource with type "rt" = "oic.r.bodyscale-am,  
19017 oic.wk.atomicmeasurement".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	Yes	Read Only	
rts	array: see schema	Yes	Read Only	This contains all possible Resource Types for this

				Atomic Measurement.
rts-m	array: see schema	Yes	Read Only	This contains all mandatory Resource Types for this Atomic Measurement.
if	array: see schema	Yes	Read Only	The OCF Interface set supported by this Resource
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
links	multiple types: see schema	Yes	Read Write	
href	multiple types: see schema	Yes	Read Write	
rep	object: see schema	Yes	Read Write	
rt	array: see schema	Yes	Read Only	Resource Type of the target Resource
if	array: see schema	Yes	Read Only	The OCF Interface set supported by the target Resource
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	

19018 **6.95.6 CRUDN behaviour**

19019 Table 194 defines the CRUDN operations that are supported on the "oic.r.bodyscale-am,  
19020 oic.wk.atomicmeasurement" Resource Type.

19021 **Table 194 – The CRUDN operations of the Resource with type "rt" = "oic.r.bodyscale-am,**  
19022 **oic.wk.atomicmeasurement".**

Create	Read	Update	Delete	Notify
	get			observe

19023 **6.96 Body Soft Lean Mass**

19024 **6.96.1 Introduction**

19025 This Resource describes the Properties associated with a person's body soft lean mass.  
19026 The unit is a single value that is one of kg, lb or percent.  
19027 If the unit Property is missing the default is kilograms [kg].  
19028 The slm and unit Properties are read-only values that are provided by the Server.  
19029 When range is omitted the default is 0 to +MAXFLOAT.

19030 **6.96.2 Example URI**

19031 /BodySoftLeanMassResURI

19032 **6.96.3 Resource type**

19033 The Resource Type is defined as: "oic.r.body.slm".

19034 **6.96.4 OpenAPI 2.0 definition**

```
19035 {
19036   "swagger": "2.0",
19037   "info": {
19038     "title": "Body Soft Lean Mass",
19039     "version": "2019-03-22",
19040     "license": {
19041       "name": "OCF Data Model License",
19042       "url":
19043         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
19044         CENSE.md",
19045       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
19046     },
19047     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
19048   },
19049   "schemes": [
19050     "http"
19051   ],
19052   "consumes": [
19053     "application/json"
19054   ],
19055   "produces": [
19056     "application/json"
19057   ],
19058   "paths": {
19059     "/BodySoftLeanMassResURI": {
19060       "get": {
19061         "description": "This Resource describes the Properties associated with a person's body soft
19062         lean mass.\n\nThe unit is a single value that is one of kg, lb or percent.\n\nIf the unit Property is
19063         missing the default is kilograms [kg].\n\nThe slm and unit Properties are read-only values that are
19064         provided by the Server.\n\nWhen range is omitted the default is 0 to +MAXFLOAT.",
19065         "parameters": [
19066           {
19067             "$ref": "#/parameters/interface"
19068           }
19069         ],
19070         "responses": {
19071           "200": {
19072             "description": "",
19073             "x-example": {
19074               "rt": [
19075                 "oic.r.body.slm"
19076               ],
19077               "slm": 20.0,
19078               "units": "kg"
19079             },
19080             "schema": {
19081               "$ref": "#/definitions/BodySoftLeanMass"
19082             }
19083           }
19084         }
19085       }
19086     }
19087   }
19088 }
```

```

19086     }
19087   },
19088   "parameters": {
19089     "interface": {
19090       "in": "query",
19091       "name": "if",
19092       "type": "string",
19093       "enum": [
19094         "oic.if.s",
19095         "oic.if.baseline"
19096       ]
19097     }
19098   },
19099   "definitions": {
19100     "BodySoftLeanMass": {
19101       "properties": {
19102         "rt": {
19103           "description": "Resource Type",
19104           "items": {
19105             "enum": [
19106               "oic.r.body.slm"
19107             ],
19108             "type": "string",
19109             "maxLength": 64
19110           },
19111           "minItems": 1,
19112           "uniqueItems": true,
19113           "readOnly": true,
19114           "type": "array"
19115         },
19116         "slm": {
19117           "description": "Body soft lean mass.",
19118           "minimum": 0.0,
19119           "readOnly": true,
19120           "type": "number"
19121         },
19122         "units": {
19123           "description": "Body soft lean mass units",
19124           "enum": [
19125             "kg",
19126             "lb",
19127             "percent"
19128           ],
19129           "readOnly": true,
19130           "type": "string",
19131           "default": "kg"
19132         },
19133         "range": {
19134           "$ref":
19135             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19136             schema.json#/definitions/range_number"
19137         },
19138         "step": {
19139           "$ref":
19140             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19141             schema.json#/definitions/step_number"
19142         },
19143         "precision": {
19144           "$ref":
19145             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19146             schema.json#/definitions/precision"
19147         },
19148         "n": {
19149           "$ref":
19150             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19151             schema.json#/definitions/n"
19152         },
19153         "id": {
19154           "$ref":
19155             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19156             schema.json#/definitions/id"
19157         },

```



```

19158     "if": {
19159         "description": "The OCF Interface set supported by this Resource",
19160         "items": {
19161             "enum": [
19162                 "oic.if.s",
19163                 "oic.if.baseline"
19164             ],
19165             "type": "string",
19166             "maxLength": 64
19167         },
19168         "minItems": 1,
19169         "readOnly": true,
19170         "uniqueItems": true,
19171         "type": "array"
19172     },
19173 },
19174 "type": "object",
19175 "required": [
19176     "slm"
19177 ]
19178 }
19179 }
19180 }
19181

```

19182 **6.96.5 Property definition**

19183 Table 195 defines the Properties that are part of the "oic.r.body.slm" Resource Type.

19184 **Table 195 – The Property definitions of the Resource with type "rt" = "oic.r.body.slm".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
slm	number	Yes	Read Only	Body soft lean mass.
units	string	No	Read Only	Body soft lean mass units
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

19185 **6.96.6 CRUDN behaviour**

19186 Table 196 defines the CRUDN operations that are supported on the "oic.r.body.slm" Resource Type.

19187 **Table 196 – The CRUDN operations of the Resource with type "rt" = "oic.r.body.slm".**

Create	Read	Update	Delete	Notify
	get			observe

## 19188 **6.97 Body Thermometer Atomic Measurement**

### 19189 **6.97.1 Introduction**

19190 This Resource describes the Properties associated with body thermometer.  
19191 The Resource is an Atomic Measurement of temperature (oic.r.temperature), body location for  
19192 temperature (oic.r.body.location.temperature), observed time (oic.r.time.stamp), and user id  
19193 (oic.r.userid).

### 19194 **6.97.2 Example URI**

19195 /BodyThermometerAMResURI

### 19196 **6.97.3 Resource type**

19197 The Resource Type is defined as: "oic.r.bodythermometer-am, oic.wk.atomicmeasurement".

### 19198 **6.97.4 OpenAPI 2.0 definition**

```
19199 {
19200   "swagger": "2.0",
19201   "info": {
19202     "title": "Body Thermometer Atomic Measurement",
19203     "version": "2019-03-22",
19204     "license": {
19205       "name": "OCF Data Model License",
19206       "url":
19207         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
19208         CENSE.md",
19209       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
19210     },
19211     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
19212   },
19213   "schemes": [
19214     "http"
19215   ],
19216   "consumes": [
19217     "application/json"
19218   ],
19219   "produces": [
19220     "application/json"
19221   ],
19222   "paths": {
19223     "/BodyThermometerAMResURI?if=oic.if.b": {
19224       "get": {
19225         "description": "This Resource describes the Properties associated with body
19226         thermometer.\n\nThe Resource is an Atomic Measurement of temperature (oic.r.temperature), body
19227         location for temperature (oic.r.body.location.temperature), observed time (oic.r.time.stamp), and
19228         user id (oic.r.userid).",
19229         "parameters": [
19230           {
19231             "$ref": "#/parameters/interface-all"
19232           }
19233         ],
19234         "responses": {
19235           "200": {
19236             "description": "",
19237             "x-example": [
19238               {
19239                 "href": "/myTemperature",
19240                 "rep": {
19241                   "temperature": 38.0,
19242                   "units": "C"
19243                 }
19244             },
19245             {
19246               "href": "/myBodyLocationForTemperature",
19247               "rep": {
19248                 "bloc": "mouth"
19249             }
19250           }
19251         }
19252       }
19253     }
19254   }
19255 }
```

```

19251     {
19252         "href": "/myUserId",
19253         "rep": {
19254             "userid": "USER1"
19255         }
19256     },
19257     {
19258         "href": "/myTimeStamp",
19259         "rep": {
19260             "timestamp": "2018-11-09T12:15+08:00"
19261         }
19262     }
19263 ],
19264 "schema": {
19265     "$ref": "#/definitions/batch-retrieve"
19266 }
19267 }
19268 }
19269 }
19270 },
19271 "/BodyThermometerAMResURI?if=oic.if.ll": {
19272     "get": {
19273         "description": "This Resource describes the Properties associated with body
19274 thermometer.\nThe Resource is an Atomic Measurement of temperature (oic.r.temperature), body
19275 location for temperature (oic.r.body.location.temperature), observed time (oic.r.time.stamp), and
19276 user id (oic.r.userid).",
19277         "parameters": [
19278             {
19279                 "$ref": "#/parameters/interface-all"
19280             }
19281         ],
19282         "responses": {
19283             "200": {
19284                 "description": "",
19285                 "x-example": [
19286                     {
19287                         "href": "/myTemperature",
19288                         "rt": [
19289                             "oic.r.temperature"
19290                         ],
19291                         "if": [
19292                             "oic.if.s",
19293                             "oic.if.baseline"
19294                         ]
19295                     },
19296                     {
19297                         "href": "/myBodyLocationForTemperature",
19298                         "rt": [
19299                             "oic.r.body.location.temperature"
19300                         ],
19301                         "if": [
19302                             "oic.if.s",
19303                             "oic.if.baseline"
19304                         ]
19305                     }
19306                 ],
19307                 {
19308                     "href": "/myUserId",
19309                     "rt": [
19310                         "oic.r.userid"
19311                     ],
19312                     "if": [
19313                         "oic.if.r",
19314                         "oic.if.baseline"
19315                     ]
19316                 },
19317                 {
19318                     "href": "/myTimeStamp",
19319                     "rt": [
19320                         "oic.r.time.stamp"
19321                     ],
19322                     "if": [

```

```

19323         "oic.if.baseline"
19324     ]
19325     }
19326 ],
19327 "schema": {
19328     "$ref": "#/definitions/links"
19329 }
19330 }
19331 }
19332 },
19333 },
19334 "/BodyThermometerAMResURI?if=oic.if.baseline": {
19335     "get": {
19336         "description": "This Resource describes the Properties associated with body
19337 thermometer.\nThe Resource is an Atomic Measurement of temperature (oic.r.temperature), body
19338 location for temperature (oic.r.body.location.temperature), observed time (oic.r.time.stamp), and
19339 user id (oic.r.userid).",
19340         "parameters": [
19341             {
19342                 "$ref": "#/parameters/interface-all"
19343             }
19344         ],
19345         "responses": {
19346             "200": {
19347                 "description": "",
19348                 "x-example": {
19349                     "rt": [
19350                         "oic.r.bodythermometer-am",
19351                         "oic.wk.atomicmeasurement"
19352                     ],
19353                     "if": [
19354                         "oic.if.b",
19355                         "oic.if.ll",
19356                         "oic.if.baseline"
19357                     ],
19358                     "rts": [
19359                         "oic.r.temperature",
19360                         "oic.r.body.location.temperature",
19361                         "oic.r.userid",
19362                         "oic.r.time.stamp"
19363                     ],
19364                     "rts-m": [
19365                         "oic.r.temperature"
19366                     ],
19367                     "links": [
19368                         {
19369                             "href": "/myTemperature",
19370                             "rt": [
19371                                 "oic.r.temperature"
19372                             ],
19373                             "if": [
19374                                 "oic.if.s",
19375                                 "oic.if.baseline"
19376                             ]
19377                         },
19378                         {
19379                             "href": "/myBodyLocationForTemperature",
19380                             "rt": [
19381                                 "oic.r.body.location.temperature"
19382                             ],
19383                             "if": [
19384                                 "oic.if.s",
19385                                 "oic.if.baseline"
19386                             ]
19387                         },
19388                         {
19389                             "href": "/myUserId",
19390                             "rt": [
19391                                 "oic.r.userid"
19392                             ],
19393                             "if": [
19394                                 "oic.if.r",

```

```

19395         "oic.if.baseline"
19396     ]
19397 },
19398 {
19399     "href": "/myTimeStamp",
19400     "rt": [
19401         "oic.r.time.stamp"
19402     ],
19403     "if": [
19404         "oic.if.r",
19405         "oic.if.baseline"
19406     ]
19407 }
19408 ]
19409 },
19410 "schema": {
19411     "$ref": "#/definitions/baseline"
19412 }
19413 }
19414 }
19415 }
19416 }
19417 },
19418 "parameters": {
19419     "interface-all": {
19420         "in": "query",
19421         "name": "if",
19422         "type": "string",
19423         "enum": [
19424             "oic.if.b",
19425             "oic.if.ll",
19426             "oic.if.baseline"
19427         ]
19428     }
19429 },
19430 "definitions": {
19431     "batch-retrieve": {
19432         "minItems": 1,
19433         "items": {
19434             "properties": {
19435                 "href": {
19436                     "$ref":
19437 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19438 schema.json#/definitions/href"
19439                 },
19440                 "rep": {
19441                     "type": "object",
19442                     "anyOf": [
19443                         {
19444                             "$ref":
19445 "https://openconnectivityfoundation.github.io/IoTDataModels/TemperatureResURI.swagger.json#/definiti
19446 ons/Temperature"
19447                         },
19448                         {
19449                             "$ref":
19450 "https://openconnectivityfoundation.github.io/IoTDataModels/BodyLocationTemperatureResURI.swagger.js
19451 on#/definitions/BodyLocationTemperature"
19452                         },
19453                         {
19454                             "$ref":
19455 "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/U
19456 serID"
19457                         },
19458                         {
19459                             "$ref":
19460 "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definition
19461 s/TimeStamp"
19462                         }
19463                     ]
19464                 }
19465             },
19466             "required": [

```

```

19467         "href",
19468         "rep"
19469     ],
19470     "type": "object"
19471 },
19472 "type": "array"
19473 },
19474 "links": {
19475     "type": "array",
19476     "items": {
19477         "$ref": "#/definitions/oic.oic-link"
19478     }
19479 },
19480 "baseline": {
19481     "properties": {
19482         "rt": {
19483             "items": {
19484                 "enum": [
19485                     "oic.r.bodythermometer-am",
19486                     "oic.wk.atomicmeasurement"
19487                 ],
19488                 "type": "string",
19489                 "maxLength": 64
19490             },
19491             "minItems": 2,
19492             "uniqueItems": true,
19493             "readOnly": true,
19494             "type": "array"
19495         },
19496         "rts": {
19497             "description": "This contains all possible Resource Types for this Atomic Measurement.",
19498             "items": {
19499                 "enum": [
19500                     "oic.r.temperature",
19501                     "oic.r.body.location.temperature",
19502                     "oic.r.time.stamp",
19503                     "oic.r.userid"
19504                 ],
19505                 "type": "string",
19506                 "maxLength": 64
19507             },
19508             "minItems": 1,
19509             "uniqueItems": true,
19510             "readOnly": true,
19511             "type": "array"
19512         },
19513         "rts-m": {
19514             "description": "This contains all mandatory Resource Types for this Atomic Measurement.",
19515             "items": {
19516                 "enum": [
19517                     "oic.r.temperature"
19518                 ],
19519                 "type": "string",
19520                 "maxLength": 64
19521             },
19522             "maxItems": 1,
19523             "minItems": 1,
19524             "uniqueItems": true,
19525             "readOnly": true,
19526             "type": "array"
19527         },
19528         "if": {
19529             "description": "The OC Interface set supported by this Resource",
19530             "items": {
19531                 "enum": [
19532                     "oic.if.b",
19533                     "oic.if.ll",
19534                     "oic.if.baseline"
19535                 ],
19536                 "type": "string",
19537                 "maxLength": 64
19538             }

```

```

19539         "minItems": 3,
19540         "uniqueItems": true,
19541         "readOnly": true,
19542         "type": "array"
19543     },
19544     "n": {
19545         "$ref":
19546 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19547 schema.json#/definitions/n"
19548     },
19549     "id": {
19550         "$ref":
19551 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19552 schema.json#/definitions/id"
19553     },
19554     "links": {
19555         "$ref": "#/definitions/links"
19556     }
19557 },
19558 "type": "object",
19559 "required": [
19560     "rt", "if", "links", "rts", "rts-m"
19561 ]
19562 },
19563 "oic.oic-link": {
19564     "properties": {
19565         "if": {
19566             "description": "The OCF Interface set supported by target Resource",
19567             "items": {
19568                 "enum": [
19569                     "oic.if.baseline",
19570                     "oic.if.s",
19571                     "oic.if.r"
19572                 ],
19573                 "type": "string",
19574                 "maxLength": 64
19575             },
19576             "minItems": 1,
19577             "uniqueItems": true,
19578             "readOnly": true,
19579             "type": "array"
19580         },
19581         "rt": {
19582             "description": "Resource Type of the target Resource",
19583             "items": {
19584                 "enum": [
19585                     "oic.r.temperature",
19586                     "oic.r.body.location.temperature",
19587                     "oic.r.time.stamp",
19588                     "oic.r.userid"
19589                 ],
19590                 "type": "string",
19591                 "maxLength": 64
19592             },
19593             "minItems": 1,
19594             "uniqueItems": true,
19595             "readOnly": true,
19596             "type": "array"
19597         },
19598         "anchor": {
19599             "$ref":
19600 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19601 schema.json#/definitions/anchor"
19602         },
19603         "di": {
19604             "$ref":
19605 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19606 schema.json#/definitions/di"
19607         },
19608         "eps": {
19609             "$ref":
19610 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-

```

```

19611 schema.json#/definitions/eps"
19612     },
19613     "href": {
19614         "$ref":
19615         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19616         schema.json#/definitions/href"
19617     },
19618     "ins": {
19619         "$ref":
19620         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19621         schema.json#/definitions/ins"
19622     },
19623     "p": {
19624         "$ref":
19625         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19626         schema.json#/definitions/p"
19627     },
19628     "rel": {
19629         "$ref":
19630         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19631         schema.json#/definitions/rel_array"
19632     },
19633     "title": {
19634         "$ref":
19635         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19636         schema.json#/definitions/title"
19637     },
19638     "type": {
19639         "$ref":
19640         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19641         schema.json#/definitions/type"
19642     }
19643 },
19644 "required": [
19645     "href",
19646     "rt",
19647     "if"
19648 ],
19649 "type": "object"
19650 }
19651 }
19652 }
19653

```

### 19654 6.97.5 Property definition

19655 Table 197 defines the Properties that are part of the "oic.r.bodythermometer-am,  
19656 oic.wk.atomicmeasurement" Resource Type.

**Table 197 – The Property definitions of the Resource with type "rt" =  
"oic.r.bodythermometer-am, oic.wk.atomicmeasurement".**

19657  
19658

Property name	Value type	Mandatory	Access mode	Description
href	multiple types: see schema	Yes	Read Write	
rep	object: see schema	Yes	Read Write	
rt	array: see schema	Yes	Read Only	
rts	array: see schema	Yes	Read Only	This contains all possible Resource Types for this Atomic Measurement.
rts-m	array: see schema	Yes	Read Only	This contains all mandatory Resource Types for this Atomic Measurement.



if	array: see schema	Yes	Read Only	The OC Interface set supported by this Resource
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
links	multiple types: see schema	Yes	Read Write	
if	array: see schema	Yes	Read Only	The OCF Interface set supported by target Resource
rt	array: see schema	Yes	Read Only	Resource Type of the target Resource
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	

19659 **6.97.6 CRUDN behaviour**

19660 Table 198 defines the CRUDN operations that are supported on the "oic.r.bodythermometer-am,  
19661 oic.wk.atomicmeasurement" Resource Type.

19662 **Table 198 – The CRUDN operations of the Resource with type "rt" =**  
19663 **"oic.r.bodythermometer-am, oic.wk.atomicmeasurement".**

Create	Read	Update	Delete	Notify
	get			observe

19664 **6.98 Body Water**

19665 **6.98.1 Introduction**

19666 This Resource describes the Properties associated with a person's body water.

19667 The unit is a single value that is one of kg or lb.

19668 If the unit Property is missing the default is kilograms [kg].

19669 The bwater and unit Properties are read-only values that are provided by the Server.

19670 When range is omitted the default is 0 to +MAXFLOAT.

19671 **6.98.2 Example URI**

19672 /BodyWaterResURI

19673 **6.98.3 Resource type**

19674 The Resource Type is defined as: "oic.r.body.water".

19675 **6.98.4 OpenAPI 2.0 definition**

```
19676 {
19677   "swagger": "2.0",
19678   "info": {
19679     "title": "Body Water",
19680     "version": "2019-03-22",
19681     "license": {
19682       "name": "OCF Data Model License",
19683       "url":
19684         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
19685         CENSE.md",
19686       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
19687     },
19688     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
19689   },
19690   "schemes": [
19691     "http"
19692   ],
19693   "consumes": [
19694     "application/json"
19695   ],
19696   "produces": [
19697     "application/json"
19698   ],
19699   "paths": {
19700     "/BodyWaterResURI": {
19701       "get": {
19702         "description": "This Resource describes the Properties associated with a person's body
19703         water.\n\nThe unit is a single value that is one of kg or lb.\n\nIf the unit Property is missing the
19704         default is kilograms [kg].\n\nThe bwater and unit Properties are read-only values that are provided by
19705         the Server.\n\nWhen range is omitted the default is 0 to +MAXFLOAT.",
19706         "parameters": [
19707           {
19708             "$ref": "#/parameters/interface"
19709           }
19710         ],
19711         "responses": {
19712           "200": {
19713             "description": "",
19714             "x-example": {
19715               "rt": [
19716                 "oic.r.body.water"
19717               ],
19718               "bwater": 20.0,
19719               "units": "kg"
19720             },
19721             "schema": {
19722               "$ref": "#/definitions/BodyWater"
19723             }
19724           }
19725         }
19726       }
19727     }
19728   },
19729   "parameters": {
19730     "interface": {
19731       "in": "query",
19732       "name": "if",
19733       "type": "string",
19734       "enum": [
19735         "oic.if.s",
19736         "oic.if.baseline"
19737       ]
19738     }
19739   },
19740   "definitions": {
19741     "BodyWater": {
```

```

19742     "properties": {
19743       "rt": {
19744         "description": "Resource Type",
19745         "items": {
19746           "enum": [
19747             "oic.r.body.water"
19748           ],
19749           "type": "string",
19750           "maxLength": 64
19751         },
19752         "minItems": 1,
19753         "uniqueItems": true,
19754         "readOnly": true,
19755         "type": "array"
19756       },
19757       "bwater": {
19758         "description": "Body water.",
19759         "minimum": 0.0,
19760         "readOnly": true,
19761         "type": "number"
19762       },
19763       "units": {
19764         "description": "Body water unit",
19765         "enum": [
19766           "kg",
19767           "lb"
19768         ],
19769         "readOnly": true,
19770         "type": "string",
19771         "default": "kg"
19772       },
19773       "range": {
19774         "$ref":
19775         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19776         schema.json#/definitions/range_number"
19777       },
19778       "step": {
19779         "$ref":
19780         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19781         schema.json#/definitions/step_number"
19782       },
19783       "precision": {
19784         "$ref":
19785         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19786         schema.json#/definitions/precision"
19787       },
19788       "n": {
19789         "$ref":
19790         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19791         schema.json#/definitions/n"
19792       },
19793       "id": {
19794         "$ref":
19795         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19796         schema.json#/definitions/id"
19797       },
19798       "if": {
19799         "description": "The OCF Interface set supported by this Resource",
19800         "items": {
19801           "enum": [
19802             "oic.if.s",
19803             "oic.if.baseline"
19804           ],
19805           "type": "string",
19806           "maxLength": 64
19807         },
19808         "minItems": 1,
19809         "readOnly": true,
19810         "uniqueItems": true,
19811         "type": "array"
19812       }
19813     },

```

```

19814     "type": "object",
19815     "required": [
19816         "bwater"
19817     ]
19818     }
19819 }
19820 }
19821

```

## 19822 6.98.5 Property definition

19823 Table 199 defines the Properties that are part of the "oic.r.body.water" Resource Type.

19824 **Table 199 – The Property definitions of the Resource with type "rt" = "oic.r.body.water".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
bwater	number	Yes	Read Only	Body water.
units	string	No	Read Only	Body water unit
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

## 19825 6.98.6 CRUDN behaviour

19826 Table 200 defines the CRUDN operations that are supported on the "oic.r.body.water" Resource  
 19827 Type.

19828 **Table 200 – The CRUDN operations of the Resource with type "rt" = "oic.r.body.water".**

Create	Read	Update	Delete	Notify
	get			observe

## 19829 6.99 Glucose

### 19830 6.99.1 Introduction

19831 This Resource describes the Properties associated with a person's glucose level.

19832 The unit is a single value that is one of mg/dL, mmol/L.

19833 If the unit Property is missing the default is milligrams per decilitre [mg/dL].

19834 The glucose and unit Properties are read-only values that are provided by the Server.

19835 When range is omitted the default is 0 to +MAXFLOAT.

### 19836 6.99.2 Example URI

19837 /GlucoseResURI

### 19838 6.99.3 Resource type

19839 The Resource Type is defined as: "oic.r.glucose".

#### 19840 6.99.4 OpenAPI 2.0 definition

```
19841 {
19842   "swagger": "2.0",
19843   "info": {
19844     "title": "Glucose",
19845     "version": "2019-03-22",
19846     "license": {
19847       "name": "OCF Data Model License",
19848       "url":
19849         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
19850 CENSE.md",
19851       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
19852     },
19853     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
19854   },
19855   "schemes": [
19856     "http"
19857   ],
19858   "consumes": [
19859     "application/json"
19860   ],
19861   "produces": [
19862     "application/json"
19863   ],
19864   "paths": {
19865     "/GlucoseResURI": {
19866       "get": {
19867         "description": "This Resource describes the Properties associated with a person's glucose
19868 level.\nThe unit is a single value that is one of mg/dL, mmol/L.\nIf the unit Property is missing
19869 the default is milligrams per decilitre [mg/dL].\nThe glucose and unit Properties are read-only
19870 values that are provided by the Server.\nWhen range is omitted the default is 0 to +MAXFLOAT.",
19871         "parameters": [
19872           {
19873             "$ref": "#/parameters/interface"
19874           }
19875         ],
19876         "responses": {
19877           "200": {
19878             "description": "",
19879             "x-example": {
19880               "rt": [
19881                 "oic.r.glucose"
19882               ],
19883               "glucose": 90.0,
19884               "units": "mg/dL",
19885               "range": [
19886                 20.0,
19887                 600.0
19888               ],
19889               "step": 1
19890             },
19891             "schema": {
19892               "$ref": "#/definitions/Glucose"
19893             }
19894           }
19895         }
19896       }
19897     }
19898   },
19899   "parameters": {
19900     "interface": {
19901       "in": "query",
19902       "name": "if",
19903       "type": "string",
19904       "enum": [
19905         "oic.if.s",
19906         "oic.if.baseline"
19907       ]
19908     }
19909   },
19910   "definitions": {
```

```

19911     "Glucose": {
19912         "properties": {
19913             "rt": {
19914                 "description": "Resource Type",
19915                 "items": {
19916                     "enum": [
19917                         "oic.r.glucose"
19918                     ],
19919                     "type": "string",
19920                     "maxLength": 64
19921                 },
19922                 "minItems": 1,
19923                 "uniqueItems": true,
19924                 "readOnly": true,
19925                 "type": "array"
19926             },
19927             "glucose": {
19928                 "description": "A measurement of glucose concentration in the blood",
19929                 "minimum": 0.0,
19930                 "readOnly": true,
19931                 "type": "number"
19932             },
19933             "units": {
19934                 "description": "Glucose unit",
19935                 "enum": [
19936                     "mg/dL",
19937                     "mmol/L"
19938                 ],
19939                 "readOnly": true,
19940                 "type": "string",
19941                 "default": "mg/dL"
19942             },
19943             "range": {
19944                 "$ref":
19945                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19946                 schema.json#/definitions/range_number"
19947             },
19948             "step": {
19949                 "$ref":
19950                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19951                 schema.json#/definitions/step_number"
19952             },
19953             "precision": {
19954                 "$ref":
19955                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19956                 schema.json#/definitions/precision"
19957             },
19958             "n": {
19959                 "$ref":
19960                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19961                 schema.json#/definitions/n"
19962             },
19963             "id": {
19964                 "$ref":
19965                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19966                 schema.json#/definitions/id"
19967             },
19968             "if": {
19969                 "description": "The OCF Interface set supported by this Resource",
19970                 "items": {
19971                     "enum": [
19972                         "oic.if.s",
19973                         "oic.if.baseline"
19974                     ],
19975                     "type": "string",
19976                     "maxLength": 64
19977                 },
19978                 "minItems": 1,
19979                 "readOnly": true,
19980                 "uniqueItems": true,
19981                 "type": "array"
19982             }
19983         }
19984     }

```

```

19983     },
19984     "type": "object",
19985     "required": [
19986         "glucose"
19987     ]
19988     }
19989 }
19990 }
19991

```

19992 **6.99.5 Property definition**

19993 Table 201 defines the Properties that are part of the "oic.r.glucose" Resource Type.

19994 **Table 201 – The Property definitions of the Resource with type "rt" = "oic.r.glucose".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
glucose	number	Yes	Read Only	A measurement of glucose concentration in the blood
units	string	No	Read Only	Glucose unit
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

19995 **6.99.6 CRUDN behaviour**

19996 Table 202 defines the CRUDN operations that are supported on the "oic.r.glucose" Resource Type.

19997 **Table 202 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose".**

Create	Read	Update	Delete	Notify
	get			observe

19998 **6.100 Context Carbohydrates for Glucose Meter**

19999 **6.100.1 Introduction**

20000 This Resource describes the Properties associated with a context carbohydrates.  
20001 The carb Property has a default unit of grams[g].  
20002 The carb and meal Properties are read-only values that are provided by the Server.  
20003 When range is omitted the default is 0 to +MAXFLOAT.

20004 **6.100.2 Example URI**

20005 /GlucoseCarbResURI

20006 **6.100.3 Resource type**

20007 The Resource Type is defined as: "oic.r.glucose.carb".

#### 20008 6.100.4 OpenAPI 2.0 definition

```
20009 {
20010   "swagger": "2.0",
20011   "info": {
20012     "title": "Context Carbohydrates for Glucose Meter",
20013     "version": "2019-03-22",
20014     "license": {
20015       "name": "OCF Data Model License",
20016       "url":
20017         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
20018 CENSE.md",
20019       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
20020     },
20021     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
20022   },
20023   "schemes": [
20024     "http"
20025   ],
20026   "consumes": [
20027     "application/json"
20028   ],
20029   "produces": [
20030     "application/json"
20031   ],
20032   "paths": {
20033     "/GlucoseCarbResURI": {
20034       "get": {
20035         "description": "This Resource describes the Properties associated with a context
20036 carbohydrates.\nThe carb Property has a default unit of grams[g].\nThe carb and meal Properties are
20037 read-only values that are provided by the Server.\nWhen range is omitted the default is 0 to
20038 +MAXFLOAT.",
20039         "parameters": [
20040           {
20041             "$ref": "#/parameters/interface"
20042           }
20043         ],
20044         "responses": {
20045           "200": {
20046             "description": "",
20047             "x-example": {
20048               "rt": [
20049                 "oic.r.glucose.carb"
20050               ],
20051               "carb": 100.0,
20052               "meal": "breakfast"
20053             },
20054             "schema": {
20055               "$ref": "#/definitions/GlucoseCarb"
20056             }
20057           }
20058         }
20059       }
20060     }
20061   },
20062   "parameters": {
20063     "interface": {
20064       "in": "query",
20065       "name": "if",
20066       "type": "string",
20067       "enum": [
20068         "oic.if.s",
20069         "oic.if.baseline"
20070       ]
20071     }
20072   },
20073   "definitions": {
20074     "GlucoseCarb": {
20075       "properties": {
20076         "rt": {
20077           "description": "Resource Type",
20078           "items": {
```



```

20079         "enum": [
20080             "oic.r.glucose.carb"
20081         ],
20082         "type": "string",
20083         "maxLength": 64
20084     },
20085     "minItems": 1,
20086     "uniqueItems": true,
20087     "readOnly": true,
20088     "type": "array"
20089 },
20090 "carb": {
20091     "description": "The amount of carbohydrates undertaken in grams",
20092     "readOnly": true,
20093     "type": "number",
20094     "minimum": 0.0
20095 },
20096 "meal": {
20097     "description": "Recorded time of carbohydrates intake",
20098     "enum": [
20099         "breakfast",
20100         "lunch",
20101         "dinner",
20102         "snack",
20103         "drink",
20104         "supper",
20105         "brunch",
20106         "undetermined",
20107         "other",
20108         "no_entry",
20109         "no_ingestion"
20110     ],
20111     "readOnly": true,
20112     "type": "string"
20113 },
20114 "range": {
20115     "description": "The range applies to the carb property only",
20116     "$ref":
20117     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20118     schema.json#/definitions/range_number"
20119 },
20120 "step": {
20121     "description": "The step applies to the carb property only",
20122     "$ref":
20123     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20124     schema.json#/definitions/step_number"
20125 },
20126 "precision": {
20127     "description": "The precision applies to the carb property only",
20128     "$ref":
20129     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20130     schema.json#/definitions/precision"
20131 },
20132 "n": {
20133     "$ref":
20134     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20135     schema.json#/definitions/n"
20136 },
20137 "id": {
20138     "$ref":
20139     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20140     schema.json#/definitions/id"
20141 },
20142 "if": {
20143     "description": "The OCF Interface set supported by this Resource",
20144     "items": {
20145         "enum": [
20146             "oic.if.s",
20147             "oic.if.baseline"
20148         ],
20149         "type": "string",
20150         "maxLength": 64

```

```

20151         },
20152         "minItems": 1,
20153         "readOnly": true,
20154         "uniqueItems": true,
20155         "type": "array"
20156     }
20157 },
20158 "type": "object",
20159 "required": [
20160     "carb",
20161     "meal"
20162 ]
20163 }
20164 }
20165 }
20166

```

20167 **6.100.5 Property definition**

20168 Table 203 defines the Properties that are part of the "oic.r.glucose.carb" Resource Type.

20169 **Table 203 – The Property definitions of the Resource with type "rt" = "oic.r.glucose.carb".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
carb	number	Yes	Read Only	The amount of carbohydrates undertaken in grams
meal	string	Yes	Read Only	Recorded time of carbohydrates intake
range	multiple types: see schema	No	Read Write	The range applies to the carb property only
step	multiple types: see schema	No	Read Write	The step applies to the carb property only
precision	multiple types: see schema	No	Read Write	The precision applies to the carb property only
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

20170 **6.100.6 CRUDN behaviour**

20171 Table 204 defines the CRUDN operations that are supported on the "oic.r.glucose.carb" Resource Type.

20173 **Table 204 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose.carb".**

Create	Read	Update	Delete	Notify
	get			observe

20174 **6.101 Exercise for Glucose Meter**

20175 **6.101.1 Introduction**

20176 This Resource describes the Properties associated with glucose exercise.  
20177 The exercise Property has a default unit of percentage.  
20178 The exercise Property is a read-only value that is provided by the Server.

20179 **6.101.2 Example URI**

20180 /ExerciseResURI

20181 **6.101.3 Resource type**

20182 The Resource Type is defined as: "oic.r.glucose.exercise".

20183 **6.101.4 OpenAPI 2.0 definition**

```
20184 {  
20185   "swagger": "2.0",  
20186   "info": {  
20187     "title": "Exercise for Glucose Meter",  
20188     "version": "2019-03-22",  
20189     "license": {  
20190       "name": "OCF Data Model License",  
20191       "url":  
20192       "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
20193       CENSE.md",  
20194       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."  
20195     },  
20196     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
20197   },  
20198   "schemes": [  
20199     "http"  
20200   ],  
20201   "consumes": [  
20202     "application/json"  
20203   ],  
20204   "produces": [  
20205     "application/json"  
20206   ],  
20207   "paths": {  
20208     "/ExerciseResURI": {  
20209       "get": {  
20210         "description": "This Resource describes the Properties associated with glucose  
20211         exercise.\n\nThe exercise Property has a default unit of percentage.\n\nThe exercise Property is a read-  
20212         only value that is provided by the Server.",  
20213         "parameters": [  
20214           {  
20215             "$ref": "#/parameters/interface"  
20216           }  
20217         ],  
20218         "responses": {  
20219           "200": {  
20220             "description": "",  
20221             "x-example": {  
20222               "rt": [  
20223                 "oic.r.glucose.exercise"  
20224               ],  
20225               "exercise": 30.0  
20226             },  
20227             "schema": {  
20228               "$ref": "#/definitions/Exercise"  
20229             }  
20230           }  
20231         }  
20232       }  
20233     }  
20234   },  
20235   "parameters": {  
20236     "interface": {  
20237       "in": "query",
```

```

20238     "name": "if",
20239     "type": "string",
20240     "enum": [
20241         "oic.if.s",
20242         "oic.if.baseline"
20243     ]
20244 }
20245 },
20246 "definitions": {
20247     "Exercise": {
20248         "properties": {
20249             "rt": {
20250                 "description": "Resource Type",
20251                 "items": {
20252                     "enum": [
20253                         "oic.r.glucose.exercise"
20254                     ],
20255                     "type": "string",
20256                     "maxLength": 64
20257                 },
20258                 "minItems": 1,
20259                 "uniqueItems": true,
20260                 "readOnly": true,
20261                 "type": "array"
20262             },
20263             "exercise": {
20264                 "description": "The level of exercise undertaken in percentage",
20265                 "maximum": 100.0,
20266                 "minimum": 0.0,
20267                 "readOnly": true,
20268                 "type": "number"
20269             },
20270             "range": {
20271                 "$ref":
20272                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20273                 schema.json#/definitions/range_number"
20274             },
20275             "step": {
20276                 "$ref":
20277                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20278                 schema.json#/definitions/step_number"
20279             },
20280             "precision": {
20281                 "$ref":
20282                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20283                 schema.json#/definitions/precision"
20284             },
20285             "n": {
20286                 "$ref":
20287                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20288                 schema.json#/definitions/n"
20289             },
20290             "id": {
20291                 "$ref":
20292                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20293                 schema.json#/definitions/id"
20294             },
20295             "if": {
20296                 "description": "The OCF Interface set supported by this Resource",
20297                 "items": {
20298                     "enum": [
20299                         "oic.if.s",
20300                         "oic.if.baseline"
20301                     ],
20302                     "type": "string",
20303                     "maxLength": 64
20304                 },
20305                 "minItems": 1,
20306                 "readOnly": true,
20307                 "uniqueItems": true,
20308                 "type": "array"
20309             }

```

```

20310     },
20311     "type": "object",
20312     "required": [
20313         "exercise"
20314     ]
20315 }
20316 }
20317 }
20318

```

20319 **6.101.5 Property definition**

20320 Table 205 defines the Properties that are part of the "oic.r.glucose.exercise" Resource Type.

20321 **Table 205 – The Property definitions of the Resource with type "rt" =**  
 20322 **"oic.r.glucose.exercise".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
exercise	number	Yes	Read Only	The level of exercise undertaken in percentage
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

20323 **6.101.6 CRUDN behaviour**

20324 Table 206 defines the CRUDN operations that are supported on the "oic.r.glucose.exercise"  
 20325 Resource Type.

20326 **Table 206 – The CRUDN operations of the Resource with type "rt" =**  
 20327 **"oic.r.glucose.exercise".**

Create	Read	Update	Delete	Notify
	get			observe

20328 **6.102 Hemoglobin Bound to Glucose A1c Form (HbA1c) for Glucose Meter**

20329 **6.102.1 Introduction**

20330 This Resource describes the Properties associated with a person's hba1c level.  
 20331 The unit is a single value that is percentage.  
 20332 The hba1c Property is a read-only value that is provided by the Server.

20333 **6.102.2 Example URI**

20334 /GlucoseHbA1cResURI

20335 **6.102.3 Resource type**

20336 The Resource Type is defined as: "oic.r.glucose.hba1c".

#### 20337 6.102.4 OpenAPI 2.0 definition

```
20338 {
20339   "swagger": "2.0",
20340   "info": {
20341     "title": "Hemoglobin Bound to Glucose Alc Form (HbAlc) for Glucose Meter",
20342     "version": "2019-03-22",
20343     "license": {
20344       "name": "OCF Data Model License",
20345       "url":
20346         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
20347         CENSE.md",
20348       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
20349     },
20350     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
20351   },
20352   "schemes": [
20353     "http"
20354   ],
20355   "consumes": [
20356     "application/json"
20357   ],
20358   "produces": [
20359     "application/json"
20360   ],
20361   "paths": {
20362     "/GlucoseHbAlcResURI": {
20363       "get": {
20364         "description": "This Resource describes the Properties associated with a person's hbalc
20365         level.\n\nThe unit is a single value that is percentage.\n\nThe hbalc Property is a read-only value that
20366         is provided by the Server.",
20367         "parameters": [
20368           {
20369             "$ref": "#/parameters/interface"
20370           }
20371         ],
20372         "responses": {
20373           "200": {
20374             "description": "",
20375             "x-example": {
20376               "rt": [
20377                 "oic.r.glucose.hbalc"
20378               ],
20379               "hbalc": 5.0
20380             },
20381             "schema": {
20382               "$ref": "#/definitions/HbAlc"
20383             }
20384           }
20385         }
20386       }
20387     }
20388   },
20389   "parameters": {
20390     "interface": {
20391       "in": "query",
20392       "name": "if",
20393       "type": "string",
20394       "enum": [
20395         "oic.if.s",
20396         "oic.if.baseline"
20397       ]
20398     }
20399   },
20400   "definitions": {
20401     "HbAlc": {
20402       "properties": {
20403         "rt": {
20404           "description": "Resource Type",
20405           "items": {
20406             "enum": [
20407               "oic.r.glucose.hbalc"

```

```

20408         ],
20409         "type": "string",
20410         "maxLength": 64
20411     },
20412     "minItems": 1,
20413     "uniqueItems": true,
20414     "readOnly": true,
20415     "type": "array"
20416 },
20417 "hbalc": {
20418     "description": "Current HbA1c measurement in percentage",
20419     "maximum": 100.0,
20420     "minimum": 0.0,
20421     "readOnly": true,
20422     "type": "number"
20423 },
20424 "range": {
20425     "$ref":
20426 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20427 schema.json#/definitions/range_number"
20428 },
20429 "step": {
20430     "$ref":
20431 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20432 schema.json#/definitions/step_number"
20433 },
20434 "precision": {
20435     "$ref":
20436 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20437 schema.json#/definitions/precision"
20438 },
20439 "n": {
20440     "$ref":
20441 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20442 schema.json#/definitions/n"
20443 },
20444 "id": {
20445     "$ref":
20446 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20447 schema.json#/definitions/id"
20448 },
20449 "if": {
20450     "description": "The OCF Interface set supported by this Resource",
20451     "items": {
20452         "enum": [
20453             "oic.if.s",
20454             "oic.if.baseline"
20455         ],
20456         "type": "string",
20457         "maxLength": 64
20458     },
20459     "minItems": 1,
20460     "readOnly": true,
20461     "uniqueItems": true,
20462     "type": "array"
20463 }
20464 },
20465 "type": "object",
20466 "required": [
20467     "hbalc"
20468 ]
20469 }
20470 }
20471 }
20472

```

### 20473 6.102.5 Property definition

20474 Table 207 defines the Properties that are part of the "oic.r.glucose.hba1c" Resource Type.

20475 **Table 207 – The Property definitions of the Resource with type "rt" = "oic.r.glucose.hba1c".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
hba1c	number	Yes	Read Only	Current HbA1c measurement in percentage
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

20476 **6.102.6 CRUDN behaviour**

20477 Table 208 defines the CRUDN operations that are supported on the "oic.r.glucose.hba1c" Resource  
20478 Type.

20479 **Table 208 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose.hba1c".**

Create	Read	Update	Delete	Notify
	get			observe

20480 **6.103 Context Health for Glucose Meter**

20481 **6.103.1 Introduction**

20482 This Resource describes the Properties associated with context health.  
20483 The health Property is a read-only value that is provided by the Server where  
20484 minor and major are related to the general health or the level of illness of the person;  
20485 menses refers to the female menstrual cycle;  
20486 stress refers to physiological or psychological stress.

20487 **6.103.2 Example URI**

20488 /GlucoseHealthResURI

20489 **6.103.3 Resource type**

20490 The Resource Type is defined as: "oic.r.glucose.health".

20491 **6.103.4 OpenAPI 2.0 definition**

```
20492 {
20493   "swagger": "2.0",
20494   "info": {
20495     "title": "Context Health for Glucose Meter",
20496     "version": "2019-03-22",
20497     "license": {
20498       "name": "OCF Data Model License",
20499       "url":
20500 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
20501 CENSE.md",
20502       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
```



```

20503     },
20504     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
20505   },
20506   "schemes": [
20507     "http"
20508   ],
20509   "consumes": [
20510     "application/json"
20511   ],
20512   "produces": [
20513     "application/json"
20514   ],
20515   "paths": {
20516     "/GlucoseHealthResURI": {
20517       "get": {
20518         "description": "This Resource describes the Properties associated with context health.\n\nThe
20519 health Property is a read-only value that is provided by the Server where\n\nminor and major are
20520 related to the general health or the level of illness of the person;\n\nmenses refers to the female
20521 menstrual cycle;\n\nstress refers to physiological or psychological stress.",
20522         "parameters": [
20523           {
20524             "$ref": "#/parameters/interface"
20525           }
20526         ],
20527         "responses": {
20528           "200": {
20529             "description": "",
20530             "x-example": {
20531               "rt": [
20532                 "oic.r.glucose.health"
20533               ],
20534               "health": "major"
20535             },
20536             "schema": {
20537               "$ref": "#/definitions/GlucoseHealth"
20538             }
20539           }
20540         }
20541       }
20542     }
20543   },
20544   "parameters": {
20545     "interface": {
20546       "in": "query",
20547       "name": "if",
20548       "type": "string",
20549       "enum": [
20550         "oic.if.s",
20551         "oic.if.baseline"
20552       ]
20553     }
20554   },
20555   "definitions": {
20556     "GlucoseHealth": {
20557       "properties": {
20558         "rt": {
20559           "description": "Resource Type",
20560           "items": {
20561             "enum": [
20562               "oic.r.glucose.health"
20563             ],
20564             "type": "string",
20565             "maxLength": 64
20566           },
20567           "minItems": 1,
20568           "readOnly": true,
20569           "type": "array"
20570         },
20571         "health": {
20572           "description": "The various levels of health a person feels when taking a glucose.",
20573           "enum": [
20574             "minor",

```

```

20575         "major",
20576         "menses",
20577         "stress",
20578         "none"
20579     ],
20580     "readOnly": true,
20581     "type": "string"
20582 },
20583 "n": {
20584     "$ref":
20585 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20586 schema.json#/definitions/n"
20587 },
20588 "id": {
20589     "$ref":
20590 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20591 schema.json#/definitions/id"
20592 },
20593 "if": {
20594     "description": "The OCF Interface set supported by this Resource",
20595     "items": {
20596         "enum": [
20597             "oic.if.s",
20598             "oic.if.baseline"
20599         ],
20600         "type": "string",
20601         "maxLength": 64
20602     },
20603     "minItems": 1,
20604     "readOnly": true,
20605     "uniqueItems": true,
20606     "type": "array"
20607 }
20608 },
20609 "type": "object",
20610 "required": [
20611     "health"
20612 ]
20613 }
20614 }
20615 }
20616

```

### 20617 6.103.5 Property definition

20618 Table 209 defines the Properties that are part of the "oic.r.glucose.health" Resource Type.

20619 **Table 209 – The Property definitions of the Resource with type "rt" =**  
20620 **"oic.r.glucose.health".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
health	string	Yes	Read Only	The various levels of health a person feels when taking a glucose.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

20621 **6.103.6 CRUDN behaviour**

20622 Table 210 defines the CRUDN operations that are supported on the "oic.r.glucose.health" Resource  
20623 Type.

20624 **Table 210 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose.health".**

Create	Read	Update	Delete	Notify
	get			observe

20625 **6.104 Context Meal for Glucose Meter**

20626 **6.104.1 Introduction**

20627 This Resource describes the Properties associated with context meal.

20628 Preprandial means pre-meal.

20629 Postprandial means post-meal.

20630 Fasting means the effect of long-term absence of food intake (overnight).

20631 The meal Property is a read-only value that is provided by the Server.

20632 **6.104.2 Example URI**

20633 /GlucoseMealResURI

20634 **6.104.3 Resource type**

20635 The Resource Type is defined as: "oic.r.glucose.meal".

20636 **6.104.4 OpenAPI 2.0 definition**

```

20637 {
20638   "swagger": "2.0",
20639   "info": {
20640     "title": "Context Meal for Glucose Meter",
20641     "version": "2019-03-22",
20642     "license": {
20643       "name": "OCF Data Model License",
20644       "url":
20645         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
20646         CENSE.md",
20647       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
20648     },
20649     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
20650   },
20651   "schemes": [
20652     "http"
20653   ],
20654   "consumes": [
20655     "application/json"
20656   ],
20657   "produces": [
20658     "application/json"
20659   ],
20660   "paths": {
20661     "/GlucoseMealResURI": {
20662       "get": {
20663         "description": "This Resource describes the Properties associated with context
20664         meal.\nPreprandial means pre-meal.\nPostprandial means post-meal.\nFasting means the effect of long-
20665         term absence of food intake (overnight).\nThe meal Property is a read-only value that is provided by
20666         the Server.",
20667         "parameters": [
20668           {
20669             "$ref": "#/parameters/interface"
20670           }
20671         ],
20672         "responses": {
20673           "200": {
20674             "description": "",
20675             "x-example": {

```

```

20676         "rt": [
20677             "oic.r.glucose.meal"
20678         ],
20679         "meal": "preprandial"
20680     },
20681     "schema": {
20682         "$ref": "#/definitions/GlucoseMeal"
20683     }
20684 }
20685 }
20686 }
20687 }
20688 },
20689 "parameters": {
20690     "interface": {
20691         "in": "query",
20692         "name": "if",
20693         "type": "string",
20694         "enum": [
20695             "oic.if.s",
20696             "oic.if.baseline"
20697         ]
20698     }
20699 },
20700 "definitions": {
20701     "GlucoseMeal": {
20702         "properties": {
20703             "rt": {
20704                 "description": "Resource Type",
20705                 "items": {
20706                     "enum": [
20707                         "oic.r.glucose.meal"
20708                     ],
20709                     "type": "string",
20710                     "maxLength": 64
20711                 },
20712                 "minItems": 1,
20713                 "uniqueItems": true,
20714                 "readOnly": true,
20715                 "type": "array"
20716             },
20717             "meal": {
20718                 "description": "Time of day when the measurement is taken.",
20719                 "enum": [
20720                     "preprandial",
20721                     "postprandial",
20722                     "fasting",
20723                     "bedtime",
20724                     "casual"
20725                 ],
20726                 "readOnly": true,
20727                 "type": "string"
20728             },
20729             "n": {
20730                 "$ref":
20731 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20732 schema.json#/definitions/n"
20733             },
20734             "id": {
20735                 "$ref":
20736 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20737 schema.json#/definitions/id"
20738             },
20739             "if": {
20740                 "description": "The OCF Interface set supported by this Resource",
20741                 "items": {
20742                     "enum": [
20743                         "oic.if.s",
20744                         "oic.if.baseline"
20745                     ],
20746                     "type": "string",
20747                     "maxLength": 64

```

```

20748     },
20749     "minItems": 1,
20750     "readOnly": true,
20751     "uniqueItems": true,
20752     "type": "array"
20753   }
20754 },
20755 "type": "object",
20756 "required": [
20757   "meal"
20758 ]
20759 }
20760 }
20761 }
20762

```

20763 **6.104.5 Property definition**

20764 Table 211 defines the Properties that are part of the "oic.r.glucose.meal" Resource Type.

20765 **Table 211 – The Property definitions of the Resource with type "rt" = "oic.r.glucose.meal".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
meal	string	Yes	Read Only	Time of day when the measurement is taken.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

20766 **6.104.6 CRUDN behaviour**

20767 Table 212 defines the CRUDN operations that are supported on the "oic.r.glucose.meal" Resource  
 20768 Type.

20769 **Table 212 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose.meal".**

Create	Read	Update	Delete	Notify
	get			observe

20770 **6.105 Context Medication for Glucose Meter**

20771 **6.105.1 Introduction**

20772 This Resource describes the Properties associated with context medication.

20773 The unit is a single value that is one of mg and mL.

20774 The medication Property has a default unit of milligrams[mg].

20775 The medication, unit and regimen Properties are read-only values that are provided by the  
 20776 Server.

20777 When range is omitted the default is 0 to +MAXFLOAT.

20778 **6.105.2 Example URI**

20779 /GlucoseMedicationResURI

20780 **6.105.3 Resource type**

20781 The Resource Type is defined as: "oic.r.glucose.medication".

## 20782 6.105.4 OpenAPI 2.0 definition

```
20783 {
20784   "swagger": "2.0",
20785   "info": {
20786     "title": "Context Medication for Glucose Meter",
20787     "version": "2019-03-22",
20788     "license": {
20789       "name": "OCF Data Model License",
20790       "url":
20791         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
20792 CENSE.md",
20793       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
20794     },
20795     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
20796   },
20797   "schemes": [
20798     "http"
20799   ],
20800   "consumes": [
20801     "application/json"
20802   ],
20803   "produces": [
20804     "application/json"
20805   ],
20806   "paths": {
20807     "/GlucoseMedicationResURI": {
20808       "get": {
20809         "description": "This Resource describes the Properties associated with context
20810 medication.\n\nThe unit is a single value that is one of mg and mL.\n\nThe medication Property has a
20811 default unit of milligrams[mg].\n\nThe medication, unit and regimen Properties are read-only values
20812 that are provided by the Server.\n\nWhen range is omitted the default is 0 to +MAXFLOAT.",
20813         "parameters": [
20814           {
20815             "$ref": "#/parameters/interface"
20816           }
20817         ],
20818         "responses": {
20819           "200": {
20820             "description": "",
20821             "x-example": {
20822               "rt": [
20823                 "oic.r.glucose.medication"
20824               ],
20825               "medication": 100.0,
20826               "units": "mg",
20827               "regimen": "rapidacting"
20828             },
20829             "schema": {
20830               "$ref": "#/definitions/GlucoseMedication"
20831             }
20832           }
20833         }
20834       }
20835     }
20836   },
20837   "parameters": {
20838     "interface": {
20839       "in": "query",
20840       "name": "if",
20841       "type": "string",
20842       "enum": [
20843         "oic.if.s",
20844         "oic.if.baseline"
20845       ]
20846     }
20847   },
20848   "definitions": {
20849     "GlucoseMedication": {
20850       "properties": {
20851         "rt": {
20852           "description": "Resource Type",
```

```

20853     "items": {
20854         "enum": [
20855             "oic.r.glucose.medication"
20856         ],
20857         "type": "string",
20858         "maxLength": 64
20859     },
20860     "minItems": 1,
20861     "uniqueItems": true,
20862     "readOnly": true,
20863     "type": "array"
20864 },
20865 "regimen": {
20866     "description": "Medication regimen",
20867     "enum": [
20868         "rapidacting",
20869         "shortacting",
20870         "intermediateacting",
20871         "longacting",
20872         "premix"
20873     ],
20874     "readOnly": true,
20875     "type": "string"
20876 },
20877 "medication": {
20878     "description": "The amount of medication taken",
20879     "readOnly": true,
20880     "type": "number",
20881     "minimum": 0.0
20882 },
20883 "units": {
20884     "description": "Unit for the amount of medication taken",
20885     "enum": [
20886         "mg",
20887         "mL"
20888     ],
20889     "readOnly": true,
20890     "type": "string",
20891     "default": "mg"
20892 },
20893 "range": {
20894     "$ref":
20895     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20896     schema.json#/definitions/range_number"
20897 },
20898     "step": {
20899         "$ref":
20900         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20901         schema.json#/definitions/step_number"
20902     },
20903     "precision": {
20904         "$ref":
20905         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20906         schema.json#/definitions/precision"
20907     },
20908     "n": {
20909         "$ref":
20910         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20911         schema.json#/definitions/n"
20912     },
20913     "id": {
20914         "$ref":
20915         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20916         schema.json#/definitions/id"
20917     },
20918     "if": {
20919         "description": "The OCF Interface set supported by this Resource",
20920         "items": {
20921             "enum": [
20922                 "oic.if.s",
20923                 "oic.if.baseline"
20924             ],

```

```

20925         "type": "string",
20926         "maxLength": 64
20927     },
20928     "minItems": 1,
20929     "readOnly": true,
20930     "uniqueItems": true,
20931     "type": "array"
20932 }
20933 },
20934 "type": "object",
20935 "required": [
20936     "medication"
20937 ]
20938 }
20939 }
20940 }
20941

```

20942 **6.105.5 Property definition**

20943 Table 213 defines the Properties that are part of the "oic.r.glucose.medication" Resource Type.

20944 **Table 213 – The Property definitions of the Resource with type "rt" =**  
20945 **"oic.r.glucose.medication".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
regimen	string	No	Read Only	Medication regimen
medication	number	Yes	Read Only	The amount of medication taken
units	string	No	Read Only	Unit for the amount of medication taken
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

20946 **6.105.6 CRUDN behaviour**

20947 Table 214 defines the CRUDN operations that are supported on the "oic.r.glucose.medication"  
20948 Resource Type.

20949 **Table 214 – The CRUDN operations of the Resource with type "rt" =**  
20950 **"oic.r.glucose.medication".**

Create	Read	Update	Delete	Notify
	get			observe



20951 **6.106 Glucose Meter Atomic Measurement**

20952 **6.106.1 Introduction**

20953 This Resource describes the Properties associated with glucose meter.

20954 The Resource is an Atomic Measurement of glucose (oic.r.glucose), context carbohydrates  
20955 (oic.r.glucose.carb), context exercise (oic.r.glucose.exercise), Hemoglobin Bound to glucose a1c  
20956 Form (HbA1c) (oic.r.glucose.hba1c), context health (oic.r.glucose.health), context meal  
20957 (oic.r.glucose.meal), context medication (oic.r.glucose.medication), context sample location  
20958 (oic.r.glucose.samplelocation), context tester (oic.r.glucose.tester), observed time  
20959 (oic.r.time.stamp), and user id (oic.r.userid).

20960 **6.106.2 Example URI**

20961 /GlucoseMeterAMResURI

20962 **6.106.3 Resource type**

20963 The Resource Type is defined as: "oic.r.glucosemeter-am, oic.wk.atomicmeasurement".

20964 **6.106.4 OpenAPI 2.0 definition**

```
20965 {
20966   "swagger": "2.0",
20967   "info": {
20968     "title": "Glucose Meter Atomic Measurement",
20969     "version": "2019-03-22",
20970     "license": {
20971       "name": "OCF Data Model License",
20972       "url":
20973 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
20974 CENSE.md",
20975       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
20976     },
20977     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
20978   },
20979   "schemes": [
20980     "http"
20981   ],
20982   "consumes": [
20983     "application/json"
20984   ],
20985   "produces": [
20986     "application/json"
20987   ],
20988   "paths": {
20989     "/GlucoseMeterAMResURI?if=oic.if.b": {
20990       "get": {
20991         "description": "This Resource describes the Properties associated with glucose meter.\n\nThe
20992 Resource is an Atomic Measurement of glucose (oic.r.glucose), context carbohydrates
20993 (oic.r.glucose.carb), context exercise (oic.r.glucose.exercise), hemoglobin bound to glucose alc
20994 Form (HbAlc) (oic.r.glucose.hbalc), context health (oic.r.glucose.health), context meal
20995 (oic.r.glucose.meal), context medication (oic.r.glucose.medication), context sample location
20996 (oic.r.glucose.samplelocation), context tester (oic.r.glucose.tester), observed time
20997 (oic.r.time.stamp), and user id (oic.r.userid).",
20998         "parameters": [
20999           {
21000             "$ref": "#/parameters/interface-all"
21001           }
21002         ],
21003         "responses": {
21004           "200": {
21005             "description": "",
21006             "x-example": [
21007               {
21008                 "href": "/myGlucose",
21009                 "rep": {
21010                   "glucose": 100.0,
21011                   "units": "mg/dL",
21012                   "range": [
```

```

21013         20.0,
21014         600.0
21015     ],
21016     "step": 1
21017 }
21018 },
21019 {
21020     "href": "/myGlucoseCarb",
21021     "rep": {
21022         "carb": 100.0,
21023         "meal": "breakfast"
21024     }
21025 },
21026 {
21027     "href": "/myGlucoseExercise",
21028     "rep": {
21029         "exercise": 30.0
21030     }
21031 },
21032 {
21033     "href": "/myGlucoseHbA1c",
21034     "rep": {
21035         "hba1c": 5.0
21036     }
21037 },
21038 {
21039     "href": "/myGlucoseHealth",
21040     "rep": {
21041         "health": "major"
21042     }
21043 },
21044 {
21045     "href": "/myGlucoseMeal",
21046     "rep": {
21047         "meal": "preprandial"
21048     }
21049 },
21050 {
21051     "href": "/myGlucoseMeditation",
21052     "rep": {
21053         "medication": 100.0,
21054         "units": "mg",
21055         "regimen": "rapidacting"
21056     }
21057 },
21058 {
21059     "href": "/myGlucoseSampleLocation",
21060     "rep": {
21061         "samplelocation": "finger"
21062     }
21063 },
21064 {
21065     "href": "/myGlucoseTester",
21066     "rep": {
21067         "tester": "self"
21068     }
21069 },
21070 {
21071     "href": "/myUserId",
21072     "rep": {
21073         "userid": "USER1"
21074     }
21075 },
21076 {
21077     "href": "/myTimeStamp",
21078     "rep": {
21079         "timestamp": "2018-11-09T12:15+08:00"
21080     }
21081 }
21082 ],
21083 "schema": {
21084     "$ref": "#/definitions/batch-retrieve"

```

```

21085     }
21086   }
21087 }
21088 },
21089 },
21090 "/GlucoseMeterAMResURI?if=oic.if.ll": {
21091   "get": {
21092     "description": "This Resource describes the Properties associated with glucose meter.\nThe
21093 Resource is an Atomic Measurement of glucose (oic.r.glucose), context carbohydrates
21094 (oic.r.glucose.carb), context exercise (oic.r.glucose.exercise), hemoglobin bound to glucose alc
21095 Form (HbA1c) (oic.r.glucose.hbalc), context health (oic.r.glucose.health), context meal
21096 (oic.r.glucose.meal), context medication (oic.r.glucose.medication), context sample location
21097 (oic.r.glucose.samplelocation), context tester (oic.r.glucose.tester), observed time
21098 (oic.r.time.stamp), and user id (oic.r.userid).",
21099     "parameters": [
21100       {
21101         "$ref": "#/parameters/interface-all"
21102       }
21103     ],
21104     "responses": {
21105       "200": {
21106         "description": "",
21107         "x-example": [
21108           {
21109             "href": "/myGlucose",
21110             "rt": [
21111               "oic.r.glucose"
21112             ],
21113             "if": [
21114               "oic.if.s",
21115               "oic.if.baseline"
21116             ]
21117           },
21118           {
21119             "href": "/myGlucoseCarb",
21120             "rt": [
21121               "oic.r.glucose.carb"
21122             ],
21123             "if": [
21124               "oic.if.s",
21125               "oic.if.baseline"
21126             ]
21127           },
21128           {
21129             "href": "/myGlucoseExercise",
21130             "rt": [
21131               "oic.r.glucose.exercise"
21132             ],
21133             "if": [
21134               "oic.if.s",
21135               "oic.if.baseline"
21136             ]
21137           },
21138           {
21139             "href": "/myGlucoseHbA1c",
21140             "rt": [
21141               "oic.r.glucose.hbalc"
21142             ],
21143             "if": [
21144               "oic.if.s",
21145               "oic.if.baseline"
21146             ]
21147           },
21148           {
21149             "href": "/myGlucoseHealth",
21150             "rt": [
21151               "oic.r.glucose.health"
21152             ],
21153             "if": [
21154               "oic.if.s",
21155               "oic.if.baseline"
21156             ]

```

```

21157     },
21158     {
21159         "href": "/myGlucoseMeal",
21160         "rt": [
21161             "oic.r.glucose.meal"
21162         ],
21163         "if": [
21164             "oic.if.s",
21165             "oic.if.baseline"
21166         ]
21167     },
21168     {
21169         "href": "/myGlucoseMedication",
21170         "rt": [
21171             "oic.r.glucose.medication"
21172         ],
21173         "if": [
21174             "oic.if.s",
21175             "oic.if.baseline"
21176         ]
21177     },
21178     {
21179         "href": "/myGlucoseSampleLocation",
21180         "rt": [
21181             "oic.r.glucose.samplelocation"
21182         ],
21183         "if": [
21184             "oic.if.r",
21185             "oic.if.baseline"
21186         ]
21187     },
21188     {
21189         "href": "/myGlucoseTester",
21190         "rt": [
21191             "oic.r.glucose.testers"
21192         ],
21193         "if": [
21194             "oic.if.r",
21195             "oic.if.baseline"
21196         ]
21197     },
21198     {
21199         "href": "/myUserId",
21200         "rt": [
21201             "oic.r.userid"
21202         ],
21203         "if": [
21204             "oic.if.r",
21205             "oic.if.baseline"
21206         ]
21207     },
21208     {
21209         "href": "/myTimeStamp",
21210         "rt": [
21211             "oic.r.time.stamp"
21212         ],
21213         "if": [
21214             "oic.if.r",
21215             "oic.if.baseline"
21216         ]
21217     }
21218 ],
21219 "schema": {
21220     "$ref": "#/definitions/links"
21221 }
21222 }
21223 }
21224 },
21225 },
21226 "/GlucoseMeterAMResURI?if=oic.if.baseline": {
21227     "get": {
21228         "description": "This Resource describes the Properties associated with glucose meter.\nThe

```

```

21229 Resource is an Atomic Measurement of glucose (oic.r.glucose), context carbohydrates
21230 (oic.r.glucose.carb), context exercise (oic.r.glucose.exercise), Hemoglobin Bound to glucose alc
21231 Form (HbA1c) (oic.r.glucose.hbalc), context health (oic.r.glucose.health), context meal
21232 (oic.r.glucose.meal), context medication (oic.r.glucose.medication), context sample location
21233 (oic.r.glucose.samplelocation), context tester (oic.r.glucose.tester), observed time
21234 (oic.r.time.stamp), and user id (oic.r.userid).",
21235     "parameters": [
21236     {
21237         "$ref": "#/parameters/interface-all"
21238     }
21239 ],
21240     "responses": {
21241         "200": {
21242             "description": "",
21243             "x-example": {
21244                 "rt": [
21245                     "oic.r.glucosemeter-am",
21246                     "oic.wk.atomicmeasurement"
21247                 ],
21248                 "if": [
21249                     "oic.if.b",
21250                     "oic.if.ll",
21251                     "oic.if.baseline"
21252                 ],
21253                 "rts": [
21254                     "oic.r.glucose",
21255                     "oic.r.glucose.carb",
21256                     "oic.r.glucose.exercise",
21257                     "oic.r.glucose.hbalc",
21258                     "oic.r.glucose.health",
21259                     "oic.r.glucose.meal",
21260                     "oic.r.glucose.medication",
21261                     "oic.r.glucose.samplelocation",
21262                     "oic.r.glucose.tester",
21263                     "oic.r.userid",
21264                     "oic.r.time.stamp"
21265                 ],
21266                 "rts-m": [
21267                     "oic.r.glucose"
21268                 ],
21269                 "links": [
21270                 {
21271                     "href": "/myGlucose",
21272                     "rt": [
21273                         "oic.r.glucose"
21274                     ],
21275                     "if": [
21276                         "oic.if.s",
21277                         "oic.if.baseline"
21278                     ]
21279                 },
21280                 {
21281                     "href": "/myGlucoseCarb",
21282                     "rt": [
21283                         "oic.r.glucose.carb"
21284                     ],
21285                     "if": [
21286                         "oic.if.s",
21287                         "oic.if.baseline"
21288                     ]
21289                 },
21290                 {
21291                     "href": "/myGlucoseExercise",
21292                     "rt": [
21293                         "oic.r.glucose.exercise"
21294                     ],
21295                     "if": [
21296                         "oic.if.s",
21297                         "oic.if.baseline"
21298                     ]
21299                 },
21300                 {

```

```

21301         "href": "/myGlucoseHbA1c",
21302         "rt": [
21303             "oic.r.glucose.hbA1c"
21304         ],
21305         "if": [
21306             "oic.if.s",
21307             "oic.if.baseline"
21308         ]
21309     },
21310     {
21311         "href": "/myGlucoseHealth",
21312         "rt": [
21313             "oic.r.glucose.health"
21314         ],
21315         "if": [
21316             "oic.if.s",
21317             "oic.if.baseline"
21318         ]
21319     },
21320     {
21321         "href": "/myGlucoseMeal",
21322         "rt": [
21323             "oic.r.glucose.meal"
21324         ],
21325         "if": [
21326             "oic.if.s",
21327             "oic.if.baseline"
21328         ]
21329     },
21330     {
21331         "href": "/myGlucoseMedication",
21332         "rt": [
21333             "oic.r.glucose.medication"
21334         ],
21335         "if": [
21336             "oic.if.s",
21337             "oic.if.baseline"
21338         ]
21339     },
21340     {
21341         "href": "/myGlucoseSampleLocation",
21342         "rt": [
21343             "oic.r.glucose.samplelocation"
21344         ],
21345         "if": [
21346             "oic.if.r",
21347             "oic.if.baseline"
21348         ]
21349     },
21350     {
21351         "href": "/myGlucoseTester",
21352         "rt": [
21353             "oic.r.glucose.testers"
21354         ],
21355         "if": [
21356             "oic.if.r",
21357             "oic.if.baseline"
21358         ]
21359     },
21360     {
21361         "href": "/myUserId",
21362         "rt": [
21363             "oic.r.userid"
21364         ],
21365         "if": [
21366             "oic.if.r",
21367             "oic.if.baseline"
21368         ]
21369     },
21370     {
21371         "href": "/myTimeStamp",
21372         "rt": [

```

```

21373         "oic.r.time.stamp"
21374     ],
21375     "if": [
21376         "oic.if.r",
21377         "oic.if.baseline"
21378     ]
21379     }
21380 ]
21381 },
21382 "schema": {
21383     "$ref": "#/definitions/baseline"
21384 }
21385 }
21386 }
21387 }
21388 }
21389 },
21390 "parameters": {
21391     "interface-all": {
21392         "in": "query",
21393         "name": "if",
21394         "type": "string",
21395         "enum": [
21396             "oic.if.b",
21397             "oic.if.ll",
21398             "oic.if.baseline"
21399         ]
21400     }
21401 },
21402 "definitions": {
21403     "links": {
21404         "type": "array",
21405         "items": {
21406             "$ref": "#/definitions/oic.oic-link"
21407         }
21408     },
21409     "batch-retrieve": {
21410         "minItems": 1,
21411         "items": {
21412             "properties": {
21413                 "href": {
21414                     "$ref":
21415 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21416 schema.json#/definitions/href"
21417                 },
21418                 "rep": {
21419                     "type": "object",
21420                     "anyOf": [
21421                         {
21422                             "$ref":
21423 "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseResURI.swagger.json#/definitions/
21424 Glucose"
21425                         },
21426                         {
21427                             "$ref":
21428 "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseCarbResURI.swagger.json#/definiti
21429 ons/GlucoseCarb"
21430                         },
21431                         {
21432                             "$ref":
21433 "https://openconnectivityfoundation.github.io/IoTDataModels/ExerciseResURI.swagger.json#/definitions
21434 /Exercise"
21435                         },
21436                         {
21437                             "$ref":
21438 "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseHbAlcResURI.swagger.json#/definit
21439 ions/HbAlc"
21440                         },
21441                         {
21442                             "$ref":
21443 "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseHealthResURI.swagger.json#/defini
21444 tions/GlucoseHealth"

```

```

21445     },
21446     {
21447         "$ref":
21448         "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseMealResURI.swagger.json#/definitions/GlucoseMeal"
21449     },
21450     {
21451         "$ref":
21452         "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseMedicationResURI.swagger.json#/definitions/GlucoseMedication"
21453     },
21454     {
21455         "$ref":
21456         "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseSampleLocationResURI.swagger.json#/definitions/GlucoseSampleLocation"
21457     },
21458     {
21459         "$ref":
21460         "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseTesterResURI.swagger.json#/definitions/GlucoseTester"
21461     },
21462     {
21463         "$ref":
21464         "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/UserID"
21465     },
21466     {
21467         "$ref":
21468         "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definitions/TimeStamp"
21469     }
21470 ]
21471 },
21472 "required": [
21473     "href",
21474     "rep"
21475 ],
21476 "type": "object"
21477 },
21478 "type": "array"
21479 },
21480 "baseline": {
21481     "properties": {
21482         "rt": {
21483             "items": {
21484                 "enum": [
21485                     "oic.r.glucosemeter-am",
21486                     "oic.wk.atomicmeasurement"
21487                 ],
21488                 "type": "string",
21489                 "maxLength": 64
21490             },
21491             "minItems": 2,
21492             "uniqueItems": true,
21493             "readOnly": true,
21494             "type": "array"
21495         },
21496         "rts": {
21497             "description": "This contains all possible Resource Types for this Atomic Measurement.",
21498             "items": {
21499                 "enum": [
21500                     "oic.r.glucose",
21501                     "oic.r.glucose.carb",
21502                     "oic.r.glucose.exercise",
21503                     "oic.r.glucose.hb1c",
21504                     "oic.r.glucose.health",
21505                     "oic.r.glucose.meal",
21506                     "oic.r.glucose.medication",
21507                     "oic.r.glucose.samplelocation",
21508                     "oic.r.glucose.testers",
21509                     "oic.r.time.stamp"
21510                 ]
21511             }
21512         }
21513     }
21514 }

```



```

21517         "oic.r.userid"
21518     ],
21519     "type": "string",
21520     "maxLength": 64
21521 },
21522 "minItems": 1,
21523 "uniqueItems": true,
21524 "readOnly": true,
21525 "type": "array"
21526 },
21527 "rts-m": {
21528     "description": "This contains all mandatory Resource Types for this Atomic Measurement.",
21529     "items": {
21530         "enum": [
21531             "oic.r.glucose"
21532         ],
21533         "type": "string",
21534         "maxLength": 64
21535     },
21536     "maxItems": 1,
21537     "minItems": 1,
21538     "uniqueItems": true,
21539     "readOnly": true,
21540     "type": "array"
21541 },
21542 "if": {
21543     "description": "The OCF Interface set supported by this Resource",
21544     "items": {
21545         "enum": [
21546             "oic.if.b",
21547             "oic.if.ll",
21548             "oic.if.baseline"
21549         ],
21550         "type": "string",
21551         "maxLength": 64
21552     },
21553     "minItems": 3,
21554     "uniqueItems": true,
21555     "readOnly": true,
21556     "type": "array"
21557 },
21558 "n": {
21559     "$ref":
21560     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21561     schema.json#/definitions/n"
21562 },
21563 "id": {
21564     "$ref":
21565     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21566     schema.json#/definitions/id"
21567 },
21568 "links": {
21569     "$ref": "#/definitions/links"
21570 }
21571 },
21572 "type": "object",
21573 "required": [
21574     "rt", "if", "links", "rts", "rts-m"
21575 ]
21576 },
21577 "oic.oic-link": {
21578     "properties": {
21579         "if": {
21580             "description": "The OCF Interface set supported by the target Resource",
21581             "items": {
21582                 "enum": [
21583                     "oic.if.s",
21584                     "oic.if.r",
21585                     "oic.if.baseline"
21586                 ],
21587                 "type": "string",
21588                 "maxLength": 64

```

```

21589     },
21590     "minItems": 1,
21591     "uniqueItems": true,
21592     "readOnly": true,
21593     "type": "array"
21594   },
21595   "rt": {
21596     "description": "Resource Type of the target Resource",
21597     "items": {
21598       "enum": [
21599         "oic.r.glucose",
21600         "oic.r.glucose.carb",
21601         "oic.r.glucose.exercise",
21602         "oic.r.glucose.hb1c",
21603         "oic.r.glucose.health",
21604         "oic.r.glucose.meal",
21605         "oic.r.glucose.medication",
21606         "oic.r.glucose.samplelocation",
21607         "oic.r.glucose.tester",
21608         "oic.r.time.stamp",
21609         "oic.r.userid"
21610       ],
21611       "type": "string",
21612       "maxLength": 64
21613     },
21614     "minItems": 1,
21615     "uniqueItems": true,
21616     "readOnly": true,
21617     "type": "array"
21618   },
21619   "anchor": {
21620     "$ref":
21621     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21622     schema.json#/definitions/anchor"
21623   },
21624   "di": {
21625     "$ref":
21626     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21627     schema.json#/definitions/di"
21628   },
21629   "eps": {
21630     "$ref":
21631     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21632     schema.json#/definitions/eps"
21633   },
21634   "href": {
21635     "$ref":
21636     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21637     schema.json#/definitions/href"
21638   },
21639   "ins": {
21640     "$ref":
21641     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21642     schema.json#/definitions/ins"
21643   },
21644   "p": {
21645     "$ref":
21646     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21647     schema.json#/definitions/p"
21648   },
21649   "rel": {
21650     "$ref":
21651     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21652     schema.json#/definitions/rel_array"
21653   },
21654   "title": {
21655     "$ref":
21656     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21657     schema.json#/definitions/title"
21658   },
21659   "type": {
21660     "$ref":

```

```

21661 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21662 schema.json#/definitions/type"
21663   }
21664 },
21665 "required": [
21666   "href",
21667   "rt",
21668   "if"
21669 ],
21670 "type": "object"
21671 }
21672 }
21673 }
21674

```

21675 **6.106.5 Property definition**

21676 Table 215 defines the Properties that are part of the "oic.r.glucosemeter-am,  
21677 oic.wk.atomicmeasurement" Resource Type.

21678 **Table 215 – The Property definitions of the Resource with type "rt" = "oic.r.glucosemeter-  
21679 am, oic.wk.atomicmeasurement".**

Property name	Value type	Mandatory	Access mode	Description
href	multiple types: see schema	Yes	Read Write	
rep	object: see schema	Yes	Read Write	
rt	array: see schema	Yes	Read Only	
rts	array: see schema	Yes	Read Only	This contains all possible Resource Types for this Atomic Measurement.
rts-m	array: see schema	Yes	Read Only	This contains all mandatory Resource Types for this Atomic Measurement.
if	array: see schema	Yes	Read Only	The OCF Interface set supported by this Resource
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
links	multiple types: see schema	Yes	Read Write	
if	array: see schema	Yes	Read Only	The OCF Interface set supported by the target Resource
rt	array: see schema	Yes	Read Only	Resource Type of the target Resource
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	

ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	

21680 **6.106.6 CRUDN behaviour**

21681 Table 216 defines the CRUDN operations that are supported on the "oic.r.glucosemeter-am,  
21682 oic.wk.atomicmeasurement" Resource Type.

21683 **Table 216 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucosemeter-  
21684 am, oic.wk.atomicmeasurement".**

Create	Read	Update	Delete	Notify
	get			observe

21685 **6.107 Context Sample Location for Glucose Meter**

21686 **6.107.1 Introduction**

21687 This Resource describes the Properties associated with context sample Location.  
21688 AST means Alternative Site Test specifying that the location of test performed was from an  
21689 alternative site on the body.  
21690 The samplelocation Property is a read-only value that is provided by the Server.

21691 **6.107.2 Example URI**

21692 /GlucoseSampleLocationResURI

21693 **6.107.3 Resource type**

21694 The Resource Type is defined as: "oic.r.glucose.samplelocation".

21695 **6.107.4 OpenAPI 2.0 definition**

```

21696 {
21697   "swagger": "2.0",
21698   "info": {
21699     "title": "Context Sample Location for Glucose Meter",
21700     "version": "2019-03-22",
21701     "license": {
21702       "name": "OCF Data Model License",
21703       "url":
21704         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
21705         CENSE.md",
21706       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
21707     },
21708     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
21709   },
21710   "schemes": [
21711     "http"
21712   ],
21713   "consumes": [
21714     "application/json"
21715   ],
21716   "produces": [
21717     "application/json"
21718   ],
21719   "paths": {
21720     "/GlucoseSampleLocationResURI": {

```

```

21721     "get": {
21722         "description": "This Resource describes the Properties associated with context sample
21723 Location.\nAST means Alternative Site Test specifying that the location of test performed was from
21724 an alternative site on the body.\nThe samplelocation Property is a read-only value that is provided
21725 by the Server.",
21726         "parameters": [
21727             {
21728                 "$ref": "#/parameters/interface"
21729             }
21730         ],
21731         "responses": {
21732             "200": {
21733                 "description": "",
21734                 "x-example": {
21735                     "rt": [
21736                         "oic.r.glucose.samplelocation"
21737                     ],
21738                     "samplelocation": "finger"
21739                 },
21740                 "schema": {
21741                     "$ref": "#/definitions/GlucoseSampleLocation"
21742                 }
21743             }
21744         }
21745     }
21746 },
21747 "parameters": {
21748     "interface": {
21749         "in": "query",
21750         "name": "if",
21751         "type": "string",
21752         "enum": [
21753             "oic.if.r",
21754             "oic.if.baseline"
21755         ]
21756     }
21757 },
21758 },
21759 "definitions": {
21760     "GlucoseSampleLocation": {
21761         "properties": {
21762             "rt": {
21763                 "description": "Resource Type",
21764                 "items": {
21765                     "enum": [
21766                         "oic.r.glucose.samplelocation"
21767                     ],
21768                     "type": "string",
21769                     "maxLength": 64
21770                 },
21771                 "minItems": 1,
21772                 "uniqueItems": true,
21773                 "readOnly": true,
21774                 "type": "array"
21775             },
21776             "samplelocation": {
21777                 "description": "The possible blood locations where the blood sample may be taken.",
21778                 "enum": [
21779                     "finger",
21780                     "ast",
21781                     "earlobe",
21782                     "ctrlsolution"
21783                 ],
21784                 "readOnly": true,
21785                 "type": "string"
21786             },
21787             "n": {
21788                 "$ref":
21789 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21790 schema.json#/definitions/n"
21791             },
21792             "id": {

```

```

21793     "$ref":
21794     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21795     schema.json#/definitions/id"
21796   },
21797   "if": {
21798     "description": "The OCF Interface set supported by this Resource",
21799     "items": {
21800       "enum": [
21801         "oic.if.r",
21802         "oic.if.baseline"
21803       ],
21804       "type": "string",
21805       "maxLength": 64
21806     },
21807     "minItems": 1,
21808     "readOnly": true,
21809     "uniqueItems": true,
21810     "type": "array"
21811   }
21812 },
21813 "type": "object",
21814 "required": [
21815   "samplelocation"
21816 ]
21817 }
21818 }
21819 }
21820

```

21821 **6.107.5 Property definition**

21822 Table 217 defines the Properties that are part of the "oic.r.glucose.samplelocation" Resource Type.

21823 **Table 217 – The Property definitions of the Resource with type "rt" =**  
 21824 **"oic.r.glucose.samplelocation".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
samplelocation	string	Yes	Read Only	The possible blood locations where the blood sample may be taken.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

21825 **6.107.6 CRUDN behaviour**

21826 Table 218 defines the CRUDN operations that are supported on the "oic.r.glucose.samplelocation"  
 21827 Resource Type.

21828 **Table 218 – The CRUDN operations of the Resource with type "rt" =**  
 21829 **"oic.r.glucose.samplelocation".**

Create	Read	Update	Delete	Notify
	get			observe

## 21830 6.108 Context Tester for Glucose Meter

### 21831 6.108.1 Introduction

21832 This Resource describes the Properties associated with context tester.

21833 The tester Property is a read-only value that is provided by the Server where especially  
21834 hcp stands for HealthCare Professional.

### 21835 6.108.2 Example URI

21836 /GlucoseTesterResURI

### 21837 6.108.3 Resource type

21838 The Resource Type is defined as: "oic.r.glucose.tester".

### 21839 6.108.4 OpenAPI 2.0 definition

```
21840 {
21841   "swagger": "2.0",
21842   "info": {
21843     "title": "Context Tester for Glucose Meter",
21844     "version": "2019-03-22",
21845     "license": {
21846       "name": "OCF Data Model License",
21847       "url":
21848         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
21849         CENSE.md",
21850       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
21851     },
21852     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
21853   },
21854   "schemes": [
21855     "http"
21856   ],
21857   "consumes": [
21858     "application/json"
21859   ],
21860   "produces": [
21861     "application/json"
21862   ],
21863   "paths": {
21864     "/GlucoseTesterResURI": {
21865       "get": {
21866         "description": "This Resource describes the Properties associated with context tester.\n\nThe
21867         tester Property is a read-only value that is provided by the Server where especially\n\nhcp stands for
21868         HealthCare Professional.",
21869         "parameters": [
21870           {
21871             "$ref": "#/parameters/interface"
21872           }
21873         ],
21874         "responses": {
21875           "200": {
21876             "description": "",
21877             "x-example": {
21878               "rt": [
21879                 "oic.r.glucose.tester"
21880               ],
21881               "tester": "self"
21882             },
21883             "schema": {
21884               "$ref": "#/definitions/GlucoseTester"
21885             }
21886           }
21887         }
21888       }
21889     }
21890   },
21891   "parameters": {
21892     "interface": {
21893       "in": "query",
```

```

21894     "name": "if",
21895     "type": "string",
21896     "enum": [
21897         "oic.if.r",
21898         "oic.if.baseline"
21899     ]
21900 }
21901 },
21902 "definitions": {
21903     "GlucoseTester": {
21904         "properties": {
21905             "rt": {
21906                 "description": "Resource Type",
21907                 "items": {
21908                     "enum": [
21909                         "oic.r.glucose.tester"
21910                     ],
21911                     "type": "string",
21912                     "maxLength": 64
21913                 },
21914                 "minItems": 1,
21915                 "uniqueItems": true,
21916                 "readOnly": true,
21917                 "type": "array"
21918             },
21919             "tester": {
21920                 "description": "The possible cases of testers who may perform the blood sugar
21921 measurement.",
21922                 "enum": [
21923                     "self",
21924                     "hcp",
21925                     "lab"
21926                 ],
21927                 "readOnly": true,
21928                 "type": "string"
21929             },
21930             "n": {
21931                 "$ref":
21932 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21933 schema.json#/definitions/n"
21934             },
21935             "id": {
21936                 "$ref":
21937 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21938 schema.json#/definitions/id"
21939             },
21940             "if": {
21941                 "description": "The OCF Interface set supported by this Resource",
21942                 "items": {
21943                     "enum": [
21944                         "oic.if.r",
21945                         "oic.if.baseline"
21946                     ],
21947                     "type": "string",
21948                     "maxLength": 64
21949                 },
21950                 "minItems": 1,
21951                 "readOnly": true,
21952                 "uniqueItems": true,
21953                 "type": "array"
21954             }
21955         },
21956         "type": "object",
21957         "required": [
21958             "tester"
21959         ]
21960     }
21961 }
21962 }
21963

```



21964 **6.108.5 Property definition**

21965 Table 219 defines the Properties that are part of the "oic.r.glucose.tester" Resource Type.

21966 **Table 219 – The Property definitions of the Resource with type "rt" = "oic.r.glucose.tester".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
tester	string	Yes	Read Only	The possible cases of testers who may perform the blood sugar measurement.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

21967 **6.108.6 CRUDN behaviour**

21968 Table 220 defines the CRUDN operations that are supported on the "oic.r.glucose.tester" Resource Type.  
21969

21970 **Table 220 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose.tester".**

Create	Read	Update	Delete	Notify
	get			observe

21971 **6.109 Optical RFID Station**

21972 **6.109.1 Introduction**

21973 The Property "process" represents the stage of the product in the product line which has an optical RFID tag on its body.

21975 The Property "event" is represented by a Boolean value set to "true" and "false" alarming the issue when additional action is requested for the tagged product.

21976 The Property "actionrequest" represent necessary actions like the isolation of the product, to send the product back to other specific line to modify or fix the issue.  
21977  
21978

21979 **6.109.2 Example URI**

21980 /ORFIDStationResURI

21981 **6.109.3 Resource type**

21982 The Resource Type is defined as: "oic.r.orfid.station".

21983 **6.109.4 OpenAPI 2.0 definition**

```
21984 {
21985   "swagger": "2.0",
21986   "info": {
21987     "title": "Optical RFID Station",
21988     "version": "20190215",
21989     "license": {
21990       "name": "OCF Data Model License",
21991       "url":
21992         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
21993         CENSE.md",
21994       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
21995         reserved."
21996     }
21997   },
```

```

21997     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
21998   },
21999   "schemes": ["http"],
22000   "consumes": ["application/json"],
22001   "produces": ["application/json"],
22002   "paths": {
22003     "/ORFIDStationResURI" : {
22004       "get": {
22005         "description": "The Property \"process\" represents the stage of the product in the product
22006 line which has an optical RFID tag on its body.\nThe Property \"event\" is represented by a Boolean
22007 value set to \"true\" and \"false\" alarming the issue when additional action is requested for the
22008 tagged product.\nThe Property \"actionrequest\" represent necessary actions like the isolation of
22009 the product, to send the product back to other specific line to modify or fix the issue.",
22010         "parameters": [
22011           {"$ref": "#/parameters/interface"}
22012         ],
22013         "responses": {
22014           "200": {
22015             "description": "RETRIEVES the station information from optical augmented RFID reader
22016 in smart factory environment.",
22017             "x-example":
22018               {
22019                 "rt": ["oic.r.orfid.station"],
22020                 "if": ["oic.if.rw", "oic.if.baseline"],
22021                 "process": 17,
22022                 "event": true,
22023                 "actionrequest": 2
22024               },
22025             "schema": { "$ref": "#/definitions/ORFID" }
22026           }
22027         }
22028       },
22029       "post": {
22030         "description": "Sets necessary action in accordance with Tag Information.",
22031         "parameters": [
22032           {"$ref": "#/parameters/interface"},
22033           {
22034             "name": "body",
22035             "in": "body",
22036             "required": true,
22037             "schema": { "$ref": "#/definitions/ORFID" },
22038             "x-example":
22039               {
22040                 "event": false,
22041                 "actionrequest": 0
22042               }
22043           }
22044         ],
22045         "responses": {
22046           "200": {
22047             "description": "",
22048             "x-example":
22049               {
22050                 "event": false,
22051                 "actionrequest": 0
22052               },
22053             "schema": { "$ref": "#/definitions/ORFID" }
22054           }
22055         }
22056       }
22057     }
22058   },
22059   "parameters": {
22060     "interface": {
22061       "in": "query",
22062       "name": "if",
22063       "type": "string",
22064       "enum": ["oic.if.rw", "oic.if.baseline"]
22065     }
22066   },
22067   "definitions": {
22068     "ORFID" : {

```

```

22069     "properties": {
22070       "rt": {
22071         "description": "The Resource Type.",
22072         "items": {
22073           "enum": ["oic.r.orfid.station"],
22074           "maxLength": 64,
22075           "type": "string"
22076         },
22077         "minItems": 1,
22078         "uniqueItems": true,
22079         "readOnly": true,
22080         "type": "array"
22081       },
22082       "process": {
22083         "description": "The process step that is being performed at this station.",
22084         "readOnly": true,
22085         "type": "integer"
22086       },
22087       "actionrequest": {
22088         "description": "The action request identifier.",
22089         "type": "integer"
22090       },
22091       "event": {
22092         "description": "The Event indicator, when True, the action request should be applied to
22093 the product identified by the tagid.",
22094         "type": "boolean"
22095       },
22096       "n": {
22097         "$ref":
22098 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22099 schema.json#/definitions/n"
22100       },
22101       "id": {
22102         "$ref":
22103 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22104 schema.json#/definitions/id"
22105       },
22106       "if": {
22107         "description": "The OCF Interface set supported by this Resource.",
22108         "items": {
22109           "enum": [
22110             "oic.if.rw",
22111             "oic.if.baseline"
22112           ],
22113           "type": "string"
22114         },
22115         "minItems": 2,
22116         "uniqueItems": true,
22117         "readOnly": true,
22118         "type": "array"
22119       }
22120     },
22121     "type": "object",
22122     "required": ["event", "actionrequest"]
22123   }
22124 }
22125 }
22126

```

## 22127 6.109.5 Property definition

22128 Table 221 defines the Properties that are part of the "oic.r.orfid.station" Resource Type.

22129 **Table 221 – The Property definitions of the Resource with type "rt" = "oic.r.orfid.station".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
process	integer	No	Read Only	The process step that is being

				performed at this station.
actionrequest	integer	Yes	Read Write	The action request identifier.
event	boolean	Yes	Read Write	The Event indicator, when True, the action request should be applied to the product identified by the tagid.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

22130 **6.109.6 CRUDN behaviour**

22131 Table 222 defines the CRUDN operations that are supported on the "oic.r.orfid.station" Resource  
22132 Type.

22133 **Table 222 – The CRUDN operations of the Resource with type "rt" = "oic.r.orfid.station".**

Create	Read	Update	Delete	Notify
	get	post		observe

22134 **6.110 Optical RFID Tag**

22135 **6.110.1 Introduction**

22136 The Property "tagid" is an integer showing the currently read optical augmented RFID tag's  
22137 identity information.

22138 **6.110.2 Example URI**

22139 /ORFIDTagResURI

22140 **6.110.3 Resource type**

22141 The Resource Type is defined as: "oic.r.orfid.tag".

22142 **6.110.4 OpenAPI 2.0 definition**

```

22143 {
22144   "swagger": "2.0",
22145   "info": {
22146     "title": "Optical RFID Tag",
22147     "version": "20190215",
22148     "license": {
22149       "name": "OCF Data Model License",
22150       "url":
22151 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
22152 CENSE.md",
22153       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
22154 reserved."
22155     },
22156     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
22157   },
22158   "schemes": ["http"],
22159   "consumes": ["application/json"],
22160   "produces": ["application/json"],
22161   "paths": {
22162     "/ORFIDTagResURI" : {

```

```

22163     "get": {
22164         "description": "The Property \"tagid\" is an integer showing the currently read optical
22165 augmented RFID tag's identity information.",
22166         "parameters": [
22167             {"$ref": "#/parameters/interface"}
22168         ],
22169         "responses": {
22170             "200": {
22171                 "description": "RETRIEVES the tag information from optical augmented RFID reader in
22172 smart factory environment.",
22173                 "x-example":
22174                     {
22175                         "rt": ["oic.r.orfid.tag"],
22176                         "if": ["oic.if.r", "oic.if.baseline"],
22177                         "tagid": 10965742,
22178                         "reading": true
22179                     },
22180                 "schema": { "$ref": "#/definitions/ORFID" }
22181             }
22182         }
22183     }
22184 },
22185 "parameters": {
22186     "interface": {
22187         "in": "query",
22188         "name": "if",
22189         "type": "string",
22190         "enum": ["oic.if.r", "oic.if.baseline"]
22191     }
22192 },
22193 "definitions": {
22194     "ORFID": {
22195         "properties": {
22196             "rt": {
22197                 "description": "The Resource Type.",
22198                 "items": {
22199                     "enum": ["oic.r.orfid.tag"],
22200                     "maxLength": 64,
22201                     "type": "string"
22202                 },
22203             },
22204             "minItems": 1,
22205             "uniqueItems": true,
22206             "readOnly": true,
22207             "type": "array"
22208         },
22209         "tagid": {
22210             "description": "The tag read by the RFID reader.",
22211             "readOnly": true,
22212             "type": "integer"
22213         },
22214         "reading": {
22215             "description": "The reading indication. true: the tagid is read e.g. being valid. false:
22216 the tagid is invalid.",
22217             "readOnly": true,
22218             "type": "boolean"
22219         },
22220         "n": {
22221             "$ref":
22222 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22223 schema.json#/definitions/n"
22224         },
22225         "id": {
22226             "$ref":
22227 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22228 schema.json#/definitions/id"
22229         },
22230         "if": {
22231             "description": "The OCF Interface set supported by this Resource.",
22232             "items": {
22233                 "enum": [
22234                     "oic.if.r",

```

```

22235         "oic.if.baseline"
22236     ],
22237     "type": "string"
22238 },
22239     "minItems": 2,
22240     "uniqueItems": true,
22241     "readOnly": true,
22242     "type": "array"
22243 }
22244 },
22245 "type": "object",
22246 "required": ["tagid", "reading"]
22247 }
22248 }
22249 }
22250

```

22251 **6.110.5 Property definition**

22252 Table 223 defines the Properties that are part of the "oic.r.orfid.tag" Resource Type.

22253 **Table 223 – The Property definitions of the Resource with type "rt" = "oic.r.orfid.tag".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
tagid	integer	Yes	Read Only	The tag read by the RFID reader.
reading	boolean	Yes	Read Only	The reading indication. true: the tagid is read e.g. being valid. false: the tagid is invalid.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

22254 **6.110.6 CRUDN behaviour**

22255 Table 224 defines the CRUDN operations that are supported on the "oic.r.orfid.tag" Resource Type.

22256 **Table 224 – The CRUDN operations of the Resource with type "rt" = "oic.r.orfid.tag".**

Create	Read	Update	Delete	Notify
	get			observe

22257 **6.111 PowerSource**

22258 **6.111.1 Introduction**

22259 This Resource list the available power sources for the Device. The Property "powersources" is a list that is read only and is informative only.

22260  
22261 If there is more than 1 power source active, use multiple Resources to indicate the active power sources. If the power source is unknown use the value "unknown".

22263 **6.111.2 Example URI**

22264 /PowerSourceResURI

22265 **6.111.3 Resource type**

22266 The Resource Type is defined as: "oic.r.powersource".

#### 22267 6.111.4 OpenAPI 2.0 definition

```
22268 {
22269   "swagger": "2.0",
22270   "info": {
22271     "title": "PowerSource",
22272     "version": "20190513",
22273     "license": {
22274       "name": "OCF Data Model License",
22275       "url":
22276         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
22277         CENSE.md",
22278       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
22279         reserved."
22280     },
22281     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
22282   },
22283   "schemes": ["http"],
22284   "consumes": ["application/json"],
22285   "produces": ["application/json"],
22286   "paths": {
22287     "/PowerSourceResURI" : {
22288       "get": {
22289         "description": "This Resource list the available power sources for the Device. The Property
22290         \"powersources\" is a list that is read only and is informative only.\nIf there is more than 1 power
22291         source active, use multiple Resources to indicate the active power sources. If the power source is
22292         unknown use the value \"unknown\".",
22293         "parameters": [
22294           { "$ref": "#/parameters/interface" }
22295         ],
22296         "responses": {
22297           "200": {
22298             "description": "Retrieves the list of available power sources.",
22299             "x-example":
22300               {
22301                 "rt": ["oic.r.powersource"],
22302                 "if": ["oic.if.r", "oic.if.baseline"],
22303                 "powersources": [
22304                   "DC power",
22305                   "Internal Battery",
22306                   "External Battery",
22307                   "Power over Ethernet",
22308                   "USB",
22309                   "AC (Mains) Power",
22310                   "Solar"
22311                 ],
22312                 "sourcefault": false
22313               },
22314             "schema": { "$ref": "#/definitions/powerSourceSchema" }
22315           }
22316         }
22317       }
22318     }
22319   },
22320   "parameters": {
22321     "interface": {
22322       "in": "query",
22323       "name": "if",
22324       "type": "string",
22325       "enum": ["oic.if.r", "oic.if.baseline"]
22326     }
22327   },
22328   "definitions": {
22329     "powerSourceSchema" : {
22330       "properties": {
22331         "rt": {
22332           "description": "The Resource Type.",
22333           "items": {
22334             "enum": ["oic.r.powersource"],
22335             "maxLength": 64,
22336             "type": "string"
22337           }

```

```

22338         "minItems": 1,
22339         "uniqueItems": true,
22340         "readOnly": true,
22341         "type": "array"
22342     },
22343     "powersources": {
22344         "items": {
22345             "enum": [
22346                 "unknown",
22347                 "DC power",
22348                 "Internal Battery",
22349                 "External Battery",
22350                 "Power over Ethernet",
22351                 "USB",
22352                 "AC (Mains) Power",
22353                 "Solar"
22354             ],
22355             "minItems": 1,
22356             "type": "string",
22357             "uniqueItems": true
22358         },
22359         "type": "array"
22360     },
22361     "sourcefault": {
22362         "description": "Fault detected in currently active power source. True = fault detected",
22363         "readOnly": true,
22364         "type": "boolean"
22365     },
22366     "n": {
22367         "$ref":
22368         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22369         schema.json#/definitions/n"
22370     },
22371     "id": {
22372         "$ref":
22373         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22374         schema.json#/definitions/id"
22375     },
22376     "if": {
22377         "description": "The OCF Interface set supported by this Resource.",
22378         "items": {
22379             "enum": [
22380                 "oic.if.r",
22381                 "oic.if.baseline"
22382             ],
22383             "type": "string"
22384         },
22385         "minItems": 2,
22386         "uniqueItems": true,
22387         "readOnly": true,
22388         "type": "array"
22389     }
22390 },
22391 "type": "object",
22392 "required": ["powersources"]
22393 }
22394 }
22395 }
22396

```

### 22397 6.111.5 Property definition

22398 Table 225 defines the Properties that are part of the "oic.r.powersource" Resource Type.

22399 **Table 225 – The Property definitions of the Resource with type "rt" = "oic.r.powersource".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
powersources	array: see schema	Yes	Read Write	



sourcefault	boolean	No	Read Only	Fault detected in currently active power source. True = fault detected
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

22400 **6.111.6 CRUDN behaviour**

22401 Table 226 defines the CRUDN operations that are supported on the "oic.r.powersource" Resource  
22402 Type.

22403 **Table 226 – The CRUDN operations of the Resource with type "rt" = "oic.r.powersource".**

Create	Read	Update	Delete	Notify
	get			observe

22404 **6.112 Print Queue**

22405 **6.112.1 Introduction**

22406 This Resource describes the items in a Printer Queue. The Properties "uri" and "status" are read  
22407 only items that cannot be changed through this resource.

22408 **6.112.2 Example URI**

22409 /PrintQueueResURI

22410 **6.112.3 Resource type**

22411 The Resource Type is defined as: "oic.r.printer.queue".

22412 **6.112.4 OpenAPI 2.0 definition**

```

22413 {
22414   "swagger": "2.0",
22415   "info": {
22416     "title": "Print Queue",
22417     "version": "20190215",
22418     "license": {
22419       "name": "OCF Data Model License",
22420       "url":
22421 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
22422 CENSE.md",
22423       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
22424 reserved."
22425     },
22426     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
22427   },
22428   "schemes": ["http"],
22429   "consumes": ["application/json"],
22430   "produces": ["application/json"],
22431   "paths": {
22432     "/PrintQueueResURI" : {
22433       "get": {
22434         "description": "This Resource describes the items in a Printer Queue. The Properties \"uri\"
22435 and \"status\" are read only items that cannot be changed through this resource.",
22436         "parameters": [
22437           {"$ref": "#/parameters/interface"}
22438         ],
22439         "responses": {
22440           "200": {

```

```

22441         "description" : "Retrieves the current Print Queue.",
22442         "x-example": {
22443             "rt": ["oic.r.printer.queue"],
22444             "if": ["oic.if.r", "oic.if.baseline"],
22445             "queue": [
22446                 {
22447                     "uri": "file://10.10.10.10/3dprinter/queueitem/1",
22448                     "status": "Printing"
22449                 },
22450                 {
22451                     "uri": "file://10.10.10.10/3dprinter/queueitem/2",
22452                     "status": "Pending"
22453                 }
22454             ]
22455         },
22456         "schema": { "$ref": "#/definitions/PrintQueue" }
22457     }
22458 }
22459 }
22460 }
22461 },
22462 "parameters": {
22463     "interface": {
22464         "in": "query",
22465         "name": "if",
22466         "type": "string",
22467         "enum": ["oic.if.r", "oic.if.baseline"]
22468     }
22469 },
22470 "definitions": {
22471     "PrintQueue" : {
22472         "properties": {
22473             "rt": {
22474                 "description": "The Resource Type.",
22475                 "items": {
22476                     "enum": ["oic.r.printer.queue"],
22477                     "maxLength": 64,
22478                     "type": "string"
22479                 },
22480                 "minItems": 1,
22481                 "uniqueItems": true,
22482                 "readOnly": true,
22483                 "type": "array"
22484             },
22485             "queue": {
22486                 "description": "The array of queue items for the printer.",
22487                 "items": {
22488                     "properties": {
22489                         "status": {
22490                             "description": "The status of the queue item.",
22491                             "enum": [
22492                                 "Printing",
22493                                 "Pending",
22494                                 "Paused",
22495                                 "Error",
22496                                 "Unknown"
22497                             ],
22498                             "readOnly": true,
22499                             "type": "string"
22500                         },
22501                         "uri": {
22502                             "description": "The uri of the queue item (i.e. the actual file).",
22503                             "format": "uri",
22504                             "maxLength": 256,
22505                             "readOnly": true,
22506                             "type": "string"
22507                         }
22508                     },
22509                     "required": [
22510                         "uri",
22511                         "status"
22512                     ],

```

```

22513         "type": "object"
22514     },
22515     "readOnly": true,
22516     "type": "array"
22517 },
22518 "n": {
22519     "$ref":
22520 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22521 schema.json#/definitions/n"
22522 },
22523 "id": {
22524     "$ref":
22525 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22526 schema.json#/definitions/id"
22527 },
22528 "if": {
22529     "description": "The OCF Interface set supported by this Resource.",
22530     "items": {
22531         "enum": [
22532             "oic.if.r",
22533             "oic.if.baseline"
22534         ],
22535         "type": "string"
22536     },
22537     "minItems": 2,
22538     "uniqueItems": true,
22539     "readOnly": true,
22540     "type": "array"
22541 }
22542 },
22543 "type": "object",
22544 "required": ["queue"]
22545 }
22546 }
22547 }
22548

```

### 22549 6.112.5 Property definition

22550 Table 227 defines the Properties that are part of the "oic.r.printer.queue" Resource Type.

22551 **Table 227 – The Property definitions of the Resource with type "rt" = "oic.r.printer.queue".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
queue	array: see schema	Yes	Read Only	The array of queue items for the printer.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

### 22552 6.112.6 CRUDN behaviour

22553 Table 228 defines the CRUDN operations that are supported on the "oic.r.printer.queue" Resource  
22554 Type.

22555 **Table 228 – The CRUDN operations of the Resource with type "rt" = "oic.r.printer.queue".**

Create	Read	Update	Delete	Notify
	get			observe

## 22556 6.113 Pulse Rate

### 22557 6.113.1 Introduction

22558 This Resource describes the Properties associated with a person's pulse rate.

22559 The unit, which is the default unit, is bpm.

22560 The pulserate and unit Properties are read-only values that are provided by the Server.

22561 When range is omitted the default is 0 to +MAXFLOAT.

### 22562 6.113.2 Example URI

22563 /PulseRateResURI

### 22564 6.113.3 Resource type

22565 The Resource Type is defined as: "oic.r.pulserate".

### 22566 6.113.4 OpenAPI 2.0 definition

```
22567 {
22568   "swagger": "2.0",
22569   "info": {
22570     "title": "Pulse Rate",
22571     "version": "2019-03-22",
22572     "license": {
22573       "name": "OCF Data Model License",
22574       "url":
22575         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
22576         CENSE.md",
22577       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
22578     },
22579     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
22580   },
22581   "schemes": [
22582     "http"
22583   ],
22584   "consumes": [
22585     "application/json"
22586   ],
22587   "produces": [
22588     "application/json"
22589   ],
22590   "paths": {
22591     "/PulseRateResURI": {
22592       "get": {
22593         "description": "This Resource describes the Properties associated with a person's pulse
22594         rate.\nThe unit, which is the default unit, is bpm.\nThe pulserate and unit Properties are read-only
22595         values that are provided by the Server.\nWhen range is omitted the default is 0 to +MAXFLOAT.",
22596         "parameters": [
22597           {
22598             "$ref": "#/parameters/interface"
22599           }
22600         ],
22601         "responses": {
22602           "200": {
22603             "description": "",
22604             "x-example": {
22605               "rt": [
22606                 "oic.r.pulserate"
22607               ],
22608               "pulserate": 80,
22609               "range": [20, 220],
22610               "step": 1
22611             },
22612             "schema": {
22613               "$ref": "#/definitions/PulseRate"
22614             }
22615           }
22616         }
22617       }
22618     }
  }
```

```

22619     },
22620     "parameters": {
22621       "interface": {
22622         "in": "query",
22623         "name": "if",
22624         "type": "string",
22625         "enum": [
22626           "oic.if.s",
22627           "oic.if.baseline"
22628         ]
22629       }
22630     },
22631     "definitions": {
22632       "PulseRate": {
22633         "properties": {
22634           "rt": {
22635             "description": "Resource Type",
22636             "items": {
22637               "enum": [
22638                 "oic.r.pulserate"
22639               ],
22640               "type": "string",
22641               "maxLength": 64
22642             },
22643             "minItems": 1,
22644             "uniqueItems": true,
22645             "readOnly": true,
22646             "type": "array"
22647           },
22648           "pulserate": {
22649             "description": "Pulse rate in bpm.",
22650             "minimum": 0,
22651             "readOnly": true,
22652             "type": "integer"
22653           },
22654           "if": {
22655             "description": "The OCF Interface set supported by this Resource",
22656             "items": {
22657               "enum": [
22658                 "oic.if.s",
22659                 "oic.if.baseline"
22660               ],
22661               "type": "string",
22662               "maxLength": 64
22663             },
22664             "minItems": 1,
22665             "readOnly": true,
22666             "uniqueItems": true,
22667             "type": "array"
22668           },
22669           "range": {
22670             "$ref":
22671             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
22672             schema.json#/definitions/range_integer"
22673           },
22674           "step": {
22675             "$ref":
22676             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
22677             schema.json#/definitions/step_integer"
22678           },
22679           "n": {
22680             "$ref":
22681             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22682             schema.json#/definitions/n"
22683           }
22684         },
22685         "type": "object",
22686         "required": [
22687           "pulserate"
22688         ]
22689       }
22690     }

```

22691 }  
22692

### 22693 6.113.5 Property definition

22694 Table 229 defines the Properties that are part of the "oic.r.pulserate" Resource Type.

22695 **Table 229 – The Property definitions of the Resource with type "rt" = "oic.r.pulserate".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
pulserate	integer	Yes	Read Only	Pulse rate in bpm.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	

### 22696 6.113.6 CRUDN behaviour

22697 Table 230 defines the CRUDN operations that are supported on the "oic.r.pulserate" Resource  
22698 Type.

22699 **Table 230 – The CRUDN operations of the Resource with type "rt" = "oic.r.pulserate".**

Create	Read	Update	Delete	Notify
	get			observe

## 22700 6.114 Sensor Properties

### 22701 6.114.1 Introduction

22702 This Resource describes the properties which guide the reporting of a state change of a Sensor.  
22703 The Property "silenttime" represents the period after which a state change report was sent where  
22704 the Sensor state change is not reported.  
22705 The Property "sensitivity" represents the level at which the sensor detects a state change.  
22706 These values are completely dependent on the type of Sensor and the manufacturer capability, so  
22707 no range restrictions are used.  
22708 The Properties "range", "step" and "precision" are only applied to the "sensitivity" Property.

### 22709 6.114.2 Example URI

22710 /SensorPropsResURI

### 22711 6.114.3 Resource type

22712 The Resource Type is defined as: "oic.r.sensor.props".

### 22713 6.114.4 OpenAPI 2.0 definition

```
22714 {  
22715   "swagger": "2.0",  
22716   "info": {  
22717     "title": "Sensor Properties",  
22718     "version": "20190215",  
22719     "license": {  
22720       "name": "OCF Data Model License",  
22721       "url":  
22722 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
22723 CENSE.md",
```

```

22724         "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
22725 reserved."
22726     },
22727     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
22728 },
22729 "schemes": ["http"],
22730 "consumes": ["application/json"],
22731 "produces": ["application/json"],
22732 "paths": {
22733     "/SensorPropsResURI" : {
22734         "get": {
22735             "description": "This Resource describes the properties which guide the reporting of a state
22736 change of a Sensor.\n\nThe Property \"silenttime\" represents the period after which a state change
22737 report was sent where the Sensor state change is not reported.\n\nThe Property \"sensitivity\"
22738 represents the level at which the sensor detects a state change.\n\nThese values are completely
22739 dependent on the type of Sensor and the manufacturer capability, so no range restrictions are
22740 used.\n\nThe Properties \"range\", \"step\" and \"precision\" are only applied to the \"sensitivity\"
22741 Property.",
22742             "parameters": [
22743                 { "$ref": "#/parameters/interface" }
22744             ],
22745             "responses": {
22746                 "200": {
22747                     "description": "Gets current Sensor Property values.",
22748                     "x-example":
22749                         {
22750                             "rt": ["oic.r.sensor.props"],
22751                             "if": ["oic.if.rw", "oic.if.baseline"],
22752                             "silenttime": 10,
22753                             "sensitivity": 20.5
22754                         },
22755                     "schema": { "$ref": "#/definitions/SensorProps" }
22756                 }
22757             }
22758         },
22759         "post": {
22760             "description": "Sets Sensor Property values\n",
22761             "parameters": [
22762                 { "$ref": "#/parameters/interface" },
22763                 {
22764                     "name": "body",
22765                     "in": "body",
22766                     "required": true,
22767                     "schema": { "$ref": "#/definitions/SensorProps" },
22768                     "x-example":
22769                         {
22770                             "silenttime": 20,
22771                             "sensitivity": 10.75
22772                         }
22773                 }
22774             ],
22775             "responses": {
22776                 "200": {
22777                     "description": "",
22778                     "x-example":
22779                         {
22780                             "silenttime": 20,
22781                             "sensitivity": 10.75
22782                         },
22783                     "schema": { "$ref": "#/definitions/SensorProps" }
22784                 }
22785             }
22786         }
22787     }
22788 },
22789 "parameters": {
22790     "interface": {
22791         "in": "query",
22792         "name": "if",
22793         "type": "string",
22794         "enum": ["oic.if.rw", "oic.if.baseline"]
22795     }

```

```

22796 },
22797 "definitions": {
22798   "SensorProps": {
22799     "properties": {
22800       "rt": {
22801         "description": "The Resource Type.",
22802         "items": {
22803           "enum": ["oic.r.sensor.props"],
22804           "maxLength": 64,
22805           "type": "string"
22806         },
22807         "minItems": 1,
22808         "uniqueItems": true,
22809         "readOnly": true,
22810         "type": "array"
22811       },
22812       "silenttime": {
22813         "description": "The time in seconds from the previous report that the Sensor restrains
22814 from sending a state change. This is used to avoid repeated state change reports.",
22815         "type": "integer"
22816       },
22817       "sensitivity": {
22818         "description": "The level of the detection accuracy of the Sensor. This is used to control
22819 the level at which the Sensor detects a state change. The \"range\" Property should be specified per
22820 manufacturer device capabilities.",
22821         "type": "number"
22822       },
22823       "n": {
22824         "$ref":
22825 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22826 schema.json#/definitions/n"
22827       },
22828       "id": {
22829         "$ref":
22830 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22831 schema.json#/definitions/id"
22832       },
22833       "range": {
22834         "$ref":
22835 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
22836 schema.json#/definitions/range_number"
22837       },
22838       "step": {
22839         "$ref":
22840 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
22841 schema.json#/definitions/step_number"
22842       },
22843       "precision": {
22844         "$ref":
22845 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
22846 schema.json#/definitions/precision"
22847       },
22848       "if": {
22849         "description": "The OCF Interface set supported by this Resource.",
22850         "items": {
22851           "enum": [
22852             "oic.if.rw",
22853             "oic.if.baseline"
22854           ],
22855           "type": "string"
22856         },
22857         "minItems": 2,
22858         "uniqueItems": true,
22859         "readOnly": true,
22860         "type": "array"
22861       }
22862     },
22863     "type": "object",
22864     "required": ["silenttime", "sensitivity"]
22865   }
22866 }

```



22867 }  
22868

### 22869 6.114.5 Property definition

22870 Table 231 defines the Properties that are part of the "oic.r.sensor.props" Resource Type.

22871 **Table 231 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.props".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
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.
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. The "range" Property should be specified per manufacturer device capabilities.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

### 22872 6.114.6 CRUDN behaviour

22873 Table 232 defines the CRUDN operations that are supported on the "oic.r.sensor.props" Resource  
22874 Type.

22875 **Table 232 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.props".**

Create	Read	Update	Delete	Notify
	get	post		observe

### 22876 6.115 User ID

#### 22877 6.115.1 Introduction

22878 This Resource describes the Properties associated with user id of an OCF Client.  
22879 The userid Property is a single value of type string.  
22880 The userid Property is a read-only value that is provided by the Server.

22881 **6.115.2 Example URI**

22882 /UserIDResURI

22883 **6.115.3 Resource type**

22884 The Resource Type is defined as: "oic.r.userid".

22885 **6.115.4 OpenAPI 2.0 definition**

```
22886 {
22887   "swagger": "2.0",
22888   "info": {
22889     "title": "User ID",
22890     "version": "2019-03-22",
22891     "license": {
22892       "name": "OCF Data Model License",
22893       "url":
22894         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
22895         CENSE.md",
22896       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
22897     },
22898     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
22899   },
22900   "schemes": [
22901     "http"
22902   ],
22903   "consumes": [
22904     "application/json"
22905   ],
22906   "produces": [
22907     "application/json"
22908   ],
22909   "paths": {
22910     "/UserIDResURI": {
22911       "get": {
22912         "description": "This Resource describes the Properties associated with user id of an OCF
22913 Client.\n\nThe userid Property is a single value of type string.\n\nThe userid Property is a read-only
22914 value that is provided by the Server.",
22915         "parameters": [
22916           {
22917             "$ref": "#/parameters/interface"
22918           }
22919         ],
22920         "responses": {
22921           "200": {
22922             "description": "",
22923             "x-example": {
22924               "rt": [
22925                 "oic.r.userid"
22926               ],
22927               "userid": "USER1"
22928             },
22929             "schema": {
22930               "$ref": "#/definitions/UserID"
22931             }
22932           }
22933         }
22934       }
22935     }
22936   },
22937   "parameters": {
22938     "interface": {
22939       "in": "query",
22940       "name": "if",
22941       "type": "string",
22942       "enum": [
22943         "oic.if.r",
22944         "oic.if.baseline"
22945       ]
22946     }
22947   },

```

```

22948 "definitions": {
22949   "UserID": {
22950     "properties": {
22951       "rt": {
22952         "description": "Resource Type",
22953         "items": {
22954           "enum": [
22955             "oic.r.userid"
22956           ],
22957           "type": "string",
22958           "maxLength": 64
22959         },
22960         "minItems": 1,
22961         "uniqueItems": true,
22962         "readOnly": true,
22963         "type": "array"
22964       },
22965       "userid": {
22966         "description": "Id of a patient/user of healthcare devices",
22967         "readOnly": true,
22968         "type": "string"
22969       },
22970       "n": {
22971         "$ref":
22972         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22973         schema.json#/definitions/n"
22974       },
22975       "if": {
22976         "description": "The OCF Interface set supported by this Resource",
22977         "items": {
22978           "enum": [
22979             "oic.if.r",
22980             "oic.if.baseline"
22981           ],
22982           "type": "string",
22983           "maxLength": 64
22984         },
22985         "minItems": 1,
22986         "readOnly": true,
22987         "uniqueItems": true,
22988         "type": "array"
22989       }
22990     },
22991     "type": "object",
22992     "required": [
22993       "userid"
22994     ]
22995   }
22996 }
22997 }
22998

```

### 22999 6.115.5 Property definition

23000 Table 233 defines the Properties that are part of the "oic.r.userid" Resource Type.

23001 **Table 233 – The Property definitions of the Resource with type "rt" = "oic.r.userid".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
userid	string	Yes	Read Only	Id of a patient/user of healthcare devices
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

23002 **6.115.6 CRUDN behaviour**

23003 Table 234 defines the CRUDN operations that are supported on the "oic.r.userid" Resource Type.

23004 **Table 234 – The CRUDN operations of the Resource with type "rt" = "oic.r.userid".**

Create	Read	Update	Delete	Notify
	get			observe

23005 **6.116 Calorific Value**

23006 **6.116.1 Introduction**

23007 This Resource describes Properties associated with the energy associated with the consumption  
23008 of different fuels (including natural gas)

23009 The calorific value is a number

23010 the calorific value is a measure of the available heat energy, used as part of the calculation to  
23011 convert a volume of a fuel (e.g. m3) to an energy value (e.g. KWh).  
23012

23013 **6.116.2 Example URI**

23014 /CalorificValueResURI

23015 **6.116.3 Resource type**

23016 The Resource Type is defined as: "oic.r.calorificvalue".

23017 **6.116.4 OpenAPI 2.0 definition**

```

23018 {
23019   "swagger": "2.0",
23020   "info": {
23021     "title": "Calorific Value",
23022     "version": "2019-03-18",
23023     "license": {
23024       "name": "OCF Data Model License",
23025       "url": "https://openconnectivityfoundation.github.io/core/LICENSE.md",
23026       "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
23027     },
23028     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
23029   },
23030   "schemes": ["http"],
23031   "consumes": ["application/json"],
23032   "produces": ["application/json"],
23033   "paths": {
23034     "/CalorificValueResURI": {
23035       "get": {
23036         "description": "This Resource describes Properties associated with the energy associated
23037         with the consumption of different fuels (including natural gas)\nThe calorific value is a
23038         number\nthe calorific value is a measure of the available heat energy, used as part of the
23039         calculation to convert a volume of a fuel (e.g. m3) to an energy value (e.g. KWh).\n",
23040         "parameters": [
23041           { "$ref": "#/parameters/interface" }
23042         ],
23043         "responses": {
23044           "200": {
23045             "description": "Success path response for the Resource",
23046             "x-example": {
23047               "rt": ["oic.r.calorificvalue"],
23048               "calorific": 39.2
23049             },
23050             "schema": { "$ref": "#/definitions/Calorific" }
23051           }
23052         }
23053       }
23054     }
23055   },
23056   "parameters": {

```

```

23057     "interface" : {
23058         "in" : "query",
23059         "name" : "if",
23060         "type" : "string",
23061         "enum" : ["oic.if.r", "oic.if.baseline"]
23062     }
23063 },
23064 "definitions": {
23065     "Calorific" : {
23066         "properties": {
23067             "rt" : {
23068                 "description": "Resource Type",
23069                 "items": {
23070                     "maxLength": 64,
23071                     "type": "string",
23072                     "enum": ["oic.r.calorificvalue"]
23073                 },
23074                 "minItems": 1,
23075                 "readOnly": true,
23076                 "uniqueItems": true,
23077                 "type": "array"
23078             },
23079             "if" : {
23080                 "description": "The OCF Interfaces supported by this Resource",
23081                 "items": {
23082                     "enum": ["oic.if.baseline", "oic.if.r"],
23083                     "type": "string",
23084                     "maxLength": 64
23085                 },
23086                 "minItems": 2,
23087                 "readOnly": true,
23088                 "uniqueItems": true,
23089                 "type": "array"
23090             },
23091             "n" : {
23092                 "$ref" :
23093                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23094                 schema.json#/definitions/n"
23095             },
23096             "id" : {
23097                 "$ref" :
23098                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23099                 schema.json#/definitions/id"
23100             },
23101             "precision" : {
23102                 "description": "Accuracy granularity of the exposed value",
23103                 "readOnly": true,
23104                 "type": "number"
23105             },
23106             "calorific" : {
23107                 "description": "Calorific value of fuel",
23108                 "readOnly": true,
23109                 "type": "number",
23110                 "minimum": 0,
23111                 "exclusiveMinimum": true
23112             }
23113         },
23114         "type" : "object",
23115         "required": ["calorific"]
23116     }
23117 }
23118 }
23119

```

## 23120 6.116.5 Property definition

23121 Table 235 defines the Properties that are part of the "oic.r.calorificvalue" Resource Type.

23122 **Table 235 – The Property definitions of the Resource with type "rt" = "oic.r.calorificvalue".**

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 OCF Interfaces supported by this Resource
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
precision	number	No	Read Only	Accuracy granularity of the exposed value
calorific	number	Yes	Read Only	Calorific value of fuel

23123 **6.116.6 CRUDN behaviour**

23124 Table 236 defines the CRUDN operations that are supported on the "oic.r.calorificvalue" Resource  
 23125 Type.

23126 **Table 236 – The CRUDN operations of the Resource with type "rt" = "oic.r.calorificvalue".**

Create	Read	Update	Delete	Notify
	get			observe

23127 **6.117 Conversion Factor**

23128 **6.117.1 Introduction**

23129 This Resource describes Properties associated with the energy associated with the consumption  
 23130 of different fuels (including natural gas)

23131 The conversion factor is a number used as part of the calculation to convert gas volume to gas  
 23132 energy. The value used for this calculation is generally defined by local regulations and the  
 23133 conversion factor resource is therefore configurable.

23134 Provides the conversion factor used/required as part of the calculation to convert from fuel  
 23135 volume (m3) to fuel energy (kWh).  
 23136

23137 **6.117.2 Example URI**

23138 /ConversionFactorResURI

23139 **6.117.3 Resource type**

23140 The Resource Type is defined as: "oic.r.conversionfactor".

23141 **6.117.4 OpenAPI 2.0 definition**

```

23142 {
23143   "swagger": "2.0",
23144   "info": {
23145     "title": "Conversion Factor",
23146     "version": "2019-03-18",
23147     "license": {
23148       "name": "OCF Data Model License",
23149       "url": "https://openconnectivityfoundation.github.io/core/LICENSE.md",
23150       "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
23151     },
23152     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
23153   },
23154   "schemes": ["http"],
23155   "consumes": ["application/json"],
  
```

```

23156     "produces": ["application/json"],
23157     "paths": {
23158         "/ConversionFactorResURI" : {
23159             "get": {
23160                 "description": "This Resource describes Properties associated with the energy associated
23161 with the consumption of different fuels (including natural gas)\nThe conversion factor is a number
23162 used as part of the calculation to convert gas volume to gas energy. The value used for this
23163 calculation is generally defined by local regulations and the conversion factor resource is
23164 therefore configurable.\nProvides the conversion factor used/required as part of the calculation to
23165 convert from fuel volume (m3) to fuel energy (kWh).\n",
23166                 "parameters": [
23167                     {"$ref": "#/parameters/interface"}
23168                 ],
23169                 "responses": {
23170                     "200": {
23171                         "description" : "Success path response for the Resource",
23172                         "x-example": {
23173                             "rt": ["oic.r.conversionfactor"],
23174                             "conversion": 1.02264
23175                         },
23176                         "schema": {"$ref": "#/definitions/Conversion" }
23177                     }
23178                 }
23179             }
23180         },
23181     },
23182     "parameters": {
23183         "interface" : {
23184             "in" : "query",
23185             "name" : "if",
23186             "type" : "string",
23187             "enum" : ["oic.if.r", "oic.if.baseline"]
23188         }
23189     },
23190     "definitions": {
23191         "Conversion" : {
23192             "properties": {
23193                 "rt" : {
23194                     "description": "Resource Type",
23195                     "items": {
23196                         "maxLength": 64,
23197                         "type": "string",
23198                         "enum": ["oic.r.conversionfactor"]
23199                     },
23200                     "minItems": 1,
23201                     "readOnly": true,
23202                     "uniqueItems": true,
23203                     "type": "array"
23204                 },
23205                 "if" : {
23206                     "description": "The OCF Interfaces supported by this Resource",
23207                     "items": {
23208                         "enum": [
23209                             "oic.if.r",
23210                             "oic.if.baseline"
23211                         ],
23212                         "type": "string",
23213                         "maxLength": 64
23214                     },
23215                     "minItems": 2,
23216                     "readOnly": true,
23217                     "uniqueItems": true,
23218                     "type": "array"
23219                 },
23220                 "n": {
23221                     "$ref" :
23222 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23223 schema.json#/definitions/n"
23224                 },
23225                 "id": {
23226                     "$ref" :
23227 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-

```

```

23228 schema.json#/definitions/id"
23229     },
23230     "conversion" : {
23231         "description": "Conversion factor to convert a volume of a fuel to energy consumption",
23232         "readOnly": true,
23233         "type": "number",
23234         "minimum": 0,
23235         "exclusiveMinimum": true
23236     },
23237     "precision" : {
23238         "description": "Accuracy granularity of the exposed value",
23239         "readOnly": true,
23240         "type": "number"
23241     }
23242 },
23243 "type" : "object",
23244 "required": ["conversion"]
23245 }
23246 }
23247 }
23248

```

23249 **6.117.5 Property definition**

23250 Table 237 defines the Properties that are part of the "oic.r.conversionfactor" Resource Type.

23251 **Table 237 – The Property definitions of the Resource with type "rt" =**  
23252 **"oic.r.conversionfactor".**

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 OCF Interfaces supported by this Resource
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
conversion	number	Yes	Read Only	Conversion factor to convert a volume of a fuel to energy consumption
precision	number	No	Read Only	Accuracy granularity of the exposed value

23253 **6.117.6 CRUDN behaviour**

23254 Table 238 defines the CRUDN operations that are supported on the "oic.r.conversionfactor"  
23255 Resource Type.

23256 **Table 238 – The CRUDN operations of the Resource with type "rt" =**  
23257 **"oic.r.conversionfactor".**

Create	Read	Update	Delete	Notify
	get			observe

23258 **6.118 Gas Consumption**

23259 **6.118.1 Introduction**

23260 This Resource describes Properties associated with the energy associated with the consumption  
23261 of natural gas

23262 The gas value is in kilowatt hours [kWh].

23263 The volume value is in metres cubed [m3].



23264 Provides the cumulative gas energy, the cumulative gas volume and the calorific value and  
23265 conversion factor used/required to convert from gas volume (m3[TB1]) to gas energy (KWh).  
23266

## 23267 **6.118.2 Example URI**

23268 /GasConsumptionResURI

## 23269 **6.118.3 Resource type**

23270 The Resource Type is defined as: "oic.r.gas.consumption".

## 23271 **6.118.4 OpenAPI 2.0 definition**

```
23272 {  
23273   "swagger": "2.0",  
23274   "info": {  
23275     "title": "Gas Consumption",  
23276     "version": "2019-03-18",  
23277     "license": {  
23278       "name": "OCF Data Model License",  
23279       "url": "https://openconnectivityfoundation.github.io/core/LICENSE.md",  
23280       "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."  
23281     },  
23282     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
23283   },  
23284   "schemes": ["http"],  
23285   "consumes": ["application/json"],  
23286   "produces": ["application/json"],  
23287   "paths": {  
23288     "/GasConsumptionResURI" : {  
23289       "get": {  
23290         "description": "This Resource describes Properties associated with the energy associated  
23291 with the consumption of natural gas\nThe gas value is in kilowatt hours [kWh].\nThe volume value is  
23292 in metres cubed [m3].\nProvides the cumulative gas energy, the cumulative gas volume and the  
23293 calorific value and conversion factor used/required to convert from gas volume (m3[TB1]) to gas  
23294 energy (KWh).\n",  
23295         "parameters": [  
23296           { "$ref": "#/parameters/interface" }  
23297         ],  
23298         "responses": {  
23299           "200": {  
23300             "description": "Success path response for the Resource",  
23301             "x-example": {  
23302               "rt": ["oic.r.gas.consumption"],  
23303               "gas": 11135.41,  
23304               "volume": 1000.0  
23305             },  
23306             "schema": { "$ref": "#/definitions/Consumption" }  
23307           }  
23308         }  
23309       }  
23310     }  
23311   },  
23312   "parameters": {  
23313     "interface" : {  
23314       "in" : "query",  
23315       "name" : "if",  
23316       "type" : "string",  
23317       "enum" : ["oic.if.s", "oic.if.baseline"]  
23318     }  
23319   },  
23320   "definitions": {  
23321     "Consumption" : {  
23322       "properties": {  
23323         "rt": {  
23324           "description": "Resource Type",  
23325           "items": {  
23326             "maxLength": 64,  
23327             "type": "string",  
23328             "enum": ["oic.r.gas.consumption"]
```

```

23329     },
23330     "minItems": 1,
23331     "uniqueItems": true,
23332     "readOnly": true,
23333     "type": "array"
23334   },
23335   "if": {
23336     "description": "The OCF Interfaces supported by this Resource",
23337     "items": {
23338       "enum": ["oic.if.r", "oic.if.baseline"],
23339       "type": "string"
23340     },
23341     "minItems": 1,
23342     "readOnly": true,
23343     "uniqueItems": true,
23344     "type": "array"
23345   },
23346   "n": {
23347     "$ref" :
23348     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23349     schema.json#/definitions/n"
23350   },
23351   "id": {
23352     "$ref" :
23353     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23354     schema.json#/definitions/id"
23355   },
23356   "gas" : {
23357     "description": "gas energy consumed in kWh",
23358     "readOnly": true,
23359     "type": "number",
23360     "minimum": 0
23361   },
23362   "precision" : {
23363     "description": "Accuracy granularity of the exposed value",
23364     "readOnly": true,
23365     "type": "number"
23366   },
23367   "volume" : {
23368     "description": "gas volume consumed in m3 (metres cubed)",
23369     "readOnly": true,
23370     "type": "number",
23371     "minimum": 0
23372   }
23373 },
23374 "type" : "object",
23375 "required": ["gas"]
23376 }
23377 }
23378 }
23379

```

## 23380 6.118.5 Property definition

23381 Table 239 defines the Properties that are part of the "oic.r.gas.consumption" Resource Type.

23382 **Table 239 – The Property definitions of the Resource with type "rt" =**  
23383 **"oic.r.gas.consumption".**

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 OCF Interfaces supported by this Resource
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	

gas	number	Yes	Read Only	gas energy consumed in kWh
precision	number	No	Read Only	Accuracy granularity of the exposed value
volume	number	No	Read Only	gas volume consumed in m3 (metres cubed)

23384 **6.118.6 CRUDN behaviour**

23385 Table 240 defines the CRUDN operations that are supported on the "oic.r.gas.consumption"  
23386 Resource Type.

23387 **Table 240 – The CRUDN operations of the Resource with type "rt" =**  
23388 **"oic.r.gas.consumption".**

Create	Read	Update	Delete	Notify
	get			observe

23389 **6.119 Gas Usage**

23390 **6.119.1 Introduction**

23391 This Resource describes a cumulative time-based gas usage query.

23392 The Resource is a Collection of:

23393 TimePeriod Resource

23394 Gas Consumption Resource

23395

23396 **6.119.2 Example URI**

23397 /GasUsageResURI

23398 **6.119.3 Resource type**

23399 The Resource Type is defined as: "oic.r.gas.usage".

23400 **6.119.4 OpenAPI 2.0 definition**

```

23401 {
23402   "swagger": "2.0",
23403   "info": {
23404     "title": "Gas Usage",
23405     "version": "2019-03-18",
23406     "license": {
23407       "name": "OCF Data Model License",
23408       "url": "https://openconnectivityfoundation.github.io/core/LICENSE.md",
23409       "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
23410     },
23411     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
23412   },
23413   "schemes": ["http"],
23414   "consumes": ["application/json"],
23415   "produces": ["application/json"],
23416   "paths": {
23417     "/GasUsageResURI?if=oic.if.ll" : {
23418       "get": {
23419         "description": "This Resource describes a cumulative time-based gas usage query.\nThe
23420 Resource is a Collection of:\n TimePeriod Resource\n Gas Consumption Resource\nThe Collection has
23421 a single instance of a Link per Resource Type.\n",
23422         "parameters": [
23423           {"$ref": "#/parameters/interface-all"}
23424         ],
23425         "responses": {
23426           "200": {
23427             "description": "Success path response for the Resource",
23428             "x-example":

```

```

23429     [
23430     {
23431         "href": "/TimeIntervalResURI",
23432         "rt": ["oic.r.time.period"],
23433         "if": ["oic.if.a","oic.if.baseline"],
23434         "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
23435     },
23436     {
23437         "href": "/GasConsumptionResURI",
23438         "rt": ["oic.r.gas.consumption"],
23439         "if": ["oic.if.s","oic.if.baseline"],
23440         "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
23441     }
23442 ],
23443 "schema": { "$ref": "#/definitions/links" }
23444 }
23445 }
23446 }
23447 },
23448 "/GasUsageResURI?if=oic.if.baseline" : {
23449     "get": {
23450         "description": "This Resource describes a cumulative time-based gas usage query.\nThe
23451 Resource is a Collection of:\n TimePeriod Resource\n Gas Consumption Resource\n",
23452         "parameters": [
23453             {"$ref": "#/parameters/interface-all"}
23454         ],
23455         "responses": {
23456             "200": {
23457                 "description" : "Success path response for the Resource",
23458                 "x-example":
23459                 {
23460                     "rt": ["oic.r.gas.usage"],
23461                     "if": ["oic.if.ll","oic.if.b","oic.if.baseline"],
23462                     "resources": [
23463                         {
23464                             "href": "/TimeIntervalResURI",
23465                             "rt": ["oic.r.time.period"],
23466                             "if": ["oic.if.a","oic.if.baseline"],
23467                             "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
23468                         },
23469                         {
23470                             "href": "/GasConsumptionResURI",
23471                             "rt": ["oic.r.gas.consumption"],
23472                             "if": ["oic.if.s","oic.if.baseline"],
23473                             "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
23474                         }
23475                     ]
23476                 },
23477                 "schema": { "$ref": "#/definitions/Usage" }
23478             }
23479         }
23480     },
23481 },
23482 "/GasUsageResURI?if=oic.if.b" : {
23483     "get": {
23484         "description": "This Resource describes a cumulative time-based gas usage query.\nThe
23485 Resource is a Collection of:\n TimePeriod Resource\n Gas Consumption Resource\n",
23486         "parameters": [
23487             {"$ref": "#/parameters/interface-all"}
23488         ],
23489         "responses": {
23490             "200": {
23491                 "description" : "Success path response for the Resource",
23492                 "x-example":
23493                 [
23494                     {
23495                         "href": "/TimeIntervalResURI",
23496                         "rep": {
23497                             "startTime": "2018-01-09T14:30Z",
23498                             "stopTime": "2018-01-09T14:45Z"
23499                         }
23500                     }
23501                 ],

```

```

23501         {
23502             "href": "/GasConsumptionResURI",
23503             "rep": {
23504                 "gas": 11135.41,
23505                 "volume": 1000.0
23506             }
23507         }
23508     ],
23509     "schema": { "$ref": "#/definitions/batch" }
23510 }
23511 },
23512 },
23513 "post": {
23514     "description": "Sets the current time period. A Client may also post directly to the exposed
23515 URL for the Time Period Resource.\n",
23516     "x-method": ["optional"],
23517     "parameters": [
23518         { "$ref": "#/parameters/interface-b" },
23519         {
23520             "name": "body",
23521             "in": "body",
23522             "required": true,
23523             "schema": { "$ref": "#/definitions/batchupdate" },
23524             "x-example":
23525             [
23526                 {
23527                     "href": "/TimePeriodResURI",
23528                     "rep": {
23529                         "startTime": "2018-01-15T16:30Z",
23530                         "stopTime": "2018-01-16T16:30Z"
23531                     }
23532                 }
23533             ]
23534         }
23535     ],
23536     "responses": {
23537         "200": {
23538             "description": "Success path response code\n"
23539         }
23540     }
23541 },
23542 },
23543 },
23544 "parameters": {
23545     "interface-all" : {
23546         "in" : "query",
23547         "name" : "if",
23548         "type" : "string",
23549         "enum" : ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
23550     },
23551     "interface-b" : {
23552         "in" : "query",
23553         "name" : "if",
23554         "type" : "string",
23555         "enum" : ["oic.if.b"]
23556     }
23557 },
23558 "definitions": {
23559     "links": {
23560         "type": "array",
23561         "items": {
23562             "$ref": "#/definitions/oic.oic-link"
23563         },
23564         "minItems": 2,
23565         "maxItems": 4
23566     },
23567     "oic.oic-link": {
23568         "properties": {
23569             "if": {
23570                 "description": "The interface set supported by the Linked Resource",
23571                 "items": {
23572                     "enum": [

```

```

23573         "oic.if.baseline",
23574         "oic.if.a",
23575         "oic.if.s"
23576     ],
23577     "type": "string"
23578 },
23579     "minItems": 1,
23580     "uniqueItems": true,
23581     "readOnly": true,
23582     "type": "array"
23583 },
23584 "rt": {
23585     "description": "Resource Type of the linked Resource",
23586     "items": {
23587         "enum": [
23588             "oic.r.time.period",
23589             "oic.r.gas.consumption",
23590             "oic.r.conversionfactor",
23591             "oic.r.calorificvalue"
23592         ],
23593         "type": "string",
23594         "maxLength": 64
23595     },
23596     "minItems": 1,
23597     "uniqueItems": true,
23598     "readOnly": true,
23599     "type": "array"
23600 },
23601 "anchor": {
23602     "$ref":
23603     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23604     schema.json#/definitions/anchor"
23605 },
23606 "di": {
23607     "$ref":
23608     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23609     schema.json#/definitions/di"
23610 },
23611 "eps": {
23612     "$ref":
23613     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23614     schema.json#/definitions/eps"
23615 },
23616 "href": {
23617     "$ref":
23618     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23619     schema.json#/definitions/href"
23620 },
23621 "ins": {
23622     "$ref":
23623     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23624     schema.json#/definitions/ins"
23625 },
23626 "p": {
23627     "$ref":
23628     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23629     schema.json#/definitions/p"
23630 },
23631 "rel": {
23632     "$ref":
23633     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23634     schema.json#/definitions/rel_array"
23635 },
23636 "title": {
23637     "$ref":
23638     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23639     schema.json#/definitions/title"
23640 },
23641 "type": {
23642     "$ref":
23643     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23644     schema.json#/definitions/type"

```

```

23645     }
23646   },
23647   "required": [
23648     "href",
23649     "rt",
23650     "if"
23651   ],
23652   "type": "object"
23653 },
23654 "batch": {
23655   "title": "Collection Batch Retrieve Format",
23656   "minItems": 2,
23657   "maxItems": 4,
23658   "type": "array",
23659   "items": {
23660     "additionalProperties": true,
23661     "type": "object",
23662     "properties": {
23663       "href": {
23664         "$ref":
23665 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23666 schema.json#/definitions/href"
23667       },
23668       "rep": {
23669         "anyOf": [
23670           {
23671             "$ref":
23672 "https://openconnectivityfoundation.github.io/IoTDataModels/TimePeriodResURI.swagger.json#/definitio
23673 ns/TimePeriod"
23674           },
23675           {
23676             "$ref":
23677 "https://openconnectivityfoundation.github.io/IoTDataModels/GasConsumptionResURI.swagger.json#/defin
23678 itions/Consumption"
23679           },
23680           {
23681             "$ref":
23682 "https://openconnectivityfoundation.github.io/IoTDataModels/CalorificValueResURI.swagger.json#/defin
23683 itions/Calorific"
23684           },
23685           {
23686             "$ref":
23687 "https://openconnectivityfoundation.github.io/IoTDataModels/ConversionFactorResURI.swagger.json#/def
23688 initions/Conversion"
23689           }
23690         ]
23691       }
23692     },
23693     "required": ["href","rep"]
23694   }
23695 },
23696 "batchupdate" : {
23697   "title": "Collection Batch Update Format",
23698   "minItems": 1,
23699   "type": "array",
23700   "items": {
23701     "additionalProperties": true,
23702     "type": "object",
23703     "properties": {
23704       "href": {
23705         "$ref":
23706 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23707 schema.json#/definitions/href"
23708       },
23709       "rep": {
23710         "$ref":
23711 "https://openconnectivityfoundation.github.io/IoTDataModels/TimePeriodResURI.swagger.json#/definitio
23712 ns/TimePeriod"
23713       }
23714     }
23715   }
23716 },

```

```

23717 "Usage" : {
23718   "properties": {
23719     "rt" : {
23720       "description": "Resource Type",
23721       "items": {
23722         "type": "string",
23723         "enum": ["oic.r.gas.usage"],
23724         "maxLength": 64
23725       },
23726       "minItems": 1,
23727       "readOnly": true,
23728       "uniqueItems": true,
23729       "type": "array"
23730     },
23731     "rts" : {
23732       "description": "Allowed Resource Type",
23733       "items": {
23734         "type": "string",
23735         "enum":
23736 ["oic.r.gas.consumption","oic.r.time.period","oic.r.calorificvalue","oic.r.conversionfactor"],
23737         "maxLength": 64
23738       },
23739       "minItems": 2,
23740       "readOnly": true,
23741       "uniqueItems": true,
23742       "type": "array"
23743     },
23744     "rts-m" : {
23745       "description": "Mandatory Resource Type",
23746       "items": {
23747         "type": "string",
23748         "enum": ["oic.r.gas.consumption","oic.r.time.period"],
23749         "maxLength": 64
23750       },
23751       "minItems": 2,
23752       "readOnly": true,
23753       "uniqueItems": true,
23754       "type": "array"
23755     },
23756     "n" : {
23757       "$ref" :
23758 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23759 schema.json#/definitions/n"
23760     },
23761     "id" : {
23762       "$ref" :
23763 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23764 schema.json#/definitions/id"
23765     },
23766     "resources" : {
23767       "$ref": "#/definitions/links"
23768     },
23769     "if" : {
23770       "description": "The interface set supported by this resource",
23771       "items": {
23772         "enum": [
23773           "oic.if.ll",
23774           "oic.if.b",
23775           "oic.if.baseline"
23776         ],
23777         "type": "string",
23778         "maxLength": 64
23779       },
23780       "minItems": 1,
23781       "readOnly": true,
23782       "uniqueItems": true,
23783       "type": "array"
23784     }
23785   },
23786   "type" : "object",
23787   "required": ["resources"]
23788 }

```



23789 }  
 23790 }  
 23791

23792 **6.119.5 Property definition**

23793 Table 241 defines the Properties that are part of the "oic.r.gas.usage" Resource Type.

23794 **Table 241 – The Property definitions of the Resource with type "rt" = "oic.r.gas.usage".**

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema	Yes	Read Only	The interface set supported by the Linked Resource
rt	array: see schema	Yes	Read Only	Resource Type of the linked Resource
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
rep	multiple types: see schema	Yes	Read Write	
href	multiple types: see schema		Read Write	
rep	multiple types: see schema		Read Write	
rt	array: see schema	No	Read Only	Resource Type
rts	array: see schema	No	Read Only	Allowed Resource Type
rts-m	array: see schema	No	Read Only	Mandatory Resource Type
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
resources	multiple types: see schema	Yes	Read Write	

if	array: see schema	No	Read Only	The interface set supported by this resource
----	-------------------	----	-----------	--

23795 **6.119.6 CRUDN behaviour**

23796 Table 242 defines the CRUDN operations that are supported on the "oic.r.gas.usage" Resource  
 23797 Type.

23798 **Table 242 – The CRUDN operations of the Resource with type "rt" = "oic.r.gas.usage".**

Create	Read	Update	Delete	Notify
	get			observe

23799 **6.120 Impact Sensor**

23800 **6.120.1 Introduction**

23801 This Resource provides a status and properties of an impact sensor. Included is the current  
 23802 status (boolean), horizontal and vertical direction (in degrees) and impact level (g force).

23803 **6.120.2 Example URI**

23804 /ImpactSensorResURI

23805 **6.120.3 Resource type**

23806 The Resource Type is defined as: "oic.r.impactsensor".

23807 **6.120.4 OpenAPI 2.0 definition**

```

23808 {
23809   "swagger": "2.0",
23810   "info": {
23811     "title": "Impact Sensor",
23812     "version": "2019-03-21",
23813     "license": {
23814       "name": "OCF Data Model License",
23815       "url":
23816         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
23817         CENSE.md",
23818       "x-copyright": "copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
23819     },
23820     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
23821   },
23822   "schemes": ["http"],
23823   "consumes": ["application/json"],
23824   "produces": ["application/json"],
23825   "paths": {
23826     "/ImpactSensorResURI" : {
23827       "get": {
23828         "description": "This Resource provides a status and properties of an impact sensor. Included
23829         is the current status (boolean), horizontal and vertical direction (in degrees) and impact level (g
23830         force).",
23831         "parameters": [
23832           {"$ref": "#/parameters/interface"}
23833         ],
23834         "responses": {
23835           "200": {
23836             "description": "The success path response for the Resource.",
23837             "x-example":
23838               {
23839                 "rt": ["oic.r.impactsensor"],
23840                 "if": ["oic.if.s", "oic.if.baseline"],
23841                 "impactstatus": true,
23842                 "impactlevel": 2.25,
23843                 "impactdirectionhorizontal": 120.0,
23844                 "impactdirectionvertical": 240.0
23845               },
23846           "schema": { "$ref": "#/definitions/ImpactSensor" }

```

```

23847     }
23848   }
23849 }
23850 }
23851 },
23852 "parameters": {
23853   "interface": {
23854     "in": "query",
23855     "name": "if",
23856     "type": "string",
23857     "enum": ["oic.if.s", "oic.if.baseline"]
23858   }
23859 },
23860 "definitions": {
23861   "ImpactSensor": {
23862     "properties": {
23863       "rt": {
23864         "description": "The Resource Type.",
23865         "items": {
23866           "maxLength": 64,
23867           "type": "string",
23868           "enum": ["oic.r.impactsensor"]
23869         },
23870         "minItems": 1,
23871         "uniqueItems": true,
23872         "readOnly": true,
23873         "type": "array"
23874       },
23875       "impactstatus": {
23876         "type": "boolean",
23877         "readOnly": true,
23878         "description": "The \"impactstatus\" Property indicates the impact as: \"true\" A physical
23879 impact is detected, \"false\" Normal status, an impact is not detected."
23880       },
23881       "impactlevel": {
23882         "type": "number",
23883         "readOnly": true,
23884         "description": "The \"impactlevel\" Property provides the level of impact. The unit is in
23885 \"G\" (G-force)."
23886       },
23887       "impactdirectionhorizontal": {
23888         "type": "number",
23889         "readOnly": true,
23890         "description": "The \"impactdirectionhorizontal\" Property shows a horizontal direction
23891 where the impact comes from. The value is 0 to 360 degrees. 0 is the front of the sensor and
23892 clockwise increment.",
23893         "minimum": 0,
23894         "maximum": 360
23895       },
23896       "impactdirectionvertical": {
23897         "type": "number",
23898         "readOnly": true,
23899         "description": "The \"impactdirectionvertical\" Property shows a vertical direction where
23900 the impact comes from. The value is 0 to 360 degrees. 0 is the front of the sensor and upward
23901 increment.",
23902         "minimum": 0,
23903         "maximum": 360
23904       },
23905       "n": {
23906         "$ref":
23907 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23908 schema.json#/definitions/n"
23909       },
23910       "id": {
23911         "$ref":
23912 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23913 schema.json#/definitions/id"
23914       },
23915       "if": {
23916         "description": "The OCF Interface set supported by this Resource.",
23917         "items": {
23918         "enum": [

```

```

23919         "oic.if.s",
23920         "oic.if.baseline"
23921     ],
23922     "type": "string"
23923 },
23924 "minItems": 2,
23925 "uniqueItems": true,
23926 "readOnly": true,
23927 "type": "array"
23928 }
23929 },
23930 "type": "object",
23931 "required": [ "impactstatus" ]
23932 }
23933 }
23934 }
23935

```

23936 **6.120.5 Property definition**

23937 Table 243 defines the Properties that are part of the "oic.r.impactsensor" Resource Type.

23938 **Table 243 – The Property definitions of the Resource with type "rt" = "oic.r.impactsensor".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
impactstatus	boolean	Yes	Read Only	The "impactstatus" Property indicates the impact as: "true" A physical impact is detected, "false" Normal status, an impact is not detected.
impactlevel	number	No	Read Only	The "impactlevel" Property provides the level of impact. The unit is in "G" (G-force).
impactdirectionhorizontal	number	No	Read Only	The "impactdirectionhorizontal" Property shows a horizontal direction where the impact comes from. The value is 0 to 360 degrees. 0 is the front of the sensor and clockwise increment.
impactdirectionvertical	number	No	Read Only	The "impactdirectionvertical" Property shows a vertical direction where the impact comes from. The value is 0 to 360 degrees. 0 is the front of the sensor and upward increment.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

23939 **6.120.6 CRUDN behaviour**

23940 Table 244 defines the CRUDN operations that are supported on the "oic.r.impactsensor" Resource  
23941 Type.

23942 **Table 244 – The CRUDN operations of the Resource with type "rt" = "oic.r.impactsensor".**

Create	Read	Update	Delete	Notify
	get			observe

23943 **6.121 KeyPadChar**

23944 **6.121.1 Introduction**

23945 This Resource describes a char (0-9,\*,#) which is selected on a number keypad.

23946 **6.121.2 Example URI**

23947 /KeyPadCharResURI

23948 **6.121.3 Resource type**

23949 The Resource Type is defined as: "oic.r.keypadchar".

23950 **6.121.4 OpenAPI 2.0 definition**

```
23951 {  
23952   "swagger": "2.0",  
23953   "info": {  
23954     "title": "KeyPadChar",  
23955     "version": "12122018",  
23956     "license": {  
23957       "name": "OCF Data Model License",  
23958       "url":  
23959         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
23960         CENSE.md",  
23961       "x-copyright": "copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."  
23962     },  
23963     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
23964   },  
23965   "schemes": ["http"],  
23966   "consumes": ["application/json"],  
23967   "produces": ["application/json"],  
23968   "paths": {  
23969     "/KeyPadCharResURI" : {  
23970       "get": {  
23971         "description": "This Resource describes a char (0-9,*,#) which is selected on a number  
23972         keypad.",  
23973         "parameters": [  
23974           {"$ref": "#/parameters/interface"}  
23975         ],  
23976         "responses": {  
23977           "200": {  
23978             "description": "Success path response for the Resource",  
23979             "x-example":  
23980               {  
23981                 "rt": ["oic.r.keypadchar"],  
23982                 "if": ["oic.if.rw", "oic.if.baseline"],  
23983                 "keyvalue": "7"  
23984               },  
23985             "schema": { "$ref": "#/definitions/KeyPadChar" }  
23986           }  
23987         }  
23988       },  
23989       "post": {  
23990         "description": "This Resource describes a char (0-9, *, #) which is selected on a number  
23991         keypad.\n",  
23992         "parameters": [  
23993           {"$ref": "#/parameters/interface"},  
23994           {
```

```

23995         "name": "body",
23996         "in": "body",
23997         "required": true,
23998         "schema": { "$ref": "#/definitions/KeyPadChar" },
23999         "x-example":
24000             {
24001                 "keyvalue": "4"
24002             }
24003     },
24004 ],
24005 "responses": {
24006     "200": {
24007         "description": "",
24008         "x-example":
24009             {
24010                 "keyvalue": "4"
24011             },
24012         "schema": { "$ref": "#/definitions/KeyPadChar" }
24013     }
24014 }
24015 },
24016 },
24017 },
24018 "parameters": {
24019     "interface": {
24020         "in": "query",
24021         "name": "if",
24022         "type": "string",
24023         "enum": ["oic.if.rw", "oic.if.baseline"]
24024     }
24025 },
24026 "definitions": {
24027     "KeyPadChar": {
24028         "properties": {
24029             "rt": {
24030                 "description": "The Resource Type.",
24031                 "items": {
24032                     "maxLength": 64,
24033                     "type": "string",
24034                     "enum": ["oic.r.keypadchar"]
24035                 },
24036                 "minItems": 1,
24037                 "uniqueItems": true,
24038                 "readOnly": true,
24039                 "type": "array"
24040             },
24041             "keyvalue": {
24042                 "type": "string",
24043                 "enum": [
24044                     "0",
24045                     "1",
24046                     "2",
24047                     "3",
24048                     "4",
24049                     "5",
24050                     "6",
24051                     "7",
24052                     "8",
24053                     "9",
24054                     "*",
24055                     "#"
24056                 ],
24057                 "description": "The value of the key pad char."
24058             },
24059             "n": {
24060                 "$ref":
24061                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
24062                 schema.json#/definitions/n"
24063             },
24064             "id": {
24065                 "$ref":
24066                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-

```

```

24067 schema.json#/definitions/id"
24068     },
24069     "if": {
24070       "description": "The OCF Interface set supported by this Resource.",
24071       "items": {
24072         "enum": [
24073           "oic.if.baseline",
24074           "oic.if.rw"
24075         ],
24076         "type": "string"
24077       },
24078       "minItems": 2,
24079       "uniqueItems": true,
24080       "readOnly": true,
24081       "type": "array"
24082     }
24083   },
24084   "type": "object",
24085   "required": ["keyvalue"]
24086 }
24087 }
24088 }

```

### 24089 6.121.5 Property definition

24090 Table 245 defines the Properties that are part of the "oic.r.keypadchar" Resource Type.

24091 **Table 245 – The Property definitions of the Resource with type "rt" = "oic.r.keypadchar".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
keyvalue	string	Yes	Read Write	The value of the key pad char.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

### 24092 6.121.6 CRUDN behaviour

24093 Table 246 defines the CRUDN operations that are supported on the "oic.r.keypadchar" Resource  
 24094 Type.

24095 **Table 246 – The CRUDN operations of the Resource with type "rt" = "oic.r.keypadchar".**

Create	Read	Update	Delete	Notify
	get	post		observe

### 24096 6.122 Opaque Data

#### 24097 6.122.1 Introduction

24098 This Resource defines opaque data that can be transferred between endpoints where the data  
 24099 itself is not interpretable by the OCF endpoints.  
 24100 The stringdata is a string of ASCII characters.

#### 24101 6.122.2 Example URI

24102 /OpaqueDataResURI

### 24103 6.122.3 Resource type

24104 The Resource Type is defined as: "oic.r.opaquedata".

### 24105 6.122.4 OpenAPI 2.0 definition

```
24106 {
24107   "swagger": "2.0",
24108   "info": {
24109     "title": "Opaque Data",
24110     "version": "12122018",
24111     "license": {
24112       "name": "OCF Data Model License",
24113       "url":
24114         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
24115         CENSE.md",
24116       "x-copyright": "copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
24117     },
24118     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
24119   },
24120   "schemes": ["http"],
24121   "consumes": ["application/json"],
24122   "produces": ["application/json"],
24123   "paths": {
24124     "/OpaqueDataResURI" : {
24125       "get": {
24126         "description": "This Resource defines opaque data that can be transferred between endpoints
24127         where the data itself is not interpretable by the OCF endpoints.\n\nThe stringdata is a string of
24128         ASCII characters.",
24129         "parameters": [
24130           { "$ref": "#/parameters/interface" }
24131         ],
24132         "responses": {
24133           "200": {
24134             "description": "",
24135             "x-example":
24136               {
24137                 "rt": ["oic.r.opaquedata"],
24138                 "if": ["oic.if.rw", "oic.if.baseline"],
24139                 "payload": "asdf0123",
24140                 "payloadtype": "switch-get",
24141                 "encoding": "base64",
24142                 "size": 8,
24143                 "hash": "AlA1",
24144                 "system": "foreign system"
24145               },
24146             "schema": { "$ref": "#/definitions/OpaqueData" }
24147           }
24148         }
24149       },
24150       "post": {
24151         "description": "",
24152         "parameters": [
24153           { "$ref": "#/parameters/interface" },
24154           {
24155             "name": "body",
24156             "in": "body",
24157             "required": true,
24158             "schema": { "$ref": "#/definitions/OpaqueData" },
24159             "x-example":
24160               {
24161                 "payload": "asdf0123",
24162                 "payloadtype": "switch-get",
24163                 "encoding": "base64",
24164                 "size": 8,
24165                 "hash": "AlA1",
24166                 "system": "foreign system"
24167               }
24168           }
24169         ],
24170         "responses": {
24171           "200": {
```



```

24172         "description" : "",
24173         "x-example":
24174             {
24175                 "payload": "asdf0123",
24176                 "payloadtype": "switch-get",
24177                 "encoding": "base64",
24178                 "size": 8,
24179                 "hash": "AlAl",
24180                 "system": "foreign system"
24181             },
24182         "schema": { "$ref": "#/definitions/OpaqueData" }
24183     }
24184 }
24185 }
24186 },
24187 "parameters": {
24188     "interface": {
24189         "in": "query",
24190         "name": "if",
24191         "type": "string",
24192         "enum": ["oic.if.rw", "oic.if.baseline"]
24193     }
24194 },
24195 "definitions": {
24196     "OpaqueData" : {
24197         "properties": {
24198             "rt": {
24199                 "description": "The Resource Type.",
24200                 "items": {
24201                     "maxLength": 64,
24202                     "type": "string",
24203                     "enum": ["oic.r.opaquedata"]
24204                 },
24205                 "minItems": 1,
24206                 "uniqueItems": true,
24207                 "readOnly": true,
24208                 "type": "array"
24209             },
24210             "payload": {
24211                 "type": "string",
24212                 "description": "This Property contains the opaque data."
24213             },
24214             "encoding": {
24215                 "type": "string",
24216                 "description": "This Property describes the encoding of the payload, e.g. binary as
24217 base64, json, xml, utf-8."
24218             },
24219             "payloadtype": {
24220                 "type": "string",
24221                 "description": "This Property describes the identification of the payload, e.g. what the
24222 payload is representing ."
24223             },
24224             "size": {
24225                 "type": "integer",
24226                 "description": "The size in bytes of the decoded binary object."
24227             },
24228             "hash": {
24229                 "type": "string",
24230                 "description": "The hash code of the blob. If present, it is used to check the decoded
24231 content of the object data point for integrity. The algorithm used for generating the hash value is
24232 SHA-2 [15]. The data point contains the hash as a hex encoded value."
24233             },
24234             "system": {
24235                 "type": "string",
24236                 "description": "The eco system that is using the payload."
24237             },
24238             "if": {
24239                 "description": "The OCF Interface set supported by this Resource.",
24240                 "items": {
24241                     "enum": [
24242                         "oic.if.baseline",

```

```

24244         "oic.if.rw"
24245     ],
24246     "type": "string"
24247 },
24248     "minItems": 2,
24249     "uniqueItems": true,
24250     "readOnly": true,
24251     "type": "array"
24252 }
24253 },
24254     "type": "object",
24255     "required": [ "payload", "encoding", "system" ]
24256 }
24257 }
24258 }
24259

```

### 24260 6.122.5 Property definition

24261 Table 247 defines the Properties that are part of the "oic.r.opaquedata" Resource Type.

24262 **Table 247 – The Property definitions of the Resource with type "rt" = "oic.r.opaquedata".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
payload	string	Yes	Read Write	This Property contains the opaque data.
encoding	string	Yes	Read Write	This Property describes the encoding of the payload, e.g. binary as base64, json, xml, utf-8.
payloadtype	string	No	Read Write	This Property describes the identification of the payload, e.g. what the payload is representing .
size	integer	No	Read Write	The size in bytes of the decoded binary object.
hash	string	No	Read Write	The hash code of the blob. If present, it is used to check the decoded content of the object data point for integrity. The algorithm used for generating the hash value is SHA-2 [15]. The data point contains the hash as a hex encoded value.
system	string	Yes	Read Write	The eco system that is using the payload.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

24263 **6.122.6 CRUDN behaviour**

24264 Table 248 defines the CRUDN operations that are supported on the "oic.r.opaquedata" Resource  
24265 Type.

24266 **Table 248 – The CRUDN operations of the Resource with type "rt" = "oic.r.opaquedata".**

Create	Read	Update	Delete	Notify
	get	post		observe

24267 **6.123 User Info for Application Layer**

24268 **6.123.1 Introduction**

24269 This Resource defines credentials for user to application layer login. This does not relate to OCF  
24270 Device to Device or Device to Cloud authentication. The username, password and token are  
24271 strings.

24272 **6.123.2 Example URI**

24273 /UserInfoResURI

24274 **6.123.3 Resource type**

24275 The Resource Type is defined as: "oic.r.userinfo".

24276 **6.123.4 OpenAPI 2.0 definition**

```

24277 {
24278   "swagger": "2.0",
24279   "info": {
24280     "title": "User Info for Application Layer",
24281     "version": "12122018",
24282     "license": {
24283       "name": "OCF Data Model License",
24284       "url":
24285       "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
24286       CENSE.md",
24287       "x-copyright": "copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
24288     },
24289     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
24290   },
24291   "schemes": ["http"],
24292   "consumes": ["application/json"],
24293   "produces": ["application/json"],
24294   "paths": {
24295     "/UserInfoResURI" : {
24296       "get": {
24297         "description": "This Resource defines credentials for user to application layer login. This
24298         does not relate to OCF Device to Device or Device to Cloud authentication. The username, password
24299         and token are strings.",
24300         "parameters": [
24301           {"$ref": "#/parameters/interface"}
24302         ],
24303         "responses": {
24304           "200": {
24305             "description": "Success path response for the Resource, note that the info supplied
24306             is NOT returned on RETRIEVE",
24307             "x-example":
24308             {
24309               "rt": ["oic.r.userinfo"],
24310               "if": ["oic.if.rw", "oic.if.baseline"]
24311             },
24312             "schema": { "$ref": "#/definitions/UserInfo-retrieve" }
24313           }
24314         }
24315       },
24316       "post": {
24317         "description": "This Resource defines credentials for user to application layer login. This
24318         does not relate to OCF Device to Device or Device to Cloud authentication. The username, password

```

```

24319 and token are strings.",
24320     "parameters": [
24321       {"$ref": "#/parameters/interface"},
24322       {
24323         "name": "body",
24324         "in": "body",
24325         "required": true,
24326         "schema": { "$ref": "#/definitions/UserInfo-update" },
24327         "x-example":
24328           {
24329             "username": "username",
24330             "password": "password",
24331             "token": "AlAl"
24332           }
24333       }
24334     ],
24335     "responses": {
24336       "200": {
24337         "description": "The success path response for the Resource.",
24338         "x-example":
24339           {
24340             "username": "username",
24341             "password": "password",
24342             "token": "AlAl"
24343           },
24344         "schema": { "$ref": "#/definitions/UserInfo-update" }
24345       }
24346     }
24347   }
24348 },
24349 },
24350 "parameters": {
24351   "interface" : {
24352     "in": "query",
24353     "name": "if",
24354     "type": "string",
24355     "enum": ["oic.if.rw", "oic.if.baseline"]
24356   }
24357 },
24358 "definitions": {
24359   "UserInfo-retrieve": {
24360     "properties": {
24361       "rt": {
24362         "description": "The Resource Type.",
24363         "items": {
24364           "maxLength": 64,
24365           "type": "string",
24366           "enum": ["oic.r.userinfo"]
24367         },
24368         "minItems": 1,
24369         "uniqueItems": true,
24370         "readOnly": true,
24371         "type": "array"
24372       },
24373       "n": {
24374         "$ref":
24375           "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
24376           schema.json#/definitions/n"
24377       },
24378       "id": {
24379         "$ref":
24380           "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
24381           schema.json#/definitions/id"
24382       },
24383       "if": {
24384         "description": "The OCF Interface set supported by this Resource.",
24385         "items": {
24386           "enum": [
24387             "oic.if.rw",
24388             "oic.if.baseline"
24389           ],
24390           "type": "string"

```

```

24391     },
24392     "minItems": 2,
24393     "uniqueItems": true,
24394     "readOnly": true,
24395     "type": "array"
24396   }
24397 },
24398 "type": "object",
24399 "required": [ ]
24400 },
24401 "UserInfo-update": {
24402   "properties": {
24403     "username": {
24404       "type": "string",
24405       "description": "Login name."
24406     },
24407     "password": {
24408       "type": "string",
24409       "description": "Login password."
24410     },
24411     "token": {
24412       "type": "string",
24413       "description": "Authentication token."
24414     }
24415   },
24416   "type": "object",
24417   "required": [ ]
24418 }
24419 }
24420 }
24421

```

24422 **6.123.5 Property definition**

24423 Table 249 defines the Properties that are part of the "oic.r.userinfo" Resource Type.

24424 **Table 249 – The Property definitions of the Resource with type "rt" = "oic.r.userinfo".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
username	string	No	Read Write	Login name.
password	string	No	Read Write	Login password.
token	string	No	Read Write	Authentication token.

24425 **6.123.6 CRUDN behaviour**

24426 Table 250 defines the CRUDN operations that are supported on the "oic.r.userinfo" Resource Type.

24427 **Table 250 – The CRUDN operations of the Resource with type "rt" = "oic.r.userinfo".**

Create	Read	Update	Delete	Notify
	get	post		observe

24428 **6.124 IAS Zone Info**

24429 **6.124.1 Introduction**

24430 This Resource describes information associated with an Intruder Alert System (IAS) Zone.  
24431 Zone Type provides the information about the type of device/alarm.  
24432 Zone Status provides an array which has 10 items representing various status information(e.g.,  
24433 battery status, mode, alarm (Up to two), supervision of IAS network, etc.  
24434 A Device implementing this Resource can be enrolled to IAS Control and Indicator Equipment  
24435 (CIE). IAS CIE can allocate an ID for the Device and update this Resource on the Device.  
24436 This Resource may provide multiple sensitivity levels (>2).  
24437 NumberofZoneSensitivityLevelSupported provides the number of the levels. A specific level can  
24438 be selected as currentzonesensitivityLevel.

24439 **6.124.2 Example URI**

24440 /IASZoneInfoResURI

24441 **6.124.3 Resource type**

24442 The Resource Type is defined as: "oic.r.iaszoneinfo".

24443 **6.124.4 OpenAPI 2.0 definition**

```
24444 {
24445   "swagger": "2.0",
24446   "info": {
24447     "title": "IAS Zone Info",
24448     "version": "20190513",
24449     "license": {
24450       "name": "OCF Data Model License",
24451       "url":
24452         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
24453         CENSE.md",
24454       "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
24455     },
24456     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
24457   },
24458   "schemes": ["http"],
24459   "consumes": ["application/json"],
24460   "produces": ["application/json"],
24461   "paths": {
24462     "/IASZoneInfoResURI" : {
24463       "get": {
24464         "description": "This Resource describes information associated with an Intruder Alert System
24465         (IAS) Zone.\nZone Type provides the information about the type of device/alarm.\nZone Status
24466         provides an array which has 10 items representing various status information(e.g., battery status,
24467         mode, alarm (Up to two), supervision of IAS network, etc.\nA Device implementing this Resource can
24468         be enrolled to IAS Control and Indicator Equipment (CIE). IAS CIE can allocate an ID for the Device
24469         and update this Resource on the Device.\nThis Resource may provide multiple sensitivity levels (>2).
24470         NumberofZoneSensitivityLevelSupported provides the number of the levels. A specific level can be
24471         selected as currentzonesensitivityLevel.",
24472         "parameters": [
24473           {"$ref": "#/parameters/interface-all"}
24474         ],
24475         "responses": {
24476           "200": {
24477             "description" : "",
24478             "x-example":
24479             {
24480               "rt": ["oic.r.iaszoneinfo"],
24481               "zonetype": "motionsensor",
24482               "zonestatus": {
24483                 "alarms": ["presence"],
24484                 "tamper": false,
24485                 "zonestatusreports": "statuschangeonly",
24486                 "fault": false,
24487                 "test": false
24488               },
24489               "iascieaddress": "ACDE9F56A3FE6B98",
```

```

24490         "zonestate": true,
24491         "zoneid": 64,
24492         "numzonesensitivitylevel": 3,
24493         "currentzonesensitivitylevel": 2
24494     },
24495     "schema": { "$ref": "#/definitions/IASZoneInfo" }
24496 }
24497 },
24498 },
24499 "post": {
24500     "description": "Sets the current sensitivity level of the IASZone.\n",
24501     "parameters": [
24502         { "$ref": "#/parameters/interface-rw" },
24503         {
24504             "name": "body",
24505             "in": "body",
24506             "required": true,
24507             "schema": { "$ref": "#/definitions/IASZoneInfo-Update" },
24508             "x-example":
24509                 {
24510                     "currentzonesensitivitylevel": 3
24511                 }
24512         }
24513     ],
24514     "responses": {
24515         "200": {
24516             "description": "Success path response code\n"
24517         }
24518     }
24519 },
24520 },
24521 },
24522 "parameters": {
24523     "interface-all" : {
24524         "in" : "query",
24525         "name" : "if",
24526         "type" : "string",
24527         "enum" : ["oic.if.rw", "oic.if.baseline"]
24528     },
24529     "interface-rw" : {
24530         "in" : "query",
24531         "name" : "if",
24532         "type" : "string",
24533         "enum" : ["oic.if.rw"]
24534     }
24535 },
24536 "definitions": {
24537     "IASZoneInfo" : {
24538         "properties": {
24539             "rt" : {
24540                 "description": "Resource Type",
24541                 "items": {
24542                     "type": "string",
24543                     "enum": ["oic.r.iaszoneinfo"]
24544                 },
24545                 "minItems": 1,
24546                 "readOnly": true,
24547                 "type": "array"
24548             },
24549             "zonestate" : {
24550                 "description": "The IAS zone state. True = enrolled, False = not enrolled.",
24551                 "readOnly": true,
24552                 "type": "boolean"
24553             },
24554             "zonestatus" : {
24555                 "description": "Set of alarm indicators.",
24556                 "properties": {
24557                     "alarms": {
24558                         "type": "array",
24559                         "description": "Array of alarms. The alarms exposed are dependent on the zonetype.",
24560                         "readOnly": true,
24561                         "minItems": 1,

```

```

24562         "maxItems": 2,
24563         "items": {
24564             "type": "string",
24565             "enum":
24566 ["system", "intrusion", "presence", "1stportalopenclose", "2ndportalopenclose", "fire", "wateroverflow", "C
24567 0", "cooking", "fall", "emergencybutton", "movement", "vibration", "panic", "emergency", "glassbreak"]
24568         },
24569     },
24570     "zonestatusreports": {
24571         "description": "Controls the generation of status indications",
24572         "type": "string",
24573         "enum": ["none", "statuschangeonly", "alarmclearonly", "statuschangeandalarmclear"]
24574     },
24575     "tamper": {
24576         "description": "Tamper status. True = tampered, False = not tampered.",
24577         "readOnly": true,
24578         "type": "boolean"
24579     },
24580     "test": {
24581         "description": "Test mode indicator. True = sensor is in test mode, False = sensor is
24582 in operational mode",
24583         "readOnly": true,
24584         "type": "boolean"
24585     },
24586     "fault": {
24587         "description": "Fault indicator. True = fault detected, False = no fault detected",
24588         "readOnly": true,
24589         "type": "boolean"
24590     }
24591 },
24592 "readOnly": true,
24593 "type": "object"
24594 },
24595 "numzonesensitivitylevel" : {
24596     "description": "Number of supported zone sensitivity levels",
24597     "minimum": 2,
24598     "readOnly": true,
24599     "type": "integer"
24600 },
24601 "zoneid" : {
24602     "description": "ID allocated by the IAS CIE",
24603     "readOnly": true,
24604     "type": "integer"
24605 },
24606 "iascieaddress" : {
24607     "description": "EUI-64 Address of the enrolled IAS Control and Indicating Equipment
24608 (CIE)",
24609     "readOnly": true,
24610     "type": "string"
24611 },
24612 "zonetype" : {
24613     "description": "IAS zone type. See OCF enumeration map for set of valid values.",
24614     "readOnly": true,
24615     "type": "string"
24616 },
24617 "currentzonesensitivitylevel" : {
24618     "description": "Current zone sensitivity level",
24619     "minimum": 0,
24620     "type": "integer"
24621 },
24622 "n" : {
24623     "$ref":
24624 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
24625 schema.json#/definitions/n"
24626 },
24627 "id" : {
24628     "$ref":
24629 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
24630 schema.json#/definitions/id"
24631 },
24632 "if" : {
24633     "description": "The OCF Interface set supported by this Resource",

```



```

24634     "items": {
24635         "enum": [
24636             "oic.if.rw",
24637             "oic.if.baseline"
24638         ],
24639         "type": "string"
24640     },
24641     "minItems": 2,
24642     "maxItems": 2,
24643     "readOnly": true,
24644     "type": "array"
24645 }
24646 },
24647     "required": ["zonetype", "zonestate", "zonestatus", "zoneid", "iascieaddress"]
24648 },
24649     "IASZoneInfo-Update" : {
24650         "properties": {
24651             "currentzonesensitivitylevel" : {
24652                 "description": "Current zone sensitivity level, Client can only set 1 or higher.",
24653                 "minimum": 1,
24654                 "type": "integer"
24655             }
24656         },
24657         "required": ["currentzonesensitivitylevel"]
24658     }
24659 }
24660 }
24661

```

24662 **6.124.5 Property definition**

24663 Table 251 defines the Properties that are part of the "oic.r.iaszoneinfo" Resource Type.

24664 **Table 251 – The Property definitions of the Resource with type "rt" = "oic.r.iaszoneinfo".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
zonestate	boolean	Yes	Read Only	The IAS zone state. True = enrolled, False = not enrolled.
zonestatus	object: see schema	Yes	Read Only	Set of alarm indicators.
numzonesensitivitylevel	integer	No	Read Only	Number of supported zone sensitivity levels
zoneid	integer	Yes	Read Only	ID allocated by the IAS CIE
iascieaddress	string	Yes	Read Only	EUI-64 Address of the enrolled IAS Control and Indicating Equipment (CIE)
zonetype	string	Yes	Read Only	IAS zone type. See OCF enumeration map for set of valid values.
currentzonesensitivitylevel	integer	No	Read Write	Current zone sensitivity level
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	

if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
currentzonesensitivitylevel	integer	Yes	Read Write	Current zone sensitivity level, Client can only set 1 or higher.

24665 **6.124.6 CRUDN behaviour**

24666 Table 252 defines the CRUDN operations that are supported on the "oic.r.iaszoneinfo" Resource  
24667 Type.

24668 **Table 252 – The CRUDN operations of the Resource with type "rt" = "oic.r.iaszoneinfo".**

Create	Read	Update	Delete	Notify
	get	post		observe

24669 **6.125 IAS Zone Collection**

24670 **6.125.1 Introduction**

24671

24672 **6.125.2 Example URI**

24673 /IASZoneCollectionResURI

24674 **6.125.3 Resource type**

24675 **6.125.4 OpenAPI 2.0 definition**

```

24676 {
24677   "swagger": "2.0",
24678   "info": {
24679     "title": "IAS Zone Collection",
24680     "version": "20190513",
24681     "license": {
24682       "name": "OCF Data Model License",
24683       "url":
24684         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
24685         CENSE.md",
24686       "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
24687     },
24688     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
24689   },
24690   "schemes": ["http"],
24691   "consumes": ["application/json"],
24692   "produces": ["application/json"],
24693   "paths": {
24694     "/IASZoneResURI?if=oic.if.baseline" : {
24695       "get": {
24696         "description": "This Resource is Collection that fully describes an Intruder Alert System
24697         (IAS) Zone. It is made up of an instance of IAS Zone Info, Battery, and Power Source.",
24698         "parameters": [
24699           { "$ref": "#/parameters/interface-baseline" }
24700         ],
24701         "responses": {
24702           "200": {
24703             "description" : "",
24704             "schema": { "$ref": "#/definitions/baseline" },
24705             "x-example":
24706               {
24707                 "rt": ["oic.r.iaszone"],
24708                 "if": ["oic.if.ll", "oic.if.b", "oic.if.baseline"],
24709                 "links": [
24710                   {
24711                     "href": "/myIASZoneInfoResURI",
24712                     "rt": ["oic.r.iaszoneinfo"],

```

```

24713         "if": ["oic.if.rw", "oic.if.baseline"]
24714     },
24715     {
24716         "href": "/myBatteryResURI",
24717         "rt": ["oic.r.energy.battery"],
24718         "if": ["oic.if.rw", "oic.if.baseline"]
24719     },
24720     {
24721         "href": "/myPowersourceResURI",
24722         "rt": ["oic.r.powersource"],
24723         "if": ["oic.if.r", "oic.if.baseline"]
24724     }
24725 ]
24726 }
24727 }
24728 }
24729 }
24730 },
24731 "/IASZoneResURI?if=oic.if.ll" : {
24732     "get": {
24733         "description": "This Resource is Collection that fully describes an Intruder Alert System
24734 (IAS) Zone. It is made up of an instance of IAS Zone Info, Battery, and Power Source.",
24735         "parameters": [
24736             {"$ref": "#/parameters/interface-ll"}
24737         ],
24738         "responses": {
24739             "200": {
24740                 "description": "",
24741                 "schema": {"$ref": "#/definitions/links"},
24742                 "x-example":
24743                 [
24744                     {
24745                         "href": "/myIASZoneInfoResURI",
24746                         "rt": ["oic.r.iaszoneinfo"],
24747                         "if": ["oic.if.rw", "oic.if.baseline"]
24748                     },
24749                     {
24750                         "href": "/myBatteryResURI",
24751                         "rt": ["oic.r.energy.battery"],
24752                         "if": ["oic.if.rw", "oic.if.baseline"]
24753                     },
24754                     {
24755                         "href": "/myPowersourceResURI",
24756                         "rt": ["oic.r.powersource"],
24757                         "if": ["oic.if.r", "oic.if.baseline"]
24758                     }
24759                 ]
24760             }
24761         }
24762     },
24763 },
24764 "/IASZoneResURI?if=oic.if.b" : {
24765     "get": {
24766         "description": "This Resource is Collection that fully describes an Intruder Alert System
24767 (IAS) Zone. It is made up of an instance of IAS Zone Info, Battery, and Power Source.",
24768         "parameters": [
24769             {"$ref": "#/parameters/interface-b"}
24770         ],
24771         "responses": {
24772             "200": {
24773                 "description": "",
24774                 "schema": {"$ref": "#/definitions/IASZoneCollectionBatch-Retrieve"},
24775                 "x-example":
24776                 [
24777                     {
24778                         "href": "/myIASZoneInfoResURI",
24779                         "rep": {
24780                             "zonetype": "motionsensor",
24781                             "zonestatus": {
24782                                 "alarms": ["presence"],
24783                                 "tamper": false,
24784                                 "zonestatusreports": "statuschangeonly",

```

```

24785         "fault": false,
24786         "test": false
24787     },
24788     "iascieaddress": "ACDE9F56A3FE6B98",
24789     "zonestate": true,
24790     "zoneid": 64,
24791     "numzonesensitivitylevel": 3,
24792     "currentzonesensitivitylevel": 2
24793 }
24794 },
24795 {
24796     "href": "/myBatteryResURI",
24797     "rep": {
24798         "charge": 70,
24799         "defect": false
24800     }
24801 },
24802 {
24803     "href": "/myPowersourceResURI",
24804     "rep": {
24805         "powerSources": ["AC (Mains) Power"],
24806         "sourcefault": false
24807     }
24808 }
24809 ]
24810 }
24811 },
24812 },
24813 "post": {
24814     "description": "Sets the current sensitivity level of the IASZone.\n",
24815     "parameters": [
24816         {"$ref": "#/parameters/interface-b"},
24817         {
24818             "name": "body",
24819             "in": "body",
24820             "required": true,
24821             "schema": {"$ref": "#/definitions/IASZoneCollectionBatch-Update" },
24822             "x-example":
24823             [
24824                 {
24825                     "href": "/myIASZoneInfoResURI",
24826                     "rep": {
24827                         "currentzonesensitivitylevel": 3
24828                     }
24829                 }
24830             ]
24831         }
24832     ],
24833     "responses": {
24834         "200": {
24835             "description": "Success path response code\n"
24836         }
24837     }
24838 }
24839 },
24840 },
24841 "parameters": {
24842     "interface-all" : {
24843         "in" : "query",
24844         "name" : "if",
24845         "type" : "string",
24846         "enum" : ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
24847     },
24848     "interface-ll" : {
24849         "in" : "query",
24850         "name" : "if",
24851         "type" : "string",
24852         "enum" : ["oic.if.ll"]
24853     },
24854     "interface-b" : {
24855         "in" : "query",
24856         "name" : "if",

```

```

24857         "type" : "string",
24858         "enum" : ["oic.if.b"]
24859     },
24860     "interface-baseline" : {
24861         "in" : "query",
24862         "name" : "if",
24863         "type" : "string",
24864         "enum" : ["oic.if.baseline"]
24865     }
24866 },
24867 "definitions": {
24868     "baseline": {
24869         "properties": {
24870             "rt" : {
24871                 "description": "Resource Type",
24872                 "items": {
24873                     "type": "string",
24874                     "enum": ["oic.r.iaszone"]
24875                 },
24876                 "minItems": 1,
24877                 "readOnly": true,
24878                 "type": "array"
24879             },
24880             "rts" : {
24881                 "description": "Allowed Resources",
24882                 "type": "array",
24883                 "minItems": 3,
24884                 "maxItems": 3,
24885                 "items": {
24886                     "type": "string",
24887                     "enum": ["oic.r.iaszoneinfo", "oic.r.energy.battery", "oic.r.powersource"]
24888                 }
24889             },
24890             "rts-m" : {
24891                 "description": "Mandatory Resources",
24892                 "type": "array",
24893                 "minItems": 3,
24894                 "maxItems": 3,
24895                 "items": {
24896                     "type": "string",
24897                     "enum": ["oic.r.iaszoneinfo", "oic.r.energy.battery", "oic.r.powersource"]
24898                 }
24899             },
24900             "n": {
24901                 "$ref":
24902                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
24903                 schema.json#/definitions/n"
24904             },
24905             "id": {
24906                 "$ref":
24907                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
24908                 schema.json#/definitions/id"
24909             },
24910             "links" : {
24911                 "$ref": "#/definitions/links"
24912             },
24913             "if" : {
24914                 "description": "The OCF Interface set supported by this Resource",
24915                 "items": {
24916                     "enum": [
24917                         "oic.if.ll",
24918                         "oic.if.b",
24919                         "oic.if.baseline"
24920                     ],
24921                     "type": "string"
24922                 },
24923                 "minItems": 1,
24924                 "readOnly": true,
24925                 "type": "array"
24926             }
24927         },
24928         "type" : "object",

```

```

24929     "required": ["links"]
24930   },
24931   "links": {
24932     "type": "array",
24933     "items": {
24934       "$ref": "#/definitions/oic.oic-link"
24935     }
24936   },
24937   "oic.oic-link": {
24938     "properties": {
24939       "if": {
24940         "description": "The OCF Interface set supported by this resource",
24941         "items": {
24942           "enum": [
24943             "oic.if.baseline",
24944             "oic.if.rw",
24945             "oic.if.r"
24946           ],
24947           "type": "string"
24948         },
24949         "minItems": 1,
24950         "uniqueItems": true,
24951         "readOnly": true,
24952         "type": "array"
24953       },
24954       "rt": {
24955         "description": "Resource Type of the Resource",
24956         "items": {
24957           "enum": [
24958             "oic.r.iaszoneinfo",
24959             "oic.r.energy.battery",
24960             "oic.r.powersource"
24961           ],
24962           "type": "string"
24963         },
24964         "minItems": 1,
24965         "maxItems": 1,
24966         "uniqueItems": true,
24967         "readOnly": true,
24968         "type": "array"
24969       },
24970       "anchor": {
24971         "$ref":
24972         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
24973         schema.json#/definitions/anchor"
24974       },
24975       "di": {
24976         "$ref":
24977         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
24978         schema.json#/definitions/di"
24979       },
24980       "eps": {
24981         "$ref":
24982         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
24983         schema.json#/definitions/eps"
24984       },
24985       "href": {
24986         "$ref":
24987         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
24988         schema.json#/definitions/href"
24989       },
24990       "ins": {
24991         "$ref":
24992         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
24993         schema.json#/definitions/ins"
24994       },
24995       "p": {
24996         "$ref":
24997         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
24998         schema.json#/definitions/p"
24999       },
25000       "rel": {

```

```

25001         "$ref":
25002         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
25003         schema.json#/definitions/rel_array"
25004     },
25005     "title": {
25006         "$ref":
25007         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
25008         schema.json#/definitions/title"
25009     },
25010     "type": {
25011         "$ref":
25012         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
25013         schema.json#/definitions/type"
25014     }
25015 },
25016 "required": [
25017     "href",
25018     "rt",
25019     "if"
25020 ],
25021 "type": "object"
25022 },
25023 "IASZoneCollectionBatch-Retrieve": {
25024     "title": "Collection Batch Retrieve Format",
25025     "minItems": 3,
25026     "maxItems": 3,
25027     "type": "array",
25028     "uniqueItems": true,
25029     "items": {
25030         "additionalProperties": true,
25031         "type": "object",
25032         "properties": {
25033             "href": {
25034                 "$ref":
25035                 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
25036                 schema.json#/definitions/href"
25037             },
25038             "rep": {
25039                 "anyOf": [
25040                     {
25041                         "$ref":
25042                         "https://openconnectivityfoundation.github.io/IoTDataModels/IASZoneInfoResURI.swagger.json#/definiti
25043                         ons/IASZoneInfo"
25044                     },
25045                     {
25046                         "$ref":
25047                         "https://openconnectivityfoundation.github.io/IoTDataModels/BatteryResURI.swagger.json#/definitions/
25048                         Battery"
25049                     },
25050                     {
25051                         "$ref":
25052                         "https://openconnectivityfoundation.github.io/IoTDataModels/PowerSourcesResourceURI.swagger.json#/de
25053                         finitions/powerSourceSchema"
25054                     }
25055                 ]
25056             }
25057         },
25058         "required": ["href", "rep"]
25059     }
25060 },
25061 "IASZoneCollectionBatch-Update" : {
25062     "title": "Collection Batch Update Format",
25063     "minItems": 1,
25064     "type": "array",
25065     "items": {
25066         "additionalProperties": true,
25067         "type": "object",
25068         "properties": {
25069             "href": {
25070                 "$ref":
25071                 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
25072                 schema.json#/definitions/href"

```

```

25073     },
25074     "rep": {
25075       "type": "object",
25076       "anyOf": [
25077         {
25078           "$ref":
25079             "https://openconnectivityfoundation.github.io/IoTDataModels/IASZoneInfoResURI.swagger.json#/definitions/IASZoneInfo-Update"
25080         },
25081         {
25082           "$ref":
25083             "https://openconnectivityfoundation.github.io/IoTDataModels/BatteryResURI.swagger.json#/definitions/BatteryUpdate"
25084         }
25085       ]
25086     }
25087   }
25088 }
25089 }
25090 }
25091 }
25092 }
25093 }
25094 }

```

### 25095 6.125.5 Property definition

25096 Table 253 defines the Properties that are part of the "oic.r.iaszone" Resource Type.

25097 **Table 253 – The Property definitions of the Resource with type "rt" = "None".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
rts	array: see schema	No	Read Write	Allowed Resources
rts-m	array: see schema	No	Read Write	Mandatory Resources
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
links	multiple types: see schema	Yes	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
if	array: see schema	Yes	Read Only	The OCF Interface set supported by this resource
rt	array: see schema	Yes	Read Only	Resource Type of the Resource
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	



rel	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
rep	multiple types: see schema	Yes	Read Write	
href	multiple types: see schema		Read Write	
rep	object: see schema		Read Write	

25098 **6.125.6 CRUDN behaviour**

25099 Table 254 defines the CRUDN operations that are supported on the "oic.r.iaszone" Resource Type.

25100 **Table 254 – The CRUDN operations of the Resource with type "rt" = "None".**

Create	Read	Update	Delete	Notify

25101 **6.126 Window Covering**

25102 **6.126.1 Introduction**

25103 This Resource describes the information of a window covering, i.e., type, configuration status,  
25104 and mode.

25105 Velocity associated with lifting the window covering can be changed by updating  
25106 Lift\_Velocity(cm/sec).

25107 Ramp up/down times to reaching the velocity setting can be changed by updating  
25108 Lift\_Acceleration Time/Lift\_Deceleration Time (0.1sec).

25109 **6.126.2 Example URI**

25110 /WindowCoveringResURI

25111 **6.126.3 Resource type**

25112 The Resource Type is defined as: "oic.r.windowcovering".

25113 **6.126.4 OpenAPI 2.0 definition**

```

25114 {
25115   "swagger": "2.0",
25116   "info": {
25117     "title": "Window Covering",
25118     "version": "20190513",
25119     "license": {
25120       "name": "OCF Data Model License",
25121       "url":
25122 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
25123 CENSE.md",
25124       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
25125     },
25126     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
25127   },
25128   "schemes": ["http"],
25129   "consumes": ["application/json"],
25130   "produces": ["application/json"],
25131   "paths": {
25132     "/WindowCoveringResURI" : {
25133       "get": {
25134         "description": "This Resource describes the information of a window covering, i.e., type,

```

```

25135 configuration status, and mode.\nVelocity associated with lifting the window covering can be changed
25136 by updating Lift_Velocity(cm/sec).\nRamp up/down times to reaching the velocity setting can be
25137 changed by updating Lift_Acceleration Time/Lift_Deceleration Time (0.1sec).",
25138     "parameters": [
25139         {"$ref": "#/parameters/interface-all"}
25140     ],
25141     "responses": {
25142         "200": {
25143             "description" : "",
25144             "x-example":
25145             {
25146                 "rt": ["oic.r.windowcovering"],
25147                 "windowcoveringtype": "shutter",
25148                 "configstatus": {
25149                     "operational": true,
25150                     "online": true,
25151                     "rotationdirection": "normal",
25152                     "controllift": "closedloop",
25153                     "controltilt": "closedloop",
25154                     "closedloopliftcontrol": "encoder",
25155                     "closedlooptiltcontrol": "encoder"
25156                 },
25157                 "mode": {
25158                     "motordirection": false,
25159                     "calibration": false,
25160                     "maintenance": false,
25161                     "ledfeedback": true
25162                 },
25163                 "liftvelocity": 5,
25164                 "liftaccelerationtime": 200,
25165                 "liftdecelerationtime": 200
25166             },
25167             "schema": { "$ref": "#/definitions/WindowCovering" }
25168         }
25169     },
25170 },
25171 "post": {
25172     "description": "Update window covering settings.\n",
25173     "parameters": [
25174         {"$ref": "#/parameters/interface-all"},
25175         {
25176             "name": "body",
25177             "in": "body",
25178             "required": true,
25179             "schema": { "$ref": "#/definitions/WindowCovering-Update" },
25180             "x-example":
25181             {
25182                 "mode": {
25183                     "motordirection": true,
25184                     "calibration": false,
25185                     "maintenance": false,
25186                     "ledfeedback": true
25187                 },
25188                 "liftvelocity": 10,
25189                 "liftaccelerationtime": 500,
25190                 "liftdecelerationtime": 500
25191             }
25192         }
25193     ],
25194     "responses": {
25195         "200": {
25196             "description" : "Success path response code\n"
25197         }
25198     }
25199 }
25200 },
25201 },
25202 "parameters": {
25203     "interface-all" : {
25204         "in" : "query",
25205         "name" : "if",
25206         "type" : "string",

```

```

25207         "enum" : ["oic.if.rw", "oic.if.baseline"]
25208     }
25209 },
25210 "definitions": {
25211     "WindowCovering" : {
25212         "properties": {
25213             "rt" : {
25214                 "description": "Resource Type",
25215                 "items": {
25216                     "maxLength": 64,
25217                     "type": "string",
25218                     "enum": ["oic.r.windowcovering"]
25219                 },
25220                 "minItems": 1,
25221                 "readOnly": true,
25222                 "type": "array"
25223             },
25224             "windowcoveringtype" : {
25225                 "description": "Window covering type. See OCF enumeration map for set of valid values.",
25226                 "readOnly": true,
25227                 "type": "string"
25228             },
25229             "liftvelocity" : {
25230                 "description": "Velocity in cm/sec associated with lifting the covering",
25231                 "type": "integer"
25232             },
25233             "configstatus" : {
25234                 "description": "Set of config status indicators.",
25235                 "properties": {
25236                     "controllift": {
25237                         "description": "Closed loop control allows for intermediate settings, open loop
25238 supports only up or down",
25239                         "readOnly": true,
25240                         "type": "string",
25241                         "enum": ["closedloop","openloop"]
25242                     },
25243                     "controltilt": {
25244                         "description": "Closed loop control allows for intermediate settings, open loop
25245 supports only tilted or not tilted",
25246                         "readOnly": true,
25247                         "type": "string",
25248                         "enum": ["closedloop","openloop"]
25249                     },
25250                     "closedloopliftcontrol": {
25251                         "description": "Encoder or timer controlled",
25252                         "readOnly": true,
25253                         "type": "string",
25254                         "enum": ["encoder","timer"]
25255                     },
25256                     "closedlooptiltcontrol": {
25257                         "description": "Encoder or timer controlled",
25258                         "readOnly": true,
25259                         "type": "string",
25260                         "enum": ["encoder","timer"]
25261                     },
25262                     "online": {
25263                         "description": "True = online, False = not online",
25264                         "readOnly": true,
25265                         "type": "boolean"
25266                     },
25267                     "operational": {
25268                         "description": "True = operational, False = not operational",
25269                         "readOnly": true,
25270                         "type": "boolean"
25271                     },
25272                     "rotationdirection": {
25273                         "description": "Identifies if the direction of rotation has been reversed to match
25274 physical installation.",
25275                         "readOnly": true,
25276                         "type": "string",
25277                         "enum": ["normal","reversed"]
25278                     }

```

```

25279     },
25280     "readOnly": true,
25281     "type": "object"
25282   },
25283   "liftaccelerationtime" : {
25284     "description": "Ramp up time to reach lift velocity (ms)",
25285     "type": "integer"
25286   },
25287   "liftdecelerationtime" : {
25288     "description": "Ramp down time from the velocity setting (ms)",
25289     "type": "integer"
25290   },
25291   "mode" : {
25292     "description": "Set of operational modes.",
25293     "properties": {
25294       "calibration": {
25295         "description": "True = calibration mode, False = normal mode",
25296         "type": "boolean"
25297       },
25298       "ledfeedback": {
25299         "description": "True = feedback enabled, False = LEDs are off",
25300         "type": "boolean"
25301       },
25302       "maintenance": {
25303         "description": "True = maintenance mode, False = normal mode",
25304         "type": "boolean"
25305       },
25306       "motordirection": {
25307         "description": "True = direction reversed, False = direction normal",
25308         "type": "boolean"
25309       }
25310     },
25311     "type": "object"
25312   },
25313   "n": {
25314     "$ref":
25315     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
25316     schema.json#/definitions/n"
25317   },
25318   "id": {
25319     "$ref":
25320     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
25321     schema.json#/definitions/id"
25322   },
25323   "if" : {
25324     "description": "The interface set supported by this resource",
25325     "items": {
25326       "enum": [
25327         "oic.if.rw",
25328         "oic.if.baseline"
25329       ],
25330       "type": "string"
25331     },
25332     "minItems": 2,
25333     "maxItems": 2,
25334     "readOnly": true,
25335     "type": "array"
25336   }
25337 },
25338 "required": ["windowcoveringtype", "configstatus", "mode"]
25339 },
25340 "WindowCovering-Update" : {
25341   "properties": {
25342     "liftaccelerationtime" : {
25343       "description": "Ramp up time to reach lift velocity (ms)",
25344       "type": "integer"
25345     },
25346     "liftdecelerationtime" : {
25347       "description": "Ramp down time from the velocity setting (ms)",
25348       "type": "integer"
25349     },
25350     "liftvelocity" : {

```

```

25351         "description": "Velocity in cm/sec associated with lifting the covering",
25352         "type": "integer"
25353     },
25354     "mode" : {
25355         "description": "Set of operational modes.",
25356         "properties": {
25357             "calibration": {
25358                 "description": "True = calibration mode, False = normal mode",
25359                 "type": "boolean"
25360             },
25361             "ledfeedback": {
25362                 "description": "True = feedback enabled, False = LEDs are off",
25363                 "type": "boolean"
25364             },
25365             "maintenance": {
25366                 "description": "True = maintenance mode, False = normal mode",
25367                 "type": "boolean"
25368             },
25369             "motordirection": {
25370                 "description": "True = direction reversed, False = direction normal",
25371                 "type": "boolean"
25372             }
25373         },
25374         "type": "object"
25375     },
25376 },
25377 "required": ["mode"]
25378 }
25379 }
25380 }
25381

```

25382 **6.126.5 Property definition**

25383 Table 255 defines the Properties that are part of the "oic.r.windowcovering" Resource Type.

25384 **Table 255 – The Property definitions of the Resource with type "rt" =**  
25385 **"oic.r.windowcovering".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
windowcoveringtype	string	Yes	Read Only	Window covering type. See OCF enumeration map for set of valid values.
liftvelocity	integer	No	Read Write	Velocity in cm/sec associated with lifting the covering
configstatus	object: see schema	Yes	Read Only	Set of config status indicators.
liftaccelerationtime	integer	No	Read Write	Ramp up time to reach lift velocity (ms)
liftdecelerationtime	integer	No	Read Write	Ramp down time from the velocity setting (ms)
mode	object: see schema	Yes	Read Write	Set of operational modes.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	

if	array: see schema	No	Read Only	The interface set supported by this resource
liftaccelerationtime	integer	No	Read Write	Ramp up time to reach lift velocity (ms)
liftdecelerationtime	integer	No	Read Write	Ramp down time from the velocity setting (ms)
liftvelocity	integer	No	Read Write	Velocity in cm/sec associated with lifting the covering
mode	object: see schema	Yes	Read Write	Set of operational modes.

25386 **6.126.6 CRUDN behaviour**

25387 Table 256 defines the CRUDN operations that are supported on the "oic.r.windowcovering"  
25388 Resource Type.

25389 **Table 256 – The CRUDN operations of the Resource with type "rt" =**  
25390 **"oic.r.windowcovering".**

Create	Read	Update	Delete	Notify
	get	post		observe

25391 **6.127 Activity**

25392 **6.127.1 Introduction**

25393 This Resource describes the Properties associated with a person's physical activity.  
25394 All Properties are read-only values that are provided by the server.  
25395 When range (from "oic.r.baseresource") is omitted the default is 0 to +MAXFLOAT.

25396 **6.127.2 Example URI**

25397 /ActivityResURI

25398 **6.127.3 Resource type**

25399 The Resource Type is defined as: "oic.r.activity".

25400 **6.127.4 OpenAPI 2.0 definition**

```

25401 {
25402   "swagger": "2.0",
25403   "info": {
25404     "title": "Activity",
25405     "version": "2019-03-04",
25406     "license": {
25407       "name": "OCF Data Model License",
25408       "url":
25409 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
25410 CENSE.md",
25411       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
25412     },
25413     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
25414   },
25415   "schemes": [
25416     "http"
25417   ],
25418   "consumes": [
25419     "application/json"
25420   ],
25421   "produces": [
25422     "application/json"

```

```

25423 ],
25424 "paths": {
25425   "/ActivityResURI": {
25426     "get": {
25427       "description": "This Resource describes the Properties associated with a person's physical
25428 activity.\n All Properties are read-only values that are provided by the server.\n When range (from
25429 \"oic.r.baseresource\") is omitted the default is 0 to +MAXFLOAT.",
25430       "parameters": [
25431         {
25432           "$ref": "#/parameters/interface"
25433         }
25434       ],
25435       "responses": {
25436         "200": {
25437           "description": "",
25438           "x-example": {
25439             "rt": [
25440               "oic.r.activity"
25441             ],
25442             "activity": "sleep",
25443             "steps_day": 1000,
25444             "steps_reset": 500,
25445             "ccal_day": 3000.0,
25446             "ccal_reset": 1500.0
25447           },
25448           "schema": {
25449             "$ref": "#/definitions/Activity"
25450           }
25451         }
25452       }
25453     }
25454   }
25455 },
25456 "parameters": {
25457   "interface": {
25458     "in": "query",
25459     "name": "if",
25460     "type": "string",
25461     "enum": [
25462       "oic.if.s",
25463       "oic.if.baseline"
25464     ]
25465   }
25466 },
25467 "definitions": {
25468   "Activity": {
25469     "properties": {
25470       "activity": {
25471         "description": "This Property describes the recognized current activity type of user",
25472         "type": "string",
25473         "enum": [
25474           "sleep",
25475           "sit",
25476           "stand",
25477           "walk",
25478           "run",
25479           "unknown"
25480         ],
25481         "readOnly": true
25482       },
25483       "steps_day": {
25484         "description": "This Property describes the user's step count that measures the number of
25485 steps the user has taken since the beginning of the day.",
25486         "type": "integer",
25487         "minimum": 0,
25488         "readOnly": true
25489       },
25490       "steps_reset": {
25491         "description": "This Property describes the user's step count that measures the number of
25492 steps the user has taken since the last reset.",
25493         "type": "integer",
25494         "minimum": 0,

```

```

25495         "readOnly": true
25496     },
25497     "ccal_day": {
25498         "description": "This Property describes the burned off calories of user since the
25499 beginning of the day.",
25500         "type": "number",
25501         "minimum": 0.0,
25502         "readOnly": true
25503     },
25504     "ccal_reset": {
25505         "description": "This Property describes the burned off calories of user since the last
25506 reset.",
25507         "type": "number",
25508         "minimum": 0.0,
25509         "readOnly": true
25510     },
25511     "rt": {
25512         "description": "The Resource Type.",
25513         "items": {
25514             "enum": [
25515                 "oic.r.activity"
25516             ],
25517             "type": "string"
25518         },
25519         "minItems": 1,
25520         "uniqueItems": true,
25521         "readOnly": true,
25522         "type": "array"
25523     },
25524     "n": {
25525         "$ref":
25526 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
25527 schema.json#/definitions/n"
25528     },
25529     "if": {
25530         "description": "The OCF Interface set supported by this Resource.",
25531         "items": {
25532             "enum": [
25533                 "oic.if.s", "oic.if.baseline"
25534             ],
25535             "type": "string"
25536         },
25537         "minItems": 1,
25538         "uniqueItems": true,
25539         "readOnly": true,
25540         "type": "array"
25541     },
25542     "steps_day_range": {
25543         "$ref":
25544 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
25545 schema.json#/definitions/range_integer"
25546     },
25547     "steps_day_step": {
25548         "$ref":
25549 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
25550 schema.json#/definitions/step_integer"
25551     },
25552     "steps_reset_range": {
25553         "$ref":
25554 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
25555 schema.json#/definitions/range_integer"
25556     },
25557     "steps_reset_step": {
25558         "$ref":
25559 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
25560 schema.json#/definitions/step_integer"
25561     },
25562     "ccal_day_range": {
25563         "$ref":
25564 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
25565 schema.json#/definitions/range_number"
25566     },

```



```

25567         "ccal_day_step": {
25568             "$ref":
25569 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
25570 schema.json#/definitions/step_number"
25571         },
25572         "ccal_day_precision": {
25573             "$ref":
25574 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
25575 schema.json#/definitions/precision"
25576         },
25577         "ccal_reset_range": {
25578             "$ref":
25579 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
25580 schema.json#/definitions/range_number"
25581         },
25582         "ccal_reset_step": {
25583             "$ref":
25584 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
25585 schema.json#/definitions/step_number"
25586         },
25587         "ccal_reset_precision": {
25588             "$ref":
25589 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
25590 schema.json#/definitions/precision"
25591         }
25592     },
25593     "type": "object",
25594     "required": [
25595         "activity"
25596     ]
25597 }
25598 }
25599 }

```

## 25600 6.127.5 Property definition

25601 Table 257 defines the Properties that are part of the "oic.r.activity" Resource Type.

25602 **Table 257 – The Property definitions of the Resource with type "rt" = "oic.r.activity".**

Property name	Value type	Mandatory	Access mode	Description
activity	string	Yes	Read Only	This Property describes the recognized current activity type of user
steps_day	integer	No	Read Only	This Property describes the user's step count that measures the number of steps the user has taken since the beginning of the day.
steps_reset	integer	No	Read Only	This Property describes the user's step count that measures the number of steps the user has taken since the last reset.
ccal_day	number	No	Read Only	This Property describes the burned off calories of user since the beginning of the day.
ccal_reset	number	No	Read Only	This Property describes the burned

				off calories of user since the last reset.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
steps_day_range	multiple types: see schema	No	Read Write	
steps_day_step	multiple types: see schema	No	Read Write	
steps_reset_range	multiple types: see schema	No	Read Write	
steps_reset_step	multiple types: see schema	No	Read Write	
ccal_day_range	multiple types: see schema	No	Read Write	
ccal_day_step	multiple types: see schema	No	Read Write	
ccal_day_precision	multiple types: see schema	No	Read Write	
ccal_reset_range	multiple types: see schema	No	Read Write	
ccal_reset_step	multiple types: see schema	No	Read Write	
ccal_reset_precision	multiple types: see schema	No	Read Write	

25603 **6.127.6 CRUDN behaviour**

25604 Table 258 defines the CRUDN operations that are supported on the "oic.r.activity" Resource Type.

25605 **Table 258 – The CRUDN operations of the Resource with type "rt" = "oic.r.activity".**

Create	Read	Update	Delete	Notify
	get			observe

25606 **6.128 Activity Tracker Atomic Measurement Representation**

25607 **6.128.1 Introduction**

25608 This Resource describes the Properties associated with Activity Tracker.

25609 The Resource is an Atomic Measurement of activity ("oic.r.activity"), heart rate ("oic.r.heartrate"),  
 25610 observed time ("oic.r.time.stamp"), and user ID ("oic.r.userid").

25611 **6.128.2 Example URI**

25612 /ActivityTrackerAMResURI

25613 **6.128.3 Resource type**

25614 The Resource Type is defined as: "oic.r.activitytracker-am, oic.wk.atomicmeasurement".

25615 **6.128.4 OpenAPI 2.0 definition**

```
25616 {
25617   "swagger": "2.0",
25618   "info": {
25619     "title": "Activity Tracker Atomic Measurement Representation",
```

```

25620     "version": "2019-03-04",
25621     "license": {
25622       "name": "OCF Data Model License",
25623       "url":
25624 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
25625 CENSE.md",
25626       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
25627     },
25628     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
25629   },
25630   "schemes": [
25631     "http"
25632   ],
25633   "consumes": [
25634     "application/json"
25635   ],
25636   "produces": [
25637     "application/json"
25638   ],
25639   "paths": {
25640     "/ActivityTrackerAMResURI?if=oic.if.b": {
25641       "get": {
25642         "description": "This Resource describes the Properties associated with Activity Tracker.\n
25643 The Resource is an Atomic Measurement of activity (\\"oic.r.activity\\"), heart rate
25644 (\\"oic.r.heartrate\\"), observed time (\\"oic.r.time.stamp\\"), and user ID (\\"oic.r.userid\\").",
25645         "parameters": [
25646           {
25647             "$ref": "#/parameters/interface-all"
25648           }
25649         ],
25650         "responses": {
25651           "200": {
25652             "description": "",
25653             "x-example": [
25654               {
25655                 "href": "/myActivity",
25656                 "rep": {
25657                   "activity": "sleep",
25658                   "steps_day": 1000,
25659                   "steps_reset": 500,
25660                   "ccal_day": 3000.0,
25661                   "ccal_reset": 1500.0
25662                 }
25663             },
25664             {
25665                 "href": "/myHeartRate",
25666                 "rep": {
25667                   "heartrate": 80
25668                 }
25669             },
25670             {
25671                 "href": "/myUserId",
25672                 "rep": {
25673                   "userid": "USER1"
25674                 }
25675             },
25676             {
25677                 "href": "/myTimeStamp",
25678                 "rep": {
25679                   "timestamp": "2018-11-09T12:15:00+08:00"
25680                 }
25681             }
25682           ],
25683           "schema": {
25684             "$ref": "#/definitions/batch-retrieve"
25685           }
25686         }
25687       }
25688     },
25689     "/ActivityTrackerAMResURI?if=oic.if.ll": {
25690       "get": {

```

```

25692         "description": "This Resource describes the Properties associated with Activity Tracker.\n
25693 The Resource is an Atomic Measurement of activity (\\"oic.r.activity\\"), heart rate
25694 (\\"oic.r.heartrate\\"), observed time (\\"oic.r.time.stamp\\"), and user ID (\\"oic.r.userid\\").",
25695         "parameters": [
25696             {
25697                 "$ref": "#/parameters/interface-all"
25698             }
25699         ],
25700         "responses": {
25701             "200": {
25702                 "description": "",
25703                 "x-example": [
25704                     {
25705                         "href": "/myActivity",
25706                         "rt": [
25707                             "oic.r.activity"
25708                         ],
25709                         "if": [
25710                             "oic.if.s",
25711                             "oic.if.baseline"
25712                         ]
25713                     },
25714                     {
25715                         "href": "/myHeartRate",
25716                         "rt": [
25717                             "oic.r.heartrate"
25718                         ],
25719                         "if": [
25720                             "oic.if.s",
25721                             "oic.if.baseline"
25722                         ]
25723                     },
25724                     {
25725                         "href": "/myUserId",
25726                         "rt": [
25727                             "oic.r.userid"
25728                         ],
25729                         "if": [
25730                             "oic.if.r",
25731                             "oic.if.baseline"
25732                         ]
25733                     },
25734                     {
25735                         "href": "/myTimeStamp",
25736                         "rt": [
25737                             "oic.r.time.stamp"
25738                         ],
25739                         "if": [
25740                             "oic.if.r",
25741                             "oic.if.baseline"
25742                         ]
25743                     }
25744                 ],
25745                 "schema": {
25746                     "$ref": "#/definitions/links"
25747                 }
25748             }
25749         }
25750     },
25751     "/ActivityTrackerAMResURI?if=oic.if.baseline": {
25752         "get": {
25753             "description": "This Resource describes the Properties associated with Activity Tracker.\n
25754 The Resource is an Atomic Measurement of activity (\\"oic.r.activity\\"), heart rate
25755 (\\"oic.r.heartrate\\"), observed time (\\"oic.r.time.stamp\\"), and user ID (\\"oic.r.userid\\").",
25756             "parameters": [
25757                 {
25758                     "$ref": "#/parameters/interface-all"
25759                 }
25760             ],
25761             "responses": {
25762                 "200": {

```

```

25764     "description": "",
25765     "x-example":
25766     {
25767         "rt": [
25768             "oic.r.activitytracker-am",
25769             "oic.wk.atomicmeasurement"
25770         ],
25771         "if": [
25772             "oic.if.b",
25773             "oic.if.ll",
25774             "oic.if.baseline"
25775         ],
25776         "rts-m": [
25777             "oic.r.activity"
25778         ],
25779         "rts": [
25780             "oic.r.activity", "oic.r.heartrate", "oic.r.userid", "oic.r.time.stamp"
25781         ],
25782         "links": [
25783             {
25784                 "href": "/myActivity",
25785                 "rt": [
25786                     "oic.r.activity"
25787                 ],
25788                 "if": [
25789                     "oic.if.s",
25790                     "oic.if.baseline"
25791                 ]
25792             },
25793             {
25794                 "href": "/myHeartRate",
25795                 "rt": [
25796                     "oic.r.heartrate"
25797                 ],
25798                 "if": [
25799                     "oic.if.s",
25800                     "oic.if.baseline"
25801                 ]
25802             },
25803             {
25804                 "href": "/myUserId",
25805                 "rt": [
25806                     "oic.r.userid"
25807                 ],
25808                 "if": [
25809                     "oic.if.r",
25810                     "oic.if.baseline"
25811                 ]
25812             },
25813             {
25814                 "href": "/myTimeStamp",
25815                 "rt": [
25816                     "oic.r.time.stamp"
25817                 ],
25818                 "if": [
25819                     "oic.if.r",
25820                     "oic.if.baseline"
25821                 ]
25822             }
25823         ],
25824     },
25825     "schema": {
25826         "$ref": "#/definitions/baseline"
25827     }
25828 }
25829 }
25830 }
25831 }
25832 },
25833 "parameters": {
25834     "interface-all": {
25835         "in": "query",

```

```

25836     "name": "if",
25837     "type": "string",
25838     "enum": [
25839         "oic.if.b",
25840         "oic.if.ll",
25841         "oic.if.baseline"
25842     ]
25843 }
25844 },
25845 "definitions": {
25846     "batch-retrieve": {
25847         "title": "Collection Batch Retrieve Format",
25848         "minItems": 1,
25849         "items": {
25850             "additionalProperties": true,
25851             "properties": {
25852                 "href": {
25853                     "$ref":
25854 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
25855 schema.json#/definitions/href"
25856                 },
25857                 "rep": {
25858                     "type": "object",
25859                     "anyOf": [
25860                         {
25861                             "$ref":
25862 "https://openconnectivityfoundation.github.io/IoTDataModels/Activity.swagger.json#/definitions/Activ
25863 ity"
25864                         },
25865                         {
25866                             "$ref":
25867 "https://openconnectivityfoundation.github.io/IoTDataModels/HeartRate.swagger.json#/definitions/Hear
25868 tRate"
25869                         },
25870                         {
25871                             "$ref":
25872 "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/U
25873 serID"
25874                         },
25875                         {
25876                             "$ref":
25877 "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definition
25878 s/TimeStamp"
25879                         }
25880                     ]
25881                 }
25882             },
25883             "required": [
25884                 "href",
25885                 "rep"
25886             ],
25887             "type": "object"
25888         },
25889         "type": "array"
25890     },
25891     "links": {
25892         "type": "array",
25893         "items": {
25894             "$ref": "#/definitions/oic.oic-link"
25895         }
25896     },
25897     "baseline": {
25898         "properties": {
25899             "rt": {
25900                 "items": {
25901                     "enum": [
25902                         "oic.r.activitytracker-am",
25903                         "oic.wk.atomicmeasurement"
25904                     ]
25905                 },
25906                 "minItems": 2,
25907                 "type": "array",

```

```

25908         "uniqueItems": true,
25909         "readOnly": true
25910     },
25911     "links": {
25912         "$ref": "#/definitions/links"
25913     },
25914     "n": {
25915         "$ref":
25916 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
25917 schema.json#/definitions/n"
25918     },
25919     "rts": {
25920         "description": "This Property contains all possible Resource Types for this Atomic
25921 Measurement.",
25922         "items": {
25923             "enum": [
25924                 "oic.r.activity",
25925                 "oic.r.heartrate",
25926                 "oic.r.time.stamp",
25927                 "oic.r.userid"
25928             ]
25929         },
25930         "minItems": 1,
25931         "type": "array",
25932         "uniqueItems": true
25933     },
25934     "id": {
25935         "$ref":
25936 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
25937 schema.json#/definitions/id"
25938     },
25939     "rts-m": {
25940         "description": "This Property contains all mandatory Resource Types for this Atomic
25941 Measurement.",
25942         "items": {
25943             "enum": [
25944                 "oic.r.activity"
25945             ]
25946         },
25947         "maxItems": 1,
25948         "minItems": 1,
25949         "type": "array",
25950         "readOnly": true,
25951         "uniqueItems": true
25952     },
25953     "if": {
25954         "description": "The OCF Interface set supported by this Resource.",
25955         "items": {
25956             "enum": [
25957                 "oic.if.baseline",
25958                 "oic.if.ll",
25959                 "oic.if.b"
25960             ],
25961             "type": "string"
25962         },
25963         "minItems": 1,
25964         "uniqueItems": true,
25965         "readOnly": true,
25966         "type": "array"
25967     }
25968 },
25969 "type": "object",
25970 "required": [
25971     "rts-m"
25972 ]
25973 },
25974 "oic.oic-link": {
25975     "properties": {
25976         "anchor": {
25977             "$ref":
25978 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
25979 schema.json#/definitions/anchor"

```

```

25980     },
25981     "di": {
25982       "$ref":
25983       "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
25984       schema.json#/definitions/di"
25985     },
25986     "eps": {
25987       "$ref":
25988       "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
25989       schema.json#/definitions/eps"
25990     },
25991     "href": {
25992       "$ref":
25993       "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
25994       schema.json#/definitions/href"
25995     },
25996     "if": {
25997       "description": "The OCF Interface set supported by this Resource.",
25998       "items": {
25999         "enum": [
26000           "oic.if.baseline",
26001           "oic.if.s",
26002           "oic.if.r"
26003         ],
26004         "type": "string"
26005       },
26006       "minItems": 1,
26007       "uniqueItems": true,
26008       "type": "array"
26009     },
26010     "ins": {
26011       "$ref":
26012       "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26013       schema.json#/definitions/ins"
26014     },
26015     "p": {
26016       "$ref":
26017       "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26018       schema.json#/definitions/p"
26019     },
26020     "rel": {
26021       "$ref":
26022       "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26023       schema.json#/definitions/rel_array"
26024     },
26025     "rt": {
26026       "description": "The Resource Type.",
26027       "items": {
26028         "enum": [
26029           "oic.r.activity",
26030           "oic.r.heartrate",
26031           "oic.r.time.stamp",
26032           "oic.r.userid"
26033         ],
26034         "type": "string"
26035       },
26036       "minItems": 1,
26037       "uniqueItems": true,
26038       "readOnly": true,
26039       "type": "array"
26040     },
26041     "title": {
26042       "$ref":
26043       "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26044       schema.json#/definitions/title"
26045     },
26046     "type": {
26047       "$ref":
26048       "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26049       schema.json#/definitions/type"
26050     }
26051   },

```



```

26052     "required": [
26053         "href",
26054         "rt",
26055         "if"
26056     ],
26057     "type": "object"
26058 }
26059 }
26060 }

```

26061 **6.128.5 Property definition**

26062 Table 259 defines the Properties that are part of the "oic.r.activitytracker-am,  
26063 oic.wk.atomicmeasurement" Resource Type.

26064 **Table 259 – The Property definitions of the Resource with type "rt" = "oic.r.activitytracker-  
26065 am, oic.wk.atomicmeasurement".**

Property name	Value type	Mandatory	Access mode	Description
href	multiple types: see schema	Yes	Read Write	
rep	object: see schema	Yes	Read Write	
rt	array: see schema	No	Read Only	
links	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
rts	array: see schema	No	Read Write	This Property contains all possible Resource Types for this Atomic Measurement.
id	multiple types: see schema	No	Read Write	
rts-m	array: see schema	Yes	Read Only	This Property contains all mandatory Resource Types for this Atomic Measurement.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
if	array: see schema	Yes	Read Write	The OCF Interface set supported by this Resource.
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	

rel	multiple types: see schema	No	Read Write	
rt	array: see schema	Yes	Read Only	The Resource Type.
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	

26066 **6.128.6 CRUDN behaviour**

26067 Table 260 defines the CRUDN operations that are supported on the "oic.r.activitytracker-am,  
26068 oic.wk.atomicmeasurement" Resource Type.

**Table 260 – The CRUDN operations of the Resource with type "rt" = "oic.r.activitytracker-am, oic.wk.atomicmeasurement".**

Create	Read	Update	Delete	Notify
	get			observe

26071 **6.129 Alarm**

26072 **6.129.1 Introduction**

26073 This Resource describes the Properties associated with alarm status.

26074 **6.129.2 Example URI**

26075 /AlarmResURI

26076 **6.129.3 Resource type**

26077 The Resource Type is defined as: "oic.r.alarm".

26078 **6.129.4 OpenAPI 2.0 definition**

```

26079 {
26080   "swagger": "2.0",
26081   "info": {
26082     "title": "Alarm",
26083     "version": "2019-03-04",
26084     "license": {
26085       "name": "OCF Data Model License",
26086       "url":
26087 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
26088 CENSE.md",
26089       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
26090     },
26091     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
26092   },
26093   "schemes": [
26094     "http"
26095   ],
26096   "consumes": [
26097     "application/json"
26098   ],
26099   "produces": [
26100     "application/json"
26101   ],
26102   "paths": {
26103     "/AlarmResURI": {
26104       "get": {
26105         "description": "This Resource describes the Properties associated with alarm status.",
26106         "parameters": [
26107           {
26108             "$ref": "#/parameters/interface"
26109           }
26110         ]
26111       }
26112     }
26113   }

```

```

26111     "responses": {
26112         "200": {
26113             "description": "",
26114             "x-example": {
26115                 "rt": [ "oic.r.alarm" ],
26116                 "if": [ "oic.if.rw", "oic.if.baseline"],
26117                 "status": false,
26118                 "duration": 0.0,
26119                 "time": "2018-06-20T14:30Z",
26120                 "alarmtype": "General"
26121             },
26122             "schema": {
26123                 "$ref": "#/definitions/Alarm"
26124             }
26125         }
26126     },
26127 },
26128 "post": {
26129     "description": "This Resource describes the Properties associated with alarm status.",
26130     "parameters": [
26131         {
26132             "$ref": "#/parameters/interface"
26133         },
26134         {
26135             "name": "body",
26136             "in": "body",
26137             "required": true,
26138             "schema": { "$ref": "#/definitions/Alarm" },
26139             "x-example": {
26140                 "status": true,
26141                 "duration": 30.0,
26142                 "time": "2019-01-31T14:30Z"
26143             }
26144         }
26145     ],
26146     "responses": {
26147         "200": {
26148             "description": "",
26149             "x-example": {
26150                 "rt": [
26151                     "oic.r.alarm"
26152                 ],
26153                 "status": true,
26154                 "duration": 30.0,
26155                 "time": "2019-01-31T14:30Z",
26156                 "alarmtype": "General"
26157             },
26158             "schema": {
26159                 "$ref": "#/definitions/Alarm"
26160             }
26161         }
26162     }
26163 },
26164 },
26165 },
26166 "parameters": {
26167     "interface": {
26168         "in": "query",
26169         "name": "if",
26170         "type": "string",
26171         "enum": [
26172             "oic.if.rw",
26173             "oic.if.baseline"
26174         ]
26175     }
26176 },
26177 },
26178 "definitions": {
26179     "Alarm": {
26180         "properties": {
26181             "rt": {
26182                 "description": "The Resource Type.",

```

```

26183         "items": {
26184             "enum": [
26185                 "oic.r.alarm"
26186             ],
26187             "type": "string"
26188         },
26189         "minItems": 1,
26190         "uniqueItems": true,
26191         "readOnly": true,
26192         "type": "array"
26193     },
26194     "status": {
26195         "description": "This Property describes the status of the alarm: true - on, false - off.",
26196         "type": "boolean",
26197         "readOnly": false
26198     },
26199     "duration": {
26200         "description": "This Property describes the alarm duration (seconds).",
26201         "type": "number",
26202         "minimum": 0.0,
26203         "readOnly": false
26204     },
26205     "time": {
26206         "description": "This Property describes the alarm time using ISO 8601 datetime format
26207 (e.g: 2007-04-05T14:30Z, 2007-04-05T14:30+09:00).",
26208         "type": "string",
26209         "readOnly": false
26210     },
26211     "alarmtype": {
26212         "description": "The Alarm Type.",
26213         "type": "string",
26214         "enum": [
26215             "General",
26216             "Fire",
26217             "Flood",
26218             "Weather",
26219             "Security"
26220         ],
26221         "readOnly": true
26222     },
26223     "n": {
26224         "$ref":
26225         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
26226         schema.json#/definitions/n"
26227     },
26228     "id": {
26229         "$ref":
26230         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
26231         schema.json#/definitions/id"
26232     },
26233     "if": {
26234         "description": "The OCF Interface set supported by this Resource.",
26235         "items": {
26236             "enum": [
26237                 "oic.if.baseline",
26238                 "oic.if.rw"
26239             ],
26240             "type": "string"
26241         },
26242         "minItems": 1,
26243         "uniqueItems": true,
26244         "readOnly": true,
26245         "type": "array"
26246     },
26247     "range": {
26248         "$ref":
26249         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
26250         schema.json#/definitions/range_number"
26251     },
26252     "step": {
26253         "$ref":
26254         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-

```

```

26255 schema.json#/definitions/step_number"
26256     },
26257     "precision": {
26258         "$ref":
26259         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
26260         schema.json#/definitions/precision"
26261     }
26262 },
26263 "type": "object",
26264 "required": [
26265     "status"
26266 ]
26267 }
26268 }
26269 }

```

### 26270 6.129.5 Property definition

26271 Table 261 defines the Properties that are part of the "oic.r.alarm" Resource Type.

26272 **Table 261 – The Property definitions of the Resource with type "rt" = "oic.r.alarm".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
status	boolean	Yes	Read Write	This Property describes the status of the alarm: true - on, false - off.
duration	number	No	Read Write	This Property describes the alarm duration (seconds).
time	string	No	Read Write	This Property describes the alarm time using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z, 2007-04-05T14:30+09:00).
alarmtype	string	No	Read Only	The Alarm Type.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	

### 26273 6.129.6 CRUDN behaviour

26274 Table 262 defines the CRUDN operations that are supported on the "oic.r.alarm" Resource Type.

26275 **Table 262 – The CRUDN operations of the Resource with type "rt" = "oic.r.alarm".**

Create	Read	Update	Delete	Notify
	get	post		observe

## 26276 **6.130 Continuous Glucose Meter (CGM) Atomic Measurement Representation**

### 26277 **6.130.1 Introduction**

26278 This Resource describes the Properties associated with Continuous Glucose Meter.  
26279 The Resource is an Atomic Measurement of glucose ("oic.r.glucose"), sensor  
26280 ("oic.r.cgm.sensor"), observed time ("oic.r.time.stamp"), and user ID ("oic.r.userid").

### 26281 **6.130.2 Example URI**

26282 /ContinuousGlucoseMeterAMResURI

### 26283 **6.130.3 Resource type**

26284 The Resource Type is defined as: "oic.r.cgm-am, oic.wk.atomicmeasurement".

### 26285 **6.130.4 OpenAPI 2.0 definition**

```
26286 {  
26287   "swagger": "2.0",  
26288   "info": {  
26289     "title": "Continuous Glucose Meter (CGM) Atomic Measurement Representation",  
26290     "version": "2019-03-04",  
26291     "license": {  
26292       "name": "OCF Data Model License",  
26293       "url":  
26294       "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
26295       CENSE.md",  
26296       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."  
26297     },  
26298     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
26299   },  
26300   "schemes": [  
26301     "http"  
26302   ],  
26303   "consumes": [  
26304     "application/json"  
26305   ],  
26306   "produces": [  
26307     "application/json"  
26308   ],  
26309   "paths": {  
26310     "/ContinuousGlucoseMeterAMResURI?if=oic.if.b": {  
26311       "get": {  
26312         "description": "This Resource describes the Properties associated with Continuous Glucose  
26313         Meter.\n The Resource is an Atomic Measurement of glucose (\\"oic.r.glucose\\"), sensor  
26314         (\\"oic.r.cgm.sensor\\"), observed time (\\"oic.r.time.stamp\\"), and user ID (\\"oic.r.userid\\").",  
26315         "parameters": [  
26316           {  
26317             "$ref": "#/parameters/interface-all"  
26318           }  
26319         ],  
26320         "responses": {  
26321           "200": {  
26322             "description": "",  
26323             "x-example": [  
26324               {  
26325                 "href": "/myGlucose",  
26326                 "rep": {  
26327                   "glucose": 100.0,  
26328                   "units": "mg/dL"  
26329                 }  
26330               },  
26331               {  
26332                 "href": "/myContinuousGlucoseMeterSensor",  
26333                 "rep": {  
26334                   "starttime": "2018-06-20T14:30Z",  
26335                   "runtime": 7.0  
26336                 }  
26337               }  
26338             ],  
26339             {  
26340               "href": "/myUserId",
```

```

26340         "rep": {
26341             "userid": "USER1"
26342         }
26343     },
26344     {
26345         "href": "/myTimeStamp",
26346         "rep": {
26347             "timestamp": "2018-11-09T12:15:00+08:00"
26348         }
26349     }
26350 ],
26351 "schema": {
26352     "$ref": "#/definitions/batch-retrieve"
26353 }
26354 }
26355 }
26356 },
26357 },
26358 "/ContinuousGlucoseMeterAMResURI?if=oic.if.ll": {
26359     "get": {
26360         "description": "This Resource describes the Properties associated with Continuous Glucose
26361 Meter.\n The Resource is an Atomic Measurement of glucose (\\"oic.r.glucose\\"), sensor
26362 (\\"oic.r.cgm.sensor\\"), observed time (\\"oic.r.time.stamp\\"), and user ID (\\"oic.r.userid\\").",
26363         "parameters": [
26364             {
26365                 "$ref": "#/parameters/interface-all"
26366             }
26367         ],
26368         "responses": {
26369             "200": {
26370                 "description": "",
26371                 "x-example": [
26372                     {
26373                         "href": "/myGlucose",
26374                         "rt": [
26375                             "oic.r.glucose"
26376                         ],
26377                         "if": [
26378                             "oic.if.s",
26379                             "oic.if.baseline"
26380                         ]
26381                     },
26382                     {
26383                         "href": "/myContinuousGlucoseMeterSensor",
26384                         "rt": [
26385                             "oic.r.cgm.sensor"
26386                         ],
26387                         "if": [
26388                             "oic.if.s",
26389                             "oic.if.baseline"
26390                         ]
26391                     },
26392                     {
26393                         "href": "/myUserId",
26394                         "rt": [
26395                             "oic.r.userid"
26396                         ],
26397                         "if": [
26398                             "oic.if.r",
26399                             "oic.if.baseline"
26400                         ]
26401                     },
26402                     {
26403                         "href": "/myTimeStamp",
26404                         "rt": [
26405                             "oic.r.time.stamp"
26406                         ],
26407                         "if": [
26408                             "oic.if.r",
26409                             "oic.if.baseline"
26410                         ]
26411                     }

```

```

26412         ],
26413         "schema": {
26414             "$ref": "#/definitions/links"
26415         }
26416     }
26417 }
26418 },
26419 ],
26420 "/ContinuousGlucoseMeterAMResURI?if=oic.if.baseline": {
26421     "get": {
26422         "description": "This Resource describes the Properties associated with Continuous Glucose
26423 Meter.\n The Resource is an Atomic Measurement of glucose (\\"oic.r.glucose\\"), sensor
26424 (\\"oic.r.cgm.sensor\\"), observed time (\\"oic.r.time.stamp\\"), and user ID (\\"oic.r.userid\\").",
26425         "parameters": [
26426             {
26427                 "$ref": "#/parameters/interface-all"
26428             }
26429         ],
26430         "responses": {
26431             "200": {
26432                 "description": "",
26433                 "x-example":
26434                 {
26435                     "rt": [
26436                         "oic.r.cgm-am",
26437                         "oic.wk.atomicmeasurement"
26438                     ],
26439                     "if": [
26440                         "oic.if.b",
26441                         "oic.if.ll",
26442                         "oic.if.baseline"
26443                     ],
26444                     "rts-m": [
26445                         "oic.r.glucose"
26446                     ],
26447                     "rts": [
26448                         "oic.r.glucose", "oic.r.cgm.sensor"
26449                     ],
26450                     "links": [
26451                         {
26452                             "href": "/myGlucose",
26453                             "rt": [
26454                                 "oic.r.glucose"
26455                             ],
26456                             "if": [
26457                                 "oic.if.s",
26458                                 "oic.if.baseline"
26459                             ]
26460                         },
26461                         {
26462                             "href": "/myContinuousGlucoseMeterSensor",
26463                             "rt": [
26464                                 "oic.r.cgm.sensor"
26465                             ],
26466                             "if": [
26467                                 "oic.if.s",
26468                                 "oic.if.baseline"
26469                             ]
26470                         },
26471                         {
26472                             "href": "/myUserId",
26473                             "rt": [
26474                                 "oic.r.userid"
26475                             ],
26476                             "if": [
26477                                 "oic.if.r",
26478                                 "oic.if.baseline"
26479                             ]
26480                         },
26481                         {
26482                             "href": "/myTimeStamp",
26483                             "rt": [

```



```

26484         "oic.r.time.stamp"
26485     ],
26486     "if": [
26487         "oic.if.r",
26488         "oic.if.baseline"
26489     ]
26490 }
26491 ]
26492 },
26493 "schema": {
26494     "$ref": "#/definitions/baseline"
26495 }
26496 }
26497 }
26498 }
26499 }
26500 },
26501 "parameters": {
26502     "interface-all": {
26503         "in": "query",
26504         "name": "if",
26505         "type": "string",
26506         "enum": [
26507             "oic.if.b",
26508             "oic.if.ll",
26509             "oic.if.baseline"
26510         ]
26511     }
26512 },
26513 "definitions": {
26514     "batch-retrieve": {
26515         "title": "Collection Batch Retrieve Format",
26516         "minItems": 1,
26517         "items": {
26518             "properties": {
26519                 "href": {
26520                     "$ref":
26521 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26522 schema.json#/definitions/href"
26523                 },
26524                 "rep": {
26525                     "type": "object",
26526                     "anyOf": [
26527                         {
26528                             "$ref":
26529 "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseResURI.swagger.json#/definitions/
26530 Glucose"
26531                         },
26532                         {
26533                             "$ref":
26534 "https://openconnectivityfoundation.github.io/IoTDataModels/ContinuousGlucoseMeterSensor.swagger.jso
26535 n#/definitions/ContinuousGlucoseMeterSensor"
26536                         },
26537                         {
26538                             "$ref":
26539 "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/U
26540 serID"
26541                         },
26542                         {
26543                             "$ref":
26544 "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definition
26545 s/TimeStamp"
26546                         }
26547                     ]
26548                 }
26549             },
26550             "required": [
26551                 "href",
26552                 "rep"
26553             ],
26554             "type": "object"
26555         },

```

```

26556     "type": "array"
26557   },
26558   "links": {
26559     "type": "array",
26560     "items": {
26561       "$ref": "#/definitions/oic.oic-link"
26562     }
26563   },
26564   "baseline": {
26565     "properties": {
26566       "rt": {
26567         "items": {
26568           "enum": [
26569             "oic.r.cgm-am",
26570             "oic.wk.atomicmeasurement"
26571           ]
26572         },
26573         "minItems": 2,
26574         "type": "array",
26575         "uniqueItems": true,
26576         "readOnly": true
26577       },
26578       "links": {
26579         "$ref": "#/definitions/links"
26580       },
26581       "n": {
26582         "$ref":
26583 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
26584 schema.json#/definitions/n"
26585       },
26586       "rts": {
26587         "description": "This Property contains all possible Resource Types for this Atomic
26588 Measurement.",
26589         "items": {
26590           "enum": [
26591             "oic.r.glucose",
26592             "oic.r.cgm.sensor",
26593             "oic.r.time.stamp",
26594             "oic.r.userid"
26595           ]
26596         },
26597         "minItems": 1,
26598         "type": "array",
26599         "uniqueItems": true
26600       },
26601       "id": {
26602         "$ref":
26603 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
26604 schema.json#/definitions/id"
26605       },
26606       "rts-m": {
26607         "description": "This Property contains all mandatory Resource Types for this Atomic
26608 Measurement.",
26609         "items": {
26610           "enum": [
26611             "oic.r.glucose"
26612           ]
26613         },
26614         "maxItems": 1,
26615         "minItems": 1,
26616         "type": "array",
26617         "readOnly": true,
26618         "uniqueItems": true
26619       },
26620       "if": {
26621         "description": "The OCF Interface set supported by this Resource.",
26622         "items": {
26623           "enum": [
26624             "oic.if.baseline",
26625             "oic.if.ll",
26626             "oic.if.b"
26627           ]

```

```

26628         "type": "string"
26629     },
26630     "minItems": 1,
26631     "uniqueItems": true,
26632     "readOnly": true,
26633     "type": "array"
26634 }
26635 },
26636 "type": "object",
26637 "required": [
26638     "rts-m"
26639 ]
26640 },
26641 "oic.oic-link": {
26642     "properties": {
26643         "anchor": {
26644             "$ref":
26645 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26646 schema.json#/definitions/anchor"
26647         },
26648         "di": {
26649             "$ref":
26650 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26651 schema.json#/definitions/di"
26652         },
26653         "eps": {
26654             "$ref":
26655 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26656 schema.json#/definitions/eps"
26657         },
26658         "href": {
26659             "$ref":
26660 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26661 schema.json#/definitions/href"
26662         },
26663         "if": {
26664             "description": "The OCF Interface set supported by this Resource.",
26665             "items": {
26666                 "enum": [
26667                     "oic.if.baseline",
26668                     "oic.if.s",
26669                     "oic.if.r"
26670                 ],
26671                 "type": "string"
26672             },
26673             "minItems": 1,
26674             "uniqueItems": true,
26675             "type": "array"
26676         },
26677         "ins": {
26678             "$ref":
26679 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26680 schema.json#/definitions/ins"
26681         },
26682         "p": {
26683             "$ref":
26684 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26685 schema.json#/definitions/p"
26686         },
26687         "rel": {
26688             "$ref":
26689 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26690 schema.json#/definitions/rel_array"
26691         },
26692         "rt": {
26693             "description": "The Resource Type.",
26694             "items": {
26695                 "enum": [
26696                     "oic.r.glucose",
26697                     "oic.r.cgm.sensor",
26698                     "oic.r.time.stamp",
26699                     "oic.r.userid"

```

```

26700         ],
26701         "type": "string"
26702     },
26703     "minItems": 1,
26704     "uniqueItems": true,
26705     "readOnly": true,
26706     "type": "array"
26707 },
26708 "title": {
26709     "$ref":
26710 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26711 schema.json#/definitions/title"
26712 },
26713 "type": {
26714     "$ref":
26715 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26716 schema.json#/definitions/type"
26717 }
26718 },
26719 "required": [
26720     "href",
26721     "rt",
26722     "if"
26723 ],
26724 "type": "object"
26725 }
26726 }
26727 }

```

26728 **6.130.5 Property definition**

26729 Table 263 defines the Properties that are part of the "oic.r.cgm-am, oic.wk.atomicmeasurement"  
26730 Resource Type.

26731 **Table 263 – The Property definitions of the Resource with type "rt" = "oic.r.cgm-am,**  
26732 **oic.wk.atomicmeasurement".**

Property name	Value type	Mandatory	Access mode	Description
href	multiple types: see schema	Yes	Read Write	
rep	object: see schema	Yes	Read Write	
rt	array: see schema	No	Read Only	
links	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
rts	array: see schema	No	Read Write	This Property contains all possible Resource Types for this Atomic Measurement.
id	multiple types: see schema	No	Read Write	
rts-m	array: see schema	Yes	Read Only	This Property contains all mandatory Resource Types for this Atomic Measurement.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
if	array: see schema	Yes	Read Write	The OCF Interface set supported by this Resource.
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
rt	array: see schema	Yes	Read Only	The Resource Type.
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	

26733 **6.130.6 CRUDN behaviour**

26734 Table 264 defines the CRUDN operations that are supported on the "oic.r.cgm-am,  
26735 oic.wk.atomicmeasurement" Resource Type.

26736 **Table 264 – The CRUDN operations of the Resource with type "rt" = "oic.r.cgm-am,**  
26737 **oic.wk.atomicmeasurement".**

Create	Read	Update	Delete	Notify
	get			observe

26738 **6.131 Calibrate for Continuous Glucose Meter (CGM)**

26739 **6.131.1 Introduction**

26740 This Resource describes the Properties associated with Calibrate for Continuous Glucose Meter  
26741 (CGM).

26742 **6.131.2 Example URI**

26743 /ContinuousGlucoseMeterCalibrateResURI

26744 **6.131.3 Resource type**

26745 The Resource Type is defined as: "oic.r.cgm.calibrate".

26746 **6.131.4 OpenAPI 2.0 definition**

26747 {  
26748 "swagger": "2.0",  
26749 "info": {  
26750 "title": "Calibrate for Continuous Glucose Meter (CGM)",  
26751 "version": "2019-03-04",  
26752 "license": {  
26753 "name": "OCF Data Model License",  
26754 "url":  
26755 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
26756 CENSE.md",  
26757 "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."}

```

26758     },
26759     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
26760 },
26761 "schemes": [
26762   "http"
26763 ],
26764 "consumes": [
26765   "application/json"
26766 ],
26767 "produces": [
26768   "application/json"
26769 ],
26770 "paths": {
26771   "/ContinuousGlucoseMeterCalibrateResURI": {
26772     "get": {
26773       "description": "This Resource describes the Properties associated with Calibrate for
26774 Continuous Glucose Meter (CGM).",
26775       "parameters": [
26776         {
26777           "$ref": "#/parameters/interface"
26778         }
26779       ],
26780       "responses": {
26781         "200": {
26782           "description": "",
26783           "x-example": {
26784             "rt": [
26785               "oic.r.cgm.calibrate"
26786             ],
26787             "Cvalue": 128.0,
26788             "Cstatus": true
26789           },
26790           "schema": {
26791             "$ref": "#/definitions/ContinuousGlucoseMeterCalibrate"
26792           }
26793         }
26794       }
26795     },
26796     "post": {
26797       "description": "This Resource describes the Properties associated with Calibrate for
26798 Continuous Glucose Meter (CGM).",
26799       "parameters": [
26800         {
26801           "$ref": "#/parameters/interface"
26802         },
26803         {
26804           "name": "body",
26805           "in": "body",
26806           "required": true,
26807           "schema": { "$ref": "#/definitions/ContinuousGlucoseMeterCalibrate" },
26808           "x-example": {
26809             "Cvalue": 130.0,
26810             "Cstatus": true
26811           }
26812         }
26813       ],
26814       "responses": {
26815         "200": {
26816           "description": "",
26817           "x-example": {
26818             "rt": [
26819               "oic.r.cgm.calibrate"
26820             ],
26821             "Cvalue": 130.0,
26822             "Cstatus": true
26823           },
26824           "schema": {
26825             "$ref": "#/definitions/ContinuousGlucoseMeterCalibrate"
26826           }
26827         }
26828       }
26829     }

```

```

26830     }
26831   },
26832   "parameters": {
26833     "interface": {
26834       "in": "query",
26835       "name": "if",
26836       "type": "string",
26837       "enum": [
26838         "oic.if.rw",
26839         "oic.if.baseline"
26840       ]
26841     }
26842   },
26843   "definitions": {
26844     "ContinuousGlucoseMeterCalibrate": {
26845       "properties": {
26846         "Cvalue": {
26847           "description": "This Property describes the Sensor Calibration Value in mg/dL units. This
26848 blood glucose measurement using other external glucose meter.",
26849           "type": "number",
26850           "minimum": 0,
26851           "readOnly": false
26852         },
26853         "Cstatus": {
26854           "description": "Sensor calibration required flag",
26855           "type": "boolean",
26856           "readOnly": true
26857         },
26858         "rt": {
26859           "description": "The Resource Type.",
26860           "items": {
26861             "enum": [
26862               "oic.r.cgm.calibrate"
26863             ],
26864             "type": "string"
26865           },
26866           "minItems": 1,
26867           "uniqueItems": true,
26868           "readOnly": true,
26869           "type": "array"
26870         },
26871         "n": {
26872           "$ref":
26873 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
26874 schema.json#/definitions/n"
26875         },
26876         "if": {
26877           "description": "The OCF Interface set supported by this Resource.",
26878           "items": {
26879             "enum": [
26880               "oic.if.rw",
26881               "oic.if.baseline"
26882             ],
26883             "type": "string"
26884           },
26885           "minItems": 1,
26886           "uniqueItems": true,
26887           "readOnly": true,
26888           "type": "array"
26889         },
26890         "range": {
26891           "$ref":
26892 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
26893 schema.json#/definitions/range_number"
26894         },
26895         "step": {
26896           "$ref":
26897 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
26898 schema.json#/definitions/step_number"
26899         },
26900         "precision": {
26901           "$ref":

```

```

26902 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
26903 schema.json#/definitions/precision"
26904     },
26905     },
26906     "type": "object",
26907     "required": [
26908         "Cvalue", "Cstatus"
26909     ]
26910 }
26911 }
26912 }

```

### 26913 6.131.5 Property definition

26914 Table 265 defines the Properties that are part of the "oic.r.cgm.calibrate" Resource Type.

26915 **Table 265 – The Property definitions of the Resource with type "rt" = "oic.r.cgm.calibrate".**

Property name	Value type	Mandatory	Access mode	Description
Cvalue	number	Yes	Read Write	This Property describes the Sensor Calibration Value in mg/dL units. This blood glucose measurement using other external glucose meter.
Cstatus	boolean	Yes	Read Only	Sensor calibration required flag
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	

### 26916 6.131.6 CRUDN behaviour

26917 Table 266 defines the CRUDN operations that are supported on the "oic.r.cgm.calibrate" Resource  
 26918 Type.

26919 **Table 266 – The CRUDN operations of the Resource with type "rt" = "oic.r.cgm.calibrate".**

Create	Read	Update	Delete	Notify
	get	post		observe

## 26920 6.132 Sampling Interval for Continuous Glucose Meter (CGM)

### 26921 6.132.1 Introduction

26922 This Resource describes the Properties associated with Sampling Interval for Continuous  
 26923 Glucose Meter (CGM).

### 26924 6.132.2 Example URI

26925 /ContinuousGlucoseMeterSamplingIntervalResURI



26926 **6.132.3 Resource type**

26927 The Resource Type is defined as: "oic.r.cgm.samplinginterval".

26928 **6.132.4 OpenAPI 2.0 definition**

```
26929 {
26930   "swagger": "2.0",
26931   "info": {
26932     "title": "Sampling Interval for Continuous Glucose Meter (CGM)",
26933     "version": "2019-03-04",
26934     "license": {
26935       "name": "OCF Data Model License",
26936       "url":
26937         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
26938         CENSE.md",
26939       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
26940     },
26941     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
26942   },
26943   "schemes": [
26944     "http"
26945   ],
26946   "consumes": [
26947     "application/json"
26948   ],
26949   "produces": [
26950     "application/json"
26951   ],
26952   "paths": {
26953     "/ContinuousGlucoseMeterSamplingIntervalResURI": {
26954       "get": {
26955         "description": "This Resource describes the Properties associated with Sampling Interval for
26956         Continuous Glucose Meter (CGM).",
26957         "parameters": [
26958           {
26959             "$ref": "#/parameters/interface"
26960           }
26961         ],
26962         "responses": {
26963           "200": {
26964             "description": "",
26965             "x-example": {
26966               "rt": [
26967                 "oic.r.cgm.samplinginterval"
26968               ],
26969               "interval": 10.0
26970             },
26971             "schema": {
26972               "$ref": "#/definitions/ContinuousGlucoseMeterSamplingInterval"
26973             }
26974           }
26975         }
26976       },
26977       "post": {
26978         "description": "This Resource describes the Properties associated with Sampling Interval for
26979         Continuous Glucose Meter (CGM).",
26980         "parameters": [
26981           {
26982             "$ref": "#/parameters/interface"
26983           },
26984           {
26985             "name": "body",
26986             "in": "body",
26987             "required": true,
26988             "schema": { "$ref": "#/definitions/ContinuousGlucoseMeterSamplingInterval" },
26989             "x-example": {
26990               "interval": 20.0
26991             }
26992           }
26993         ],
26994         "responses": {
```

```

26995         "200": {
26996             "description": "",
26997             "x-example": {
26998                 "rt": [
26999                     "oic.r.cgm.samplinginterval"
27000                 ],
27001                 "interval": 20.0
27002             },
27003             "schema": {
27004                 "$ref": "#/definitions/ContinuousGlucoseMeterSamplingInterval"
27005             }
27006         }
27007     }
27008 }
27009 },
27010 },
27011 "parameters": {
27012     "interface": {
27013         "in": "query",
27014         "name": "if",
27015         "type": "string",
27016         "enum": [
27017             "oic.if.a",
27018             "oic.if.baseline"
27019         ]
27020     }
27021 },
27022 "definitions": {
27023     "ContinuousGlucoseMeterSamplingInterval": {
27024         "properties": {
27025             "interval": {
27026                 "description": "This Property describes the Sampling interval in seconds.",
27027                 "type": "number",
27028                 "minimum": 0.0,
27029                 "readOnly": false
27030             },
27031             "rt": {
27032                 "description": "The Resource Type.",
27033                 "items": {
27034                     "enum": [
27035                         "oic.r.cgm.samplinginterval"
27036                     ],
27037                     "type": "string"
27038                 },
27039                 "minItems": 1,
27040                 "uniqueItems": true,
27041                 "readOnly": true,
27042                 "type": "array"
27043             },
27044             "n": {
27045                 "$ref":
27046                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
27047                 schema.json#/definitions/n"
27048             },
27049             "id": {
27050                 "$ref":
27051                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
27052                 schema.json#/definitions/id"
27053             },
27054             "if": {
27055                 "description": "The OCF Interface set supported by this Resource.",
27056                 "items": {
27057                     "enum": [
27058                         "oic.if.a",
27059                         "oic.if.baseline"
27060                     ],
27061                     "type": "string"
27062                 },
27063                 "minItems": 1,
27064                 "uniqueItems": true,
27065                 "readOnly": true,
27066                 "type": "array"

```

```

27067     },
27068     "range": {
27069       "$ref":
27070       "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27071       schema.json#/definitions/range_number"
27072     },
27073     "step": {
27074       "$ref":
27075       "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27076       schema.json#/definitions/step_number"
27077     },
27078     "precision": {
27079       "$ref":
27080       "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27081       schema.json#/definitions/precision"
27082     }
27083   },
27084   "type": "object",
27085   "required": [
27086     "interval"
27087   ]
27088 }
27089 }
27090 }

```

27091 **6.132.5 Property definition**

27092 Table 267 defines the Properties that are part of the "oic.r.cgm.samplinginterval" Resource Type.

27093 **Table 267 – The Property definitions of the Resource with type "rt" =**  
27094 **"oic.r.cgm.samplinginterval".**

Property name	Value type	Mandatory	Access mode	Description
interval	number	Yes	Read Write	This Property describes the Sampling interval in seconds.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	

27095 **6.132.6 CRUDN behaviour**

27096 Table 268 defines the CRUDN operations that are supported on the "oic.r.cgm.samplinginterval"  
27097 Resource Type.

27098 **Table 268 – The CRUDN operations of the Resource with type "rt" =**  
27099 **"oic.r.cgm.samplinginterval".**

Create	Read	Update	Delete	Notify
	get	post		observe

## 27100 **6.133 Sensor for Continuous Glucose Meter (CGM)**

### 27101 **6.133.1 Introduction**

27102 This Resource describes the Properties associated with Sensor for Continuous Glucose Meter  
27103 (CGM).

### 27104 **6.133.2 Example URI**

27105 /ContinuousGlucoseMeterSensorResURI

### 27106 **6.133.3 Resource type**

27107 The Resource Type is defined as: "oic.r.cgm.sensor".

### 27108 **6.133.4 OpenAPI 2.0 definition**

```
27109 {
27110   "swagger": "2.0",
27111   "info": {
27112     "title": "Sensor for Continuous Glucose Meter (CGM)",
27113     "version": "2019-03-04",
27114     "license": {
27115       "name": "OCF Data Model License",
27116       "url":
27117         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
27118         CENSE.md",
27119       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
27120     },
27121     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
27122   },
27123   "schemes": [
27124     "http"
27125   ],
27126   "consumes": [
27127     "application/json"
27128   ],
27129   "produces": [
27130     "application/json"
27131   ],
27132   "paths": {
27133     "/ContinuousGlucoseMeterSensorResURI": {
27134       "get": {
27135         "description": "This Resource describes the Properties associated with Sensor for Continuous
27136         Glucose Meter (CGM).",
27137         "parameters": [
27138           {
27139             "$ref": "#/parameters/interface"
27140           }
27141         ],
27142         "responses": {
27143           "200": {
27144             "description": "",
27145             "x-example": {
27146               "rt": [
27147                 "oic.r.cgm.sensor"
27148               ],
27149               "starttime": "2018-06-20T14:30Z",
27150               "runtime": 7.0
27151             },
27152             "schema": {
27153               "$ref": "#/definitions/ContinuousGlucoseMeterSensor"
27154             }
27155           }
27156         }
27157       }
27158     }
27159   },
27160   "parameters": {
27161     "interface": {
27162       "in": "query",
27163       "name": "if",
```

```

27164     "type": "string",
27165     "enum": [
27166         "oic.if.s",
27167         "oic.if.baseline"
27168     ]
27169 }
27170 },
27171 "definitions": {
27172     "ContinuousGlucoseMeterSensor": {
27173         "properties": {
27174             "starttime": {
27175                 "description": "This Property describes the Sensor start time using ISO 8601 datetime
format (e.g: 2007-04-05T14:30Z, 2007-04-05T14:30+09:00)",
27176                 "type": "string",
27177                 "readOnly": true
27178             },
27179             "runtime": {
27180                 "description": "This Property describes the recommended runtime days using CGM",
27181                 "type": "number",
27182                 "minimum": 0.0,
27183                 "readOnly": true
27184             },
27185             "rt": {
27186                 "description": "The Resource Type.",
27187                 "items": {
27188                     "enum": [
27189                         "oic.r.cgm.sensor"
27190                     ],
27191                     "type": "string"
27192                 },
27193                 "minItems": 1,
27194                 "uniqueItems": true,
27195                 "readOnly": true,
27196                 "type": "array"
27197             },
27198             "n": {
27199                 "$ref":
27200                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
27201                 schema.json#/definitions/n"
27202             },
27203             "if": {
27204                 "description": "The OCF Interface set supported by this Resource.",
27205                 "items": {
27206                     "enum": [
27207                         "oic.if.s",
27208                         "oic.if.baseline"
27209                     ],
27210                     "type": "string"
27211                 },
27212                 "minItems": 1,
27213                 "uniqueItems": true,
27214                 "readOnly": true,
27215                 "type": "array"
27216             },
27217             "range": {
27218                 "$ref":
27219                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27220                 schema.json#/definitions/range_number"
27221             },
27222             "step": {
27223                 "$ref":
27224                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27225                 schema.json#/definitions/step_number"
27226             },
27227             "precision": {
27228                 "$ref":
27229                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27230                 schema.json#/definitions/precision"
27231             }
27232         },
27233     },
27234     "type": "object",
27235     "required": [

```

```

27236         "starttime", "runtime"
27237     ]
27238 }
27239 }
27240 }

```

### 27241 6.133.5 Property definition

27242 Table 269 defines the Properties that are part of the "oic.r.cgm.sensor" Resource Type.

27243 **Table 269 – The Property definitions of the Resource with type "rt" = "oic.r.cgm.sensor".**

Property name	Value type	Mandatory	Access mode	Description
starttime	string	Yes	Read Only	This Property describes the Sensor start time using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z, 2007-04-05T14:30+09:00)
runtime	number	Yes	Read Only	This Property describes the recommended runtime days using CGM
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	

### 27244 6.133.6 CRUDN behaviour

27245 Table 270 defines the CRUDN operations that are supported on the "oic.r.cgm.sensor" Resource  
27246 Type.

27247 **Table 270 – The CRUDN operations of the Resource with type "rt" = "oic.r.cgm.sensor".**

Create	Read	Update	Delete	Notify
	get			observe

## 27248 6.134 Status for Continuous Glucose Meter (CGM)

### 27249 6.134.1 Introduction

27250 This Resource describes the Properties associated with Status for Continuous Glucose Meter  
27251 (CGM).

### 27252 6.134.2 Example URI

27253 /ContinuousGlucoseMeterStatusResURI

### 27254 6.134.3 Resource type

27255 The Resource Type is defined as: "oic.r.cgm.status".

#### 27256 6.134.4 OpenAPI 2.0 definition

```
27257 {
27258   "swagger": "2.0",
27259   "info": {
27260     "title": "Status for Continuous Glucose Meter (CGM)",
27261     "version": "2019-03-04",
27262     "license": {
27263       "name": "OCF Data Model License",
27264       "url":
27265         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
27266         CENSE.md",
27267       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
27268     },
27269     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
27270   },
27271   "schemes": [
27272     "http"
27273   ],
27274   "consumes": [
27275     "application/json"
27276   ],
27277   "produces": [
27278     "application/json"
27279   ],
27280   "paths": {
27281     "/ContinuousGlucoseMeterStatusResURI": {
27282       "get": {
27283         "description": "This Resource describes the Properties associated with Status for Continuous
27284         Glucose Meter (CGM).",
27285         "parameters": [
27286           {
27287             "$ref": "#/parameters/interface"
27288           }
27289         ],
27290         "responses": {
27291           "200": {
27292             "description": "",
27293             "x-example": {
27294               "rt": [
27295                 "oic.r.cgm.status"
27296               ],
27297               "cgmttype": "Interstitial Fluid",
27298               "cgmstatus": "working",
27299               "gtrend": 100.0,
27300               "malfunction": false
27301             },
27302             "schema": {
27303               "$ref": "#/definitions/ContinuousGlucoseMeterStatus"
27304             }
27305           }
27306         }
27307       }
27308     },
27309     "parameters": {
27310       "interface": {
27311         "in": "query",
27312         "name": "if",
27313         "type": "string",
27314         "enum": [
27315           "oic.if.s",
27316           "oic.if.baseline"
27317         ]
27318       }
27319     },
27320     "definitions": {
27321       "ContinuousGlucoseMeterStatus": {
27322         "properties": {
27323           "cgmttype": {
27324             "description": "This Property describes the CGM measurement type.",
27325             "type": "string",
27326
```

```

27327         "enum": [
27328             "Capillary Whole blood",
27329             "Capillary Plasma",
27330             "Venous Plasma",
27331             "Arterial Whole blood",
27332             "Arterial Plasma",
27333             "Undetermined Whole blood",
27334             "Undetermined Plasma",
27335             "Interstitial Fluid"
27336         ],
27337         "readOnly": true
27338     },
27339     "cgmstatus": {
27340         "description": "This Property describes the specific notifications given by the CGM device
27341 including, but not limited to, warnings, errors, and handling events.",
27342         "type": "string",
27343         "readOnly": true
27344     },
27345     "gtrend": {
27346         "description": "This Property describes the rate of change in glucose measurements at a
27347 time instant.",
27348         "type": "number",
27349         "minimum": 0.0,
27350         "readOnly": true
27351     },
27352     "malfunction": {
27353         "description": "This Property describes the sensor malfunction detection check.",
27354         "type": "boolean",
27355         "readOnly": true
27356     },
27357     "rt": {
27358         "description": "The Resource Type.",
27359         "items": {
27360             "enum": [
27361                 "oic.r.cgm.status"
27362             ],
27363             "type": "string"
27364         },
27365         "minItems": 1,
27366         "uniqueItems": true,
27367         "readOnly": true,
27368         "type": "array"
27369     },
27370     "n": {
27371         "$ref":
27372 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
27373 schema.json#/definitions/n"
27374     },
27375     "if": {
27376         "description": "The OCF Interface set supported by this Resource.",
27377         "items": {
27378             "enum": [
27379                 "oic.if.s",
27380                 "oic.if.baseline"
27381             ],
27382             "type": "string"
27383         },
27384         "minItems": 1,
27385         "uniqueItems": true,
27386         "readOnly": true,
27387         "type": "array"
27388     },
27389     "range": {
27390         "$ref":
27391 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27392 schema.json#/definitions/range_number"
27393     },
27394     "step": {
27395         "$ref":
27396 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27397 schema.json#/definitions/step_number"
27398     },
27399     },

```



```

27399     "precision": {
27400         "$ref":
27401         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27402         schema.json#/definitions/precision"
27403     },
27404 },
27405 "type": "object",
27406 "required": [
27407     "cgmtime",
27408     "cgmstatus",
27409     "gtrend",
27410     "malfunction"
27411 ]
27412 }
27413 }
27414 }

```

### 27415 6.134.5 Property definition

27416 Table 271 defines the Properties that are part of the "oic.r.cgm.status" Resource Type.

27417 **Table 271 – The Property definitions of the Resource with type "rt" = "oic.r.cgm.status".**

Property name	Value type	Mandatory	Access mode	Description
cgmtime	string	Yes	Read Only	This Property describes the CGM measurement type.
cgmstatus	string	Yes	Read Only	This Property describes the specific notifications given by the CGM device including, but not limited to, warnings, errors, and handling events.
gtrend	number	Yes	Read Only	This Property describes the rate of change in glucose measurements at a time instant.
malfunction	boolean	Yes	Read Only	This Property describes the sensor malfunction detection check.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	

### 27418 6.134.6 CRUDN behaviour

27419 Table 272 defines the CRUDN operations that are supported on the "oic.r.cgm.status" Resource  
27420 Type.

27421 **Table 272 – The CRUDN operations of the Resource with type "rt" = "oic.r.cgm.status".**

Create	Read	Update	Delete	Notify
	get			observe

27422 **6.135 Threshold for Continuous Glucose Meter (CGM)**

27423 **6.135.1 Introduction**

27424 This Resource describes the Properties associated with Threshold for Continuous Glucose Meter  
27425 (CGM).

27426 **6.135.2 Example URI**

27427 /ContinuousGlucoseMeterThresholdResURI

27428 **6.135.3 Resource type**

27429 The Resource Type is defined as: "oic.r.cgm.threshold".

27430 **6.135.4 OpenAPI 2.0 definition**

```

27431 {
27432   "swagger": "2.0",
27433   "info": {
27434     "title": "Threshold for Continuous Glucose Meter (CGM)",
27435     "version": "2019-03-04",
27436     "license": {
27437       "name": "OCF Data Model License",
27438       "url":
27439         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
27440         CENSE.md",
27441       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
27442     },
27443     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
27444   },
27445   "schemes": [
27446     "http"
27447   ],
27448   "consumes": [
27449     "application/json"
27450   ],
27451   "produces": [
27452     "application/json"
27453   ],
27454   "paths": {
27455     "/ContinuousGlucoseMeterThresholdResURI": {
27456       "get": {
27457         "description": "This Resource describes the Properties associated with Threshold for
27458         Continuous Glucose Meter (CGM).",
27459         "parameters": [
27460           {
27461             "$ref": "#/parameters/interface"
27462           }
27463         ],
27464         "responses": {
27465           "200": {
27466             "description": "",
27467             "x-example": {
27468               "rt": [
27469                 "oic.r.cgm.threshold"
27470               ],
27471               "plow": 100.0,
27472               "phigh": 180.0,
27473               "dhypo": 80.0,
27474               "dhyper": 125.0,
27475               "gir": 5.0,
27476               "gdr": 5.0
27477             },
27478             "schema": {

```

```

27479         "$ref": "#/definitions/ContinuousGlucoseMeterThreshold"
27480     }
27481 }
27482 }
27483 },
27484 "post": {
27485     "description": "This Resource describes the Properties associated with Threshold for
27486 Continuous Glucose Meter (CGM).",
27487     "parameters": [
27488         {
27489             "$ref": "#/parameters/interface"
27490         },
27491         {
27492             "name": "body",
27493             "in": "body",
27494             "required": true,
27495             "schema": { "$ref": "#/definitions/ContinuousGlucoseMeterThreshold" },
27496             "x-example": {
27497                 "plow": 70.0,
27498                 "phigh": 150.0,
27499                 "dhypo": 60.0,
27500                 "dhyper": 90.0,
27501                 "gir": 3.0,
27502                 "gdr": 3.0
27503             }
27504         }
27505     ],
27506     "responses": {
27507         "200": {
27508             "description": "",
27509             "x-example": {
27510                 "rt": [
27511                     "oic.r.cgm.threshold"
27512                 ],
27513                 "plow": 70.0,
27514                 "phigh": 150.0,
27515                 "dhypo": 60.0,
27516                 "dhyper": 90.0,
27517                 "gir": 3.0,
27518                 "gdr": 3.0
27519             },
27520             "schema": {
27521                 "$ref": "#/definitions/ContinuousGlucoseMeterThreshold"
27522             }
27523         }
27524     }
27525 },
27526 },
27527 },
27528 "parameters": {
27529     "interface": {
27530         "in": "query",
27531         "name": "if",
27532         "type": "string",
27533         "enum": [
27534             "oic.if.rw",
27535             "oic.if.baseline"
27536         ]
27537     }
27538 },
27539 "definitions": {
27540     "ContinuousGlucoseMeterThreshold": {
27541         "properties": {
27542             "plow": {
27543                 "description": "This Property describes the Patient low threshold (mg/dL)",
27544                 "type": "number",
27545                 "minimum": 0.0,
27546                 "readOnly": false
27547             },
27548             "phigh": {
27549                 "description": "This Property describes the Patient high threshold (mg/dL)",
27550                 "type": "number",

```

```

27551         "minimum": 0.0,
27552         "readOnly": false
27553     },
27554     "dhylo": {
27555         "description": "This Property describes the Device hypoglycemia threshold (mg/dL)",
27556         "type": "number",
27557         "minimum": 0.0,
27558         "readOnly": false
27559     },
27560     "dhyper": {
27561         "description": "This Property describes the Device hyperglycemia threshold (mg/dL)",
27562         "type": "number",
27563         "minimum": 0.0,
27564         "readOnly": false
27565     },
27566     "gir": {
27567         "description": "This Property describes the Glucose Increase rate of change threshold
27568 (%)",
27569         "type": "number",
27570         "minimum": 0.0,
27571         "readOnly": false
27572     },
27573     "gdr": {
27574         "description": "This Property describes the Glucose Decrease rate of change threshold
27575 (%)",
27576         "type": "number",
27577         "minimum": 0.0,
27578         "readOnly": false
27579     },
27580     "rt": {
27581         "description": "The Resource Type.",
27582         "items": {
27583             "enum": [
27584                 "oic.r.cgm.threshold"
27585             ],
27586             "type": "string"
27587         },
27588         "minItems": 1,
27589         "uniqueItems": true,
27590         "readOnly": true,
27591         "type": "array"
27592     },
27593     "n": {
27594         "$ref":
27595         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
27596         schema.json#/definitions/n"
27597     },
27598     "if": {
27599         "description": "The OCF Interface set supported by this Resource.",
27600         "items": {
27601             "enum": [
27602                 "oic.if.rw",
27603                 "oic.if.baseline"
27604             ],
27605             "type": "string"
27606         },
27607         "minItems": 1,
27608         "uniqueItems": true,
27609         "readOnly": true,
27610         "type": "array"
27611     },
27612     "range": {
27613         "$ref":
27614         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27615         schema.json#/definitions/range_number"
27616     },
27617     "step": {
27618         "$ref":
27619         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27620         schema.json#/definitions/step_number"
27621     },
27622     "precision": {

```

```

27623         "$ref":
27624         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27625         schema.json#/definitions/precision"
27626         }
27627     },
27628     "type": "object",
27629     "required": [
27630         "plow",
27631         "phigh",
27632         "dhypo",
27633         "dhyper",
27634         "gir",
27635         "gdr"
27636     ]
27637 }
27638 }
27639 }

```

27640 **6.135.5 Property definition**

27641 Table 273 defines the Properties that are part of the "oic.r.cgm.threshold" Resource Type.

27642 **Table 273 – The Property definitions of the Resource with type "rt" = "oic.r.cgm.threshold".**

Property name	Value type	Mandatory	Access mode	Description
plow	number	Yes	Read Write	This Property describes the Patient low threshold (mg/dL)
phigh	number	Yes	Read Write	This Property describes the Patient high threshold (mg/dL)
dhypo	number	Yes	Read Write	This Property describes the Device hypoglycemia threshold (mg/dL)
dhyper	number	Yes	Read Write	This Property describes the Device hyperglycemia threshold (mg/dL)
gir	number	Yes	Read Write	This Property describes the Glucose Increase rate of change threshold (%)
gdr	number	Yes	Read Write	
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	

27643 **6.135.6 CRUDN behaviour**

27644 Table 274 defines the CRUDN operations that are supported on the "oic.r.cgm.threshold" Resource  
27645 Type.

27646 **Table 274 – The CRUDN operations of the Resource with type "rt" = "oic.r.cgm.threshold".**

Create	Read	Update	Delete	Notify
	get	post		observe

27647 **6.136 Heart Rate**

27648 **6.136.1 Introduction**

27649 This Resource describes the Properties associated with a person's heart rate.

27650 The unit, which is the default unit, is bpm.

27651 The heartrate Property is a read-only value that is provided by the server.

27652 When range (from "oic.r.baseresource") is omitted the default is 0 to +MAXFLOAT.

27653 **6.136.2 Example URI**

27654 /HeartRateResURI

27655 **6.136.3 Resource type**

27656 The Resource Type is defined as: "oic.r.heartrate".

27657 **6.136.4 OpenAPI 2.0 definition**

```
27658 {  
27659   "swagger": "2.0",  
27660   "info": {  
27661     "title": "Heart Rate",  
27662     "version": "2019-03-04",  
27663     "license": {  
27664       "name": "OCF Data Model License",  
27665       "url":  
27666       "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
27667       CENSE.md",  
27668       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."  
27669     },  
27670     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
27671   },  
27672   "schemes": [  
27673     "http"  
27674   ],  
27675   "consumes": [  
27676     "application/json"  
27677   ],  
27678   "produces": [  
27679     "application/json"  
27680   ],  
27681   "paths": {  
27682     "/HeartRateResURI": {  
27683       "get": {  
27684         "description": "This Resource describes the Properties associated with a person's heart  
27685         rate.\n The unit, which is the default unit, is bpm.\n The heartrate Property is a read-only value  
27686         that is provided by the server.\n When range (from \"oic.r.baseresource\") is omitted the default is  
27687         0 to +MAXFLOAT.",  
27688         "parameters": [  
27689           {  
27690             "$ref": "#/parameters/interface"  
27691           }  
27692         ],  
27693         "responses": {  
27694           "200": {  
27695             "description": "",  
27696             "x-example": {  
27697               "rt": [  

```

```

27698         "oic.r.heartrate"
27699     ],
27700     "heartrate": 80
27701 },
27702     "schema": {
27703         "$ref": "#/definitions/HeartRate"
27704     }
27705 }
27706 }
27707 }
27708 }
27709 },
27710 "parameters": {
27711     "interface": {
27712         "in": "query",
27713         "name": "if",
27714         "type": "string",
27715         "enum": [
27716             "oic.if.s",
27717             "oic.if.baseline"
27718         ]
27719     }
27720 },
27721 "definitions": {
27722     "HeartRate": {
27723         "properties": {
27724             "heartrate": {
27725                 "description": "This Property describes the heart rate in bpm.",
27726                 "type": "integer",
27727                 "minimum": 0,
27728                 "readOnly": true
27729             },
27730             "rt": {
27731                 "description": "The Resource Type.",
27732                 "items": {
27733                     "enum": [
27734                         "oic.r.heartrate"
27735                     ],
27736                     "type": "string"
27737                 },
27738                 "minItems": 1,
27739                 "uniqueItems": true,
27740                 "readOnly": true,
27741                 "type": "array"
27742             },
27743             "n": {
27744                 "$ref":
27745 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
27746 schema.json#/definitions/n"
27747             },
27748             "if": {
27749                 "description": "The OCF Interface set supported by this Resource.",
27750                 "items": {
27751                     "enum": [
27752                         "oic.if.s",
27753                         "oic.if.baseline"
27754                     ],
27755                     "type": "string"
27756                 },
27757                 "minItems": 1,
27758                 "uniqueItems": true,
27759                 "readOnly": true,
27760                 "type": "array"
27761             },
27762             "range": {
27763                 "$ref":
27764 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27765 schema.json#/definitions/range_integer"
27766             },
27767             "step": {
27768                 "$ref":
27769 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-

```

```

27770 schema.json#/definitions/step_integer"
27771     }
27772   },
27773   "type": "object",
27774   "required": [
27775     "heartrate"
27776   ]
27777 }
27778 }
27779 }

```

### 27780 6.136.5 Property definition

27781 Table 275 defines the Properties that are part of the "oic.r.heartrate" Resource Type.

27782 **Table 275 – The Property definitions of the Resource with type "rt" = "oic.r.heartrate".**

Property name	Value type	Mandatory	Access mode	Description
heartrate	integer	Yes	Read Only	This Property describes the heart rate in bpm.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	

### 27783 6.136.6 CRUDN behaviour

27784 Table 276 defines the CRUDN operations that are supported on the "oic.r.heartrate" Resource  
 27785 Type.

27786 **Table 276 – The CRUDN operations of the Resource with type "rt" = "oic.r.heartrate".**

Create	Read	Update	Delete	Notify
	get			observe

### 27787 6.137 Heart Rate Monitor Atomic Measurement Representation

#### 27788 6.137.1 Introduction

27789 This Resource describes the Properties associated with Heart Rate Monitor.  
 27790 The Resource is an Atomic Measurement of heart rate ("oic.r.heartrate"), observed time  
 27791 ("oic.r.time.stamp"), and user ID ("oic.r.userid").

#### 27792 6.137.2 Example URI

27793 /HeartRateMonitorAMResURI

#### 27794 6.137.3 Resource type

27795 The Resource Type is defined as: "oic.r.heartratemonitor-am, oic.wk.atomicmeasurement".

#### 27796 6.137.4 OpenAPI 2.0 definition

```

27797 {
27798   "swagger": "2.0",
27799   "info": {
27800     "title": "Heart Rate Monitor Atomic Measurement Representation",
27801     "version": "2019-03-04",

```



```

27802     "license": {
27803         "name": "OCF Data Model License",
27804         "url":
27805 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
27806 CENSE.md",
27807         "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
27808     },
27809     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
27810 },
27811     "schemes": [
27812         "http"
27813     ],
27814     "consumes": [
27815         "application/json"
27816     ],
27817     "produces": [
27818         "application/json"
27819     ],
27820     "paths": {
27821         "/HeartRateMonitorAMResURI?if=oic.if.b": {
27822             "get": {
27823                 "description": "This Resource describes the Properties associated with Heart Rate Monitor.\n
27824 The Resource is an Atomic Measurement of heart rate (\\"oic.r.heartrate\\"), observed time
27825 (\\"oic.r.time.stamp\\"), and user ID (\\"oic.r.userid\\").",
27826                 "parameters": [
27827                     {
27828                         "$ref": "#/parameters/interface-all"
27829                     }
27830                 ],
27831                 "responses": {
27832                     "200": {
27833                         "description": "",
27834                         "x-example": [
27835                             {
27836                                 "href": "/myHeartrate",
27837                                 "rep": {
27838                                     "heartrate": 80
27839                                 }
27840                             },
27841                             {
27842                                 "href": "/myUserId",
27843                                 "rep": {
27844                                     "userid": "USER1"
27845                                 }
27846                             },
27847                             {
27848                                 "href": "/myTimeStamp",
27849                                 "rep": {
27850                                     "timestamp": "2018-11-09T12:15:00+08:00"
27851                                 }
27852                             }
27853                         ],
27854                         "schema": {
27855                             "$ref": "#/definitions/batch-retrieve"
27856                         }
27857                     }
27858                 }
27859             },
27860             "/HeartRateMonitorAMResURI?if=oic.if.ll": {
27861                 "get": {
27862                     "description": "This Resource describes the Properties associated with Heart Rate Monitor.\n
27863 The Resource is an Atomic Measurement of heart rate (\\"oic.r.heartrate\\"), observed time
27864 (\\"oic.r.time.stamp\\"), and user ID (\\"oic.r.userid\\").",
27865                     "parameters": [
27866                         {
27867                             "$ref": "#/parameters/interface-all"
27868                         }
27869                     ],
27870                     "responses": {
27871                         "200": {
27872                             "description": "",

```

```

27874         "x-example": [
27875             {
27876                 "href": "/myHeartrate",
27877                 "rt": [
27878                     "oic.r.heartrate"
27879                 ],
27880                 "if": [
27881                     "oic.if.s",
27882                     "oic.if.baseline"
27883                 ]
27884             },
27885             {
27886                 "href": "/myUserId",
27887                 "rt": [
27888                     "oic.r.userid"
27889                 ],
27890                 "if": [
27891                     "oic.if.r",
27892                     "oic.if.baseline"
27893                 ]
27894             },
27895             {
27896                 "href": "/myTimeStamp",
27897                 "rt": [
27898                     "oic.r.time.stamp"
27899                 ],
27900                 "if": [
27901                     "oic.if.r",
27902                     "oic.if.baseline"
27903                 ]
27904             }
27905         ],
27906         "schema": {
27907             "$ref": "#/definitions/links"
27908         }
27909     }
27910 }
27911 },
27912 "/HeartRateMonitorAMResURI?if=oic.if.baseline": {
27913     "get": {
27914         "description": "This Resource describes the Properties associated with Heart Rate Monitor.\n
27915 The Resource is an Atomic Measurement of heart rate (\\"oic.r.heartrate\\"), observed time
27916 (\\"oic.r.time.stamp\\"), and user ID (\\"oic.r.userid\\").",
27917         "parameters": [
27918             {
27919                 "$ref": "#/parameters/interface-all"
27920             }
27921         ],
27922         "responses": {
27923             "200": {
27924                 "description": "",
27925                 "x-example":
27926                 {
27927                     "rt": [
27928                         "oic.r.heartratemonitor-am",
27929                         "oic.wk.atomicmeasurement"
27930                     ],
27931                     "if": [
27932                         "oic.if.b",
27933                         "oic.if.ll",
27934                         "oic.if.baseline"
27935                     ],
27936                     "rts-m": [
27937                         "oic.r.heartrate"
27938                     ],
27939                     "rts": [
27940                         "oic.r.heartrate",
27941                         "oic.r.userid",
27942                         "oic.r.time.stamp"
27943                     ],
27944                     "links": [
27945

```

```

27946         {
27947             "href": "/myHeartRateMonitor",
27948             "rt": [
27949                 "oic.r.heartrate"
27950             ],
27951             "if": [
27952                 "oic.if.s",
27953                 "oic.if.baseline"
27954             ]
27955         },
27956         {
27957             "href": "/myUserId",
27958             "rt": [
27959                 "oic.r.userid"
27960             ],
27961             "if": [
27962                 "oic.if.r",
27963                 "oic.if.baseline"
27964             ]
27965         },
27966         {
27967             "href": "/myTimeStamp",
27968             "rt": [
27969                 "oic.r.time.stamp"
27970             ],
27971             "if": [
27972                 "oic.if.r",
27973                 "oic.if.baseline"
27974             ]
27975         }
27976     ]
27977 },
27978     "schema": {
27979         "$ref": "#/definitions/baseline"
27980     }
27981 }
27982 }
27983 }
27984 }
27985 }
27986 },
27987 "parameters": {
27988     "interface-all": {
27989         "in": "query",
27990         "name": "if",
27991         "type": "string",
27992         "enum": [
27993             "oic.if.b",
27994             "oic.if.ll",
27995             "oic.if.baseline"
27996         ]
27997     }
27998 },
27999 "definitions": {
28000     "batch-retrieve": {
28001         "title": "Collection Batch Retrieve Format",
28002         "minItems": 1,
28003         "items": {
28004             "properties": {
28005                 "href": {
28006                     "$ref":
28007 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28008 schema.json#/definitions/href"
28009                 },
28010                 "rep": {
28011                     "type": "object",
28012                     "anyOf": [
28013                         {
28014                             "$ref":
28015 "https://openconnectivityfoundation.github.io/IoTDataModels/HeartRate.swagger.json#/definitions/Hear
28016 tRate"
28017                         }

```

```

28018         {
28019             "$ref":
28020             "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/U
28021             serID"
28022         },
28023         {
28024             "$ref":
28025             "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definition
28026             s/TimeStamp"
28027         }
28028     ]
28029 }
28030 },
28031 "required": [
28032     "href",
28033     "rep"
28034 ],
28035 "type": "object"
28036 },
28037 "type": "array"
28038 },
28039 "links": {
28040     "type": "array",
28041     "items": {
28042         "$ref": "#/definitions/oic.oic-link"
28043     }
28044 },
28045 "baseline": {
28046     "properties": {
28047         "rt": {
28048             "items": {
28049                 "enum": [
28050                     "oic.r.heartratemonitor-am",
28051                     "oic.wk.atomicmeasurement"
28052                 ]
28053             },
28054             "minItems": 2,
28055             "type": "array",
28056             "uniqueItems": true,
28057             "readOnly": true
28058         },
28059         "links": {
28060             "$ref": "#/definitions/links"
28061         },
28062         "n": {
28063             "$ref":
28064             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
28065             schema.json#/definitions/n"
28066         },
28067         "rts": {
28068             "description": "This Property contains all possible Resource Types for this Atomic
28069             Measurement.",
28070             "items": {
28071                 "enum": [
28072                     "oic.r.heartrate",
28073                     "oic.r.userid",
28074                     "oic.r.time.stamp"
28075                 ]
28076             },
28077             "minItems": 1,
28078             "type": "array",
28079             "uniqueItems": true,
28080             "readOnly": true
28081         },
28082         "rts-m": {
28083             "description": "This Property contains all mandatory Resource Types for this Atomic
28084             Measurement.",
28085             "items": {
28086                 "enum": [
28087                     "oic.r.heartrate"
28088                 ]
28089             },

```

```

28090         "maxItems": 1,
28091         "minItems": 1,
28092         "type": "array",
28093         "readOnly": true,
28094         "uniqueItems": true
28095     },
28096     "if": {
28097         "description": "The OCF Interface set supported by this Resource.",
28098         "items": {
28099             "enum": [
28100                 "oic.if.b",
28101                 "oic.if.ll",
28102                 "oic.if.baseline"
28103             ],
28104             "type": "string"
28105         },
28106         "minItems": 1,
28107         "uniqueItems": true,
28108         "readOnly": true,
28109         "type": "array"
28110     }
28111 },
28112 "type": "object",
28113 "required": [
28114     "rts-m"
28115 ],
28116 },
28117 "oic.oic-link": {
28118     "properties": {
28119         "anchor": {
28120             "$ref":
28121 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28122 schema.json#/definitions/anchor"
28123         },
28124         "di": {
28125             "$ref":
28126 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28127 schema.json#/definitions/di"
28128         },
28129         "eps": {
28130             "$ref":
28131 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28132 schema.json#/definitions/eps"
28133         },
28134         "href": {
28135             "$ref":
28136 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28137 schema.json#/definitions/href"
28138         },
28139         "if": {
28140             "description": "The OCF Interface set supported by this Resource.",
28141             "items": {
28142                 "enum": [
28143                     "oic.if.baseline",
28144                     "oic.if.s",
28145                     "oic.if.r"
28146                 ],
28147                 "type": "string"
28148             },
28149             "minItems": 1,
28150             "uniqueItems": true,
28151             "readOnly": true,
28152             "type": "array"
28153         },
28154         "ins": {
28155             "$ref":
28156 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28157 schema.json#/definitions/ins"
28158         },
28159         "p": {
28160             "$ref":
28161 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-

```

```

28162 schema.json#/definitions/p"
28163     },
28164     "rel": {
28165         "$ref":
28166         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28167         schema.json#/definitions/rel_array"
28168     },
28169     "rt": {
28170         "description": "The Resource Type.",
28171         "items": {
28172             "enum": [
28173                 "oic.r.heartrate",
28174                 "oic.r.time.stamp",
28175                 "oic.r.userid"
28176             ],
28177             "type": "string"
28178         },
28179         "minItems": 1,
28180         "uniqueItems": true,
28181         "readOnly": true,
28182         "type": "array"
28183     },
28184     "title": {
28185         "$ref":
28186         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28187         schema.json#/definitions/title"
28188     },
28189     "type": {
28190         "$ref":
28191         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28192         schema.json#/definitions/type"
28193     }
28194 },
28195 "required": [
28196     "href",
28197     "rt",
28198     "if"
28199 ],
28200 "type": "object"
28201 }
28202 }
28203 }

```

### 28204 6.137.5 Property definition

28205 Table 277 defines the Properties that are part of the "oic.r.heartratemonitor-am,  
28206 oic.wk.atomicmeasurement" Resource Type.

28207 **Table 277 – The Property definitions of the Resource with type "rt" =**  
28208 **"oic.r.heartratemonitor-am, oic.wk.atomicmeasurement".**

Property name	Value type	Mandatory	Access mode	Description
href	multiple types: see schema	Yes	Read Write	
rep	object: see schema	Yes	Read Write	
rt	array: see schema	No	Read Only	
links	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
rts	array: see schema	No	Read Only	This Property contains all possible Resource Types for this Atomic Measurement.

rts-m	array: see schema	Yes	Read Only	This Property contains all mandatory Resource Types for this Atomic Measurement.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
if	array: see schema	Yes	Read Only	The OCF Interface set supported by this Resource.
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
rt	array: see schema	Yes	Read Only	The Resource Type.
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	

28209 **6.137.6 CRUDN behaviour**

28210 Table 278 defines the CRUDN operations that are supported on the "oic.r.heartratemonitor-am,  
28211 oic.wk.atomicmeasurement" Resource Type.

28212 **Table 278 – The CRUDN operations of the Resource with type "rt" =**  
28213 **"oic.r.heartratemonitor-am, oic.wk.atomicmeasurement".**

Create	Read	Update	Delete	Notify
	get			observe

28214 **6.138 Pulsatile Characteristic for Pulse Oximeter**

28215 **6.138.1 Introduction**

28216 This Resource describes the Properties associated with a pulsatile characteristic of the pulsative  
28217 wave of a Pulse Oximeter.

28218 The characteristic Property is a read-only value that is provided by the server.

28219 When range (from "oic.r.baseresource") is omitted the default is 0 to +MAXFLOAT.

28220 **6.138.2 Example URI**

28221 /PulsatileCharacteristicResURI

28222 **6.138.3 Resource type**

28223 The Resource Type is defined as: "oic.r.pulsatilecharacteristic".

#### 28224 6.138.4 OpenAPI 2.0 definition

```
28225 {
28226   "swagger": "2.0",
28227   "info": {
28228     "title": "Pulsatile Characteristic for Pulse Oximeter",
28229     "version": "2019-03-04",
28230     "license": {
28231       "name": "OCF Data Model License",
28232       "url":
28233         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
28234         CENSE.md",
28235       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
28236     },
28237     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
28238   },
28239   "schemes": [
28240     "http"
28241   ],
28242   "consumes": [
28243     "application/json"
28244   ],
28245   "produces": [
28246     "application/json"
28247   ],
28248   "paths": {
28249     "/PulsatileCharacteristicResURI": {
28250       "get": {
28251         "description": "This Resource describes the Properties associated with a pulsatile
28252         characteristic of the pulsative wave of a Pulse Oximeter.\n The characteristic Property is a read-
28253         only value that is provided by the server.\n When range (from \"oic.r.baseresource\") is omitted the
28254         default is 0 to +MAXFLOAT.",
28255         "parameters": [
28256           {
28257             "$ref": "#/parameters/interface"
28258           }
28259         ],
28260         "responses": {
28261           "200": {
28262             "description": "",
28263             "x-example": {
28264               "rt": [
28265                 "oic.r.pulsatilecharacteristic"
28266               ],
28267               "characteristic": 1
28268             },
28269             "schema": {
28270               "$ref": "#/definitions/pulsatilecharacteristic"
28271             }
28272           }
28273         }
28274       }
28275     }
28276   },
28277   "parameters": {
28278     "interface": {
28279       "in": "query",
28280       "name": "if",
28281       "type": "string",
28282       "enum": [
28283         "oic.if.s",
28284         "oic.if.baseline"
28285       ]
28286     }
28287   },
28288   "definitions": {
28289     "pulsatilecharacteristic": {
28290       "properties": {
28291         "characteristic": {
28292           "description": "This Property describes the current pulsatile characteristic measurement.
28293           The value is an integer bit mapped value. The following describes what each integer means. 0 -
28294           Quality of the detected pulse is nominal, in that there are no recognized abnormalities in the
```



```

28295 detected pulse. 1 - Perfusion or quality of the detected pulse is marginal. 2 - Perfusion or quality
28296 of the detected pulse is minimal. 3 - Perfusion or quality of the detected pulse is unacceptable.",
28297     "type": "integer",
28298     "minimum": 0,
28299     "maximum": 3,
28300     "readOnly": true
28301   },
28302   "rt": {
28303     "description": "The Resource Type.",
28304     "items": {
28305       "enum": [
28306         "oic.r.pulsatilecharacteristic"
28307       ],
28308       "type": "string"
28309     },
28310     "minItems": 1,
28311     "uniqueItems": true,
28312     "readOnly": true,
28313     "type": "array"
28314   },
28315   "n": {
28316     "$ref":
28317     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
28318     schema.json#/definitions/n"
28319   },
28320   "if": {
28321     "description": "The OCF Interface set supported by this Resource.",
28322     "items": {
28323       "enum": [
28324         "oic.if.s",
28325         "oic.if.baseline"
28326       ],
28327       "type": "string"
28328     },
28329     "minItems": 1,
28330     "uniqueItems": true,
28331     "readOnly": true,
28332     "type": "array"
28333   },
28334   "range": {
28335     "$ref":
28336     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
28337     schema.json#/definitions/range_integer"
28338   },
28339   "step": {
28340     "$ref":
28341     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
28342     schema.json#/definitions/step_integer"
28343   }
28344 },
28345 "type": "object",
28346 "required": [
28347   "characteristic"
28348 ]
28349 }
28350 }
28351 }

```

### 28352 6.138.5 Property definition

28353 Table 279 defines the Properties that are part of the "oic.r.pulsatilecharacteristic" Resource Type.

28354 **Table 279 – The Property definitions of the Resource with type "rt" =**  
28355 **"oic.r.pulsatilecharacteristic".**

Property name	Value type	Mandatory	Access mode	Description
characteristic	integer	Yes	Read Only	This Property describes the current pulsatile characteristic measurement. The

				value is an integer bit mapped value. The following describes what each integer means. 0 - Quality of the detected pulse is nominal, in that there are no recognized abnormalities in the detected pulse. 1 - Perfusion or quality of the detected pulse is marginal. 2 - Perfusion or quality of the detected pulse is minimal. 3 - Perfusion or quality of the detected pulse is unacceptable.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	

28356 **6.138.6 CRUDN behaviour**

28357 Table 280 defines the CRUDN operations that are supported on the "oic.r.pulsatilecharacteristic"  
28358 Resource Type.

28359 **Table 280 – The CRUDN operations of the Resource with type "rt" =**  
28360 **"oic.r.pulsatilecharacteristic".**

Create	Read	Update	Delete	Notify
	get			observe

28361 **6.139 Pulsatile Occurrence for Pulse Oximeter**

28362 **6.139.1 Introduction**

28363 This Resource describes the Properties associated with a Pulsatile Occurrence detected by a  
28364 Pulse Oximeter.

28365 The occurrence Property is a read-only value that is provided by the server.

28366 When range (from "oic.r.baseresource") is omitted the default is 0 to +MAXFLOAT.

28367 **6.139.2 Example URI**

28368 /PulsatileOccurrenceResURI

28369 **6.139.3 Resource type**

28370 The Resource Type is defined as: "oic.r.pulsatileoccurrence".

28371 **6.139.4 OpenAPI 2.0 definition**

28372 {  
28373 "swagger": "2.0",  
28374 "info": {

```

28375     "title": "Pulsatile Occurrence for Pulse Oximeter",
28376     "version": "2019-03-04",
28377     "license": {
28378         "name": "OCF Data Model License",
28379         "url":
28380 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
28381 CENSE.md",
28382         "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
28383     },
28384     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
28385 },
28386     "schemes": [
28387         "http"
28388     ],
28389     "consumes": [
28390         "application/json"
28391     ],
28392     "produces": [
28393         "application/json"
28394     ],
28395     "paths": {
28396         "/PulsatileOccurrenceResURI": {
28397             "get": {
28398                 "description": "This Resource describes the Properties associated with a Pulsatile
28399 Occurrence detected by a Pulse Oximeter.\n The occurrence Property is a read-only value that is
28400 provided by the server.\n When range (from \"oic.r.baseresource\") is omitted the default is 0 to
28401 +MAXFLOAT.",
28402                 "parameters": [
28403                     {
28404                         "$ref": "#/parameters/interface"
28405                     }
28406                 ],
28407                 "responses": {
28408                     "200": {
28409                         "description": "",
28410                         "x-example": {
28411                             "rt": [
28412                                 "oic.r.pulsatileoccurrence"
28413                             ],
28414                             "occurrence": "BEAT"
28415                         },
28416                         "schema": {
28417                             "$ref": "#/definitions/pulsatileoccurrence"
28418                         }
28419                     }
28420                 }
28421             }
28422         }
28423     },
28424     "parameters": {
28425         "interface": {
28426             "in": "query",
28427             "name": "if",
28428             "type": "string",
28429             "enum": [
28430                 "oic.if.s",
28431                 "oic.if.baseline"
28432             ]
28433         }
28434     },
28435     "definitions": {
28436         "pulsatileoccurrence": {
28437             "properties": {
28438                 "occurrence": {
28439                     "type": "string",
28440                     "readOnly": true,
28441                     "enum": [
28442                         "BEAT",
28443                         "BEAT_MAX_INRUSH",
28444                         "NOS"
28445                     ]
28446                     "description": "This Property describes the Pulsatile Occurrence detected by a Pulse

```

```

28447 Oximeter. BEAT - Pulsatile occurrence has occurred. BEAT_MAX_INRUSH - Maximal inrush of the
28448 pulsatile wave has occurred. NOS - No pulsatile event occurred.",
28449     "default": "NOS"
28450   },
28451   "rt": {
28452     "description": "The Resource Type.",
28453     "items": {
28454       "enum": [
28455         "oic.r.pulsatileoccurrence"
28456       ],
28457       "type": "string"
28458     },
28459     "minItems": 1,
28460     "uniqueItems": true,
28461     "readOnly": true,
28462     "type": "array"
28463   },
28464   "n": {
28465     "$ref":
28466     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
28467     schema.json#/definitions/n"
28468   },
28469   "if": {
28470     "description": "The OCF Interface set supported by this Resource.",
28471     "items": {
28472       "enum": [
28473         "oic.if.s",
28474         "oic.if.baseline"
28475       ],
28476       "type": "string"
28477     },
28478     "minItems": 1,
28479     "uniqueItems": true,
28480     "readOnly": true,
28481     "type": "array"
28482   }
28483 },
28484 "type": "object",
28485 "required": [
28486   "occurrence"
28487 ]
28488 }
28489 }
28490 }

```

28491 **6.139.5 Property definition**

28492 Table 281 defines the Properties that are part of the "oic.r.pulsatileoccurrence" Resource Type.

28493 **Table 281 – The Property definitions of the Resource with type "rt" =**  
28494 **"oic.r.pulsatileoccurrence".**

Property name	Value type	Mandatory	Access mode	Description
occurrence	string	Yes	Read Only	This Property describes the Pulsatile Occurrence detected by a Pulse Oximeter. BEAT - Pulsatile occurrence has occurred. BEAT_MAX_INRUSH - Maximal inrush of the pulsatile wave has occurred. NOS - No pulsatile event occurred.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	

if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
----	-------------------	----	-----------	---

28495 **6.139.6 CRUDN behaviour**

28496 Table 282 defines the CRUDN operations that are supported on the "oic.r.pulsatileoccurrence"  
28497 Resource Type.

28498 **Table 282 – The CRUDN operations of the Resource with type "rt" =**  
28499 **"oic.r.pulsatileoccurrence".**

Create	Read	Update	Delete	Notify
	get			observe

28500 **6.140 Pulse Oximeter Atomic Measurement Representation**

28501 **6.140.1 Introduction**

28502 This Resource describes the Properties associated with Pulse Oximeter.  
28503 The Resource is an Atomic Measurement of SpO2 ("oic.r.spo2"), pulse rate ("oic.r.pulserate"),  
28504 pulsatile characteristic ("oic.r.pulsatilecharacteristic"), pulsatileoccurrence  
28505 ("oic.r.pulsatileoccurrence"), observed time ("oic.r.time.stamp"), and user ID ("oic.r.userid").

28506 **6.140.2 Example URI**

28507 /PulseOximeterAMResURI

28508 **6.140.3 Resource type**

28509 The Resource Type is defined as: "oic.r.pulseoximeter-am, oic.wk.atomicmeasurement".

28510 **6.140.4 OpenAPI 2.0 definition**

```

28511 {
28512   "swagger": "2.0",
28513   "info": {
28514     "title": "Pulse Oximeter Atomic Measurement Representation",
28515     "version": "2019-03-04",
28516     "license": {
28517       "name": "OCF Data Model License",
28518       "url":
28519 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
28520 CENSE.md",
28521     "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
28522   },
28523   "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
28524 },
28525   "schemes": [
28526     "http"
28527 ],
28528   "consumes": [
28529     "application/json"
28530 ],
28531   "produces": [
28532     "application/json"
28533 ],
28534   "paths": {
28535     "/PulseOximeterAMResURI?if=oic.if.b": {
28536       "get": {
28537         "description": "This Resource describes the Properties associated with Pulse Oximeter.\n The
28538 Resource is an Atomic Measurement of SpO2 (\\"oic.r.spo2\\"), pulse rate (\\"oic.r.pulserate\\"),
28539 pulsatile characteristic (\\"oic.r.pulsatilecharacteristic\\"), pulsatileoccurrence
28540 (\\"oic.r.pulsatileoccurrence\\"), observed time (\\"oic.r.time.stamp\\"), and user ID
28541 (\\"oic.r.userid\\").",
28542         "parameters": [
28543           {
28544             "$ref": "#/parameters/interface-all"
28545         ]

```

```

28546     ],
28547     "responses": {
28548         "200": {
28549             "description": "",
28550             "x-example": [
28551                 {
28552                     "href": "/mySpO2",
28553                     "rep": {
28554                         "spo2": 99.0,
28555                         "perfusion": 20.0
28556                     }
28557                 },
28558                 {
28559                     "href": "/myPulseRate",
28560                     "rep": {
28561                         "pulserate": 80
28562                     }
28563                 },
28564                 {
28565                     "href": "/myPulsatileOccurrence",
28566                     "rep": {
28567                         "occurrence": "BEAT"
28568                     }
28569                 },
28570                 {
28571                     "href": "/myPulsatileCharacteristic",
28572                     "rep": {
28573                         "characteristic": 1
28574                     }
28575                 },
28576                 {
28577                     "href": "/myUserId",
28578                     "rep": {
28579                         "userid": "USER1"
28580                     }
28581                 },
28582                 {
28583                     "href": "/myTimeStamp",
28584                     "rep": {
28585                         "timestamp": "2018-11-09T12:15:00+08:00"
28586                     }
28587                 }
28588             ],
28589             "schema": {
28590                 "$ref": "#/definitions/batch-retrieve"
28591             }
28592         }
28593     }
28594 },
28595 ],
28596 "/PulseOximeterAMResURI?if=oic.if.ll": {
28597     "get": {
28598         "description": "This Resource describes the Properties associated with Pulse Oximeter.\n The
28599 Resource is an Atomic Measurement of SpO2 (\\"oic.r.spo2\\"), pulse rate (\\"oic.r.pulserate\\"),
28600 pulsatile characteristic (\\"oic.r.pulsatilecharacteristic\\"), pulsatileoccurrence
28601 (\\"oic.r.pulsatileoccurrence\\"), observed time (\\"oic.r.time.stamp\\"), and user ID
28602 (\\"oic.r.userid\\").",
28603         "parameters": [
28604             {
28605                 "$ref": "#/parameters/interface-all"
28606             }
28607         ],
28608         "responses": {
28609             "200": {
28610                 "description": "",
28611                 "x-example": [
28612                     {
28613                         "href": "/mySpO2",
28614                         "rt": [
28615                             "oic.r.spo2"
28616                         ],
28617                         "if": [

```

```

28618         "oic.if.s",
28619         "oic.if.baseline"
28620     ]
28621 },
28622 {
28623     "href": "/myPulseRate",
28624     "rt": [
28625         "oic.r.pulserate"
28626     ],
28627     "if": [
28628         "oic.if.s",
28629         "oic.if.baseline"
28630     ]
28631 },
28632 {
28633     "href": "/myPulsatileOccurrence",
28634     "rt": [
28635         "oic.r.pulsatileoccurrence"
28636     ],
28637     "if": [
28638         "oic.if.s",
28639         "oic.if.baseline"
28640     ]
28641 },
28642 {
28643     "href": "/myPulsatileCharacteristic",
28644     "rt": [
28645         "oic.r.pulsatilecharacteristic"
28646     ],
28647     "if": [
28648         "oic.if.s",
28649         "oic.if.baseline"
28650     ]
28651 },
28652 {
28653     "href": "/myUserId",
28654     "rt": [
28655         "oic.r.userid"
28656     ],
28657     "if": [
28658         "oic.if.r",
28659         "oic.if.baseline"
28660     ]
28661 },
28662 {
28663     "href": "/myTimeStamp",
28664     "rt": [
28665         "oic.r.time.stamp"
28666     ],
28667     "if": [
28668         "oic.if.r",
28669         "oic.if.baseline"
28670     ]
28671 }
28672 ],
28673 "schema": {
28674     "$ref": "#/definitions/links"
28675 }
28676 }
28677 }
28678 }
28679 },
28680 "/PulseOximeterAMResURI?if=oic.if.baseline": {
28681     "get": {
28682         "description": "This Resource describes the Properties associated with Pulse Oximeter.\n The
28683 Resource is an Atomic Measurement of SpO2 (\\"oic.r.spo2\\"), pulse rate (\\"oic.r.pulserate\\"),
28684 pulsatile characteristic (\\"oic.r.pulsatilecharacteristic\\"), pulsatileoccurrence
28685 (\\"oic.r.pulsatileoccurrence\\"), observed time (\\"oic.r.time.stamp\\"), and user ID
28686 (\\"oic.r.userid\\").",
28687         "parameters": [
28688             {
28689                 "$ref": "#/parameters/interface-all"

```

```

28690     }
28691   ],
28692   "responses": {
28693     "200": {
28694       "description": "",
28695       "x-example":
28696         {
28697           "rt": [
28698             "oic.r.pulseoximeter-am",
28699             "oic.wk.atomicmeasurement"
28700           ],
28701           "if": [
28702             "oic.if.b",
28703             "oic.if.ll",
28704             "oic.if.baseline"
28705           ],
28706           "rts-m": [
28707             "oic.r.spo2",
28708             "oic.r.pulserate"
28709           ],
28710           "rts": [
28711             "oic.r.spo2",
28712             "oic.r.pulserate",
28713             "oic.r.pulsatileoccurrence",
28714             "oic.r.pulsatilecharacteristic",
28715             "oic.r.userid",
28716             "oic.r.time.stamp"
28717           ],
28718           "links": [
28719             {
28720               "href": "/mySpO2",
28721               "rt": [
28722                 "oic.r.spo2"
28723               ],
28724               "if": [
28725                 "oic.if.s",
28726                 "oic.if.baseline"
28727               ]
28728             },
28729             {
28730               "href": "/myPulseRate",
28731               "rt": [
28732                 "oic.r.pulserate"
28733               ],
28734               "if": [
28735                 "oic.if.s",
28736                 "oic.if.baseline"
28737               ]
28738             },
28739             {
28740               "href": "/myPulsatileOccurrence",
28741               "rt": [
28742                 "oic.r.pulsatileoccurrence"
28743               ],
28744               "if": [
28745                 "oic.if.s",
28746                 "oic.if.baseline"
28747               ]
28748             },
28749             {
28750               "href": "/myPulsatileCharacteristic",
28751               "rt": [
28752                 "oic.r.pulsatilecharacteristic"
28753               ],
28754               "if": [
28755                 "oic.if.s",
28756                 "oic.if.baseline"
28757               ]
28758             },
28759             {
28760               "href": "/myUserId",
28761               "rt": [

```



```

28762         "oic.r.userid"
28763     ],
28764     "if": [
28765         "oic.if.r",
28766         "oic.if.baseline"
28767     ]
28768 },
28769 {
28770     "href": "/myTimeStamp",
28771     "rt": [
28772         "oic.r.time.stamp"
28773     ],
28774     "if": [
28775         "oic.if.r",
28776         "oic.if.baseline"
28777     ]
28778 }
28779 ]
28780 },
28781 "schema": {
28782     "$ref": "#/definitions/baseline"
28783 }
28784 }
28785 }
28786 }
28787 }
28788 },
28789 "parameters": {
28790     "interface-all": {
28791         "in": "query",
28792         "name": "if",
28793         "type": "string",
28794         "enum": [
28795             "oic.if.b",
28796             "oic.if.ll",
28797             "oic.if.baseline"
28798         ]
28799     }
28800 },
28801 "definitions": {
28802     "batch-retrieve": {
28803         "title": "Collection Batch Retrieve Format",
28804         "minItems": 1,
28805         "items": {
28806             "additionalProperties": true,
28807             "properties": {
28808                 "href": {
28809                     "$ref":
28810 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28811 schema.json#/definitions/href"
28812                 },
28813                 "rep": {
28814                     "type": "object",
28815                     "anyOf": [
28816                         {
28817                             "$ref":
28818 "https://openconnectivityfoundation.github.io/IoTDataModels/SpO2.swagger.json#/definitions/SpO2"
28819                         },
28820                         {
28821                             "$ref":
28822 "https://openconnectivityfoundation.github.io/IoTDataModels/PulseRateResURI.swagger.json#/definition
28823 s/PulseRate"
28824                         },
28825                         {
28826                             "$ref":
28827 "https://openconnectivityfoundation.github.io/IoTDataModels/PulsatileCharacteristic.swagger.json#/de
28828 finitions/pulsatilecharacteristic"
28829                         },
28830                         {
28831                             "$ref":
28832 "https://openconnectivityfoundation.github.io/IoTDataModels/PulsatileOccurrence.swagger.json#/defini
28833 tions/pulsatileoccurrence"

```

```

28834         },
28835         {
28836             "$ref":
28837             "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/UserID",
28838         },
28839     },
28840     {
28841         "$ref":
28842         "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definitions/TimeStamps/TimeStamp",
28843     }
28844 ]
28845 }
28846 },
28847 },
28848     "required": [
28849         "href",
28850         "rep"
28851     ],
28852     "type": "object"
28853 },
28854 "type": "array"
28855 },
28856 "links": {
28857     "type": "array",
28858     "items": {
28859         "$ref": "#/definitions/oic.oic-link"
28860     }
28861 },
28862 "baseline": {
28863     "properties": {
28864         "rt": {
28865             "items": {
28866                 "enum": [
28867                     "oic.r.pulseoximeter-am",
28868                     "oic.wk.atomicmeasurement"
28869                 ]
28870             },
28871             "minItems": 2,
28872             "type": "array",
28873             "uniqueItems": true,
28874             "readOnly": true
28875         },
28876         "links": {
28877             "$ref": "#/definitions/links"
28878         },
28879         "n": {
28880             "$ref":
28881             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-schema.json#/definitions/n",
28882         },
28883     },
28884     "rts": {
28885         "description": "This Property contains all possible Resource Types for this Atomic Measurement.",
28886         "items": {
28887             "enum": [
28888                 "oic.r.spo2",
28889                 "oic.r.pulserate",
28890                 "oic.r.pulsatilecharacteristic",
28891                 "oic.r.pulsatileoccurrence",
28892                 "oic.r.time.stamp",
28893                 "oic.r.userid"
28894             ]
28895         },
28896     },
28897     "minItems": 1,
28898     "type": "array",
28899     "uniqueItems": true
28900 },
28901 "rts-m": {
28902     "description": "This Property contains all mandatory Resource Types for this Atomic Measurement.",
28903     "items": {
28904         "enum": [
28905

```

```

28906         "oic.r.spo2",
28907         "oic.r.pulserate"
28908     ]
28909 },
28910 "maxItems": 2,
28911 "minItems": 2,
28912 "type": "array",
28913 "readOnly": true,
28914 "uniqueItems": true
28915 },
28916 "if": {
28917     "description": "The OCF Interface set supported by this Resource.",
28918     "items": {
28919         "enum": [
28920             "oic.if.b",
28921             "oic.if.ll",
28922             "oic.if.baseline"
28923         ],
28924         "type": "string"
28925     },
28926     "minItems": 1,
28927     "uniqueItems": true,
28928     "readOnly": true,
28929     "type": "array"
28930 }
28931 },
28932 "type": "object",
28933 "required": [
28934     "rts-m"
28935 ]
28936 },
28937 "oic.oic-link": {
28938     "properties": {
28939         "anchor": {
28940             "$ref":
28941 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28942 schema.json#/definitions/anchor"
28943         },
28944         "di": {
28945             "$ref":
28946 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28947 schema.json#/definitions/di"
28948         },
28949         "eps": {
28950             "$ref":
28951 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28952 schema.json#/definitions/eps"
28953         },
28954         "href": {
28955             "$ref":
28956 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28957 schema.json#/definitions/href"
28958         },
28959         "if": {
28960             "description": "The interface set supported by this resource",
28961             "items": {
28962                 "enum": [
28963                     "oic.if.baseline",
28964                     "oic.if.s",
28965                     "oic.if.r"
28966                 ],
28967                 "type": "string"
28968             },
28969             "minItems": 1,
28970             "type": "array"
28971         },
28972         "ins": {
28973             "$ref":
28974 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28975 schema.json#/definitions/ins"
28976         },
28977         "p": {

```

```

28978         "$ref":
28979         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28980         schema.json#/definitions/p"
28981     },
28982     "rel": {
28983         "$ref":
28984         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28985         schema.json#/definitions/rel_array"
28986     },
28987     "rt": {
28988         "description": "The Resource Type.",
28989         "items": {
28990             "enum": [
28991                 "oic.r.spo2",
28992                 "oic.r.pulserate",
28993                 "oic.r.pulsatilecharacteristic",
28994                 "oic.r.pulsatileoccurrence",
28995                 "oic.r.time.stamp",
28996                 "oic.r.userid"
28997             ],
28998             "type": "string"
28999         },
29000         "minItems": 1,
29001         "uniqueItems": true,
29002         "readOnly": true,
29003         "type": "array"
29004     },
29005     "title": {
29006         "$ref":
29007         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29008         schema.json#/definitions/title"
29009     },
29010     "type": {
29011         "$ref":
29012         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29013         schema.json#/definitions/type"
29014     }
29015 },
29016 "required": [
29017     "href",
29018     "rt",
29019     "if"
29020 ],
29021 "type": "object"
29022 }
29023 }
29024 }

```

### 29025 6.140.5 Property definition

29026 Table 283 defines the Properties that are part of the "oic.r.pulseoximeter-am,  
29027 oic.wk.atomicmeasurement" Resource Type.

29028 **Table 283 – The Property definitions of the Resource with type "rt" = "oic.r.pulseoximeter-  
29029 am, oic.wk.atomicmeasurement".**

Property name	Value type	Mandatory	Access mode	Description
href	multiple types: see schema	Yes	Read Write	
rep	object: see schema	Yes	Read Write	
rt	array: see schema	No	Read Only	
links	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
rts	array: see schema	No	Read Write	This Property contains all possible

				Resource Types for this Atomic Measurement.
rts-m	array: see schema	Yes	Read Only	This Property contains all mandatory Resource Types for this Atomic Measurement.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
if	array: see schema	Yes	Read Write	The interface set supported by this resource
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
rt	array: see schema	Yes	Read Only	The Resource Type.
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	

29030 **6.140.6 CRUDN behaviour**

29031 Table 284 defines the CRUDN operations that are supported on the "oic.r.pulseoximeter-am,  
29032 oic.wk.atomicmeasurement" Resource Type.

29033 **Table 284 – The CRUDN operations of the Resource with type "rt" = "oic.r.pulseoximeter-  
29034 am, oic.wk.atomicmeasurement".**

Create	Read	Update	Delete	Notify
	get			observe

29035 **6.141 Sleep**

29036 **6.141.1 Introduction**

29037 This Resource describes the Properties associated with Sleep.  
29038 Sleep shows the time spent in each of the sleep stages (awake, nrem1, nrem2, nrem3, nrem4,  
29039 rem, light sleep, deep sleep), along with a sleep score indicating the quality of sleep.

29040 **6.141.2 Example URI**

29041 /SleepResURI

### 29042 6.141.3 Resource type

29043 The Resource Type is defined as: "oic.r.sleep".

### 29044 6.141.4 OpenAPI 2.0 definition

```
29045 {
29046   "swagger": "2.0",
29047   "info": {
29048     "title": "Sleep",
29049     "version": "2018-07-12",
29050     "license": {
29051       "name": "OCF Data Model License",
29052       "url":
29053 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
29054 CENSE.md",
29055       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
29056     },
29057     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
29058   },
29059   "schemes": [
29060     "http"
29061   ],
29062   "consumes": [
29063     "application/json"
29064   ],
29065   "produces": [
29066     "application/json"
29067   ],
29068   "paths": {
29069     "/SleepResURI": {
29070       "get": {
29071         "description": "This Resource describes the Properties associated with Sleep.\nSleep shows
29072 the time spent in each of the sleep stages (awake, nrem1, nrem2, nrem3, nrem4, rem, light sleep,
29073 deep sleep), along with a sleep score indicating the quality of sleep.",
29074         "parameters": [
29075           {
29076             "$ref": "#/parameters/interface"
29077           }
29078         ],
29079         "responses": {
29080           "200": {
29081             "description": "Retrieves the sleep information.",
29082             "x-example": {
29083               "rt": [
29084                 "oic.r.sleep"
29085               ],
29086               "if": [
29087                 "oic.if.s",
29088                 "oic.if.baseline"
29089               ],
29090               "awake": 1440,
29091               "nrem1": 1440,
29092               "nrem2": 14400,
29093               "nrem3": 1440,
29094               "nrem4": 4320,
29095               "rem": 5760,
29096               "lightsleep": 15840,
29097               "deepsleep": 5760,
29098               "sleepscore": 70.0
29099             },
29100             "schema": {
29101               "$ref": "#/definitions/Sleep"
29102             }
29103           }
29104         }
29105       }
29106     }
29107   },
29108   "parameters": {
29109     "interface": {
29110       "in": "query",
```

```

29111     "name": "if",
29112     "type": "string",
29113     "enum": [
29114         "oic.if.s",
29115         "oic.if.baseline"
29116     ]
29117 }
29118 },
29119 "definitions": {
29120     "Sleep": {
29121         "properties": {
29122             "awake": {
29123                 "type": "integer",
29124                 "minimum": 0,
29125                 "readOnly": true,
29126                 "description": "Time spent in Awake stage (in seconds)"
29127             },
29128             "nrem1": {
29129                 "type": "integer",
29130                 "minimum": 0,
29131                 "readOnly": true,
29132                 "description": "Time spent in Non Rapid Eye Movement stage 1 (in seconds)"
29133             },
29134             "nrem2": {
29135                 "type": "integer",
29136                 "minimum": 0,
29137                 "readOnly": true,
29138                 "description": "Time spent in Non Rapid Eye Movement stage 2 (in seconds)"
29139             },
29140             "nrem3": {
29141                 "type": "integer",
29142                 "minimum": 0,
29143                 "readOnly": true,
29144                 "description": "Time spent in Non Rapid Eye Movement stage 3 (in seconds)"
29145             },
29146             "nrem4": {
29147                 "type": "integer",
29148                 "minimum": 0,
29149                 "readOnly": true,
29150                 "description": "Time spent in Non Rapid Eye Movement stage 4 (in seconds)"
29151             },
29152             "rem": {
29153                 "type": "integer",
29154                 "minimum": 0,
29155                 "readOnly": true,
29156                 "description": "Time spent in Rapid Eye Movement (in seconds)"
29157             },
29158             "lightsleep": {
29159                 "type": "integer",
29160                 "minimum": 0,
29161                 "readOnly": true,
29162                 "description": "Time spent in Light Sleep stage, consisting in NREM stages 1 and 2 (in
29163 seconds)"
29164             },
29165             "deepsleep": {
29166                 "type": "integer",
29167                 "minimum": 0,
29168                 "readOnly": true,
29169                 "description": "Time spent in Deep Sleep stage, consisting in NREM stages 3 and 4 (in
29170 seconds)"
29171             },
29172             "sleepscore": {
29173                 "type": "number",
29174                 "minimum": 0,
29175                 "readOnly": true,
29176                 "description": "Score computed from the time spent in each sleep stage, indicative of the
29177 quality of sleep"
29178             },
29179             "if": {
29180                 "description": "The Interface set supported by this Resource",
29181                 "type": "array",
29182                 "minItems": 1,

```

```

29183         "uniqueItems": true,
29184         "readOnly": true,
29185         "items": {
29186             "type": "string",
29187             "enum": [
29188                 "oic.if.s",
29189                 "oic.if.baseline"
29190             ]
29191         }
29192     },
29193     "rt": {
29194         "description": "Resource Type",
29195         "type": "array",
29196         "minItems": 1,
29197         "uniqueItems": true,
29198         "readOnly": true,
29199         "items": {
29200             "type": "string",
29201             "enum": [
29202                 "oic.r.sleep"
29203             ]
29204         }
29205     },
29206     "n": {
29207         "$ref":
29208         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
29209         schema.json#/definitions/n"
29210     },
29211     "range_phases": {
29212         "$ref":
29213         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
29214         schema.json#/definitions/range_integer"
29215     },
29216     "step_phases": {
29217         "$ref":
29218         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
29219         schema.json#/definitions/step_integer"
29220     },
29221     "range_score": {
29222         "$ref":
29223         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
29224         schema.json#/definitions/range_number"
29225     },
29226     "step_score": {
29227         "$ref":
29228         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
29229         schema.json#/definitions/step_number"
29230     },
29231     "precision": {
29232         "$ref":
29233         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
29234         schema.json#/definitions/precision"
29235     }
29236 },
29237 "type": "object",
29238 "required": [
29239     "awake",
29240     "nrem1",
29241     "nrem2",
29242     "nrem3",
29243     "rem"
29244 ]
29245 }
29246 }
29247 }

```

## 29248 6.141.5 Property definition

29249 Table 285 defines the Properties that are part of the "oic.r.sleep" Resource Type.



**Table 285 – The Property definitions of the Resource with type "rt" = "oic.r.sleep".**

Property name	Value type	Mandatory	Access mode	Description
awake	integer	Yes	Read Only	Time spent in Awake stage (in seconds)
nrem1	integer	Yes	Read Only	Time spent in Non Rapid Eye Movement stage 1 (in seconds)
nrem2	integer	Yes	Read Only	Time spent in Non Rapid Eye Movement stage 2 (in seconds)
nrem3	integer	Yes	Read Only	Time spent in Non Rapid Eye Movement stage 3 (in seconds)
nrem4	integer	No	Read Only	Time spent in Non Rapid Eye Movement stage 4 (in seconds)
rem	integer	Yes	Read Only	Time spent in Rapid Eye Movement (in seconds)
lightsleep	integer	No	Read Only	Time spent in Light Sleep stage, consisting in NREM stages 1 and 2 (in seconds)
deepsleep	integer	No	Read Only	Time spent in Deep Sleep stage, consisting in NREM stages 3 and 4 (in seconds)
sleepscore	number	No	Read Only	Score computed from the time spent in each sleep stage, indicative of the quality of sleep
if	array: see schema	No	Read Only	The Interface set supported by this Resource
rt	array: see schema	No	Read Only	Resource Type
n	multiple types: see schema	No	Read Write	
range_phases	multiple types: see schema	No	Read Write	
step_phases	multiple types: see schema	No	Read Write	
range_score	multiple types: see schema	No	Read Write	
step_score	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	

29251 **6.141.6 CRUDN behaviour**

29252 Table 286 defines the CRUDN operations that are supported on the "oic.r.sleep" Resource Type.

29253 **Table 286 – The CRUDN operations of the Resource with type "rt" = "oic.r.sleep".**

Create	Read	Update	Delete	Notify
	get			observe

29254 **6.142 Sleep Monitor Atomic Measurement Batch Representation**

29255 **6.142.1 Introduction**

29256 This Resource describes the Properties associated with Sleep Monitor.

29257 The Resource is an Atomic Measurement of sleep (oic.r.sleep).

29258 Sleep shows the time spent in each of the sleep stages (awake, nrem1, nrem2, nrem3, nrem4,  
29259 rem, light sleep, deep sleep), along with a sleep score indicating the quality of sleep.

29260 **6.142.2 Example URI**

29261 /SleepMonitorAMResURI

29262 **6.142.3 Resource type**

29263 The Resource Type is defined as: "oic.r.sleepmonitor-am, oic.wk.atomicmeasurement".

29264 **6.142.4 OpenAPI 2.0 definition**

```

29265 {
29266   "swagger": "2.0",
29267   "info": {
29268     "title": "Sleep Monitor Atomic Measurement Batch Representation",
29269     "version": "2018-08-29",
29270     "license": {
29271       "name": "OCF Data Model License",
29272       "url":
29273         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbc8bdc4ba/LI
29274         CENSE.md",
29275       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
29276     },
29277     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
29278   },
29279   "schemes": [
29280     "http"
29281   ],
29282   "consumes": [
29283     "application/json"
29284   ],
29285   "produces": [
29286     "application/json"
29287   ],
29288   "paths": {
29289     "/SleepMonitorAMResURI?if=oic.if.b": {
29290       "get": {
29291         "description": "This Resource describes the Properties associated with Sleep Monitor.\nThe
29292         Resource is an Atomic Measurement of sleep (oic.r.sleep).\nSleep shows the time spent in each of the
29293         sleep stages (awake, nrem1, nrem2, nrem3, nrem4, rem, light sleep, deep sleep), along with a sleep
29294         score indicating the quality of sleep.",
29295         "parameters": [
29296           {
29297             "$ref": "#/parameters/interface-b"
29298           }
29299         ],
29300         "responses": {
29301           "200": {
29302             "description": "Retrieves the sleep monitor's information.",
29303             "x-example": [
29304               {
29305                 "href": "/mySleepMonitor",
29306                 "rep": {

```

```

29307         "awake": 1440,
29308         "nrem1": 1440,
29309         "nrem2": 14400,
29310         "nrem3": 1440,
29311         "nrem4": 4320,
29312         "rem": 5760,
29313         "lightsleep": 15840,
29314         "deepsleep": 5760,
29315         "sleepscore": 70.0
29316     }
29317 },
29318 {
29319     "href": "/myHeartRate",
29320     "rep": {
29321         "heartrate": 70
29322     }
29323 },
29324 {
29325     "href": "/myUserId",
29326     "rep": {
29327         "userid": "USER1"
29328     }
29329 },
29330 {
29331     "href": "/myTimeStamp",
29332     "rep": {
29333         "timestamp": "2018-11-08T21:00:00+08:00"
29334     }
29335 }
29336 ],
29337 "schema": {
29338     "$ref": "#/definitions/batch-retrieve"
29339 }
29340 }
29341 }
29342 },
29343 {
29344     "/SleepMonitorAMResURI?if=oic.if.ll": {
29345         "get": {
29346             "description": "This Resource describes the Properties associated with Sleep Monitor.\n\nThe
29347 Resource is an Atomic Measurement of sleep (oic.r.sleep).\n\nSleep shows the time spent in each of the
29348 sleep stages (awake, nrem1, nrem2, nrem3, nrem4, rem, light sleep, deep sleep), along with a sleep
29349 score indicating the quality of sleep.",
29350             "parameters": [
29351                 {
29352                     "$ref": "#/parameters/interface-ll"
29353                 }
29354             ],
29355             "responses": {
29356                 "200": {
29357                     "description": "Retrieves the sleep monitor's information.",
29358                     "x-example": [
29359                         {
29360                             "href": "/mySleepMonitor",
29361                             "rt": [
29362                                 "oic.r.sleep"
29363                             ],
29364                             "if": [
29365                                 "oic.if.s",
29366                                 "oic.if.baseline"
29367                             ]
29368                         },
29369                         {
29370                             "href": "/myHeartRate",
29371                             "rt": [
29372                                 "oic.r.heartrate"
29373                             ],
29374                             "if": [
29375                                 "oic.if.s",
29376                                 "oic.if.baseline"
29377                             ]
29378                         }
29379                     ]
29380                 }
29381             }
29382         }
29383     }
29384 }

```

```

29379     {
29380         "href": "/myUserId",
29381         "rt": [
29382             "oic.r.userid"
29383         ],
29384         "if": [
29385             "oic.if.r",
29386             "oic.if.baseline"
29387         ]
29388     },
29389     {
29390         "href": "/myTimeStamp",
29391         "rt": [
29392             "oic.r.time.stamp"
29393         ],
29394         "if": [
29395             "oic.if.r",
29396             "oic.if.baseline"
29397         ]
29398     }
29399 ],
29400 "schema": {
29401     "$ref": "#/definitions/links"
29402 }
29403 }
29404 }
29405 }
29406 },
29407 "/SleepMonitorAMResURI?if=oic.if.baseline": {
29408     "get": {
29409         "description": "This Resource describes the Properties associated with Sleep Monitor.\nThe
29410 Resource is an Atomic Measurement of sleep (oic.r.sleep).\nSleep shows the time spent in each of the
29411 sleep stages (awake, nrem1, nrem2, nrem3, nrem4, rem, light sleep, deep sleep), along with a sleep
29412 score indicating the quality of sleep.",
29413         "parameters": [
29414             {
29415                 "$ref": "#/parameters/interface-baseline"
29416             }
29417         ],
29418         "responses": {
29419             "200": {
29420                 "description": "Retrieves the sleep monitor's information.",
29421                 "x-example": {
29422                     "rt": [
29423                         "oic.r.sleepmonitor-am",
29424                         "oic.wk.atomicmeasurement"
29425                     ],
29426                     "if": [
29427                         "oic.if.b",
29428                         "oic.if.ll",
29429                         "oic.if.baseline"
29430                     ],
29431                     "rts-m": [
29432                         "oic.r.sleep"
29433                     ],
29434                     "rts": [
29435                         "oic.r.sleep",
29436                         "oic.r.heartrate",
29437                         "oic.r.time.stamp",
29438                         "oic.r.userid"
29439                     ],
29440                     "links": [
29441                         {
29442                             "href": "/mySleepMonitor",
29443                             "rt": [
29444                                 "oic.r.sleep"
29445                             ],
29446                             "if": [
29447                                 "oic.if.s",
29448                                 "oic.if.baseline"
29449                             ]
29450                         }

```

```

29451         {
29452             "href": "/myHeartRate",
29453             "rt": [
29454                 "oic.r.heartrate"
29455             ],
29456             "if": [
29457                 "oic.if.s",
29458                 "oic.if.baseline"
29459             ]
29460         },
29461         {
29462             "href": "/myUserId",
29463             "rt": [
29464                 "oic.r.userid"
29465             ],
29466             "if": [
29467                 "oic.if.r",
29468                 "oic.if.baseline"
29469             ]
29470         },
29471         {
29472             "href": "/myTimeStamp",
29473             "rt": [
29474                 "oic.r.time.stamp"
29475             ],
29476             "if": [
29477                 "oic.if.r",
29478                 "oic.if.baseline"
29479             ]
29480         }
29481     ],
29482     },
29483     "schema": {
29484         "$ref": "#/definitions/baseline"
29485     }
29486 },
29487 }
29488 }
29489 },
29490 },
29491 "parameters": {
29492     "interface-ll": {
29493         "in": "query",
29494         "name": "if",
29495         "type": "string",
29496         "enum": [
29497             "oic.if.ll"
29498         ]
29499     },
29500     "interface-b": {
29501         "in": "query",
29502         "name": "if",
29503         "type": "string",
29504         "enum": [
29505             "oic.if.b"
29506         ]
29507     },
29508     "interface-baseline": {
29509         "in": "query",
29510         "name": "if",
29511         "type": "string",
29512         "enum": [
29513             "oic.if.baseline"
29514         ]
29515     },
29516     "interface-all": {
29517         "in": "query",
29518         "name": "if",
29519         "type": "string",
29520         "enum": [
29521             "oic.if.b",
29522             "oic.if.ll",

```

```

29523         "oic.if.baseline"
29524     ]
29525 }
29526 },
29527 "definitions": {
29528     "batch-retrieve": {
29529         "title": "Atomic Measurement Batch Retrieve Format",
29530         "minItems": 1,
29531         "uniqueItems": true,
29532         "readOnly": true,
29533         "items": {
29534             "properties": {
29535                 "href": {
29536                     "$ref":
29537 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29538 schema.json#/definitions/href"
29539                 },
29540                 "rep": {
29541                     "description": " The response payload from an Atomic Measurement (batch) resource",
29542                     "type": "object",
29543                     "items": {
29544                         "anyOf": [
29545                             {
29546                                 "$ref":
29547 "https://openconnectivityfoundation.github.io/IoTDataModels/Sleep.swagger.json#/definitions/Sleep"
29548                             },
29549                             {
29550                                 "$ref":
29551 "https://openconnectivityfoundation.github.io/IoTDataModels/HeartRate.swagger.json#/definitions/Hear
29552 tRate"
29553                             },
29554                             {
29555                                 "$ref":
29556 "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/U
29557 serID"
29558                             },
29559                             {
29560                                 "$ref":
29561 "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definition
29562 s/TimeStamp"
29563                             }
29564                         ]
29565                     }
29566                 }
29567             },
29568             "required": [
29569                 "href",
29570                 "rep"
29571             ],
29572             "type": "object"
29573         },
29574         "type": "array"
29575     },
29576     "links": {
29577         "type": "array",
29578         "items": {
29579             "$ref": "#/definitions/oic.oic-link"
29580         }
29581     },
29582     "baseline": {
29583         "properties": {
29584             "rt": {
29585                 "type": "array",
29586                 "readOnly": true,
29587                 "uniqueItems": true,
29588                 "minItems": 2,
29589                 "items": {
29590                     "type": "string",
29591                     "enum": [
29592                         "oic.r.sleepmonitor-am",
29593                         "oic.wk.atomicmeasurement"
29594                     ]

```

```

29595     }
29596   },
29597   "rts": {
29598     "description": "This contains all possible resource types for this atomic measurement.",
29599     "type": "array",
29600     "uniqueItems": true,
29601     "minItems": 1,
29602     "readOnly": true,
29603     "items": {
29604       "type": "string",
29605       "enum": [
29606         "oic.r.sleep",
29607         "oic.r.heartrate",
29608         "oic.r.userid",
29609         "oic.r.time.stamp"
29610       ]
29611     }
29612   },
29613   "rts-m": {
29614     "description": "This contains all mandatory resource types for this atomic measurement.",
29615     "type": "array",
29616     "uniqueItems": true,
29617     "minItems": 1,
29618     "maxItems": 1,
29619     "readOnly": true,
29620     "items": {
29621       "type": "string",
29622       "enum": [
29623         "oic.r.sleep"
29624       ]
29625     }
29626   },
29627   "if": {
29628     "description": "The interface set supported by this resource",
29629     "type": "array",
29630     "readOnly": true,
29631     "minItems": 3,
29632     "uniqueItems": true,
29633     "items": {
29634       "type": "string",
29635       "enum": [
29636         "oic.if.b",
29637         "oic.if.ll",
29638         "oic.if.baseline"
29639       ]
29640     }
29641   },
29642   "links": {
29643     "$ref": "#/definitions/links"
29644   },
29645   "n": {
29646     "$ref":
29647     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
29648     schema.json#/definitions/n"
29649   }
29650 },
29651 "type": "object",
29652 "required": [
29653   "rt",
29654   "if",
29655   "rts-m"
29656 ]
29657 },
29658 "oic.oic-link": {
29659   "properties": {
29660     "if": {
29661       "type": "array",
29662       "readOnly": true,
29663       "uniqueItems": true,
29664       "minItems": 1,
29665       "items": {
29666         "type": "string",

```

```

29667         "enum": [
29668             "oic.if.baseline",
29669             "oic.if.s",
29670             "oic.if.r"
29671         ]
29672     }
29673 },
29674 "rt": {
29675     "type": "array",
29676     "readOnly": true,
29677     "uniqueItems": true,
29678     "minItems": 1,
29679     "items": {
29680         "type": "string",
29681         "enum": [
29682             "oic.r.sleep",
29683             "oic.r.heartrate",
29684             "oic.r.userid",
29685             "oic.r.time.stamp"
29686         ]
29687     }
29688 },
29689 "anchor": {
29690     "$ref":
29691 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29692 schema.json#/definitions/anchor"
29693 },
29694 "di": {
29695     "$ref":
29696 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29697 schema.json#/definitions/di"
29698 },
29699 "eps": {
29700     "$ref":
29701 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29702 schema.json#/definitions/eps"
29703 },
29704 "href": {
29705     "$ref":
29706 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29707 schema.json#/definitions/href"
29708 },
29709 "ins": {
29710     "$ref":
29711 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29712 schema.json#/definitions/ins"
29713 },
29714 "p": {
29715     "$ref":
29716 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29717 schema.json#/definitions/p"
29718 },
29719 "rel": {
29720     "$ref":
29721 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29722 schema.json#/definitions/rel_array"
29723 },
29724 "title": {
29725     "$ref":
29726 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29727 schema.json#/definitions/title"
29728 },
29729 "type": {
29730     "$ref":
29731 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29732 schema.json#/definitions/type"
29733 }
29734 },
29735 "required": [
29736     "href",
29737     "rt",
29738     "if"

```



```

29739     ],
29740     "type": "object"
29741   }
29742 }
29743 }

```

29744 **6.142.5 Property definition**

29745 Table 287 defines the Properties that are part of the "oic.r.sleepmonitor-am,  
29746 oic.wk.atomicmeasurement" Resource Type.

29747 **Table 287 – The Property definitions of the Resource with type "rt" = "oic.r.sleepmonitor-  
29748 am, oic.wk.atomicmeasurement".**

Property name	Value type	Mandatory	Access mode	Description
href	multiple types: see schema	Yes	Read Write	
rep	object: see schema	Yes	Read Write	The response payload from an Atomic Measurement (batch) resource
rt	array: see schema	Yes	Read Only	
rts	array: see schema	No	Read Only	This contains all possible resource types for this atomic measurement.
rts-m	array: see schema	Yes	Read Only	This contains all mandatory resource types for this atomic measurement.
if	array: see schema	Yes	Read Only	The interface set supported by this resource
links	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
if	array: see schema	Yes	Read Only	
rt	array: see schema	Yes	Read Only	
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	

29749 **6.142.6 CRUDN behaviour**

29750 Table 288 defines the CRUDN operations that are supported on the "oic.r.sleepmonitor-am,  
29751 oic.wk.atomicmeasurement" Resource Type.

**Table 288 – The CRUDN operations of the Resource with type "rt" = "oic.r.sleepmonitor-am, oic.wk.atomicmeasurement".**

Create	Read	Update	Delete	Notify
	get			observe

29754 **6.143 SpO2 for Pulse Oximeter**

29755 **6.143.1 Introduction**

29756 This Resource describes the Properties associated with a person's blood oxygen saturation level.  
29757 The spo2 and perfusion Properties are read-only value that is provided by the server.  
29758 When range (from "oic.r.baseresource") is omitted the default is 0 to +MAXFLOAT.

29759 **6.143.2 Example URI**

29760 /SpO2ResURI

29761 **6.143.3 Resource type**

29762 The Resource Type is defined as: "oic.r.spo2".

29763 **6.143.4 OpenAPI 2.0 definition**

```

29764 {
29765   "swagger": "2.0",
29766   "info": {
29767     "title": "SpO2 for Pulse Oximeter",
29768     "version": "2019-03-04",
29769     "license": {
29770       "name": "OCF Data Model License",
29771       "url":
29772 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
29773 CENSE.md",
29774       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
29775     },
29776     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
29777   },
29778   "schemes": [
29779     "http"
29780   ],
29781   "consumes": [
29782     "application/json"
29783   ],
29784   "produces": [
29785     "application/json"
29786   ],
29787   "paths": {
29788     "/SpO2ResURI": {
29789       "get": {
29790         "description": "This Resource describes the Properties associated with a person's blood
29791 oxygen saturation level.\n The spo2 and perfusion Properties are read-only value that is provided by
29792 the server.\n When range (from \"oic.r.baseresource\") is omitted the default is 0 to +MAXFLOAT.",
29793         "parameters": [
29794           {
29795             "$ref": "#/parameters/interface"
29796           }
29797         ],
29798         "responses": {
29799           "200": {
29800             "description": "",
29801             "x-example": {
29802               "rt": [
29803                 "oic.r.spo2"

```

```

29804         ],
29805         "spo2": 99.0,
29806         "perfusion": 20.0
29807     },
29808     "schema": {
29809         "$ref": "#/definitions/SpO2"
29810     }
29811 }
29812 }
29813 }
29814 }
29815 },
29816 "parameters": {
29817     "interface": {
29818         "in": "query",
29819         "name": "if",
29820         "type": "string",
29821         "enum": [
29822             "oic.if.s",
29823             "oic.if.baseline"
29824         ]
29825     }
29826 },
29827 "definitions": {
29828     "SpO2": {
29829         "properties": {
29830             "spo2": {
29831                 "description": "This Property describes the estimation of the oxygen saturation level in
29832 percentage.",
29833                 "type": "number",
29834                 "minimum": 0.0,
29835                 "maximum": 100.0,
29836                 "readOnly": true
29837             },
29838             "perfusion": {
29839                 "description": "This Property describes the ratio of AC over DC of PPG.",
29840                 "type": "number",
29841                 "minimum": 0.0,
29842                 "readOnly": true
29843             },
29844             "rt": {
29845                 "description": "The Resource Type.",
29846                 "items": {
29847                     "enum": [
29848                         "oic.r.spo2"
29849                     ],
29850                     "type": "string"
29851                 },
29852                 "minItems": 1,
29853                 "uniqueItems": true,
29854                 "readOnly": true,
29855                 "type": "array"
29856             },
29857             "n": {
29858                 "$ref":
29859 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
29860 schema.json#/definitions/n"
29861             },
29862             "if": {
29863                 "description": "The OCF Interface set supported by this Resource.",
29864                 "items": {
29865                     "enum": [
29866                         "oic.if.s",
29867                         "oic.if.baseline"
29868                     ],
29869                     "type": "string"
29870                 },
29871                 "minItems": 1,
29872                 "uniqueItems": true,
29873                 "readOnly": true,
29874                 "type": "array"
29875             },

```

```

29876     "spo2_range": {
29877         "$ref":
29878 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
29879 schema.json#/definitions/range_number"
29880     },
29881     "perfusion_range": {
29882         "$ref":
29883 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
29884 schema.json#/definitions/range_number"
29885     },
29886     "spo2_step": {
29887         "$ref":
29888 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
29889 schema.json#/definitions/step_number"
29890     },
29891     "perfusion_step": {
29892         "$ref":
29893 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
29894 schema.json#/definitions/step_number"
29895     },
29896     "spo2_precision": {
29897         "$ref":
29898 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
29899 schema.json#/definitions/precision"
29900     },
29901     "perfusion_precision": {
29902         "$ref":
29903 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
29904 schema.json#/definitions/precision"
29905     }
29906 },
29907 "type": "object",
29908 "required": [
29909     "spo2"
29910 ]
29911 }
29912 }
29913 }

```

### 29914 6.143.5 Property definition

29915 Table 289 defines the Properties that are part of the "oic.r.spo2" Resource Type.

29916 **Table 289 – The Property definitions of the Resource with type "rt" = "oic.r.spo2".**

Property name	Value type	Mandatory	Access mode	Description
spo2	number	Yes	Read Only	This Property describes the estimation of the oxygen saturation level in percentage.
perfusion	number	No	Read Only	This Property describes the ratio of AC over DC of PPG.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
spo2_range	multiple types: see schema	No	Read Write	
perfusion_range	multiple types: see schema	No	Read Write	

spo2_step	multiple types: see schema	No	Read Write	
perfusion_step	multiple types: see schema	No	Read Write	
spo2_precision	multiple types: see schema	No	Read Write	
perfusion_precision	multiple types: see schema	No	Read Write	

29917 **6.143.6 CRUDN behaviour**

29918 Table 290 defines the CRUDN operations that are supported on the "oic.r.spo2" Resource Type.

29919 **Table 290 – The CRUDN operations of the Resource with type "rt" = "oic.r.spo2".**

Create	Read	Update	Delete	Notify
	get			observe

29920 **6.144 Cadence**

29921 **6.144.1 Introduction**

29922 This Resource describes the cadence, which is the number of revolutions of crank per minute  
29923 when cyclists pedal the pedals.

29924 The unit, which is the default unit, is rpm.

29925 The cadence Property is a read-only value that is provided by the server.

29926 When range (from "oic.r.baseresource") is omitted the default is 0 to +MAXFLOAT.

29927 **6.144.2 Example URI**

29928 /CadenceResURI

29929 **6.144.3 Resource type**

29930 The Resource Type is defined as: "oic.r.cadence".

29931 **6.144.4 OpenAPI 2.0 definition**

```

29932 {
29933   "swagger": "2.0",
29934   "info": {
29935     "title": "Cadence",
29936     "version": "2019-06-11",
29937     "license": {
29938       "name": "OCF Data Model License",
29939       "url":
29940 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
29941 CENSE.md",
29942       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
29943     },
29944     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
29945   },
29946   "schemes": [
29947     "http"
29948   ],
29949   "consumes": [
29950     "application/json"
29951   ],
29952   "produces": [
29953     "application/json"
29954   ],
29955   "paths": {
29956     "/CadenceResURI": {
29957       "get": {
29958         "description": "This Resource describes the cadence, which is the number of revolutions of
29959 crank per minute when cyclists pedal the pedals.\n The unit, which is the default unit, is rpm.\n
29960 The cadence Property is a read-only value that is provided by the server.\n When range (from

```

```

29961  \"oic.r.baseresource\") is omitted the default is 0 to +MAXFLOAT.",
29962      "parameters": [
29963          {
29964              "$ref": "#/parameters/interface"
29965          }
29966      ],
29967      "responses": {
29968          "200": {
29969              "description": "",
29970              "x-example": {
29971                  "rt": [
29972                      "oic.r.cadence"
29973                  ],
29974                  "cadence": 60
29975              },
29976              "schema": {
29977                  "$ref": "#/definitions/Cadence"
29978              }
29979          }
29980      }
29981  },
29982  },
29983  },
29984  "parameters": {
29985      "interface": {
29986          "in": "query",
29987          "name": "if",
29988          "type": "string",
29989          "enum": [
29990              "oic.if.s",
29991              "oic.if.baseline"
29992          ]
29993      }
29994  },
29995  "definitions": {
29996      "Cadence": {
29997          "properties": {
29998              "cadence": {
29999                  "description": "This Property describes the rate at which a cyclist is pedalling/turning
30000 the pedals.",
30001                  "type": "integer",
30002                  "minimum": 0,
30003                  "readOnly": true
30004              },
30005              "rt": {
30006                  "description": "The Resource Type.",
30007                  "items": {
30008                      "enum": [
30009                          "oic.r.cadence"
30010                      ],
30011                      "type": "string"
30012                  },
30013                  "minItems": 1,
30014                  "uniqueItems": true,
30015                  "readOnly": true,
30016                  "type": "array"
30017              },
30018              "n": {
30019                  "$ref":
30020 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
30021 schema.json#/definitions/n"
30022              },
30023              "if": {
30024                  "description": "The OCF Interface set supported by this Resource.",
30025                  "items": {
30026                      "enum": [
30027                          "oic.if.s",
30028                          "oic.if.baseline"
30029                      ],
30030                      "type": "string"
30031                  },
30032                  "minItems": 1,

```

```

30033         "uniqueItems": true,
30034         "readOnly": true,
30035         "type": "array"
30036     },
30037     "range": {
30038         "$ref":
30039         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
30040         schema.json#/definitions/range_integer"
30041     },
30042     "step": {
30043         "$ref":
30044         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
30045         schema.json#/definitions/step_integer"
30046     }
30047 },
30048 "type": "object",
30049 "required": [
30050     "cadence"
30051 ]
30052 }
30053 }
30054 }

```

### 30055 6.144.5 Property definition

30056 Table 291 defines the Properties that are part of the "oic.r.cadence" Resource Type.

30057 **Table 291 – The Property definitions of the Resource with type "rt" = "oic.r.cadence".**

Property name	Value type	Mandatory	Access mode	Description
cadence	integer	Yes	Read Only	This Property describes the rate at which a cyclist is pedalling/turning the pedals.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	

### 30058 6.144.6 CRUDN behaviour

30059 Table 292 defines the CRUDN operations that are supported on the "oic.r.cadence" Resource Type.

30060 **Table 292 – The CRUDN operations of the Resource with type "rt" = "oic.r.cadence".**

Create	Read	Update	Delete	Notify
	get			observe

### 30061 6.145 Circuit Breaker (IEC 61850)

#### 30062 6.145.1 Introduction

30063 This Resource describes functions for the control and monitoring of IEC 61850 based circuit  
30064 breaker.

#### 30065 6.145.2 Example URI

30066 /CircuitBreakerResURI

### 30067 6.145.3 Resource type

30068 The Resource Type is defined as: "oic.r.circuitbreaker".

### 30069 6.145.4 OpenAPI 2.0 definition

```
30070 {
30071   "swagger": "2.0",
30072   "info": {
30073     "title": "Circuit Breaker (IEC 61850)",
30074     "version": "20190613",
30075     "license": {
30076       "name": "OCF Data Model License",
30077       "url":
30078         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
30079         CENSE.md",
30080       "x-copyright": "copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
30081     },
30082     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
30083   },
30084   "schemes": ["http"],
30085   "consumes": ["application/json"],
30086   "produces": ["application/json"],
30087   "paths": {
30088     "/CircuitBreakerResURI": {
30089       "get": {
30090         "description": "This Resource describes functions for the control and monitoring of IEC
30091         61850 based circuit breaker.",
30092         "parameters": [
30093           { "$ref": "#/parameters/interface" }
30094         ],
30095         "responses": {
30096           "200": {
30097             "description": "",
30098             "x-example":
30099               {
30100                 "rt": ["oic.r.circuitbreaker"],
30101                 "if": ["oic.if.s", "oic.if.baseline"],
30102                 "status": "on",
30103                 "ratedcurrent": 10.0,
30104                 "ratedbreakingcurrent": 2500.0,
30105                 "ratedvoltage": 460.0,
30106                 "leakagecurrent": 0.5,
30107                 "insulationresistance": 0.3,
30108                 "timestamp": "2015-11-05T14:30:00.10Z"
30109               },
30110             "schema": { "$ref": "#/definitions/CircuitBreaker" }
30111           }
30112         }
30113       }
30114     }
30115   },
30116   "parameters": {
30117     "interface": {
30118       "in": "query",
30119       "name": "if",
30120       "type": "string",
30121       "enum": ["oic.if.s", "oic.if.baseline"]
30122     }
30123   },
30124   "definitions": {
30125     "CircuitBreaker": {
30126       "properties": {
30127         "rt": {
30128           "description": "The Resource Type",
30129           "items": {
30130             "enum": ["oic.r.circuitbreaker"],
30131             "maxLength": 64,
30132             "type": "string"
30133           },
30134           "minItems": 1,
30135           "uniqueItems": true,
```



```

30136         "readOnly": true,
30137         "type": "array"
30138     },
30139     "status" : {
30140         "description": "The circuit breaker status. The status can only be reset out of bounds.",
30141         "readOnly": true,
30142         "type": "string",
30143         "enum" : [ "on", "off", "trip" ]
30144     },
30145     "ratedcurrent" : {
30146         "description": "The rated current in Ampere, defined at manufacturing time.",
30147         "readOnly": true,
30148         "type": "number"
30149     },
30150     "ratedbreakingcurrent" : {
30151         "description": "The rated breaking current in Ampere, defined at manufacturing time.",
30152         "readOnly": true,
30153         "type": "number"
30154     },
30155     "ratedvoltage" : {
30156         "description": "The rated voltage in Volts, defined at manufacturing time.",
30157         "readOnly": true,
30158         "type": "number"
30159     },
30160     "leakagecurrent" : {
30161         "description": "The leakage current in mA.",
30162         "readOnly": true,
30163         "type": "number"
30164     },
30165     "insulationresistance" : {
30166         "description": "Insulation resistance of circuit breaker (M Ohm).",
30167         "readOnly": true,
30168         "type": "number"
30169     },
30170     "timestamp": {
30171         "description": "An RFC3339 formatted time indicating when the data was observed (e.g.:
30172 2016-02-15T09:19Z, 1996-12-19T16:39:57-08:00). Note that 1/100 time resolution should be used.",
30173         "format": "date-time",
30174         "readOnly": true,
30175         "type": "string"
30176     },
30177     "n": {
30178         "$ref":
30179 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
30180 schema.json#/definitions/n"
30181     },
30182     "id": {
30183         "$ref":
30184 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
30185 schema.json#/definitions/id"
30186     },
30187     "if": {
30188         "description": "The OCF Interface set supported by this Resource.",
30189         "items": {
30190             "enum": [
30191                 "oic.if.s",
30192                 "oic.if.baseline"
30193             ],
30194             "type": "string"
30195         },
30196         "minItems": 2,
30197         "uniqueItems": true,
30198         "readOnly": true,
30199         "type": "array"
30200     }
30201 },
30202 "type": "object",
30203 "required": ["status", "ratedcurrent", "ratedbreakingcurrent", "ratedvoltage", "timestamp"]
30204 }
30205 }
30206 }
30207

```

30208 **6.145.5 Property definition**

30209 Table 293 defines the Properties that are part of the "oic.r.circuitbreaker" Resource Type.

30210 **Table 293 – The Property definitions of the Resource with type "rt" = "oic.r.circuitbreaker".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type
status	string	Yes	Read Only	The circuit breaker status. The status can only be reset out of bounds.
ratedcurrent	number	Yes	Read Only	The rated current in Ampere, defined at manufacturing time.
ratedbreakingcurrent	number	Yes	Read Only	The rated breaking current in Ampere, defined at manufacturing time.
ratedvoltage	number	Yes	Read Only	The rated voltage in Volts, defined at manufacturing time.
leakagecurrent	number	No	Read Only	The leakage current in mA.
insulationresistance	number	No	Read Only	Insulation resistance of circuit breaker (M Ohm).
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). Note that 1/100 time resolution should be used.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

30211 **6.145.6 CRUDN behaviour**

30212 Table 294 defines the CRUDN operations that are supported on the "oic.r.circuitbreaker" Resource  
30213 Type.

30214 **Table 294 – The CRUDN operations of the Resource with type "rt" = "oic.r.circuitbreaker".**

Create	Read	Update	Delete	Notify
	get			observe

30215 **6.146 Cycling Power**

30216 **6.146.1 Introduction**

30217 This Resource describes the cycling power, which is the amount of energy transferred or  
30218 converted per unit time.

30219 The unit, which is the default SI unit, is W (which is equal to one joule per second).  
30220 The power Property is a read-only value that is provided by the server.  
30221 When range (from "oic.r.baseresource") is omitted the default is 0 to +MAXFLOAT.

## 30222 6.146.2 Example URI

30223 /CyclingPowerResURI

## 30224 6.146.3 Resource type

30225 The Resource Type is defined as: "oic.r.cyclingpower".

## 30226 6.146.4 OpenAPI 2.0 definition

```
30227 {
30228   "swagger": "2.0",
30229   "info": {
30230     "title": "Cycling Power",
30231     "version": "2019-06-11",
30232     "license": {
30233       "name": "OCF Data Model License",
30234       "url":
30235         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
30236         CENSE.md",
30237       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
30238     },
30239     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
30240   },
30241   "schemes": [
30242     "http"
30243   ],
30244   "consumes": [
30245     "application/json"
30246   ],
30247   "produces": [
30248     "application/json"
30249   ],
30250   "paths": {
30251     "/CyclingPowerResURI": {
30252       "get": {
30253         "description": "This Resource describes the cycling power, which is the amount of energy
30254         transferred or converted per unit time.\n The unit, which is the default SI unit, is W (which is
30255         equal to one joule per second).\n The power Property is a read-only value that is provided by the
30256         server.\n When range (from \"oic.r.baseresource\") is omitted the default is 0 to +MAXFLOAT.",
30257         "parameters": [
30258           {
30259             "$ref": "#/parameters/interface"
30260           }
30261         ],
30262         "responses": {
30263           "200": {
30264             "description": "",
30265             "x-example": {
30266               "rt": [
30267                 "oic.r.cyclingpower"
30268               ],
30269               "power": 200.0,
30270               "power-left": 100.0,
30271               "power-right": 100.0
30272             },
30273             "schema": {
30274               "$ref": "#/definitions/CyclingPower"
30275             }
30276           }
30277         }
30278       }
30279     }
30280   },
30281   "parameters": {
30282     "interface": {
30283       "in": "query",
```

```

30284     "name": "if",
30285     "type": "string",
30286     "enum": [
30287         "oic.if.s",
30288         "oic.if.baseline"
30289     ]
30290 }
30291 },
30292 "definitions": {
30293     "CyclingPower": {
30294         "properties": {
30295             "power": {
30296                 "description": "The current overall power output in watts.",
30297                 "$ref": "#/definitions/power"
30298             },
30299             "power-left": {
30300                 "description": "The current power output in watts from the left pedal.",
30301                 "$ref": "#/definitions/power"
30302             },
30303             "power-right": {
30304                 "description": "The current power output in watts from the right pedal.",
30305                 "$ref": "#/definitions/power"
30306             },
30307             "rt": {
30308                 "description": "The Resource Type.",
30309                 "items": {
30310                     "enum": [
30311                         "oic.r.cyclingpower"
30312                     ],
30313                     "type": "string"
30314                 },
30315                 "minItems": 1,
30316                 "uniqueItems": true,
30317                 "readOnly": true,
30318                 "type": "array"
30319             },
30320             "n": {
30321                 "$ref":
30322 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
30323 schema.json#/definitions/n"
30324             },
30325             "if": {
30326                 "description": "The OCF Interface set supported by this Resource.",
30327                 "items": {
30328                     "enum": [
30329                         "oic.if.s",
30330                         "oic.if.baseline"
30331                     ],
30332                     "type": "string"
30333                 },
30334                 "minItems": 1,
30335                 "uniqueItems": true,
30336                 "readOnly": true,
30337                 "type": "array"
30338             },
30339             "range": {
30340                 "$ref":
30341 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
30342 schema.json#/definitions/range_number"
30343             },
30344             "step": {
30345                 "$ref":
30346 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
30347 schema.json#/definitions/step_number"
30348             }
30349         },
30350         "type": "object",
30351         "required": [
30352             "power"
30353         ]
30354     },
30355     "power": {

```

```

30356     "description": "This Resource describes the power, which is the amount of energy transferred
30357 or converted per unit time, in W (which is equal to one joule per second).",
30358     "type": "number",
30359     "minimum": 0.0,
30360     "readOnly": true
30361   }
30362 }
30363 }

```

### 30364 6.146.5 Property definition

30365 Table 295 defines the Properties that are part of the "oic.r.cyclingpower" Resource Type.

30366 **Table 295 – The Property definitions of the Resource with type "rt" = "oic.r.cyclingpower".**

Property name	Value type	Mandatory	Access mode	Description
power	multiple types: see schema	Yes	Read Write	The current overall power output in watts.
power-left	multiple types: see schema	No	Read Write	The current power output in watts from the left pedal.
power-right	multiple types: see schema	No	Read Write	The current power output in watts from the right pedal.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	

### 30367 6.146.6 CRUDN behaviour

30368 Table 296 defines the CRUDN operations that are supported on the "oic.r.cyclingpower" Resource  
30369 Type.

30370 **Table 296 – The CRUDN operations of the Resource with type "rt" = "oic.r.cyclingpower".**

Create	Read	Update	Delete	Notify
	get			observe

## 30371 6.147 Inverter (IEC 61850)

### 30372 6.147.1 Introduction

30373 This Resource describes functions for the control and monitoring of IEC 61850 based circuit  
30374 breaker.

### 30375 6.147.2 Example URI

30376 /InverterResURI

### 30377 6.147.3 Resource type

30378 The Resource Type is defined as: "oic.r.inverter".

#### 30379 6.147.4 OpenAPI 2.0 definition

```
30380 {
30381   "swagger": "2.0",
30382   "info": {
30383     "title": "Inverter (IEC 61850)",
30384     "version": "20190613",
30385     "license": {
30386       "name": "OCF Data Model License",
30387       "url":
30388         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
30389         CENSE.md",
30390       "x-copyright": "copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
30391     },
30392     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
30393   },
30394   "schemes": ["http"],
30395   "consumes": ["application/json"],
30396   "produces": ["application/json"],
30397   "paths": {
30398     "/InverterResURI" : {
30399       "get": {
30400         "description": "This Resource describes functions for the control and monitoring of IEC
30401         61850 based circuit breaker.",
30402         "parameters": [
30403           {"$ref": "#/parameters/interface"}
30404         ],
30405         "responses": {
30406           "200": {
30407             "description": "",
30408             "x-example":
30409               {
30410                 "rt": ["oic.r.inverter"],
30411                 "if": ["oic.if.s", "oic.if.baseline"],
30412                 "status": "on",
30413                 "ratedpower": 36.0,
30414                 "minvoltmppt": 200.0,
30415                 "maxvoltmppt": 1000.0,
30416                 "inputvoltage": 980.0,
30417                 "inputcurrent": 22.0,
30418                 "outputpower": 61.0,
30419                 "timestamp": "2015-11-05T14:30:00.13Z"
30420               },
30421             "schema": { "$ref": "#/definitions/Inverter" }
30422           }
30423         }
30424       }
30425     }
30426   },
30427   "parameters": {
30428     "interface" : {
30429       "in": "query",
30430       "name": "if",
30431       "type": "string",
30432       "enum": ["oic.if.s", "oic.if.baseline"]
30433     }
30434   },
30435   "definitions": {
30436     "Inverter" : {
30437       "properties": {
30438         "rt" : {
30439           "description": "The Resource Type",
30440           "items": {
30441             "enum": ["oic.r.inverter"],
30442             "maxLength": 64,
30443             "type": "string"
30444           },
30445           "minItems": 1,
30446           "uniqueItems": true,
30447           "readOnly": true,
30448           "type": "array"
30449         }
30450       }
30451     }
30452   }
30453 }
```

```

30450     "status" : {
30451         "description": "The inverter status. The status can only be reset out of bounds.",
30452         "readOnly": true,
30453         "type": "string",
30454         "enum" : [ "on", "off", "trip" ]
30455     },
30456     "ratedpower" : {
30457         "description": "The rated power in kW, defined at manufacturing time.",
30458         "readOnly": true,
30459         "type": "number"
30460     },
30461     "minvoltmppt" : {
30462         "description": "Minimum voltage for MPPT (Maximum power point tracking) control method
30463 (V), defined at manufacturing time.",
30464         "readOnly": true,
30465         "type": "number"
30466     },
30467     "maxvoltmppt" : {
30468         "description": "Maximum voltage for MPPT (Maximum power point tracking) control method
30469 (V), defined at manufacturing time.",
30470         "readOnly": true,
30471         "type": "number"
30472     },
30473     "inputvoltage" : {
30474         "description": "input voltage in Volts.",
30475         "readOnly": true,
30476         "type": "number"
30477     },
30478     "inputcurrent" : {
30479         "description": "input current in Amperes.",
30480         "readOnly": true,
30481         "type": "number"
30482     },
30483     "outputpower" : {
30484         "description": "output power in kW.",
30485         "readOnly": true,
30486         "type": "number"
30487     },
30488     "timestamp": {
30489         "description": "An RFC3339 formatted time indicating when the data was observed (e.g.:
30490 2016-02-15T09:19Z, 1996-12-19T16:39:57-08:00). Resolution in 1/100 second.",
30491         "format": "date-time",
30492         "readOnly": true,
30493         "type": "string"
30494     },
30495     "n": {
30496         "$ref":
30497 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
30498 schema.json#/definitions/n"
30499     },
30500     "id": {
30501         "$ref":
30502 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
30503 schema.json#/definitions/id"
30504     },
30505     "if": {
30506         "description": "The OCF Interface set supported by this Resource.",
30507         "items": {
30508             "enum": [
30509                 "oic.if.s",
30510                 "oic.if.baseline"
30511             ],
30512             "type": "string"
30513         },
30514         "minItems": 2,
30515         "uniqueItems": true,
30516         "readOnly": true,
30517         "type": "array"
30518     }
30519 },
30520 "type": "object",
30521 "required": ["status", "ratedpower", "minvoltmppt", "maxvoltmppt",

```

```

30522 "inputvoltage", "inputcurrent", "outputpower", "timestamp"]
30523     }
30524   }
30525 }
30526

```

### 30527 6.147.5 Property definition

30528 Table 297 defines the Properties that are part of the "oic.r.inverter" Resource Type.

30529 **Table 297 – The Property definitions of the Resource with type "rt" = "oic.r.inverter".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type
status	string	Yes	Read Only	The inverter status. The status can only be reset out of bounds.
ratedpower	number	Yes	Read Only	The rated power in kW, defined at manufacturing time.
minvoltmppt	number	Yes	Read Only	Minimum voltage for MPPT (Maximum power point tracking) control method (V), defined at manufacturing time.
maxvoltmppt	number	Yes	Read Only	Maximum voltage for MPPT (Maximum power point tracking) control method (V), defined at manufacturing time.
inputvoltage	number	Yes	Read Only	input voltage in Volts.
inputcurrent	number	Yes	Read Only	input current in Amperes.
outputpower	number	Yes	Read Only	output power in kW.
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). Resolution in 1/100 second.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

### 30530 6.147.6 CRUDN behaviour

30531 Table 298 defines the CRUDN operations that are supported on the "oic.r.inverter" Resource Type.



30532 **Table 298 – The CRUDN operations of the Resource with type "rt" = "oic.r.inverter".**

Create	Read	Update	Delete	Notify
	get			observe

30533 **6.148 PV array system connection terminal (IEC 61850)**

30534 **6.148.1 Introduction**

30535 This Resource describes functions for the control and monitoring of IEC 61850 based PV Array  
30536 system connection terminal.

30537 **6.148.2 Example URI**

30538 /PVConnectionTerminalResURI

30539 **6.148.3 Resource type**

30540 The Resource Type is defined as: "oic.r.pvconnectionterminal".

30541 **6.148.4 OpenAPI 2.0 definition**

```

30542 {
30543   "swagger": "2.0",
30544   "info": {
30545     "title": "PV array system connection terminal (IEC 61850)",
30546     "version": "20190613",
30547     "license": {
30548       "name": "OCF Data Model License",
30549       "url":
30550 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
30551 CENSE.md",
30552       "x-copyright": "copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
30553     },
30554     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
30555   },
30556   "schemes": ["http"],
30557   "consumes": ["application/json"],
30558   "produces": ["application/json"],
30559   "paths": {
30560     "/PVConnectionTerminalResURI" : {
30561       "get": {
30562         "description": "This Resource describes functions for the control and monitoring of IEC
30563 61850 based PV Array system connection terminal.",
30564         "parameters": [
30565           {"$ref": "#/parameters/interface"}
30566         ],
30567         "responses": {
30568           "200": {
30569             "description": "",
30570             "x-example":
30571             {
30572               "rt": ["oic.r.pvconnectionterminal"],
30573               "if": ["oic.if.s", "oic.if.baseline"],
30574               "ratedarrayvoltage": 46.6,
30575               "ratedarraycurrent": 10.2,
30576               "arrayvoltage": 37.0,
30577               "arraycurrent": 9.1,
30578               "leakagecurrent": 0.5,
30579               "insulationresistance": 0.3,
30580               "timestamp": "2015-11-05T14:30:00.15Z"
30581             },
30582             "schema": { "$ref": "#/definitions/PVArrayConnectionTerminal" }
30583           }
30584         }
30585       }
30586     }
30587   },
30588   "parameters": {
30589     "interface" : {

```

```

30590     "in": "query",
30591     "name": "if",
30592     "type": "string",
30593     "enum": ["oic.if.s", "oic.if.baseline"]
30594   }
30595 },
30596 "definitions": {
30597   "PVArrayConnectionTerminal" : {
30598     "properties": {
30599       "rt" : {
30600         "description": "The Resource Type",
30601         "items": {
30602           "enum": ["oic.r.pvconnectionterminal"],
30603           "maxLength": 64,
30604           "type": "string"
30605         },
30606         "minItems": 1,
30607         "uniqueItems": true,
30608         "readOnly": true,
30609         "type": "array"
30610       },
30611       "ratedarrayvoltage" : {
30612         "description": "Rated voltage of array (Nominal values of maximum power voltage * number
30613 of modules) (V)",
30614         "readOnly": true,
30615         "type": "number"
30616       },
30617       "ratedarraycurrent" : {
30618         "description": "Rated current of array (Nominal values of maximum power current * number
30619 of modules) (A), defined at manufacturing time.",
30620         "readOnly": true,
30621         "type": "number"
30622       },
30623       "arrayvoltage" : {
30624         "description": "Output voltage of array in volts (V).",
30625         "readOnly": true,
30626         "type": "number"
30627       },
30628       "arraycurrent" : {
30629         "description": "Output current of array in Ampere (A).",
30630         "readOnly": true,
30631         "type": "number"
30632       },
30633       "leakagecurrent" : {
30634         "description": "The leakage current in mA.",
30635         "readOnly": true,
30636         "type": "number"
30637       },
30638       "insulationresistance" : {
30639         "description": "Insulation resistance of circuit breaker (M Ohm).",
30640         "readOnly": true,
30641         "type": "number"
30642       },
30643       "timestamp" : {
30644         "description": "An RFC3339 formatted time indicating when the data was observed (e.g.:
30645 2016-02-15T09:19Z, 1996-12-19T16:39:57-08:00). Note that 1/100 time resolution should be used.",
30646         "format": "date-time",
30647         "readOnly": true,
30648         "type": "string"
30649       },
30650       "n" : {
30651         "$ref":
30652 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
30653 schema.json#/definitions/n"
30654       },
30655       "id" : {
30656         "$ref":
30657 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
30658 schema.json#/definitions/id"
30659       },
30660       "if" : {
30661         "description": "The OCF Interface set supported by this Resource.",

```

```

30662     "items": {
30663         "enum": [
30664             "oic.if.s",
30665             "oic.if.baseline"
30666         ],
30667         "type": "string"
30668     },
30669     "minItems": 2,
30670     "uniqueItems": true,
30671     "readOnly": true,
30672     "type": "array"
30673 }
30674 },
30675 "type": "object",
30676 "required": ["ratedarrayvoltage", "ratedarraycurrent", "arrayvoltage", "arraycurrent",
30677 "timestamp"]
30678 }
30679 }
30680 }

```

### 30681 6.148.5 Property definition

30682 Table 299 defines the Properties that are part of the "oic.r.pvconnectionterminal" Resource Type.

30683 **Table 299 – The Property definitions of the Resource with type "rt" =**  
30684 **"oic.r.pvconnectionterminal".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type
ratedarrayvoltage	number	Yes	Read Only	Rated voltage of array (Nominal values of maximum power voltage * number of modules) (V)
ratedarraycurrent	number	Yes	Read Only	Rated current of array (Nominal values of maximum power current * number of modules) (A), defined at manufacturing time.
arrayvoltage	number	Yes	Read Only	Output voltage of array in volts (V).
arraycurrent	number	Yes	Read Only	Output current of array in Ampere (A).
leakagecurrent	number	No	Read Only	The leakage current in mA.
insulationresistance	number	No	Read Only	Insulation resistance of circuit breaker (M Ohm).
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). Note that 1/100 time resolution should be used.
n	multiple types: see schema	No	Read Write	

id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

30685 **6.148.6 CRUDN behaviour**

30686 Table 300 defines the CRUDN operations that are supported on the "oic.r.pvconnectionterminal"  
 30687 Resource Type.

30688 **Table 300 – The CRUDN operations of the Resource with type "rt" =**  
 30689 **"oic.r.pvconnectionterminal".**

Create	Read	Update	Delete	Notify
	get			observe

30690 **6.149 Speed**

30691 **6.149.1 Introduction**

30692 This Resource describes the speed of an object, which is the magnitude of its velocity.  
 30693 The unit, which is the default SI unit, is metre per second.  
 30694 The speed Property is a read-only value that is provided by the server.  
 30695 When range (from "oic.r.baseresource") is omitted the default is 0 to +MAXFLOAT.

30696 **6.149.2 Example URI**

30697 /SpeedResURI

30698 **6.149.3 Resource type**

30699 The Resource Type is defined as: "oic.r.speed".

30700 **6.149.4 OpenAPI 2.0 definition**

```

30701 {
30702   "swagger": "2.0",
30703   "info": {
30704     "title": "Speed",
30705     "version": "2019-05-13",
30706     "license": {
30707       "name": "OCF Data Model License",
30708       "url":
30709 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
30710 CENSE.md",
30711       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
30712     },
30713     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
30714   },
30715   "schemes": [
30716     "http"
30717   ],
30718   "consumes": [
30719     "application/json"
30720   ],
30721   "produces": [
30722     "application/json"
30723   ],
30724   "paths": {
30725     "/SpeedResURI": {
30726       "get": {
30727         "description": "This Resource describes the speed of an object, which is the magnitude of
30728 its velocity.\n The unit, which is the default SI unit, is metre per second.\n The speed Property is
30729 a read-only value that is provided by the server.\n When range (from \"oic.r.baseresource\") is
30730 omitted the default is 0 to +MAXFLOAT.",
30731         "parameters": [
30732           {

```

```

30733         "$ref": "#/parameters/interface"
30734     }
30735 ],
30736 "responses": {
30737     "200": {
30738         "description": "",
30739         "x-example": {
30740             "rt": [
30741                 "oic.r.speed"
30742             ],
30743             "speed": 10.0
30744         },
30745         "schema": {
30746             "$ref": "#/definitions/Speed"
30747         }
30748     }
30749 }
30750 }
30751 }
30752 },
30753 "parameters": {
30754     "interface": {
30755         "in": "query",
30756         "name": "if",
30757         "type": "string",
30758         "enum": [
30759             "oic.if.s",
30760             "oic.if.baseline"
30761         ]
30762     }
30763 },
30764 "definitions": {
30765     "Speed": {
30766         "properties": {
30767             "speed": {
30768                 "description": "This Property describes the speed of an object in metre per second (SI
30769 Unit). It should be noted, however, that the most common unit of speed everyday usage is the
30770 kilometre per hour or, in the US and the UK, miles per hour.",
30771                 "type": "number",
30772                 "minimum": 0.0,
30773                 "readOnly": true
30774             },
30775             "rt": {
30776                 "description": "The Resource Type.",
30777                 "items": {
30778                     "enum": [
30779                         "oic.r.speed"
30780                     ],
30781                     "type": "string"
30782                 },
30783                 "minItems": 1,
30784                 "uniqueItems": true,
30785                 "readOnly": true,
30786                 "type": "array"
30787             },
30788             "n": {
30789                 "$ref":
30790 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
30791 schema.json#/definitions/n"
30792             },
30793             "if": {
30794                 "description": "The OCF Interface set supported by this Resource.",
30795                 "items": {
30796                     "enum": [
30797                         "oic.if.s",
30798                         "oic.if.baseline"
30799                     ],
30800                     "type": "string"
30801                 },
30802                 "minItems": 1,
30803                 "uniqueItems": true,
30804                 "readOnly": true,

```

```

30805         "type": "array"
30806     },
30807     "range": {
30808         "$ref":
30809         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
30810         schema.json#/definitions/range_number"
30811     },
30812     "step": {
30813         "$ref":
30814         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
30815         schema.json#/definitions/step_number"
30816     }
30817 },
30818 "type": "object",
30819 "required": [
30820     "speed"
30821 ]
30822 }
30823 }
30824 }

```

### 30825 6.149.5 Property definition

30826 Table 301 defines the Properties that are part of the "oic.r.speed" Resource Type.

30827 **Table 301 – The Property definitions of the Resource with type "rt" = "oic.r.speed".**

Property name	Value type	Mandatory	Access mode	Description
speed	number	Yes	Read Only	This Property describes the speed of an object in metre per second (SI Unit). It should be noted, however, that the most common unit of speed everyday usage is the kilometre per hour or, in the US and the UK, miles per hour.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	

### 30828 6.149.6 CRUDN behaviour

30829 Table 302 defines the CRUDN operations that are supported on the "oic.r.speed" Resource Type.

30830 **Table 302 – The CRUDN operations of the Resource with type "rt" = "oic.r.speed".**

Create	Read	Update	Delete	Notify
	get			observe

30831 **6.150 Torque**

30832 **6.150.1 Introduction**

30833 This Resource describes the torque, which is the rotational equivalent of linear force.

30834 The unit, which is the default SI unit, is N\*m (Newton metre).

30835 The torque Property is a read-only value that is provided by the server.

30836 When range (from "oic.r.baseresource") is omitted the default is 0 to +MAXFLOAT.

30837 **6.150.2 Example URI**

30838 /TorqueResURI

30839 **6.150.3 Resource type**

30840 The Resource Type is defined as: "oic.r.torque".

30841 **6.150.4 OpenAPI 2.0 definition**

```
30842 {
30843   "swagger": "2.0",
30844   "info": {
30845     "title": "Torque",
30846     "version": "2019-09-25",
30847     "license": {
30848       "name": "OCF Data Model License",
30849       "url":
30850 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
30851 CENSE.md",
30852       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
30853     },
30854     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
30855   },
30856   "schemes": [
30857     "http"
30858   ],
30859   "consumes": [
30860     "application/json"
30861   ],
30862   "produces": [
30863     "application/json"
30864   ],
30865   "paths": {
30866     "/TorqueResURI": {
30867       "get": {
30868         "description": "This Resource describes the torque, which is the rotational equivalent of
30869 linear force.\n The unit, which is the default SI unit, is N*m (Newton metre).\n The torque Property
30870 is a read-only value that is provided by the server.\n When range (from \"oic.r.baseresource\") is
30871 omitted the default is 0 to +MAXFLOAT.",
30872         "parameters": [
30873           {
30874             "$ref": "#/parameters/interface"
30875           }
30876         ],
30877         "responses": {
30878           "200": {
30879             "description": "",
30880             "x-example": {
30881               "rt": [
30882                 "oic.r.torque"
30883               ],
30884               "torque": 10.0
30885             },
30886             "schema": {
30887               "$ref": "#/definitions/Torque"
30888             }
30889           }
30890         }
30891       }
30892     }
30893   },
}
```

```

30894     "parameters": {
30895       "interface": {
30896         "in": "query",
30897         "name": "if",
30898         "type": "string",
30899         "enum": [
30900           "oic.if.s",
30901           "oic.if.baseline"
30902         ]
30903       }
30904     },
30905     "definitions": {
30906       "Torque": {
30907         "properties": {
30908           "torque": {
30909             "description": "This Resource describes the torque, which is the rotational equivalent of
30910 linear force, in N*m (Newton metre).",
30911             "type": "number",
30912             "minimum": 0.0,
30913             "readOnly": true
30914           },
30915           "rt": {
30916             "description": "The Resource Type.",
30917             "items": {
30918               "enum": [
30919                 "oic.r.torque"
30920               ],
30921               "type": "string"
30922             },
30923             "minItems": 1,
30924             "uniqueItems": true,
30925             "readOnly": true,
30926             "type": "array"
30927           },
30928           "n": {
30929             "$ref":
30930 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
30931 schema.json#/definitions/n"
30932           },
30933           "if": {
30934             "description": "The OCF Interface set supported by this Resource.",
30935             "items": {
30936               "enum": [
30937                 "oic.if.s",
30938                 "oic.if.baseline"
30939               ],
30940               "type": "string"
30941             },
30942             "minItems": 1,
30943             "uniqueItems": true,
30944             "readOnly": true,
30945             "type": "array"
30946           },
30947           "range": {
30948             "$ref":
30949 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
30950 schema.json#/definitions/range_number"
30951           },
30952           "step": {
30953             "$ref":
30954 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
30955 schema.json#/definitions/step_number"
30956           }
30957         },
30958         "type": "object",
30959         "required": [
30960           "torque"
30961         ]
30962       }
30963     }
30964 }

```



30965 **6.150.5 Property definition**

30966 Table 303 defines the Properties that are part of the "oic.r.torque" Resource Type.

30967 **Table 303 – The Property definitions of the Resource with type "rt" = "oic.r.torque".**

Property name	Value type	Mandatory	Access mode	Description
torque	number	Yes	Read Only	This Resource describes the torque, which is the rotational equivalent of linear force, in N*m (Newton metre).
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	

30968 **6.150.6 CRUDN behaviour**

30969 Table 304 defines the CRUDN operations that are supported on the "oic.r.torque" Resource Type.

30970 **Table 304 – The CRUDN operations of the Resource with type "rt" = "oic.r.torque".**

Create	Read	Update	Delete	Notify
	get			observe

30971 **6.151 Water Info**

30972 **6.151.1 Introduction**

30973 This Resource describes the water information to indicate type of water currently provided by the  
30974 device. The water type can be read or set.

30975 The Property "supportedwatertypes" is an array of the possible water types are defined by the  
30976 enumeration ["cold", "hot", "ambient", "ice"].

30977 The Property "supportedadditivetypes" is an array of the possible additive types for water. The  
30978 additive types mean optional types that can be added to the specific water type according to  
30979 Client's preference and are defined by the enumeration ["none", "soda", "mineral"]. If absent, the  
30980 default value is "none".

30981 The Property "currentwatertype" is the currently desired water type.

30982 The Property "currentadditivetypes" is the currently desired additive type(s).

30983 For example, if "cold" is selected with the "currentwatertype", "soda" and "mineral" or both can be  
30984 selected as "currentadditivetypes". Note that if "hot" is selected with the "currentwatertype",  
30985 "soda" and "mineral" may be restricted for the "currentadditivetypes".

30986 **6.151.2 Example URI**

30987 /WaterInfoResURI

30988 **6.151.3 Resource type**

30989 The Resource Type is defined as: "oic.r.waterinfo".

30990 **6.151.4 OpenAPI 2.0 definition**

```

30991 {
30992   "swagger": "2.0",
30993   "info": {
30994     "title": "Water Info",
30995     "version": "2019-06-13",
30996     "license": {
30997       "name": "OCF Date Model License",
30998       "url":
30999 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
31000 CENSE.md",
31001     "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
31002   },
31003   "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
31004 },
31005   "schemes": ["http"],
31006   "consumes": ["application/json"],
31007   "produces": ["application/json"],
31008   "paths": {
31009     "/WaterInfoResURI":{
31010       "get": {
31011         "description": "This Resource describes the water information to indicate type of
31012 water currently provided by the device. The water type can be read or set.\nThe Property
31013 \"supportedwatertypes\" is an array of the possible water types are defined by the enumeration
31014 [\"cold\", \"hot\", \"ambient\", \"ice\"].\nThe Property \"supportedadditivetypes\" is an array of
31015 the possible additive types for water. The additive types mean optional types that can be added to
31016 the specific water type according to Client's preference and are defined by the enumeration
31017 [\"none\", \"soda\", \"mineral\"]. If absent, the default value is \"none\". \nThe Property
31018 \"currentwatertype\" is the currently desired water type. \nThe Property \"currentadditivetypes\" is
31019 the currently desired additive type(s). \nFor example, if \"cold\" is selected with the
31020 \"currentwatertype\", \"soda\" and \"mineral\" or both can be selected as \"currentadditivetypes\".
31021 Note that if \"hot\" is selected with the \"currentwatertype\", \"soda\" and \"mineral\" may be
31022 restricted for the \"currentadditivetypes\".",
31023
31024         "parameters": [
31025           { "$ref": "#/parameters/interface" }
31026         ],
31027         "responses": {
31028           "200": {
31029             "description": "RETRIEVES the set of supported water type information and
31030 current desired water type information.",
31031             "x-example":
31032             {
31033               "rt": ["oic.r.waterinfo"],
31034               "if": ["oic.if.rw", "oic.if.baseline"],
31035               "supportedwatertypes": ["cold", "hot", "ambient", "ice"],
31036               "supportedadditivetypes": ["none", "soda", "mineral"],
31037               "currentwatertype": "cold",
31038               "currentadditivetypes": ["soda", "mineral"]
31039             },
31040
31041             "schema": { "$ref": "#/definitions/WaterInfo" }
31042           }
31043         }
31044       },
31045       "post":{
31046         "description": "Sets the desired water type.",
31047         "parameters": [
31048           { "$ref": "#/parameters/interface" },
31049           {
31050             "name": "body",
31051             "in": "body",
31052             "required": true,
31053             "schema": { "$ref": "#/definitions/WaterInfoUpdate" },
31054             "x-example": {
31055               "currentwatertype": "hot",
31056               "currentadditivetypes": ["none"]
31057             }
31058           }
31059         ],
31060         "responses":{

```

```

31061         "200": {
31062             "description" : "Indicates that the current desired water type and additive
type(s) were changed. \nThe new desired water type info is provided in the response.\n",
31063             "x-example": {
31064                 "currentwatertype": "hot",
31065                 "currentadditivetypes": ["none"]
31066             },
31067             "schema": { "$ref": "#/definitions/WaterInfoUpdate" }
31068         },
31069     },
31070     "403":{
31071         "description" : "This response is generated by the OCF Server when the client
31072 sends:\n An UPDATE with an invalid property value for \"currentwatertype\".\nThe OCF Server
31073 responds with the current resource representation.\n",
31074         "x-example": {
31075             "supportedwatertypes": ["cold", "hot", "ambient", "ice"],
31076             "supportedadditivetypes": ["none", "soda", "mineral"],
31077             "currentwatertype": "cold",
31078             "currentadditivetypes": ["soda", "mineral"]
31079         },
31080         "schema": { "$ref": "#/definitions/WaterInfo" }
31081     }
31082 }
31083 }
31084 }
31085 },
31086 "parameters": {
31087     "interface": {
31088         "in": "query",
31089         "name": "if",
31090         "type": "string",
31091         "enum": ["oic.if.rw", "oic.if.baseline"]
31092     }
31093 },
31094 "definitions": {
31095     "WaterInfo" : {
31096         "properties": {
31097             "rt": {
31098                 "description": "The Resource Type.",
31099                 "items": {
31100                     "enum": ["oic.r.waterinfo"],
31101                     "maxLength": 64,
31102                     "type": "string"
31103                 },
31104                 "minItems": 1,
31105                 "uniqueItems": true,
31106                 "readOnly": true,
31107                 "type": "array"
31108             },
31109             "supportedwatertypes":{
31110                 "description": "The array of the possible water types.",
31111                 "items": {
31112                     "type": "string"
31113                 },
31114                 "readOnly": true,
31115                 "type": "array"
31116             },
31117             "supportedadditivetypes":{
31118                 "description": "The array of the possible additive types.",
31119                 "items": {
31120                     "type": "string"
31121                 },
31122                 "readOnly": true,
31123                 "type": "array"
31124             },
31125             "currentwatertype": {
31126                 "description": " The currently desired water type.",
31127                 "type": "string"
31128             },
31129             "currentadditivetypes":{
31130                 "description": "The currently desired additive type(s) according to Client's
31131 preference.",
31132                 "items": {

```

```

31133         "type": "string"
31134     },
31135     "minItems": 1,
31136     "type": "array"
31137 },
31138 "n": {
31139     "$ref":
31140 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
31141 schema.json#/definitions/n"
31142 },
31143 "id": {
31144     "$ref":
31145 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
31146 schema.json#/definitions/id"
31147 },
31148 "if": {
31149     "description": "The OCF Interface set supported by this Resource.",
31150     "items": {
31151         "enum": [
31152             "oic.if.rw",
31153             "oic.if.baseline"
31154         ],
31155         "type": "string"
31156     },
31157     "minItems": 2,
31158     "uniqueItems": true,
31159     "readOnly": true,
31160     "type": "array"
31161     }
31162 },
31163 "type": "object",
31164 "required" : ["supportedwatertypes", "currentwatertype"]
31165 },
31166 "WaterInfoUpdate":{
31167     "properties":{
31168         "currentwatertype": {
31169             "description": "Set the desired water type.",
31170             "type": "string"
31171         },
31172         "currentadditivetypes": {
31173             "description": "Set the desired additive type(s).",
31174             "items": {
31175                 "type": "string"
31176             },
31177             "minItems": 1,
31178             "type": "array"
31179         }
31180     },
31181     "type": "object",
31182     "required": ["currentwatertype"]
31183 }
31184 }
31185 }
31186 }
31187 }
31188 }
31189 }

```

### 31190 6.151.5 Property definition

31191 Table 305 defines the Properties that are part of the "oic.r.waterinfo" Resource Type.

31192 **Table 305 – The Property definitions of the Resource with type "rt" = "oic.r.waterinfo".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
supportedwatertypes	array: see schema	Yes	Read Only	The array of the possible water types.

supportedadditivetypes	array: see schema	No	Read Only	The array of the possible additive types.
currentwatertype	string	Yes	Read Write	The currently desired water type.
currentadditivetypes	array: see schema	No	Read Write	The currently desired additive type(s) according to Client's preference.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
currentwatertype	string	Yes	Read Write	Set the desired water type.
currentadditivetypes	array: see schema	No	Read Write	Set the desired additive type(s).

31193 **6.151.6 CRUDN behaviour**

31194 Table 306 defines the CRUDN operations that are supported on the "oic.r.waterinfo" Resource  
31195 Type.

31196 **Table 306 – The CRUDN operations of the Resource with type "rt" = "oic.r.waterinfo".**

Create	Read	Update	Delete	Notify
	get	post		observe

31197 **6.152 Deodorization**

31198 **6.152.1 Introduction**

31199 This Resource describes a deodorization function, which can be supported by controlling on air  
31200 filter.

31201 The Property "mode" is a mode of the deodorization function. The supported modes are defined  
31202 by the enumeration ["off", "on", "auto"].

31203 "off" means that the deodorization function is not enabled.

31204 "on" means that the deodorization function is active.

31205 "auto" means that the deodorization function is automatically controlled depending on sensed air  
31206 condition in the device inside.

31207 The Property "currentstate" is the current state of the deodorization function. In the case of "auto"  
31208 mode, if the sensed air condition is determined to be bad, the function will be "on". Then, "mode"  
31209 value is "auto" and "currentstate" value is "on". If not, the function is remaining "off" state. Then,  
31210 "currentstate" value is "off".

31211 **6.152.2 Example URI**

31212 /DeodorizationResURI

31213 **6.152.3 Resource type**

31214 The Resource Type is defined as: "oic.r.deodorization".

31215 **6.152.4 OpenAPI 2.0 definition**

```
31216 {
31217   "swagger": "2.0",
31218   "info": {
31219     "title": "Deodorization",
```

```

31220     "version": "20190820",
31221     "license": {
31222         "name": "OCF Data Model License",
31223         "url":
31224         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
31225 CENSE.md",
31226         "x-copyright": "copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
31227     },
31228     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
31229 },
31230     "schemes": ["http"],
31231     "consumes": ["application/json"],
31232     "produces": ["application/json"],
31233     "paths": {
31234         "/DeodorizationResURI" : {
31235             "get": {
31236                 "description": "This Resource describes a deodorization function, which can be supported by
31237 controlling on air filter. \n The Property \"mode\" is a mode of the deodorization function. The
31238 supported modes are defined by the enumeration [\"off\", \"on\", \"auto\"]. \n\"off\" means that the
31239 deodorization function is not enabled.\n\"on\" means that the deodorization function is
31240 active.\n\"auto\" means that the deodorization function is automatically controlled depending on
31241 sensed air condition in the device inside. \nThe Property \"currentstate\" is the current state of
31242 the deodorization function. In the case of \"auto\" mode, if the sensed air condition is determined
31243 to be bad, the function will be \"on\". Then, \"mode\" value is \"auto\" and \"currentstate\" value
31244 is \"on\". If not, the function is remaining \"off\" state. Then, \"currentstate\" value is
31245 \"off\".",
31246                 "parameters": [
31247                     { "$ref": "#/parameters/interface" }
31248                 ],
31249                 "responses": {
31250                     "200": {
31251                         "description": "RETRIEVES the current deodorization function state.",
31252                         "x-example":
31253                         {
31254                             "rt": ["oic.r.deodorization"],
31255                             "if": ["oic.if.a", "oic.if.baseline"],
31256                             "mode": "auto",
31257                             "currentstate": "off"
31258                         },
31259                         "schema": { "$ref": "#/definitions/Deodorization" }
31260                     }
31261                 }
31262             },
31263             "post": {
31264                 "description": "Sets the desired deodorization function state.",
31265                 "parameters": [
31266                     { "$ref": "#/parameters/interface" },
31267                     {
31268                         "name": "body",
31269                         "in": "body",
31270                         "required": true,
31271                         "schema": { "$ref": "#/definitions/DeodorizationUpdate" },
31272                         "x-example":
31273                         {
31274                             "mode": "on"
31275                         }
31276                     }
31277                 ],
31278                 "responses": {
31279                     "200": {
31280                         "description": "Indicates that the Deodorization function state was changed.\n\nThe new
31281 state is provided in the response.\n",
31282                         "x-example":
31283                         {
31284                             "mode": "on",
31285                             "currentstate": "on"
31286                         },
31287                         "schema": { "$ref": "#/definitions/Deodorization" }
31288                     }
31289                 }
31290             }
31291         }

```

```

31292 },
31293 "parameters": {
31294   "interface": {
31295     "in": "query",
31296     "name": "if",
31297     "type": "string",
31298     "enum": ["oic.if.a", "oic.if.baseline"]
31299   }
31300 },
31301 "definitions": {
31302   "Deodorization" : {
31303     "properties": {
31304       "rt": {
31305         "description": "The Resource Type.",
31306         "items": {
31307           "enum": ["oic.r.deodorization"],
31308           "maxLength": 64,
31309           "type": "string"
31310         },
31311         "minItems": 1,
31312         "uniqueItems": true,
31313         "readOnly": true,
31314         "type": "array"
31315       },
31316       "mode": {
31317         "description": "The modes of the Deodorization function.",
31318         "enum": [
31319           "off",
31320           "on",
31321           "auto"
31322         ],
31323         "type": "string"
31324       },
31325       "currentstate": {
31326         "description": "The current state of the Deodorization function.",
31327         "enum": [
31328           "off",
31329           "on"
31330         ],
31331         "readOnly": true,
31332         "type": "string"
31333       },
31334       "n": {
31335         "$ref":
31336         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
31337         schema.json#/definitions/n"
31338       },
31339       "id": {
31340         "$ref":
31341         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
31342         schema.json#/definitions/id"
31343       },
31344       "if": {
31345         "description": "The OCF Interface set supported by this Resource.",
31346         "items": {
31347           "enum": [
31348             "oic.if.a",
31349             "oic.if.baseline"
31350           ],
31351           "type": "string"
31352         },
31353         "minItems": 2,
31354         "uniqueItems": true,
31355         "readOnly": true,
31356         "type": "array"
31357       }
31358     },
31359     "type": "object",
31360     "required": ["mode", "currentstate"]
31361   },
31362   "DeodorizationUpdate" : {
31363     "properties": {

```

```

31364         "mode": {
31365             "description": "The modes of the Deodorization function.",
31366             "enum": [
31367                 "off",
31368                 "on",
31369                 "auto"
31370             ],
31371             "type": "string"
31372         },
31373     },
31374     "type": "object",
31375     "required": ["mode"]
31376 }
31377 }
31378 }

```

### 31379 6.152.5 Property definition

31380 Table 307 defines the Properties that are part of the "oic.r.deodorization" Resource Type.

31381 **Table 307 – The Property definitions of the Resource with type "rt" = "oic.r.deodorization".**

Property name	Value type	Mandatory	Access mode	Description
Rt	array: see schema	No	Read Only	The Resource Type.
Mode	string	Yes	Read Write	The modes of the Deodorization function.
currentstate	string	Yes	Read Only	The current state of the Deodorization function.
N	multiple types: see schema	No	Read Write	
Id	multiple types: see schema	No	Read Write	
If	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
Mode	string	Yes	Read Write	The modes of the Deodorization function.

### 31382 6.152.6 CRUDN behaviour

31383 Table 308 defines the CRUDN operations that are supported on the "oic.r.deodorization" Resource  
31384 Type.

31385 **Table 308 – The CRUDN operations of the Resource with type "rt" = "oic.r.deodorization".**

Create	Read	Update	Delete	Notify
	get	post		observe

## 31386 6.153 KeyCard Switch

### 31387 6.153.1 Introduction

31388 This Resource describes the operation of a KeyCard style switch. It has one mandatory  
31389 Property, "stateofcard", which is a string enum type. It has two enum values: "validCardInserted",  
31390 "validCardNotInserted". "validCardInserted" means that a keycard was inserted and passed  
31391 validation check. "validCardNotInserted" means that a keycard is not inserted or it was inserted  
31392 but failed to pass validation check.



31393 **6.153.2 Example URI**

31394 /KeyCardSwitchResURI

31395 **6.153.3 Resource type**

31396 The Resource Type is defined as: "oic.r.keycardswitch".

31397 **6.153.4 OpenAPI 2.0 definition**

```
31398 {
31399     "swagger": "2.0",
31400     "info": {
31401         "title": "KeyCard Switch",
31402         "version": "20190807",
31403         "license": {
31404             "name": "OCF Data Model License",
31405             "url":
31406 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
31407 CENSE.md",
31408             "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All
31409 rights reserved."
31410         },
31411         "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
31412     },
31413     "schemes": ["http"],
31414     "consumes": ["application/json"],
31415     "produces": ["application/json"],
31416     "paths": {
31417         "/KeyCardSwitchResURI" : {
31418             "get": {
31419                 "description": "This Resource describes the operation of a KeyCard
31420 style switch. It has one mandatory Property, \"stateofcard\", which is a string enum type. It has two
31421 enum values: \"validCardInserted\", \"validCardNotInserted\". \"validCardInserted\" means that a
31422 keycard was inserted and passed validation check. \"validCardNotInserted\" means that a keycard is
31423 not inserted or it was inserted but failed to pass validation check.",
31424                 "parameters": [
31425                     { "$ref": "#/parameters/interface" }
31426                 ],
31427                 "responses": {
31428                     "200": {
31429                         "description" : "",
31430                         "x-example":
31431                         {
31432                             "rt": ["oic.r.keycardswitch"],
31433                             "if": ["oic.if.s", "oic.if.baseline"],
31434                             "stateofcard": "validCardInserted"
31435                         }
31436                     },
31437                     "schema": { "$ref": "#/definitions/KeyCardSwitch" }
31438                 }
31439             }
31440         }
31441     },
31442     "parameters": {
31443         "interface" : {
31444             "in": "query",
31445             "name": "if",
31446             "type": "string",
31447             "enum": ["oic.if.s", "oic.if.baseline"]
31448         }
31449     },
31450     "definitions": {
31451         "KeyCardSwitch" : {
31452             "properties": {
31453                 "rt": {
31454                     "description": "The Resource Type of KeyCardSwitch",
31455                     "items": {
31456                         "enum": ["oic.r.keycardswitch"],
31457                         "maxLength": 64,
31458                         "type": "string"
31459                     }
31460                 }
31461             }
31462         }
31463     }
31464 }
```

```

31460         },
31461         "minItems": 1,
31462         "uniqueItems": true,
31463         "readOnly": true,
31464         "type": "array"
31465     },
31466     "stateofcard": {
31467         "description": "The status of the keycardswitch.
31468 \"validCardInserted\" means that a keycard was inserted and passed validation check.
31469 \"validCardNotInserted\" means that a keycard is not inserted or it was inserted but failed to pass
31470 validation check.",
31471         "readOnly": true,
31472         "type": "string",
31473         "enum": [
31474             "validCardInserted",
31475             "validCardNotInserted"
31476         ]
31477     },
31478     "n": {
31479         "$ref":
31480 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
31481 schema.json#/definitions/n"
31482     },
31483     "id": {
31484         "$ref":
31485 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
31486 schema.json#/definitions/id"
31487     },
31488     "if": {
31489         "description": "The OCF Interface set supported by this
31490 Resource.",
31491         "items": {
31492             "enum": [
31493                 "oic.if.s",
31494                 "oic.if.baseline"
31495             ],
31496             "type": "string"
31497         },
31498         "minItems": 2,
31499         "uniqueItems": true,
31500         "readOnly": true,
31501         "type": "array"
31502     }
31503 },
31504 "type": "object",
31505 "required": ["stateofcard"]
31506 }
31507 }
31508 }
31509

```

### 31510 6.153.5 Property definition

31511 Table 309 defines the Properties that are part of the "oic.r.keycardswitch" Resource Type.

31512 **Table 309 – The Property definitions of the Resource with type "rt" = "oic.r.keycardswitch".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type of KeyCardSwitch
stateofcard	string	Yes	Read Only	The status of the keycardswitch. "validCardInserted" means that a keycard was inserted and passed validation check. "validCardNotInserted" means that a keycard is not inserted or it

				was inserted but failed to pass validation check.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

31513 **6.153.6 CRUDN behaviour**

31514 Table 310 defines the CRUDN operations that are supported on the "oic.r.keycardswitch" Resource  
31515 Type.

31516 **Table 310 – The CRUDN operations of the Resource with type "rt" = "oic.r.keycardswitch".**

Create	Read	Update	Delete	Notify
	get			observe

31517 **6.154 Muscle Oxygen Saturation**

31518 **6.154.1 Introduction**

31519 This Resource describes the muscle oxygen saturation (SmO2), which is the percentage of  
31520 hemoglobin that is saturated with oxygen in the capillaries of a muscle.

31521 The unit is percentage.

31522 The smo2 Property is a read-only value that is provided by the server.

31523 **6.154.2 Example URI**

31524 /MuscleOxygenSaturationResURI

31525 **6.154.3 Resource type**

31526 The Resource Type is defined as: "oic.r.muscleoxygensaturation".

31527 **6.154.4 OpenAPI 2.0 definition**

```

31528 {
31529   "swagger": "2.0",
31530   "info": {
31531     "title": "Muscle Oxygen Saturation",
31532     "version": "2019-08-20",
31533     "license": {
31534       "name": "OCF Data Model License",
31535       "url":
31536 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
31537 CENSE.md",
31538       "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
31539     },
31540     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
31541   },
31542   "schemes": [
31543     "http"
31544   ],
31545   "consumes": [
31546     "application/json"
31547   ],
31548   "produces": [
31549     "application/json"
31550   ],
31551   "paths": {
31552     "/MuscleOxygenSaturationResURI": {
31553       "get": {
31554         "description": "This Resource describes the muscle oxygen saturation (SmO2), which is the

```

```

31555 percentage of hemoglobin that is saturated with oxygen in the capillaries of a muscle.\n The unit is
31556 percentage.\n The smo2 Property is a read-only value that is provided by the server.",
31557     "parameters": [
31558         {
31559             "$ref": "#/parameters/interface"
31560         }
31561     ],
31562     "responses": {
31563         "200": {
31564             "description": "",
31565             "x-example": {
31566                 "rt": [
31567                     "oic.r.muscleoxygensaturation"
31568                 ],
31569                 "muscleoxygensaturation": 80.0
31570             },
31571             "schema": {
31572                 "$ref": "#/definitions/MuscleOxygenSaturation"
31573             }
31574         }
31575     }
31576 },
31577 },
31578 },
31579 "parameters": {
31580     "interface": {
31581         "in": "query",
31582         "name": "if",
31583         "type": "string",
31584         "enum": [
31585             "oic.if.s",
31586             "oic.if.baseline"
31587         ]
31588     }
31589 },
31590 "definitions": {
31591     "MuscleOxygenSaturation": {
31592         "properties": {
31593             "muscleoxygensaturation": {
31594                 "description": "This Property describes the muscle oxygen saturation (SmO2), which is the
31595 percentage of hemoglobin that is saturated with oxygen in the capillaries of a muscle. The unit is
31596 percentage.",
31597                 "type": "number",
31598                 "minimum": 0,
31599                 "maximum": 100,
31600                 "readOnly": true
31601             },
31602             "rt": {
31603                 "description": "The Resource Type.",
31604                 "items": {
31605                     "enum": [
31606                         "oic.r.muscleoxygensaturation"
31607                     ],
31608                     "type": "string"
31609                 },
31610                 "minItems": 1,
31611                 "uniqueItems": true,
31612                 "readOnly": true,
31613                 "type": "array"
31614             },
31615             "n": {
31616                 "$ref":
31617 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
31618 schema.json#/definitions/n"
31619             },
31620             "if": {
31621                 "description": "The OCF Interface set supported by this Resource.",
31622                 "items": {
31623                     "enum": [
31624                         "oic.if.s",
31625                         "oic.if.baseline"
31626                     ],

```

```

31627         "type": "string"
31628     },
31629     "minItems": 1,
31630     "uniqueItems": true,
31631     "readOnly": true,
31632     "type": "array"
31633 }
31634 },
31635 "type": "object",
31636 "required": [
31637     "muscleoxygensaturation"
31638 ]
31639 }
31640 }
31641 }

```

31642 **6.154.5 Property definition**

31643 Table 311 defines the Properties that are part of the "oic.r.muscleoxygensaturation" Resource Type.

31644 **Table 311 – The Property definitions of the Resource with type "rt" =**  
31645 **"oic.r.muscleoxygensaturation".**

Property name	Value type	Mandatory	Access mode	Description
muscleoxygensaturation	number	Yes	Read Only	This Property describes the muscle oxygen saturation (SmO2), which is the percentage of hemoglobin that is saturated with oxygen in the capillaries of a muscle. The unit is percentage.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

31646 **6.154.6 CRUDN behaviour**

31647 Table 312 defines the CRUDN operations that are supported on the "oic.r.muscleoxygensaturation"  
31648 Resource Type.

31649 **Table 312 – The CRUDN operations of the Resource with type "rt" =**  
31650 **"oic.r.muscleoxygensaturation".**

Create	Read	Update	Delete	Notify
	get			observe

31651

31652 **6.155 Body Composition Analyser Atomic Measurement**

31653 **6.155.1 Introduction**

31654 This Resource describes the Properties associated with body composition analyser.  
31655 The Resource is an Atomic Measurement of weight (oic.r.weight), body mass index (BMI)  
31656 (oic.r.bmi), height (oic.r.height), body fat (oic.r.body.fat), body water (oic.r.body.water), body soft  
31657 lean mass (oic.r.body.slm), body fat free mass (oic.r.body.ffm), observed time (oic.r.time.stamp),  
31658 and user id (oic.r.userid).

31659 **6.155.2 Example URI**

31660 /BodyCompositionAnalyserAMResURI

31661 **6.155.3 Resource type**

31662 The Resource Type is defined as: "oic.r.bodycompositionanalyser-am, oic.wk.atomicmeasurement".

31663 **6.155.4 OpenAPI 2.0 definition**

```
31664 {
31665   "swagger": "2.0",
31666   "info": {
31667     "title": "Body Composition Analyser Atomic Measurement",
31668     "version": "2019-03-22",
31669     "license": {
31670       "name": "OCF Data Model License",
31671       "url":
31672 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
31673 CENSE.md",
31674       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
31675     },
31676     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
31677   },
31678   "schemes": [
31679     "http"
31680   ],
31681   "consumes": [
31682     "application/json"
31683   ],
31684   "produces": [
31685     "application/json"
31686   ],
31687   "paths": {
31688     "/BodyCompositionAnalyserAMResURI?if=oic.if.b": {
31689       "get": {
31690         "description": "This Resource describes the Properties associated with body composition
31691 analyser.\n\nThe Resource is an Atomic Measurement of weight (oic.r.weight), body mass index (BMI)
31692 (oic.r.bmi), height (oic.r.height), body fat (oic.r.body.fat), body water (oic.r.body.water), body
31693 soft lean mass (oic.r.body.slm), body fat free mass (oic.r.body.ffm), observed time
31694 (oic.r.time.stamp), and user id (oic.r.userid).",
31695         "parameters": [
31696           {
31697             "$ref": "#/parameters/interface-all"
31698           }
31699         ],
31700         "responses": {
31701           "200": {
31702             "description": "",
31703             "x-example": [
31704               {
31705                 "href": "/myWeight",
31706                 "rep": {
31707                   "weight": 80.0,
31708                   "units": "kg"
31709                 }
31710             },
31711             {
31712                 "href": "/myBMI",
31713                 "rep": {
31714                   "bmi": 20.0
31715                 }
31716             },
31717             {
31718                 "href": "/myHeight",
31719                 "rep": {
31720                   "height": 1.8,
31721                   "units": "m"
31722                 }
31723             },
31724             {
31725                 "href": "/myBodyFat",
```

```

31726         "rep": {
31727             "bodyfat": 20.0,
31728             "units": "kg"
31729         }
31730     },
31731     {
31732         "href": "/myBodyWater",
31733         "rep": {
31734             "bwater": 20.0,
31735             "units": "kg"
31736         }
31737     },
31738     {
31739         "href": "/myBodySoftLeanMass",
31740         "rep": {
31741             "slm": 20.0,
31742             "units": "kg"
31743         }
31744     },
31745     {
31746         "href": "/myBodyFatFreeMass",
31747         "rep": {
31748             "ffm": 40.0,
31749             "units": "kg"
31750         }
31751     },
31752     {
31753         "href": "/myUserId",
31754         "rep": {
31755             "userid": "USER1"
31756         }
31757     },
31758     {
31759         "href": "/myTimeStamp",
31760         "rep": {
31761             "timestamp": "2018-11-09T12:15+08:00"
31762         }
31763     }
31764 ],
31765 "schema": {
31766     "$ref": "#/definitions/batch-retrieve"
31767 }
31768 }
31769 }
31770 }
31771 },
31772 "/BodyCompositionAnalyserAMResURI?if=oic.if.ll": {
31773     "get": {
31774         "description": "This Resource describes the Properties associated with body composition
31775 analyser.\n\nThe Resource is an Atomic Measurement of weight (oic.r.weight), body mass index (BMI)
31776 (oic.r.bmi), height (oic.r.height), body fat (oic.r.body.fat), body water (oic.r.body.water), body
31777 soft lean mass (oic.r.body.slm), body fat free mass (oic.r.body.ffm), observed time
31778 (oic.r.time.stamp), and user id (oic.r.userid).",
31779         "parameters": [
31780             {
31781                 "$ref": "#/parameters/interface-all"
31782             }
31783         ],
31784         "responses": {
31785             "200": {
31786                 "description": "",
31787                 "x-example": [
31788                     {
31789                         "href": "/myWeight",
31790                         "rt": [
31791                             "oic.r.weight"
31792                         ],
31793                         "if": [
31794                             "oic.if.s",
31795                             "oic.if.baseline"
31796                         ]
31797                     }
31798                 ]
31799             }
31800         }
31801     }
31802 }

```

```

31798 {
31799   "href": "/myBMI",
31800   "rt": [
31801     "oic.r.bmi"
31802   ],
31803   "if": [
31804     "oic.if.s",
31805     "oic.if.baseline"
31806   ]
31807 },
31808 {
31809   "href": "/myHeight",
31810   "rt": [
31811     "oic.r.height"
31812   ],
31813   "if": [
31814     "oic.if.s",
31815     "oic.if.baseline"
31816   ]
31817 },
31818 {
31819   "href": "/myBodyFat",
31820   "rt": [
31821     "oic.r.body.fat"
31822   ],
31823   "if": [
31824     "oic.if.s",
31825     "oic.if.baseline"
31826   ]
31827 },
31828 {
31829   "href": "/myBodyWater",
31830   "rt": [
31831     "oic.r.body.water"
31832   ],
31833   "if": [
31834     "oic.if.s",
31835     "oic.if.baseline"
31836   ]
31837 },
31838 {
31839   "href": "/myBodySoftLeanMass",
31840   "rt": [
31841     "oic.r.body.slm"
31842   ],
31843   "if": [
31844     "oic.if.s",
31845     "oic.if.baseline"
31846   ]
31847 },
31848 {
31849   "href": "/myBodyFatFreeMass",
31850   "rt": [
31851     "oic.r.body.ffmpeg"
31852   ],
31853   "if": [
31854     "oic.if.s",
31855     "oic.if.baseline"
31856   ]
31857 },
31858 {
31859   "href": "/myUserId",
31860   "rt": [
31861     "oic.r.userid"
31862   ],
31863   "if": [
31864     "oic.if.r",
31865     "oic.if.baseline"
31866   ]
31867 },
31868 {
31869   "href": "/myTimeStamp",

```



```

31870         "rt": [
31871             "oic.r.time.stamp"
31872         ],
31873         "if": [
31874             "oic.if.r",
31875             "oic.if.baseline"
31876         ]
31877     }
31878 ],
31879     "schema": {
31880         "$ref": "#/definitions/links"
31881     }
31882 }
31883 }
31884 },
31885 },
31886 "/BodyCompositionAnalyserAMResURI?if=oic.if.baseline": {
31887     "get": {
31888         "description": "This Resource describes the Properties associated with body composition
31889 analyser.\n\nThe Resource is an Atomic Measurement of weight (oic.r.weight), body mass index (BMI)
31890 (oic.r.bmi), height (oic.r.height), body fat (oic.r.body.fat), body water (oic.r.body.water), body
31891 soft lean mass (oic.r.body.slm), body fat free mass (oic.r.body.ffm), observed time
31892 (oic.r.time.stamp), and user id (oic.r.userid).",
31893         "parameters": [
31894             {
31895                 "$ref": "#/parameters/interface-all"
31896             }
31897         ],
31898         "responses": {
31899             "200": {
31900                 "description": "",
31901                 "x-example": {
31902                     "rt": [
31903                         "oic.r.bodycompositionanalyser-am",
31904                         "oic.wk.atomicmeasurement"
31905                     ],
31906                     "if": [
31907                         "oic.if.b",
31908                         "oic.if.ll",
31909                         "oic.if.baseline"
31910                     ],
31911                     "rts": [
31912                         "oic.r.weight",
31913                         "oic.r.bmi",
31914                         "oic.r.height",
31915                         "oic.r.body.fat",
31916                         "oic.r.body.water",
31917                         "oic.r.body.slm",
31918                         "oic.r.body.ffm",
31919                         "oic.r.userid",
31920                         "oic.r.time.stamp"
31921                     ],
31922                     "rts-m": [
31923                         "oic.r.weight",
31924                         "oic.r.body.fat",
31925                         "oic.r.height"
31926                     ],
31927                     "links": [
31928                         {
31929                             "href": "/myWeight",
31930                             "rt": [
31931                                 "oic.r.weight"
31932                             ],
31933                             "if": [
31934                                 "oic.if.s",
31935                                 "oic.if.baseline"
31936                             ]
31937                         },
31938                         {
31939                             "href": "/myBMI",
31940                             "rt": [
31941                                 "oic.r.bmi"

```

```

31942     ],
31943     "if": [
31944         "oic.if.s",
31945         "oic.if.baseline"
31946     ]
31947 },
31948 {
31949     "href": "/myHeight",
31950     "rt": [
31951         "oic.r.height"
31952     ],
31953     "if": [
31954         "oic.if.s",
31955         "oic.if.baseline"
31956     ]
31957 },
31958 {
31959     "href": "/myBodyFat",
31960     "rt": [
31961         "oic.r.body.fat"
31962     ],
31963     "if": [
31964         "oic.if.s",
31965         "oic.if.baseline"
31966     ]
31967 },
31968 {
31969     "href": "/myBodyWater",
31970     "rt": [
31971         "oic.r.body.water"
31972     ],
31973     "if": [
31974         "oic.if.s",
31975         "oic.if.baseline"
31976     ]
31977 },
31978 {
31979     "href": "/myBodySoftLeanMass",
31980     "rt": [
31981         "oic.r.body.slm"
31982     ],
31983     "if": [
31984         "oic.if.s",
31985         "oic.if.baseline"
31986     ]
31987 },
31988 {
31989     "href": "/myBodyFatFreeMass",
31990     "rt": [
31991         "oic.r.body.ffm"
31992     ],
31993     "if": [
31994         "oic.if.s",
31995         "oic.if.baseline"
31996     ]
31997 },
31998 {
31999     "href": "/myUserId",
32000     "rt": [
32001         "oic.r.userid"
32002     ],
32003     "if": [
32004         "oic.if.r",
32005         "oic.if.baseline"
32006     ]
32007 },
32008 {
32009     "href": "/myTimeStamp",
32010     "rt": [
32011         "oic.r.time.stamp"
32012     ],
32013     "if": [

```

```

32014         "oic.if.r",
32015         "oic.if.baseline"
32016     ]
32017 }
32018 ]
32019 },
32020 "schema": {
32021     "$ref": "#/definitions/baseline"
32022 }
32023 }
32024 }
32025 }
32026 }
32027 },
32028 "parameters": {
32029     "interface-all": {
32030         "in": "query",
32031         "name": "if",
32032         "type": "string",
32033         "enum": [
32034             "oic.if.b",
32035             "oic.if.ll",
32036             "oic.if.baseline"
32037         ]
32038     }
32039 },
32040 "definitions": {
32041     "links": {
32042         "type": "array",
32043         "items": {
32044             "$ref": "#/definitions/oic.oic-link"
32045         }
32046     },
32047     "baseline": {
32048         "properties": {
32049             "rt": {
32050                 "items": {
32051                     "enum": [
32052                         "oic.r.bodycompositionanalyser-am",
32053                         "oic.wk.atomicmeasurement"
32054                     ],
32055                     "type": "string",
32056                     "maxLength": 64
32057                 },
32058                 "minItems": 2,
32059                 "uniqueItems": true,
32060                 "readOnly": true,
32061                 "type": "array"
32062             },
32063             "rts": {
32064                 "description": "This contains all possible Resource Types for this Atomic Measurement.",
32065                 "items": {
32066                     "enum": [
32067                         "oic.r.weight",
32068                         "oic.r.bmi",
32069                         "oic.r.height",
32070                         "oic.r.body.fat",
32071                         "oic.r.body.water",
32072                         "oic.r.body.slm",
32073                         "oic.r.body.ffm",
32074                         "oic.r.time.stamp",
32075                         "oic.r.userid"
32076                     ],
32077                     "type": "string",
32078                     "maxLength": 64
32079                 },
32080                 "minItems": 1,
32081                 "uniqueItems": true,
32082                 "readOnly": true,
32083                 "type": "array"
32084             },
32085             "rts-m": {

```

```

32086         "description": "This contains all mandatory Resource Types for this Atomic Measurement.",
32087         "items": {
32088             "enum": [
32089                 "oic.r.weight",
32090                 "oic.r.body.fat",
32091                 "oic.r.height"
32092             ],
32093             "type": "string",
32094             "maxLength": 64
32095         },
32096         "maxItems": 3,
32097         "minItems": 3,
32098         "uniqueItems": true,
32099         "readOnly": true,
32100         "type": "array"
32101     },
32102     "if": {
32103         "description": "The OCF Interface set supported by this Resource",
32104         "items": {
32105             "enum": [
32106                 "oic.if.b",
32107                 "oic.if.ll",
32108                 "oic.if.baseline"
32109             ],
32110             "type": "string",
32111             "maxLength": 64
32112         },
32113         "minItems": 3,
32114         "uniqueItems": true,
32115         "readOnly": true,
32116         "type": "array"
32117     },
32118     "n": {
32119         "$ref":
32120         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
32121         schema.json#/definitions/n"
32122     },
32123     "id": {
32124         "$ref":
32125         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
32126         schema.json#/definitions/id"
32127     },
32128     "links": {
32129         "$ref": "#/definitions/links"
32130     }
32131 },
32132 "type": "object",
32133 "required": [
32134     "rt", "if", "links", "rts", "rts-m"
32135 ]
32136 },
32137 "batch-retrieve": {
32138     "minItems": 1,
32139     "items": {
32140         "properties": {
32141             "href": {
32142                 "$ref":
32143                 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
32144                 schema.json#/definitions/href"
32145             },
32146             "rep": {
32147                 "type": "object",
32148                 "anyOf": [
32149                     {
32150                         "$ref":
32151                         "https://openconnectivityfoundation.github.io/IoTDataModels/WeightResURI.swagger.json#/definitions/W
32152                         eight"
32153                     },
32154                     {
32155                         "$ref":
32156                         "https://openconnectivityfoundation.github.io/IoTDataModels/BMIResURI.swagger.json#/definitions/BMI"
32157                     }
32158                 ]
32159             }
32160         }
32161     }
32162 }

```

```

32158         {
32159             "$ref":
32160 "https://openconnectivityfoundation.github.io/IoTDataModels/HeightResURI.swagger.json#/definitions/H
32161 eight"
32162         },
32163         {
32164             "$ref":
32165 "https://openconnectivityfoundation.github.io/IoTDataModels/BodyFatResURI.swagger.json#/definitions/
32166 BodyFat"
32167         },
32168         {
32169             "$ref":
32170 "https://openconnectivityfoundation.github.io/IoTDataModels/BodyWaterResURI.swagger.json#/definition
32171 s/BodyWater"
32172         },
32173         {
32174             "$ref":
32175 "https://openconnectivityfoundation.github.io/IoTDataModels/BodySoftLeanMassResURI.swagger.json#/def
32176 initions/BodySoftLeanMass"
32177         },
32178         {
32179             "$ref":
32180 "https://openconnectivityfoundation.github.io/IoTDataModels/BodyFatFreeMassResURI.swagger.json#/defi
32181 nitions/BodyFatFreeMass"
32182         },
32183         {
32184             "$ref":
32185 "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/U
32186 serID"
32187         },
32188         {
32189             "$ref":
32190 "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definition
32191 s/TimeStamp"
32192         }
32193     ]
32194 }
32195 },
32196 "required": [
32197     "href",
32198     "rep"
32199 ],
32200 "type": "object"
32201 },
32202 "type": "array"
32203 },
32204 "oic.oic-link": {
32205     "properties": {
32206         "rt": {
32207             "description": "Resource Type of the target Resource",
32208             "items": {
32209                 "enum": [
32210                     "oic.r.weight",
32211                     "oic.r.bmi",
32212                     "oic.r.height",
32213                     "oic.r.body.fat",
32214                     "oic.r.body.water",
32215                     "oic.r.body.slm",
32216                     "oic.r.body.ffmpeg",
32217                     "oic.r.time.stamp",
32218                     "oic.r.userid"
32219                 ],
32220                 "type": "string",
32221                 "maxLength": 64
32222             },
32223             "minItems": 1,
32224             "uniqueItems": true,
32225             "readOnly": true,
32226             "type": "array"
32227         },
32228         "if": {
32229             "description": "The OCF Interface set supported by the target Resource",

```

```

32230         "items": {
32231             "enum": [
32232                 "oic.if.s",
32233                 "oic.if.r",
32234                 "oic.if.baseline"
32235             ],
32236             "type": "string",
32237             "maxLength": 64
32238         },
32239         "minItems": 1,
32240         "uniqueItems": true,
32241         "readOnly": true,
32242         "type": "array"
32243     },
32244     "anchor": {
32245         "$ref":
32246         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
32247         schema.json#/definitions/anchor"
32248     },
32249     "di": {
32250         "$ref":
32251         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
32252         schema.json#/definitions/di"
32253     },
32254     "eps": {
32255         "$ref":
32256         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
32257         schema.json#/definitions/eps"
32258     },
32259     "href": {
32260         "$ref":
32261         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
32262         schema.json#/definitions/href"
32263     },
32264     "ins": {
32265         "$ref":
32266         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
32267         schema.json#/definitions/ins"
32268     },
32269     "p": {
32270         "$ref":
32271         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
32272         schema.json#/definitions/p"
32273     },
32274     "rel": {
32275         "$ref":
32276         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
32277         schema.json#/definitions/rel_array"
32278     },
32279     "title": {
32280         "$ref":
32281         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
32282         schema.json#/definitions/title"
32283     },
32284     "type": {
32285         "$ref":
32286         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
32287         schema.json#/definitions/type"
32288     }
32289 },
32290 "required": [
32291     "href",
32292     "rt",
32293     "if"
32294 ],
32295 "type": "object"
32296 }
32297 }
32298 }
32299

```

32300 **6.155.5 Property definition**

32301 Table 313 defines the Properties that are part of the "oic.r.bodycompositionanalyser-am,  
32302 oic.wk.atomicmeasurement" Resource Type.

32303  
32304

**Table 313 – The Property definitions of the Resource with type "rt" = "oic.r.bodycompositionanalyser-am, oic.wk.atomicmeasurement".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	Yes	Read Only	
rts	array: see schema	Yes	Read Only	This contains all possible Resource Types for this Atomic Measurement.
rts-m	array: see schema	Yes	Read Only	This contains all mandatory Resource Types for this Atomic Measurement.
if	array: see schema	Yes	Read Only	The OCF Interface set supported by this Resource
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
links	multiple types: see schema	Yes	Read Write	
href	multiple types: see schema	Yes	Read Write	
rep	object: see schema	Yes	Read Write	
rt	array: see schema	Yes	Read Only	Resource Type of the target Resource
if	array: see schema	Yes	Read Only	The OCF Interface set supported by the target Resource
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	

32305 **6.155.6 CRUDN behaviour**

32306 Table 314 defines the CRUDN operations that are supported on the  
 32307 "oic.r.bodycompositionanalyser-am, oic.wk.atomicmeasurement" Resource Type.

32308 **Table 314 – The CRUDN operations of the Resource with type "rt" =**  
 32309 **"oic.r.bodycompositionanalyser-am, oic.wk.atomicmeasurement".**

Create	Read	Update	Delete	Notify
	get			observe

32310 **6.156 Fault Interrupter Switch**

32311 **6.156.1 Introduction**

32312 This Resource describes a fault interrupter switch (on/off/faulted).

32313 The Property "state" is an enum.

32314 A state of "on" means that the switch is on.

32315 A state of "off" means that the switch is off.

32316 A state of "faulted" means the switch is faulted, in such a state an UPDATE is not possible.

32317 **6.156.2 Example URI**

32318 /FaultSwitchResURI

32319 **6.156.3 Resource type**

32320 The Resource Type is defined as: "oic.r.switch.fault".

32321 **6.156.4 OpenAPI 2.0 definition**

```

32322 {
32323   "swagger": "2.0",
32324   "info": {
32325     "title": "Fault Interrupter Switch",
32326     "version": "20191114",
32327     "license": {
32328       "name": "OCF Data Model License",
32329       "url":
32330 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
32331 CENSE.md",
32332     "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
32333   },
32334   "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
32335 },
32336 "schemes": ["http"],
32337 "consumes": ["application/json"],
32338 "produces": ["application/json"],
32339 "paths": {
32340   "/FaultSwitchResURI" : {
32341     "get": {
32342       "description": "This Resource describes a fault interrupter switch (on/off/faulted).\nThe
32343 Property \"state\" is an enum.\nA state of \"on\" means that the switch is on.\nA state of \"off\"
32344 means that the switch is off.\nA state of \"faulted\" means the switch is faulted, in such a state
32345 an UPDATE is not possible.",
32346       "parameters": [
32347         {"$ref": "#/parameters/interface"}
32348       ],
32349       "responses": {
32350         "200": {
32351           "description": "",
32352           "x-example":
32353             {
32354               "rt": ["oic.r.switch.fault"],
32355               "if": ["oic.if.a", "oic.if.baseline"],
32356               "state": "off"
32357             },
32358           "schema": { "$ref": "#/definitions/FaultSwitch" }
32359         }
32359       }
32359     }
32359   }

```



```

32360     }
32361   },
32362   "post": {
32363     "description": "Setting a fault interrupter to a faulted state requires a manual human
32364 intervention, thus it is not allowed in an UPDATE. When in a faulted state it is not possible to
32365 reset to a non-faulted state without also manual human intervention.",
32366     "parameters": [
32367       { "$ref": "#/parameters/interface" },
32368       {
32369         "name": "body",
32370         "in": "body",
32371         "required": true,
32372         "schema": { "$ref": "#/definitions/FaultSwitchUpdate" },
32373         "x-example":
32374           {
32375             "state": "on"
32376           }
32377       }
32378     ],
32379     "responses": {
32380       "200": {
32381         "description": "Success path response as would be provided for an UPDATE as shown in
32382 the example for \"post\".",
32383         "x-example":
32384           {
32385             "state": "on"
32386           },
32387         "schema": { "$ref": "#/definitions/FaultSwitch" }
32388       }
32389     }
32390   }
32391 },
32392 },
32393 "parameters": {
32394   "interface": {
32395     "in": "query",
32396     "name": "if",
32397     "type": "string",
32398     "enum": ["oic.if.a", "oic.if.baseline"]
32399   }
32400 },
32401 "definitions": {
32402   "FaultSwitch": {
32403     "properties": {
32404       "rt": {
32405         "description": "The Resource Type.",
32406         "items": {
32407           "enum": ["oic.r.switch.fault"],
32408           "maxLength": 64,
32409           "type": "string"
32410         },
32411         "minItems": 1,
32412         "uniqueItems": true,
32413         "readOnly": true,
32414         "type": "array"
32415       },
32416       "state": {
32417         "description": "The status of the switch.",
32418         "enum": ["on", "off", "faulted"],
32419         "type": "string"
32420       },
32421       "n": {
32422         "$ref":
32423           "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
32424 schema.json#/definitions/n"
32425       },
32426       "id": {
32427         "$ref":
32428           "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
32429 schema.json#/definitions/id"
32430       },
32431       "if": {

```

```

32432         "description": "The OCF Interface set supported by this Resource.",
32433         "items": {
32434             "enum": [
32435                 "oic.if.a",
32436                 "oic.if.baseline"
32437             ],
32438             "type": "string"
32439         },
32440         "minItems": 2,
32441         "uniqueItems": true,
32442         "readOnly": true,
32443         "type": "array"
32444     }
32445 },
32446 "type": "object",
32447 "required": ["state"]
32448 },
32449 "FaultSwitchUpdate" : {
32450     "properties": {
32451         "state": {
32452             "description": "The status of the switch.",
32453             "enum": ["on", "off"],
32454             "type": "string"
32455         }
32456     },
32457     "type": "object",
32458     "required": ["state"]
32459 }
32460 }
32461 }
32462

```

32463 **6.156.5 Property definition**

32464 Table 315 defines the Properties that are part of the "oic.r.switch.fault" Resource Type.

32465 **Table 315 – The Property definitions of the Resource with type "rt" = "oic.r.switch.fault".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
state	string	Yes	Read Write	The status of the switch.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
state	string	Yes	Read Write	The status of the switch.

32466 **6.156.6 CRUDN behaviour**

32467 Table 316 defines the CRUDN operations that are supported on the "oic.r.switch.fault" Resource  
32468 Type.

32469 **Table 316 – The CRUDN operations of the Resource with type "rt" = "oic.r.switch.fault".**

Create	Read	Update	Delete	Notify
	get	post		observe

## 32470 6.157 HVAC Capacity

### 32471 6.157.1 Introduction

32472 This Resource describes the capacity (heating or cooling) of a HVAC system.

32473 "capacity" is a number in units of kW (kilowatts).

32474 To convert from kW to other units that may be commonly used in certain geographic locales the following conversions should be applied:

32476 - to convert to BTU/hr:  $\text{BTU/hr} = 3412.142 * \text{kW}$

32477 - to convert to ton:  $\text{ton} = \text{kW}/3.5168525$

### 32478 6.157.2 Example URI

32479 /HVACCapacityResURI

### 32480 6.157.3 Resource type

32481 The Resource Type is defined as: "oic.r.hvac.capacity".

### 32482 6.157.4 OpenAPI 2.0 definition

```
32483 {
32484   "swagger": "2.0",
32485   "info": {
32486     "title": "HVAC Capacity",
32487     "version": "20190724",
32488     "license": {
32489       "name": "OCF Data Model License",
32490       "url":
32491         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
32492         CENSE.md",
32493       "x-copyright": "copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
32494     },
32495     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
32496   },
32497   "schemes": ["http"],
32498   "consumes": ["application/json"],
32499   "produces": ["application/json"],
32500   "paths": {
32501     "/HVACCapacityResURI" : {
32502       "get": {
32503         "description": "This Resource describes the capacity (heating or cooling) of a HVAC
32504         system.\n \"capacity\" is a number in units of kW (kilowatts).\n To convert from kW to other units
32505         that may be commonly used in certain geographic locales the following conversions should be
32506         applied:\n - to convert to BTU/hr:  $\text{BTU/hr} = 3412.142 * \text{kW}$ \n - to convert to ton:  $\text{ton} =$ 
32507          $\text{kW}/3.5168525$ ",
32508         "parameters": [
32509           { "$ref": "#/parameters/interface" }
32510         ],
32511         "responses": {
32512           "200": {
32513             "description": "RETRIEVES the current capacity.",
32514             "x-example":
32515               {
32516                 "rt": ["oic.r.hvac.capacity"],
32517                 "if": ["oic.if.r", "oic.if.baseline"],
32518                 "capacity": 2.5
32519               },
32520             "schema": { "$ref": "#/definitions/capacity" }
32521           }
32522         }
32523       }
32524     }
32525   },
32526   "parameters": {
32527     "interface": {
32528       "in": "query",
32529       "name": "if",
32530       "type": "string",
32531       "enum": ["oic.if.r", "oic.if.baseline"]
32532     }
32533   }
}
```

```

32533 },
32534 "definitions": {
32535   "capacity": {
32536     "properties": {
32537       "rt": {
32538         "description": "The Resource Type.",
32539         "items": {
32540           "enum": ["oic.r.hvac.capacity"],
32541           "maxLength": 64,
32542           "type": "string"
32543         },
32544         "minItems": 1,
32545         "uniqueItems": true,
32546         "readOnly": true,
32547         "type": "array"
32548       },
32549       "capacity": {
32550         "description": "The rated capacity for the Device.",
32551         "minimum": 0,
32552         "exclusiveMinimum": true,
32553         "readOnly": true,
32554         "type": "number"
32555       },
32556       "n": {
32557         "$ref":
32558         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
32559         schema.json#/definitions/n"
32560       },
32561       "id": {
32562         "$ref":
32563         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
32564         schema.json#/definitions/id"
32565       },
32566       "if": {
32567         "description": "The OCF Interface set supported by this Resource.",
32568         "items": {
32569           "enum": [
32570             "oic.if.r",
32571             "oic.if.baseline"
32572           ],
32573           "type": "string"
32574         },
32575         "minItems": 2,
32576         "uniqueItems": true,
32577         "readOnly": true,
32578         "type": "array"
32579       }
32580     },
32581     "type": "object",
32582     "required": ["capacity"]
32583   }
32584 }
32585 }
32586

```

### 32587 6.157.5 Property definition

32588 Table 317 defines the Properties that are part of the "oic.r.hvac.capacity" Resource Type.

32589 **Table 317 – The Property definitions of the Resource with type "rt" = "oic.r.hvac.capacity".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
capacity	number	Yes	Read Only	The rated capacity for the Device.
n	multiple types: see schema	No	Read Write	

id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

32590 **6.157.6 CRUDN behaviour**

32591 Table 318 defines the CRUDN operations that are supported on the "oic.r.hvac.capacity" Resource  
32592 Type.

32593 **Table 318 – The CRUDN operations of the Resource with type "rt" = "oic.r.hvac.capacity".**

Create	Read	Update	Delete	Notify
	get			observe

32594 **6.158 Media Audio Resource Type**

32595 **6.158.1 Introduction**

32596 This OCF Resource specifies the audio media types that an OCF Device supports.

32597 **6.158.2 Example URI**

32598 /MediaAudioResURI

32599 **6.158.3 Resource type**

32600 The Resource Type is defined as: "oic.r.media.audio".

32601 **6.158.4 OpenAPI 2.0 definition**

```

32602 {
32603   "swagger": "2.0",
32604   "info": {
32605     "title": "Media Audio Resource Type",
32606     "version": "2019-11-27",
32607     "license": {
32608       "name": "OCF Data Model License",
32609       "url":
32610 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
32611 CENSE.md",
32612       "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
32613     },
32614     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
32615   },
32616   "schemes": ["http"],
32617   "consumes": ["application/json"],
32618   "produces": ["application/json"],
32619   "paths": {
32620     "/MediaAudioResURI" : {
32621       "get": {
32622         "description": "This OCF Resource specifies the audio media types that an OCF Device
32623 supports.",
32624         "parameters": [
32625           {"$ref": "#/parameters/interface-r"}
32626         ],
32627         "responses": {
32628           "200": {
32629             "description": "Retrieves the audio information for the specified or the current
32630 media.",
32631             "x-example": {
32632               "rt": ["oic.r.media.audio"],
32633               "id": "unique_example_id",
32634               "mediacore": {
32635                 "title": "Song 1",
32636                 "description": "Long user-friendly synopsis of Song 1",
32637                 "mimetype": "audio/mpeg3",
32638                 "mediafile": "file://example/url/Song1.mp3",

```

```

32639         "genres": [{"category": "Music", "subcategory": "Rock"}, {"category": "Music",
32640 "subcategory": "Pop"}],
32641         "ratinginfo": [{"ratingorganization": "none", "rating": "Parental Advisory -
32642 Explicit Content"}],
32643         "identificationnumber": "ISSN:1234-5678",
32644         "datetime": "2018-06-23T20:22:59-08:00",
32645         "mediaartwork": [
32646             {
32647                 "rt": ["oic.r.icon"],
32648                 "mimetype": "image/png",
32649                 "width": 256,
32650                 "height": 256,
32651                 "media": "file://example/url/song1.png"
32652             }
32653         ],
32654         "copyright": "Copyright notice by the copyright holder for Song 1"
32655     },
32656     "artists": [
32657         "Artist 1",
32658         "Artist 2"
32659     ],
32660     "album": "Album Title 1",
32661     "albumartwork": [
32662         {
32663             "rt": ["oic.r.icon"],
32664             "mimetype": "image/png",
32665             "width": 256,
32666             "height": 256,
32667             "media": "file://example/url/album1.png"
32668         }
32669     ],
32670     "sdp": [
32671         "m=audio 2 RTP/AVP 97",
32672         "a=rtpmap:97 MP4A-LATM/90000"
32673     ],
32674     "duration": "P0Y0M0DT0H4M27S",
32675     "tracknumber": 2,
32676     "producers": [
32677         "Producer 1",
32678         "Producer 2"
32679     ],
32680     "composers": [
32681         "Composer 1",
32682         "Composer 2"
32683     ],
32684     "language": "en"
32685 },
32686 "schema": {"$ref": "#/definitions/MediaAudio"}
32687 }
32688 }
32689 },
32690 "post": {
32691     "description": "Sets the Media Audio properties.",
32692     "parameters": [
32693         {"$ref": "#/parameters/interface-rw"},
32694         {
32695             "name": "body",
32696             "in": "body",
32697             "required": true,
32698             "x-example": {
32699                 "mediacore": {
32700                     "title": "Song 1",
32701                     "description": "Long user-friendly synopsis of Song 1",
32702                     "mimetype": "audio/mpeg3",
32703                     "mediafile": "file://example/url/Song1.mp3",
32704                     "genres": [{"category": "Music", "subcategory": "Rock"}, {"category": "Music",
32705 "subcategory": "Pop"}],
32706                     "ratinginfo": [{"ratingorganization": "none", "rating": "Parental Advisory -
32707 Explicit Content"}],
32708                     "identificationnumber": "ISSN:1234-5678",
32709                     "datetime": "2018-06-23T20:22:59-08:00",
32710                     "mediaartwork": [

```

```

32711         {
32712             "mimetype": "image/png",
32713             "width": 256,
32714             "height": 256,
32715             "media": "file://example/url/song1.png"
32716         }
32717     ],
32718     "copyright": "Copyright notice by the copyright holder for Song 1"
32719 },
32720 "artists": [
32721     "Artist 1",
32722     "Artist 2"
32723 ],
32724 "album": "Album Title 1",
32725 "albumartwork": [
32726     {
32727         "mimetype": "image/png",
32728         "width": 256,
32729         "height": 256,
32730         "media": "file://example/url/album1.png"
32731     }
32732 ],
32733 "sdp": [
32734     "m=audio 2 RTP/AVP 97",
32735     "a=rtpmap:97 MP4A-LATM/90000"
32736 ],
32737 "duration": "P0Y0M0DT0H4M27S",
32738 "tracknumber": 2,
32739 "producers": [
32740     "Producer 1",
32741     "Producer 2"
32742 ],
32743 "composers": [
32744     "Composer 1",
32745     "Composer 2"
32746 ],
32747 "language": "en"
32748 },
32749 "schema": {"$ref": "#/definitions/MediaAudioUpdate"}
32750 }
32751 ],
32752 "responses": {
32753     "200": {
32754         "description": "Sets the audio information for the specified or the current media.",
32755         "x-example": {
32756             "mediacore": {
32757                 "title": "Song 1",
32758                 "description": "Long user-friendly synopsis of Song 1",
32759                 "mimetype": "audio/mpeg3",
32760                 "mediafile": "file://example/url/Song1.mp3",
32761                 "genres": [{"category": "Music", "subcategory": "Rock"}, {"category": "Music",
32762 "subcategory": "Pop"}],
32763                 "ratinginfo": [{"ratingorganization": "none", "rating": "Parental Advisory -
32764 Explicit Content"}],
32765                 "identificationnumber": "ISSN:1234-5678",
32766                 "datetime": "2018-06-23T20:22:59-08:00",
32767                 "mediaartwork": [
32768                     {
32769                         "rt": ["oic.r.icon"],
32770                         "mimetype": "image/png",
32771                         "width": 256,
32772                         "height": 256,
32773                         "media": "file://example/url/song1.png"
32774                     }
32775                 ],
32776                 "copyright": "Copyright notice by the copyright holder for Song 1"
32777             },
32778             "artists": [
32779                 "Artist 1",
32780                 "Artist 2"
32781             ],
32782             "album": "Album Title 1",

```

```

32783         "albumartwork": [
32784             {
32785                 "rt": ["oic.r.icon"],
32786                 "mimetype": "image/png",
32787                 "width": 256,
32788                 "height": 256,
32789                 "media": "file://example/url/album1.png"
32790             }
32791         ],
32792         "sdp": [
32793             "m=audio 2 RTP/AVP 97",
32794             "a=rtpmap:97 MP4A-LATM/90000"
32795         ],
32796         "duration": "POY0MODT0H4M27S",
32797         "tracknumber": 2,
32798         "producers": [
32799             "Producer 1",
32800             "Producer 2"
32801         ],
32802         "composers": [
32803             "Composer 1",
32804             "Composer 2"
32805         ],
32806         "language": "en"
32807     },
32808     "schema": {"$ref": "#/definitions/MediaAudioUpdate"}
32809 }
32810 }
32811 }
32812 },
32813 },
32814 "parameters": {
32815     "interface-r" : {
32816         "in" : "query",
32817         "name" : "if",
32818         "type" : "string",
32819         "enum" : ["oic.if.rw", "oic.if.baseline"]
32820     },
32821     "interface-rw" : {
32822         "in" : "query",
32823         "name" : "if",
32824         "type" : "string",
32825         "enum" : ["oic.if.rw"]
32826     }
32827 },
32828 "definitions": {
32829     "MediaAudio" : {
32830         "properties": {
32831             "rt": {
32832                 "description": "The Resource Type of Media Audio",
32833                 "items": {
32834                     "enum": ["oic.r.media.audio"],
32835                     "type": "string"
32836                 },
32837                 "minItems": 1,
32838                 "uniqueItems": true,
32839                 "readOnly": true,
32840                 "type": "array"
32841             },
32842             "mediacore": {
32843                 "description": "The Media Core Properties common on all Media Resource Types",
32844                 "$ref":
32845 "https://openconnectivityfoundation.github.io/IoTDataModels/MediaCoreResURI.swagger.json#/definition
32846 s/MediaCore"
32847             },
32848             "artists" : {
32849                 "description": "List of artists that recorded the song",
32850                 "items": {
32851                     "type": "string"
32852                 },
32853                 "minItems": 1,
32854                 "type": "array"

```



```

32855     },
32856     "album" : {
32857         "description": "Which album the song and picture belong to (if applicable)",
32858         "type": "string"
32859     },
32860     "albumartwork" : {
32861         "description": "The array of icons that are used as the album artwork.",
32862         "items": {
32863             "$ref": "https://openconnectivityfoundation.github.io/core-
32864 extensions/swagger2.0/oic.r.icon.swagger.json#/definitions/Icon"
32865         },
32866         "minItems": 1,
32867         "type": "array"
32868     },
32869     "tracknumber" : {
32870         "description": "The track number from the album",
32871         "type": "integer"
32872     },
32873     "sdp" : {
32874         "description": "Array of strings, a string for each Session Description Protocol syntax.",
32875         "items": {
32876             "description": "Session Description Protocol is a format for describing streaming media
32877 communications parameters using the media and attribute lines defined in RFC4566.",
32878             "type": "string"
32879         },
32880         "minItems": 1,
32881         "type": "array"
32882     },
32883     "duration": {
32884         "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
32885 schema.json#/definitions/duration",
32886         "description": "Duration is the total length of the media audio with format pattern
32887 according to ISO 8601 duration. For example, P0Y0M0DT0H4M27S represents a duration of 4 minutes, and
32888 27 seconds."
32889     },
32890     "producers" : {
32891         "description": "List of producers that produced the song",
32892         "items": {
32893             "type": "string"
32894         },
32895         "minItems": 1,
32896         "type": "array"
32897     },
32898     "composers" : {
32899         "description": "List of composers that wrote the song",
32900         "items": {
32901             "type": "string"
32902         },
32903         "minItems": 1,
32904         "type": "array"
32905     },
32906     "language": {
32907         "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
32908 schema.json#/definitions/language-tag",
32909         "description": "Current language of the audio media content with format pattern according
32910 to RFC 5646 language tag"
32911     },
32912     "n": {
32913         "$ref":
32914 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
32915 schema.json#/definitions/n"
32916     },
32917     "id": {
32918         "$ref":
32919 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
32920 schema.json#/definitions/id"
32921     },
32922     "if": {
32923         "description": "The OCF Interface set supported by this Resource",
32924         "items": {
32925             "enum": ["oic.if.rw", "oic.if.baseline"],
32926             "type": "string"

```

```

32927         },
32928         "minItems": 1,
32929         "uniqueItems": true,
32930         "readOnly": true,
32931         "type": "array"
32932     }
32933 },
32934 "type" : "object",
32935 "required": ["mediacore"]
32936 },
32937 "MediaAudioUpdate" : {
32938     "properties": {
32939         "mediacore": {
32940             "description": "The Media Core Properties common on all Media Resource Types,",
32941             "$ref":
32942 "https://openconnectivityfoundation.github.io/IoTDataModels/MediaCoreResURI.swagger.json#/definition
32943 s/MediaCore"
32944         },
32945         "artists" : {
32946             "description": "List of artists that recorded the song",
32947             "items": {
32948                 "type": "string"
32949             },
32950             "minItems": 1,
32951             "type": "array"
32952         },
32953         "album" : {
32954             "description": "Which album the song and picture belong to (if applicable)",
32955             "type": "string"
32956         },
32957         "albumartwork" : {
32958             "description": "The array of icons that are used as the album artwork.",
32959             "items": {
32960                 "$ref": "https://openconnectivityfoundation.github.io/core-
32961 extensions/swagger2.0/oic.r.icon.swagger.json#/definitions/Icon"
32962             },
32963             "minItems": 1,
32964             "type": "array"
32965         },
32966         "tracknumber" : {
32967             "description": "The track number from the album",
32968             "type": "integer"
32969         },
32970         "sdp" : {
32971             "description": "Array of strings, a string for each Session Description Protocol syntax.",
32972             "items": {
32973                 "description": "Session Description Protocol is a format for describing streaming media
32974 communications parameters using the media and attribute lines defined in RFC4566.",
32975                 "type": "string"
32976             },
32977             "minItems": 1,
32978             "type": "array"
32979         },
32980         "duration": {
32981             "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
32982 schema.json#/definitions/duration",
32983             "description": "Duration is the total length of the media audio with format pattern
32984 according to ISO 8601 duration. For example, P0Y0M0DT0H4M27S represents a duration of 4 minutes, and
32985 27 seconds."
32986         },
32987         "producers" : {
32988             "description": "List of producers that produced the song",
32989             "items": {
32990                 "type": "string"
32991             },
32992             "minItems": 1,
32993             "type": "array"
32994         },
32995         "composers" : {
32996             "description": "List of composers that wrote the song",
32997             "items": {
32998                 "type": "string"

```

```

32999     },
33000     "minItems": 1,
33001     "type": "array"
33002   },
33003   "language": {
33004     "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
33005 schema.json#/definitions/language-tag",
33006     "description": "Current language of the audio media content with format pattern according
33007 to RFC 5646 language tag"
33008   },
33009   "n": {
33010     "$ref":
33011 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
33012 schema.json#/definitions/n"
33013   }
33014 },
33015 "type" : "object",
33016 "required": ["mediacore"]
33017 }
33018 }
33019 }
33020

```

### 33021 6.158.5 Property definition

33022 Table 319 defines the Properties that are part of the "oic.r.media.audio" Resource Type.

33023 **Table 319 – The Property definitions of the Resource with type "rt" = "oic.r.media.audio".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type of Media Audio
mediacore	multiple types: see schema	Yes	Read Write	The Media Core Properties common on all Media Resource Types
artists	array: see schema	No	Read Write	List of artists that recorded the song
album	string	No	Read Write	Which album the song and picture belong to (if applicable)
albumartwork	array: see schema	No	Read Write	The array of icons that are used as the album artwork.
tracknumber	integer	No	Read Write	The track number from the album
sdp	array: see schema	No	Read Write	Array of strings, a string for each Session Description Protocol syntax.
duration	multiple types: see schema	No	Read Write	Duration is the total length of the media audio with format pattern according to ISO 8601 duration. For example, P0Y0M0DT0H4M27S represents a duration of 4 minutes, and 27 seconds.

producers	array: see schema	No	Read Write	List of producers that produced the song
composers	array: see schema	No	Read Write	List of composers that wrote the song
language	multiple types: see schema	No	Read Write	Current language of the audio media content with format pattern according to RFC 5646 language tag
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
mediacore	multiple types: see schema	Yes	Read Write	The Media Core Properties common on all Media Resource Types,
artists	array: see schema	No	Read Write	List of artists that recorded the song
album	string	No	Read Write	Which album the song and picture belong to (if applicable)
albumartwork	array: see schema	No	Read Write	The array of icons that are used as the album artwork.
tracknumber	integer	No	Read Write	The track number from the album
sdp	array: see schema	No	Read Write	Array of strings, a string for each Session Description Protocol syntax.
duration	multiple types: see schema	No	Read Write	Duration is the total length of the media audio with format pattern according to ISO 8601 duration. For example, P0Y0M0DT0H4M27S represents a duration of 4 minutes, and 27 seconds.
producers	array: see schema	No	Read Write	List of producers that produced the song
composers	array: see schema	No	Read Write	List of composers that wrote the song
language	multiple types: see schema	No	Read Write	Current language of the audio media content with format pattern according to RFC 5646 language tag

n	multiple types: see schema	No	Read Write	
---	----------------------------	----	------------	--

33024 **6.158.6 CRUDN behaviour**

33025 Table 320 defines the CRUDN operations that are supported on the "oic.r.media.audio" Resource  
33026 Type.

33027 **Table 320 – The CRUDN operations of the Resource with type "rt" = "oic.r.media.audio".**

Create	Read	Update	Delete	Notify
	get	post		observe

33028 **6.159 Media Core Resource Type**

33029 **6.159.1 Introduction**

33030 This OCF Resource specifies the core media types that an OCF Device supports.

33031 **6.159.2 Example URI**

33032 /MediaCoreResURI

33033 **6.159.3 Resource type**

33034 The Resource Type is defined as: "oic.r.media.core".

33035 **6.159.4 OpenAPI 2.0 definition**

```

33036 {
33037   "swagger": "2.0",
33038   "info": {
33039     "title": "Media Core Resource Type",
33040     "version": "2019-11-27",
33041     "license": {
33042       "name": "OCF Data Model License",
33043       "url":
33044         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
33045         CENSE.md",
33046       "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
33047     },
33048     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
33049   },
33050   "schemes": ["http"],
33051   "consumes": ["application/json"],
33052   "produces": ["application/json"],
33053   "paths": {
33054     "/MediaCoreResURI" : {
33055       "get": {
33056         "description": "This OCF Resource specifies the core media types that an OCF Device
33057         supports.",
33058         "parameters": [
33059           {"$ref": "#/parameters/interface-r"}
33060         ],
33061         "responses": {
33062           "200": {
33063             "description" : "Retrieves the core information for the specified or the current
33064             media.",
33065             "x-example": {
33066               "rt": ["oic.r.media.core"],
33067               "id": "unique_example_id",
33068               "title": "PDF File 1",
33069               "description": "Long user-friendly synopsis of PDF File 1",
33070               "mimetype": "application/pdf",
33071               "mediafile": "file://example/url/PDF_File1.pdf",
33072               "genres": [{"category": "Music", "subcategory": "Rock"}, {"category": "Music",
33073               "subcategory": "Pop"}],
33074               "ratinginfo": [{"ratingorganization": "none", "rating": "Parental Advisory - Explicit
33075               Content"}],
33076               "identificationnumber": "ISSN:1234-5678",

```

```

33077         "datetime": "2018-06-23T20:22:59-08:00",
33078         "mediaartwork": [
33079             {
33080                 "rt": ["oic.r.icon"],
33081                 "mimetype": "image/png",
33082                 "width": 256,
33083                 "height": 256,
33084                 "media": "file://example/url/medial.png"
33085             }
33086         ],
33087         "copyright": "Copyright notice by the copyright holder for PDF File 1"
33088     },
33089     "schema": {"$ref": "#/definitions/MediaCore"}
33090 }
33091 },
33092 "post": {
33093     "description": "Sets the Media Core properties.",
33094     "parameters": [
33095         {"$ref": "#/parameters/interface-rw"},
33096         {
33097             "name": "body",
33098             "in": "body",
33099             "required": true,
33100             "x-example": {
33101                 "title": "New PDF File 1",
33102                 "description": "Long user-friendly synopsis of PDF File 1",
33103                 "mimetype": "application/pdf",
33104                 "mediafile": "file://example/url/PDF_File1.pdf",
33105                 "genres": [{"category": "Music", "subcategory": "Rock"}, {"category": "Music",
33106 "subcategory": "Pop"}],
33107                 "ratinginfo": [{"ratingorganization": "none", "rating": "Parental Advisory - Explicit
33108 Content"}],
33109                 "identificationnumber": "ISSN:1234-5678",
33110                 "datetime": "2018-06-23T20:22:59-08:00",
33111                 "mediaartwork": [
33112                     {
33113                         "mimetype": "image/png",
33114                         "width": 256,
33115                         "height": 256,
33116                         "media": "file://example/url/medial.png"
33117                     }
33118                 ],
33119                 "copyright": "Copyright notice by the copyright holder for PDF File 1"
33120             }
33121         },
33122         "schema": {"$ref": "#/definitions/MediaCoreUpdate"}
33123     ]
33124 },
33125     "responses": {
33126         "200": {
33127             "description": "Sets the core information for the specified or the current media.",
33128             "x-example": {
33129                 "title": "PDF File 1",
33130                 "description": "Long user-friendly synopsis of PDF File 1",
33131                 "mimetype": "application/pdf",
33132                 "mediafile": "file://example/url/PDF_File1.pdf",
33133                 "genres": [{"category": "Music", "subcategory": "Rock"}, {"category": "Music",
33134 "subcategory": "Pop"}],
33135                 "ratinginfo": [{"ratingorganization": "none", "rating": "Parental Advisory - Explicit
33136 Content"}],
33137                 "identificationnumber": "ISSN:1234-5678",
33138                 "datetime": "2018-06-23T20:22:59-08:00",
33139                 "mediaartwork": [
33140                     {
33141                         "rt": ["oic.r.icon"],
33142                         "mimetype": "image/png",
33143                         "width": 256,
33144                         "height": 256,
33145                         "media": "file://example/url/medial.png"
33146                     }
33147                 ],
33148                 "copyright": "Copyright notice by the copyright holder for PDF File 1"

```

```

33149         },
33150         "schema": {"$ref": "#/definitions/MediaCoreUpdate"}
33151     }
33152 }
33153 }
33154 }
33155 },
33156 "parameters": {
33157     "interface-r" : {
33158         "in" : "query",
33159         "name" : "if",
33160         "type" : "string",
33161         "enum" : ["oic.if.rw", "oic.if.baseline"]
33162     },
33163     "interface-rw" : {
33164         "in" : "query",
33165         "name" : "if",
33166         "type" : "string",
33167         "enum" : ["oic.if.rw"]
33168     }
33169 },
33170 "definitions": {
33171     "MediaCore" : {
33172         "properties": {
33173             "rt": {
33174                 "description": "The Resource Type of Media Core",
33175                 "items": {
33176                     "enum": ["oic.r.media.core"],
33177                     "type": "string"
33178                 },
33179                 "minItems": 1,
33180                 "uniqueItems": true,
33181                 "readOnly": true,
33182                 "type": "array"
33183             },
33184             "title" : {
33185                 "description": "Specifies the Short user-friendly name of the media.",
33186                 "type": "string"
33187             },
33188             "description" : {
33189                 "description": "Specifies the Long user-friendly synopsis of the media content.",
33190                 "readOnly": true,
33191                 "type": "string"
33192             },
33193             "mimetype" : {
33194                 "description": "Specifies the Mime Type for the media content.",
33195                 "type": "string"
33196             },
33197             "mediafile" : {
33198                 "description": "uri of the Media File for media content. It can be specified as a Relative
33199 Reference or fully-qualified URI.",
33200                 "format": "uri",
33201                 "maxLength": 256,
33202                 "type": "string"
33203             },
33204             "genres" : {
33205                 "description": "Genres for media content.",
33206                 "items": {
33207                     "$ref": "#/definitions/MediaGenre"
33208                 },
33209                 "minItems": 1,
33210                 "type": "array"
33211             },
33212             "ratinginfo" : {
33213                 "description": "The rating information which includes the rating organization and
33214 rating.",
33215                 "items": {
33216                     "properties": {
33217                         "rating": {
33218                             "description": "A category of artistic composition, as in music or literature,
33219 characterized by similarities in form, style, or subject matter. (For instance, the type of song,
33220 e.g. speech, rock, pop)",

```

```

33221         "type": "string"
33222     },
33223     "ratingorganization": {
33224         "description": "These are media content rating organization.",
33225         "type": "string"
33226     }
33227 },
33228     "type": "object"
33229 },
33230     "type": "array"
33231 },
33232     "identificationnumber" : {
33233         "description": "Unique identification number for media content (ISSN:
33234 International_Standard_Serial_Number)",
33235         "type": "string"
33236     },
33237     "datetime" : {
33238         "description": "This is date, time, and timezone of the media content was created using
33239 RFC3339 date-time format.\n\r (e.g: '2018-06-23T20:22:59Z' - Date+Time+Timezone'UTC' or '2018-06-
33240 23T20:22:59-08:00' - Date+Time+Timezone'PST')",
33241         "format": "date-time",
33242         "type": "string"
33243     },
33244     "mediaartwork" : {
33245         "description": "The array of icons that are used as the media artwork.",
33246         "items": {
33247             "$ref": "https://openconnectivityfoundation.github.io/core-
33248 extensions/swagger2.0/oic.r.icon.swagger.json#/definitions/Icon"
33249         },
33250         "minItems": 1,
33251         "type": "array"
33252     },
33253     "copyright" : {
33254         "description": "Copyright notice by the copyright holder.",
33255         "readOnly": true,
33256         "type": "string"
33257     },
33258     "n": {
33259         "$ref":
33260 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
33261 schema.json#/definitions/n"
33262     },
33263     "id": {
33264         "$ref":
33265 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
33266 schema.json#/definitions/id"
33267     },
33268     "if": {
33269         "description": "The OCF Interface set supported by this Resource",
33270         "items": {
33271             "enum": ["oic.if.rw", "oic.if.baseline"],
33272             "type": "string"
33273         },
33274         "minItems": 1,
33275         "uniqueItems": true,
33276         "readOnly": true,
33277         "type": "array"
33278     }
33279 },
33280     "type": "object",
33281     "required": ["title", "mimetype", "mediafile"]
33282 },
33283     "MediaCoreUpdate" : {
33284         "properties": {
33285             "title" : {
33286                 "description": "Specifies the Short user-friendly name of the media.",
33287                 "type": "string"
33288             },
33289             "description" : {
33290                 "description": "Specifies the Long user-friendly synopsis of the media content.",
33291                 "readOnly": true,
33292                 "type": "string"

```



```

33293     },
33294     "mimetype" : {
33295         "description": "Specifies the Mime Type for the media content.",
33296         "type": "string"
33297     },
33298     "mediafile" : {
33299         "description": "uri of the Media File for media content. It can be specified as a Relative
33300 Reference or fully-qualified URI.",
33301         "format": "uri",
33302         "maxLength": 256,
33303         "type": "string"
33304     },
33305     "genres" : {
33306         "description": "Genres for media content.",
33307         "items": {
33308             "$ref": "#/definitions/MediaGenre"
33309         },
33310         "minItems": 1,
33311         "type": "array"
33312     },
33313     "ratinginfo" : {
33314         "description": "The rating information which includes the rating organization and
33315 rating.",
33316         "items": {
33317             "properties": {
33318                 "rating": {
33319                     "description": "A category of artistic composition, as in music or literature,
33320 characterized by similarities in form, style, or subject matter. (For instance, the type of song,
33321 e.g. speech, rock, pop)",
33322                     "type": "string"
33323                 },
33324                 "ratingorganization": {
33325                     "description": "These are media content rating organization.",
33326                     "type": "string"
33327                 }
33328             },
33329             "type": "object"
33330         },
33331         "type": "array"
33332     },
33333     "identificationnumber" : {
33334         "description": "Unique identification number for media content (ISSN:
33335 International_Standard_Serial_Number)",
33336         "type": "string"
33337     },
33338     "datetime" : {
33339         "description": "This is date, time, and timezone of the media content was created using
33340 RFC3339 date-time format.\n\r (e.g: '2018-06-23T20:22:59Z' - Date+Time+Timezone'UTC' or '2018-06-
33341 23T20:22:59-08:00' - Date+Time+Timezone'PST')",
33342         "format": "date-time",
33343         "type": "string"
33344     },
33345     "mediaartwork" : {
33346         "description": "The array of icons that are used as the media artwork.",
33347         "items": {
33348             "$ref": "https://openconnectivityfoundation.github.io/core-
33349 extensions/swagger2.0/oic.r.icon.swagger.json#/definitions/Icon"
33350         },
33351         "minItems": 1,
33352         "type": "array"
33353     },
33354     "copyright" : {
33355         "description": "Copyright notice by the copyright holder.",
33356         "readOnly": true,
33357         "type": "string"
33358     },
33359     "n": {
33360         "$ref":
33361 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
33362 schema.json#/definitions/n"
33363     }
33364 },

```

```

33365     "type": "object"
33366   },
33367   "MediaGenre": {
33368     "properties": {
33369       "category": {
33370         "$ref":
33371 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.genre.properties-
33372 schema.json#/definitions/category",
33373         "description": "Genre Category for Media Information.",
33374         "readOnly": true
33375       },
33376       "subcategory": {
33377         "$ref":
33378 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.genre.properties-
33379 schema.json#/definitions/subcategory",
33380         "description": "Genre Sub-Category for Media Information.",
33381         "readOnly": true
33382       }
33383     },
33384     "type": "object",
33385     "required": ["category"]
33386   }
33387 }
33388 }
33389

```

### 33390 6.159.5 Property definition

33391 Table 321 defines the Properties that are part of the "oic.r.media.core" Resource Type.

33392 **Table 321 – The Property definitions of the Resource with type "rt" = "oic.r.media.core".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type of Media Core
title	string	Yes	Read Write	Specifies the Short user-friendly name of the media.
description	string	No	Read Only	Specifies the Long user-friendly synopsis of the media content.
mimetype	string	Yes	Read Write	Specifies the Mime Type for the media content.
mediafile	string	Yes	Read Write	uri of the Media File for media content. It can be specified as a Relative Reference or fully-qualified URI.
genres	array: see schema	No	Read Write	Genres for media content.
ratinginfo	array: see schema	No	Read Write	The rating information which includes the rating organization and rating.
identificationnumber	string	No	Read Write	Unique identification number for media content (ISSN: International_Standard_Serial_Number)
datetime	string	No	Read Write	This is date, time, and timezone of the media content was created using RFC3339 date-time format.  (e.g: '2018-06-23T20:22:59Z' - Date+Time+Timezone'UTC' or '2018-06-23T20:22:59-08:00' - Date+Time+Timezone'PST')
mediaartwork	array: see schema	No	Read Write	The array of icons that are used as the media artwork.
copyright	string	No	Read Only	Copyright notice by the copyright holder.

n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
title	string		Read Write	Specifies the Short user-friendly name of the media.
description	string		Read Only	Specifies the Long user-friendly synopsis of the media content.
mimetype	string		Read Write	Specifies the Mime Type for the media content.
mediafile	string		Read Write	uri of the Media File for media content. It can be specified as a Relative Reference or fully-qualified URI.
genres	array: see schema		Read Write	Genres for media content.
ratinginfo	array: see schema		Read Write	The rating information which includes the rating organization and rating.
identificationnumber	string		Read Write	Unique identification number for media content (ISSN: International_Standard_Serial_Number)
datetime	string		Read Write	This is date, time, and timezone of the media content was created using RFC3339 date-time format.  (e.g: '2018-06-23T20:22:59Z' - Date+Time+Timezone'UTC' or '2018- 06-23T20:22:59-08:00' - Date+Time+Timezone'PST')
mediaartwork	array: see schema		Read Write	The array of icons that are used as the media artwork.
copyright	string		Read Only	Copyright notice by the copyright holder.
n	multiple types: see schema		Read Write	
category	multiple types: see schema	Yes	Read Only	Genre Category for Media Information.
subcategory	multiple types: see schema	No	Read Only	Genre Sub-Category for Media Information.

### 33393 6.159.6 CRUDN behaviour

33394 Table 322 defines the CRUDN operations that are supported on the "oic.r.media.core" Resource  
33395 Type.

33396 **Table 322 – The CRUDN operations of the Resource with type "rt" = "oic.r.media.core".**

Create	Read	Update	Delete	Notify
	get	post		observe

### 33397 6.160 Media Image Resource Type

#### 33398 6.160.1 Introduction

33399 This OCF Resource specifies the image media types that an OCF Device supports.

33400 **6.160.2 Example URI**

33401 /MediaImageResURI

33402 **6.160.3 Resource type**

33403 The Resource Type is defined as: "oic.r.media.image".

33404 **6.160.4 OpenAPI 2.0 definition**

```
33405 {
33406   "swagger": "2.0",
33407   "info": {
33408     "title": "Media Image Resource Type",
33409     "version": "2019-11-27",
33410     "license": {
33411       "name": "OCF Data Model License",
33412       "url":
33413 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
33414 CENSE.md",
33415       "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
33416     },
33417     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
33418   },
33419   "schemes": ["http"],
33420   "consumes": ["application/json"],
33421   "produces": ["application/json"],
33422   "paths": {
33423     "/MediaImageResURI" : {
33424       "get": {
33425         "description": "This OCF Resource specifies the image media types that an OCF Device
33426 supports.",
33427         "parameters": [
33428           {"$ref": "#/parameters/interface-r"}
33429         ],
33430         "responses": {
33431           "200": {
33432             "description": "Retrieves the image information for the specified or the current
33433 media.",
33434             "x-example": {
33435               "rt": ["oic.r.media.image"],
33436               "id": "unique_example_id",
33437               "mediacore": {
33438                 "title": "Image 1",
33439                 "description": "Long user-friendly synopsis of Image 1",
33440                 "mimetype": "image/png",
33441                 "mediafile": "file://example/url/Image1.png",
33442                 "genres": [{"category": "Arts", "subcategory": "Culture"}, {"category": "Arts",
33443 "subcategory": "Religion"}],
33444                 "ratinginfo": [{"ratingorganization": "none", "rating": "General"}],
33445                 "identificationnumber": "ISSN:1234-5678",
33446                 "datetime": "2018-06-23T20:22:59-08:00",
33447                 "copyright": "Copyright notice by the copyright holder for Image 1"
33448               },
33449               "artists": [ "Artist 1", "Artist 2" ],
33450               "album": "Album Title 1",
33451               "albumartwork": [
33452                 {
33453                   "rt": ["oic.r.icon"],
33454                   "mimetype": "image/png",
33455                   "width": 256,
33456                   "height": 256,
33457                   "media": "file://example/url/album1.png"
33458                 }
33459               ],
33460               "width": 2460,
33461               "height": 1667,
33462               "size": 496.765,
33463               "resolution": 200,
33464               "location": "Death Valley National Park, Furnace Creek, CA 92328, USA",
33465               "geolocation": {"latitude": 36.4643308,"longitude": -116.86906640000001, "alt": -62.1}
33466             }
33467           }
33468         }
33469       }
33470     }
33471   }
33472 }
```

```

33467         "schema": {"$ref": "#/definitions/MediaImage"}
33468     }
33469 }
33470 },
33471 "post": {
33472     "description": "Sets the Media Image properties.",
33473     "parameters": [
33474         {"$ref": "#/parameters/interface-rw"},
33475     ],
33476     "name": "body",
33477     "in": "body",
33478     "required": true,
33479     "x-example": {
33480         "mediacore": {
33481             "title": "Image 1",
33482             "description": "Long user-friendly synopsis of Image 1",
33483             "mimetype": "image/png",
33484             "mediafile": "file://example/url/Image1.png",
33485             "genres": [{"category": "Arts", "subcategory": "Culture"}, {"category": "Arts",
33486 "subcategory": "Religion"}],
33487             "ratinginfo": [{"ratingorganization": "none", "rating": "General"}],
33488             "identificationnumber": "ISSN:1234-5678",
33489             "datetime": "2018-06-23T20:22:59-08:00",
33490             "copyright": "Copyright notice by the copyright holder for Image 1"
33491         },
33492         "artists": [ "Artist 1", "Artist 2" ],
33493         "album": "Album Title 1",
33494         "albumartwork": [
33495             {
33496                 "rt": ["oic.r.icon"],
33497                 "mimetype": "image/png",
33498                 "width": 256,
33499                 "height": 256,
33500                 "media": "file://example/url/album1.png"
33501             }
33502         ],
33503         "width": 2460,
33504         "height": 1667,
33505         "size": 496.765,
33506         "resolution": 200,
33507         "location": "Death Valley National Park, Furnace Creek, CA 92328, USA",
33508         "geolocation": {"latitude": 36.4643308,"longitude": -116.86906640000001, "alt": -62.1}
33509     },
33510     "schema": {"$ref": "#/definitions/MediaImageUpdate"}
33511 }
33512 ],
33513 "responses": {
33514     "200": {
33515         "description": "Sets the image information for the specified or the current media.",
33516         "x-example": {
33517             "mediacore": {
33518                 "title": "Image 1",
33519                 "description": "Long user-friendly synopsis of Image 1",
33520                 "mimetype": "image/png",
33521                 "mediafile": "file://example/url/Image1.png",
33522                 "genres": [{"category": "Arts", "subcategory": "Culture"}, {"category": "Arts",
33523 "subcategory": "Religion"}],
33524                 "ratinginfo": [{"ratingorganization": "none", "rating": "General"}],
33525                 "identificationnumber": "ISSN:1234-5678",
33526                 "datetime": "2018-06-23T20:22:59-08:00",
33527                 "copyright": "Copyright notice by the copyright holder for Image 1"
33528             },
33529             "artists": [ "Artist 1", "Artist 2" ],
33530             "album": "Album Title 1",
33531             "albumartwork": [
33532                 {
33533                     "rt": ["oic.r.icon"],
33534                     "mimetype": "image/png",
33535                     "width": 256,
33536                     "height": 256,
33537                     "media": "file://example/url/album1.png"
33538                 }

```

```

33539         ],
33540         "width": 2460,
33541         "height": 1667,
33542         "size": 496.765,
33543         "resolution": 200,
33544         "location": "Death Valley National Park, Furnace Creek, CA 92328, USA",
33545         "geolocation": {"latitude": 36.4643308,"longitude": -116.86906640000001, "alt": -62.1}
33546     },
33547     "schema": {"$ref": "#/definitions/MediaImageUpdate"}
33548 }
33549 }
33550 }
33551 }
33552 },
33553 "parameters": {
33554     "interface-r" : {
33555         "in" : "query",
33556         "name" : "if",
33557         "type" : "string",
33558         "enum" : ["oic.if.rw", "oic.if.baseline"]
33559     },
33560     "interface-rw" : {
33561         "in" : "query",
33562         "name" : "if",
33563         "type" : "string",
33564         "enum" : ["oic.if.rw"]
33565     }
33566 },
33567 "definitions": {
33568     "MediaImage" : {
33569         "properties": {
33570             "rt": {
33571                 "description": "The Resource Type of Media Image",
33572                 "items": {
33573                     "enum": ["oic.r.media.image"],
33574                     "type": "string"
33575                 },
33576                 "minItems": 1,
33577                 "uniqueItems": true,
33578                 "readOnly": true,
33579                 "type": "array"
33580             },
33581             "mediacore": {
33582                 "description": "The Media Core Properties common on all Media Resource Types,",
33583                 "$ref":
33584 "https://openconnectivityfoundation.github.io/IoTDataModels/MediaCoreResURI.swagger.json#/definition
33585 s/MediaCore"
33586             },
33587             "artists" : {
33588                 "description": "List of artists",
33589                 "items": {
33590                     "type": "string"
33591                 },
33592                 "minItems": 1,
33593                 "type": "array"
33594             },
33595             "album" : {
33596                 "description": "Which album the picture belongs to (if applicable).",
33597                 "type": "string"
33598             },
33599             "albumartwork" : {
33600                 "description": "The array of icons that are used as the album artwork.",
33601                 "items": {
33602                     "$ref": "https://openconnectivityfoundation.github.io/core-
33603 extensions/swagger2.0/oic.r.icon.swagger.json#/definitions/Icon"
33604                 },
33605                 "minItems": 1,
33606                 "type": "array"
33607             },
33608             "width" : {
33609                 "description": "The resolution of the image",
33610                 "type": "integer"

```

```

33611     },
33612     "height" : {
33613         "description": "The resolution of the image",
33614         "type": "integer"
33615     },
33616     "size" : {
33617         "description": "The size of the image in KB - Kilo-Bytes",
33618         "type": "number"
33619     },
33620     "resolution" : {
33621         "description": "The resolution of the image in pixels",
33622         "type": "integer"
33623     },
33624     "location" : {
33625         "description": "Location is the user-friendly string of the geographic location of the
33626 image.",
33627         "type": "string"
33628     },
33629     "geolocation" : {
33630         "$ref":
33631 "https://openconnectivityfoundation.github.io/IoTDataModels/GeolocationResURI.swagger.json#/definiti
33632 ons/Geolocation"
33633     },
33634     "n" : {
33635         "$ref":
33636 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
33637 schema.json#/definitions/n"
33638     },
33639     "id" : {
33640         "$ref":
33641 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
33642 schema.json#/definitions/id"
33643     },
33644     "if" : {
33645         "description": "The OCF Interface set supported by this Resource",
33646         "items" : {
33647             "enum": ["oic.if.rw", "oic.if.baseline"],
33648             "type": "string"
33649         },
33650         "minItems": 1,
33651         "uniqueItems": true,
33652         "readOnly": true,
33653         "type": "array"
33654     }
33655 },
33656 "type" : "object",
33657 "required": ["mediacore"]
33658 },
33659 "MediaImageUpdate" : {
33660     "properties": {
33661         "mediacore": {
33662             "description": "The Media Core Properties common on all Media Resource Types",
33663             "$ref":
33664 "https://openconnectivityfoundation.github.io/IoTDataModels/MediaCoreResURI.swagger.json#/definition
33665 s/MediaCore"
33666         },
33667         "artists" : {
33668             "description": "List of artists",
33669             "items": {
33670                 "type": "string"
33671             },
33672             "minItems": 1,
33673             "type": "array"
33674         },
33675         "album" : {
33676             "description": "Which album the picture belongs to (if applicable).",
33677             "type": "string"
33678         },
33679         "albumartwork" : {
33680             "description": "The array of icons that are used as the album artwork.",
33681             "items": {
33682                 "$ref": "https://openconnectivityfoundation.github.io/core-

```

```

33683 extensions/swagger2.0/oic.r.icon.swagger.json#/definitions/Icon"
33684     },
33685     "minItems": 1,
33686     "type": "array"
33687   },
33688   "width" : {
33689     "description": "The resolution of the image",
33690     "type": "integer"
33691   },
33692   "height" : {
33693     "description": "The resolution of the image",
33694     "type": "integer"
33695   },
33696   "size" : {
33697     "description": "The size of the image in KB - Kilo-Bytes",
33698     "type": "number"
33699   },
33700   "resolution" : {
33701     "description": "The resolution of the image in pixels",
33702     "type": "integer"
33703   },
33704   "location" : {
33705     "description": "Location is the user-friendly string of the geographic location of the
33706 image.",
33707     "type": "string"
33708   },
33709   "geolocation" : {
33710     "$ref":
33711 "https://openconnectivityfoundation.github.io/IoTDataModels/GeolocationResURI.swagger.json#/definiti
33712 ons/Geolocation"
33713   },
33714   "n" : {
33715     "$ref":
33716 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
33717 schema.json#/definitions/n"
33718   }
33719 },
33720 "type" : "object",
33721 "required": ["mediacore"]
33722 }
33723 }
33724 }
33725

```

### 33726 6.160.5 Property definition

33727 Table 323 defines the Properties that are part of the "oic.r.media.image" Resource Type.

33728 **Table 323 – The Property definitions of the Resource with type "rt" = "oic.r.media.image".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type of Media Image
mediacore	multiple types: see schema	Yes	Read Write	The Media Core Properties common on all Media Resource Types,
artists	array: see schema	No	Read Write	List of artists
album	string	No	Read Write	Which album the picture belongs to (if applicable).
albumartwork	array: see schema	No	Read Write	The array of icons that are used as the album artwork.
width	integer	No	Read Write	The resolution of the image



height	integer	No	Read Write	The resolution of the image
size	number	No	Read Write	The size of the image in KB - Kilo-Bytes
resolution	integer	No	Read Write	The resolution of the image in pixels
location	string	No	Read Write	Location is the user-friendly string of the geographic location of the image.
geolocation	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
mediacore	multiple types: see schema	Yes	Read Write	The Media Core Properties common on all Media Resource Types,
artists	array: see schema	No	Read Write	List of artists
album	string	No	Read Write	Which album the picture belongs to (if applicable).
albumartwork	array: see schema	No	Read Write	The array of icons that are used as the album artwork.
width	integer	No	Read Write	The resolution of the image
height	integer	No	Read Write	The resolution of the image
size	number	No	Read Write	The size of the image in KB - Kilo-Bytes
resolution	integer	No	Read Write	The resolution of the image in pixels
location	string	No	Read Write	Location is the user-friendly string of the geographic location of the image.
geolocation	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	

33729

**6.160.6 CRUDN behaviour**

33730

Table 324 defines the CRUDN operations that are supported on the "oic.r.media.image" Resource Type.

33731

33732 **Table 324 – The CRUDN operations of the Resource with type "rt" = "oic.r.media.image".**

Create	Read	Update	Delete	Notify
	get	post		observe

33733 **6.161 Media Text Resource Type**

33734 **6.161.1 Introduction**

33735 This OCF Resource specifies the text media types that an OCF Device supports.

33736 **6.161.2 Example URI**

33737 /MediaTextResURI

33738 **6.161.3 Resource type**

33739 The Resource Type is defined as: "oic.r.media.text".

33740 **6.161.4 OpenAPI 2.0 definition**

```

33741 {
33742   "swagger": "2.0",
33743   "info": {
33744     "title": "Media Text Resource Type",
33745     "version": "2019-11-27",
33746     "license": {
33747       "name": "OCF Data Model License",
33748       "url":
33749 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
33750 CENSE.md",
33751     "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
33752   },
33753   "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
33754 },
33755   "schemes": ["http"],
33756   "consumes": ["application/json"],
33757   "produces": ["application/json"],
33758   "paths": {
33759     "/MediaTextResURI" : {
33760       "get": {
33761         "description": "This OCF Resource specifies the text media types that an OCF Device
33762 supports.",
33763         "parameters": [
33764           {"$ref": "#/parameters/interface-r"}
33765         ],
33766         "responses": {
33767           "200": {
33768             "description": "Retrieves the text information for the specified or the current
33769 media.",
33770             "x-example": {
33771               "rt": ["oic.r.media.text"],
33772               "id": "unique_example_id",
33773               "mediacore": {
33774                 "title": "Book 1",
33775                 "description": "Long user-friendly synopsis of Book 1",
33776                 "mimetype": "text",
33777                 "mediafile": "file://example/url/Book1.pdf",
33778                 "genres": [{"category": "Sports", "subcategory": "Other"}, {"category": "Youth",
33779 "subcategory": "Other"}],
33780                 "ratinginfo": [{"ratingorganization": "none", "rating": "adult-content"}],
33781                 "identificationnumber": "ISBN: 978-3-16-148410-0",
33782                 "datetime": "2018-06-23T20:22:59-08:00",
33783                 "mediaartwork": [
33784                   {
33785                     "rt": ["oic.r.icon"],
33786                     "mimetype": "image/png",
33787                     "width": 256,
33788                     "height": 256,
33789                     "media": "file://example/url/book1.png"
33790                   }
33791                 ]
33792               }
33793             }
33794           }
33795         }
33796       }
33797     }
33798   }
33799 }

```

```

33791         ],
33792         "copyright": "Copyright notice by the copyright holder for Book 1"
33793     },
33794     "sdp": [
33795         "m=text 49156 RTP/AVP 100 101",
33796         "a=rtpmap:100 1140/1000",
33797         "a=rtpmap:101 red/1000",
33798         "a=fmtp:101 100/100/100"
33799     ],
33800     "authors": [
33801         "Author 1",
33802         "Author 2"
33803     ],
33804     "publishers": [
33805         "Publisher 1",
33806         "Publisher 2"
33807     ],
33808     "series": [
33809         "Series 1",
33810         "Series 2"
33811     ],
33812     "totalchapters": 28,
33813     "totalpages": 499,
33814     "language": "en"
33815 },
33816 "schema": {"$ref": "#/definitions/MediaText"}
33817 }
33818 },
33819 },
33820 "post": {
33821     "description": "Sets the Media Text properties.",
33822     "parameters": [
33823         {"$ref": "#/parameters/interface-rw"},
33824         {
33825             "name": "body",
33826             "in": "body",
33827             "required": true,
33828             "x-example": {
33829                 "mediacore": {
33830                     "title": "Book 1",
33831                     "description": "Long user-friendly synopsis of Book 1",
33832                     "mimetype": "text",
33833                     "mediafile": "file://example/url/Book1.pdf",
33834                     "genres": [{"category": "Sports", "subcategory": "Other"}, {"category": "Youth",
33835 "subcategory": "Other"}],
33836                     "ratinginfo": [{"ratingorganization": "none", "rating": "adult-content"}],
33837                     "identificationnumber": "ISBN: 978-3-16-148410-0",
33838                     "datetime": "2018-06-23T20:22:59-08:00",
33839                     "mediaartwork": [
33840                         {
33841                             "mimetype": "image/png",
33842                             "width": 256,
33843                             "height": 256,
33844                             "media": "file://example/url/book1.png"
33845                         }
33846                     ],
33847                     "copyright": "Copyright notice by the copyright holder for Book 1"
33848                 }
33849             },
33850             "sdp": [
33851                 "m=text 49156 RTP/AVP 100 101",
33852                 "a=rtpmap:100 1140/1000",
33853                 "a=rtpmap:101 red/1000",
33854                 "a=fmtp:101 100/100/100"
33855             ],
33856             "authors": [
33857                 "Author 1",
33858                 "Author 2"
33859             ],
33860             "publishers": [
33861                 "Publisher 1",
33862                 "Publisher 2"

```

```

33863         "series": [
33864             "Series 1",
33865             "Series 2"
33866         ],
33867         "totalchapters": 28,
33868         "totalpages": 499,
33869         "language": "en"
33870     },
33871     "schema": {"$ref": "#/definitions/MediaTextUpdate"}
33872 }
33873 ],
33874 "responses": {
33875     "200": {
33876         "description": "Sets the text information for the specified or the current media.",
33877         "x-example": {
33878             "mediacore": {
33879                 "title": "Book 1",
33880                 "description": "Long user-friendly synopsis of Book 1",
33881                 "mimetype": "text",
33882                 "mediafile": "file://example/url/Book1.pdf",
33883                 "genres": [{"category": "Sports", "subcategory": "Other"}, {"category": "Youth",
33884 "subcategory": "Other"}],
33885                 "ratinginfo": [{"ratingorganization": "none", "rating": "adult-content"}],
33886                 "identificationnumber": "ISBN: 978-3-16-148410-0",
33887                 "datetime": "2018-06-23T20:22:59-08:00",
33888                 "mediaartwork": [
33889                     {
33890                         "rt": ["oic.r.icon"],
33891                         "mimetype": "image/png",
33892                         "width": 256,
33893                         "height": 256,
33894                         "media": "file://example/url/book1.png"
33895                     }
33896                 ],
33897                 "copyright": "Copyright notice by the copyright holder for Book 1"
33898             },
33899             "sdp": [
33900                 "m=text 49156 RTP/AVP 100 101",
33901                 "a=rtpmap:100 1140/1000",
33902                 "a=rtpmap:101 red/1000",
33903                 "a=fmtp:101 100/100/100"
33904             ],
33905             "authors": [
33906                 "Author 1",
33907                 "Author 2"
33908             ],
33909             "publishers": [
33910                 "Publisher 1",
33911                 "Publisher 2"
33912             ],
33913             "series": [
33914                 "Series 1",
33915                 "Series 2"
33916             ],
33917             "totalchapters": 28,
33918             "totalpages": 499,
33919             "language": "en"
33920         },
33921         "schema": {"$ref": "#/definitions/MediaTextUpdate"}
33922     }
33923 }
33924 }
33925 }
33926 },
33927 "parameters": {
33928     "interface-r" : {
33929         "in" : "query",
33930         "name" : "if",
33931         "type" : "string",
33932         "enum" : ["oic.if.rw", "oic.if.baseline"]
33933     },
33934     "interface-rw" : {

```

```

33935     "in" : "query",
33936     "name" : "if",
33937     "type" : "string",
33938     "enum" : ["oic.if.rw"]
33939   }
33940 },
33941 "definitions": {
33942   "MediaText" : {
33943     "properties": {
33944       "rt": {
33945         "description": "The Resource Type of Media Text",
33946         "items": {
33947           "enum": ["oic.r.media.text"],
33948           "type": "string"
33949         },
33950         "minItems": 1,
33951         "uniqueItems": true,
33952         "readOnly": true,
33953         "type": "array"
33954       },
33955       "mediacore": {
33956         "description": "The Media Core Properties common on all Media Resource Types,",
33957         "$ref":
33958 "https://openconnectivityfoundation.github.io/IoTDataModels/MediaCoreResURI.swagger.json#/definition
33959 s/MediaCore"
33960       },
33961       "sdp" : {
33962         "description": "Array of strings, a string for each Session Description Protocol syntax.",
33963         "items": {
33964           "description": "Session Description Protocol is a format for describing streaming media
33965 communications parameters using the media and attribute lines defined in RFC4566.",
33966           "type": "string"
33967         },
33968         "minItems": 1,
33969         "type": "array"
33970       },
33971       "authors" : {
33972         "description": "List of authors that wrote the text",
33973         "items": {
33974           "type": "string"
33975         },
33976         "minItems": 1,
33977         "type": "array"
33978       },
33979       "publishers" : {
33980         "description": "List of publishers that released the text",
33981         "items": {
33982           "type": "string"
33983         },
33984         "minItems": 1,
33985         "type": "array"
33986       },
33987       "series" : {
33988         "description": "List of series for the text",
33989         "items": {
33990           "type": "string"
33991         },
33992         "minItems": 1,
33993         "type": "array"
33994       },
33995       "totalchapters" : {
33996         "description": "The total number of chapters in the text",
33997         "type": "integer"
33998       },
33999       "totalpages" : {
34000         "description": "The total number of pages in the text",
34001         "type": "integer"
34002       },
34003       "language": {
34004         "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
34005 schema.json#/definitions/language-tag",
34006         "description": "Current language of the text media content with format pattern according

```

```

34007 to RFC 5646 language tag"
34008     },
34009     "n": {
34010         "$ref":
34011         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
34012         schema.json#/definitions/n"
34013     },
34014     "id": {
34015         "$ref":
34016         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
34017         schema.json#/definitions/id"
34018     },
34019     "if": {
34020         "description": "The OCF Interface set supported by this Resource",
34021         "items": {
34022             "enum": ["oic.if.rw", "oic.if.baseline"],
34023             "type": "string"
34024         },
34025         "minItems": 1,
34026         "uniqueItems": true,
34027         "readOnly": true,
34028         "type": "array"
34029     }
34030 },
34031 "type" : "object",
34032 "required": ["mediacore"]
34033 },
34034 "MediaTextUpdate" : {
34035     "properties": {
34036         "mediacore": {
34037             "description": "The Media Core Properties common on all Media Resource Types,",
34038             "$ref":
34039             "https://openconnectivityfoundation.github.io/IoTDataModels/MediaCoreResURI.swagger.json#/definition
34040             s/MediaCore"
34041         },
34042         "sdp" : {
34043             "description": "Array of strings, a string for each Session Description Protocol syntax.",
34044             "items": {
34045                 "description": "Session Description Protocol is a format for describing streaming media
34046                 communications parameters using the media and attribute lines defined in RFC4566.",
34047                 "type": "string"
34048             },
34049             "minItems": 1,
34050             "type": "array"
34051         },
34052         "authors" : {
34053             "description": "List of authors that wrote the text",
34054             "items": {
34055                 "type": "string"
34056             },
34057             "minItems": 1,
34058             "type": "array"
34059         },
34060         "publishers" : {
34061             "description": "List of publishers that released the text",
34062             "items": {
34063                 "type": "string"
34064             },
34065             "minItems": 1,
34066             "type": "array"
34067         },
34068         "series" : {
34069             "description": "List of series for the text",
34070             "items": {
34071                 "type": "string"
34072             },
34073             "minItems": 1,
34074             "type": "array"
34075         },
34076         "totalchapters" : {
34077             "description": "The total number of chapters in the text",
34078             "type": "integer"

```

```

34079     },
34080     "totalpages" : {
34081       "description": "The total number of pages in the text",
34082       "type": "integer"
34083     },
34084     "language": {
34085       "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
34086 schema.json#/definitions/language-tag",
34087       "description": "Current language of the text media content with format pattern according
34088 to RFC 5646 language tag"
34089     },
34090     "n": {
34091       "$ref":
34092 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
34093 schema.json#/definitions/n"
34094     }
34095   },
34096   "type" : "object",
34097   "required": ["mediacore"]
34098 }
34099 }
34100 }
34101

```

### 34102 6.161.5 Property definition

34103 Table 325 defines the Properties that are part of the "oic.r.media.text" Resource Type.

34104 **Table 325 – The Property definitions of the Resource with type "rt" = "oic.r.media.text".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type of Media Text
mediacore	multiple types: see schema	Yes	Read Write	The Media Core Properties common on all Media Resource Types,
sdp	array: see schema	No	Read Write	Array of strings, a string for each Session Description Protocol syntax.
authors	array: see schema	No	Read Write	List of authors that wrote the text
publishers	array: see schema	No	Read Write	List of publishers that released the text
series	array: see schema	No	Read Write	List of series for the text
totalchapters	integer	No	Read Write	The total number of chapters in the text
totalpages	integer	No	Read Write	The total number of pages in the text
language	multiple types: see schema	No	Read Write	Current language of the text media content with format pattern according to RFC 5646 language tag
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	

if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
mediacore	multiple types: see schema	Yes	Read Write	The Media Core Properties common on all Media Resource Types,
sdp	array: see schema	No	Read Write	Array of strings, a string for each Session Description Protocol syntax.
authors	array: see schema	No	Read Write	List of authors that wrote the text
publishers	array: see schema	No	Read Write	List of publishers that released the text
series	array: see schema	No	Read Write	List of series for the text
totalchapters	integer	No	Read Write	The total number of chapters in the text
totalpages	integer	No	Read Write	The total number of pages in the text
language	multiple types: see schema	No	Read Write	Current language of the text media content with format pattern according to RFC 5646 language tag
n	multiple types: see schema	No	Read Write	

34105 **6.161.6 CRUDN behaviour**

34106 Table 326 defines the CRUDN operations that are supported on the "oic.r.media.text" Resource  
34107 Type.

34108 **Table 326 – The CRUDN operations of the Resource with type "rt" = "oic.r.media.text".**

Create	Read	Update	Delete	Notify
	get	post		observe

34109 **6.162 Media Video Resource Type**

34110 **6.162.1 Introduction**

34111 This OCF Resource specifies the video media types that an OCF Device supports.

34112 **6.162.2 Example URI**

34113 /MediaVideoResURI

34114 **6.162.3 Resource type**

34115 The Resource Type is defined as: "oic.r.media.video".

34116 **6.162.4 OpenAPI 2.0 definition**

```
34117 {
34118   "swagger": "2.0",
34119   "info": {
34120     "title": "Media Video Resource Type",
34121     "version": "2019-11-27",
34122     "license": {
```



```

34123     "name": "OCF Data Model License",
34124     "url":
34125 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
34126 CENSE.md",
34127     "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
34128   },
34129   "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
34130 },
34131 "schemes": ["http"],
34132 "consumes": ["application/json"],
34133 "produces": ["application/json"],
34134 "paths": {
34135   "/MediaVideoResURI" : {
34136     "get": {
34137       "description": "This OCF Resource specifies the video media types that an OCF Device
34138 supports.",
34139       "parameters": [
34140         {"$ref": "#/parameters/interface-r"}
34141       ],
34142       "responses": {
34143         "200": {
34144           "description": "Retrieves the video information for the specified or the current
34145 media.",
34146           "x-example": {
34147             "rt": ["oic.r.media.video"],
34148             "id": "unique_example_id",
34149             "mediacore": {
34150               "title": "Video 1",
34151               "description": "Long user-friendly synopsis of Video 1",
34152               "mimetype": "video/mp4",
34153               "mediafile": "file://example/url/Videol.mp4",
34154               "genres": [{"category": "Movie", "subcategory": "Action"}, {"category": "Movie",
34155 "subcategory": "Western"}],
34156               "ratinginfo": [{"ratingorganization": "MPAA", "rating": "PG-13"}],
34157               "identificationnumber": "EDID:1234-5678",
34158               "datetime": "2018-06-23T20:22:59-08:00",
34159               "mediaartwork": [
34160                 {
34161                   "rt": ["oic.r.icon"],
34162                   "mimetype": "image/png",
34163                   "width": 256,
34164                   "height": 256,
34165                   "media": "file://example/url/videol.png"
34166                 }
34167               ],
34168               "copyright": "Copyright notice by the copyright holder for Video 1"
34169             },
34170             "series": [
34171               "Series 1",
34172               "Series 2"
34173             ],
34174             "studio": [
34175               "Studio 1",
34176               "Studio 2"
34177             ],
34178             "cast": [
34179               "Actor 1",
34180               "Actress 2"
34181             ],
34182             "directors": [
34183               "Dircector 1",
34184               "Director 2"
34185             ],
34186             "producers": [
34187               "Producer 1",
34188               "Producer 2"
34189             ],
34190             "writers": [
34191               "Writer 1",
34192               "Writer 2"
34193             ],
34194             "composers": [

```

```

34195         "Composer 1",
34196         "Composer 2"
34197     ],
34198     "sdp": [
34199         "m=video 51372 RTP/AVP 99",
34200         "a=rtpmap:99 h263-1998/90000"
34201     ],
34202     "width": 1920,
34203     "height": 1080,
34204     "resolution": 200,
34205     "format": "progressive",
34206     "framerate": 30,
34207     "bitdepth": 8,
34208     "size": 44.064,
34209     "duration": "P0Y0M0DT1H22M59S",
34210     "location": "Death Valley National Park, Furnace Creek, CA 92328, USA",
34211     "geolocation": {"latitude": 36.4643308, "longitude": -116.86906640000001, "alt": -
34212 62.1},
34213     "language": "en"
34214 },
34215 "schema": {"$ref": "#/definitions/MediaVideo"}
34216 }
34217 }
34218 },
34219 "post": {
34220     "description": "Sets the Media Video properties.",
34221     "parameters": [
34222         {"$ref": "#/parameters/interface-rw"},
34223         {
34224             "name": "body",
34225             "in": "body",
34226             "required": true,
34227             "x-example": {
34228                 "mediacore": {
34229                     "title": "Video 1",
34230                     "description": "Long user-friendly synopsis of Video 1",
34231                     "mimetype": "video/mp4",
34232                     "mediafile": "file://example/url/Video1.mp4",
34233                     "genres": [{"category": "Movie", "subcategory": "Action"}, {"category": "Movie",
34234 "subcategory": "Western"}],
34235                     "ratinginfo": [{"ratingorganization": "MPAA", "rating": "PG-13"}],
34236                     "identificationnumber": "EDID:1234-5678",
34237                     "datetime": "2018-06-23T20:22:59-08:00",
34238                     "mediaartwork": [
34239                         {
34240                             "mimetype": "image/png",
34241                             "width": 256,
34242                             "height": 256,
34243                             "media": "file://example/url/video1.png"
34244                         }
34245                     ],
34246                     "copyright": "Copyright notice by the copyright holder for Video 1"
34247                 },
34248                 "series": [
34249                     "Series 1",
34250                     "Series 2"
34251                 ],
34252                 "studio": [
34253                     "Studio 1",
34254                     "Studio 2"
34255                 ],
34256                 "cast": [
34257                     "Actor 1",
34258                     "Actress 2"
34259                 ],
34260                 "directors": [
34261                     "Director 1",
34262                     "Director 2"
34263                 ],
34264                 "producers": [
34265                     "Producer 1",
34266                     "Producer 2"

```

```

34267     ],
34268     "writers": [
34269         "Writer 1",
34270         "Writer 2"
34271     ],
34272     "composers": [
34273         "Composer 1",
34274         "Composer 2"
34275     ],
34276     "sdp": [
34277         "m=video 51372 RTP/AVP 99",
34278         "a=rtpmap:99 h263-1998/90000"
34279     ],
34280     "width": 1920,
34281     "height": 1080,
34282     "resolution": 2073600,
34283     "format": "progressive",
34284     "framerate": 30,
34285     "bitdepth": 8,
34286     "size": 44.064,
34287     "duration": "P0Y0M0DT1H22M59S",
34288     "location": "Death Valley National Park, Furnace Creek, CA 92328, USA",
34289     "geolocation": {"latitude": 36.4643308, "longitude": -116.86906640000001, "alt": -
34290 62.1},
34291     "language": "en"
34292 },
34293 "schema": {"$ref": "#/definitions/MediaVideoUpdate"}
34294 }
34295 ],
34296 "responses": {
34297     "200": {
34298         "description": "Sets the video information for the specified or the current media.",
34299         "x-example": {
34300             "mediacore": {
34301                 "title": "Video 1",
34302                 "description": "Long user-friendly synopsis of Video 1",
34303                 "mimetype": "video/mp4",
34304                 "mediafile": "file:///example/url/Video1.mp4",
34305                 "genres": [{"category": "Movie", "subcategory": "Action"}, {"category": "Movie",
34306 "subcategory": "Western"}],
34307                 "ratinginfo": [{"ratingorganization": "MPAA", "rating": "PG-13"}],
34308                 "identificationnumber": "EDID:1234-5678",
34309                 "datetime": "2018-06-23T20:22:59-08:00",
34310                 "mediaartwork": [
34311                     {
34312                         "rt": ["oic.r.icon"],
34313                         "mimetype": "image/png",
34314                         "width": 256,
34315                         "height": 256,
34316                         "media": "file:///example/url/video1.png"
34317                     }
34318                 ],
34319                 "copyright": "Copyright notice by the copyright holder for Video 1"
34320             },
34321             "series": [
34322                 "Series 1",
34323                 "Series 2"
34324             ],
34325             "studio": [
34326                 "Studio 1",
34327                 "Studio 2"
34328             ],
34329             "cast": [
34330                 "Actor 1",
34331                 "Actress 2"
34332             ],
34333             "directors": [
34334                 "Dircector 1",
34335                 "Director 2"
34336             ],
34337             "producers": [
34338                 "Producer 1",

```

```

34339         "Producer 2"
34340     ],
34341     "writers": [
34342         "Writer 1",
34343         "Writer 2"
34344     ],
34345     "composers": [
34346         "Composer 1",
34347         "Composer 2"
34348     ],
34349     "sdp": [
34350         "m=video 51372 RTP/AVP 99",
34351         "a=rtpmap:99 h263-1998/90000"
34352     ],
34353     "width": 1920,
34354     "height": 1080,
34355     "resolution": 200,
34356     "format": "progressive",
34357     "framerate": 30,
34358     "bitdepth": 8,
34359     "size": 44.064,
34360     "duration": "POY0MODT1H22M59S",
34361     "location": "Death Valley National Park, Furnace Creek, CA 92328, USA",
34362     "geolocation": {"latitude": 36.4643308, "longitude": -116.86906640000001, "alt": -
34363 62.1},
34364     "language": "en"
34365 },
34366     "schema": {"$ref": "#/definitions/MediaVideoUpdate"}
34367 }
34368 }
34369 }
34370 }
34371 },
34372 "parameters": {
34373     "interface-r" : {
34374         "in" : "query",
34375         "name" : "if",
34376         "type" : "string",
34377         "enum" : ["oic.if.rw", "oic.if.baseline"]
34378     },
34379     "interface-rw" : {
34380         "in" : "query",
34381         "name" : "if",
34382         "type" : "string",
34383         "enum" : ["oic.if.rw"]
34384     }
34385 },
34386 "definitions": {
34387     "MediaVideo" : {
34388         "properties": {
34389             "rt": {
34390                 "description": "The Resource Type of Media Video",
34391                 "items": {
34392                     "enum": ["oic.r.media.video"],
34393                     "type": "string"
34394                 },
34395                 "minItems": 1,
34396                 "uniqueItems": true,
34397                 "readOnly": true,
34398                 "type": "array"
34399             },
34400             "mediacore": {
34401                 "description": "The Media Core Properties common on all Media Resource Types,",
34402                 "$ref":
34403 "https://openconnectivityfoundation.github.io/IoTDataModels/MediaCoreResURI.swagger.json#/definition
34404 s/MediaCore"
34405             },
34406             "series" : {
34407                 "description": "List of TV Series and episode",
34408                 "items": {
34409                     "type": "string"
34410                 },

```

```

34411         "minItems": 1,
34412         "type": "array"
34413     },
34414     "studio" : {
34415         "description": "List of studios that produced the movie",
34416         "items": {
34417             "type": "string"
34418         },
34419         "minItems": 1,
34420         "type": "array"
34421     },
34422     "cast" : {
34423         "description": "List of casts that acted in the movie",
34424         "items": {
34425             "type": "string"
34426         },
34427         "minItems": 1,
34428         "type": "array"
34429     },
34430     "directors" : {
34431         "description": "List of directors that directed the movie",
34432         "items": {
34433             "type": "string"
34434         },
34435         "minItems": 1,
34436         "type": "array"
34437     },
34438     "producers" : {
34439         "description": "List of producers that produced the movie",
34440         "items": {
34441             "type": "string"
34442         },
34443         "minItems": 1,
34444         "type": "array"
34445     },
34446     "writers" : {
34447         "description": "List of writers that wrote the movie",
34448         "items": {
34449             "type": "string"
34450         },
34451         "minItems": 1,
34452         "type": "array"
34453     },
34454     "composers" : {
34455         "description": "List of composers that wrote the music",
34456         "items": {
34457             "type": "string"
34458         },
34459         "minItems": 1,
34460         "type": "array"
34461     },
34462     "sdp" : {
34463         "description": "Array of strings, a string for each Session Description Protocol syntax.",
34464         "items": {
34465             "description": "Session Description Protocol is a format for describing streaming media
34466 communications parameters using the media and attribute lines defined in RFC4566.",
34467             "type": "string"
34468         },
34469         "minItems": 1,
34470         "type": "array"
34471     },
34472     "width" : {
34473         "description": "The resolution width of the video",
34474         "type": "integer"
34475     },
34476     "height" : {
34477         "description": "The resolution height of the video",
34478         "type": "integer"
34479     },
34480     "resolution" : {
34481         "description": "The resolution of the video in pixels",
34482         "type": "integer"

```

```

34483     },
34484     "format": {
34485         "type": "string",
34486         "description": "The available video formats.",
34487         "enum": [
34488             "progressive",
34489             "interlaced",
34490             "HDR",
34491             "HDR10",
34492             "HDR10+",
34493             "Dolby Vision"
34494         ]
34495     },
34496     "framerate" : {
34497         "description": "The frame rate of the video in frames per second.",
34498         "type": "integer"
34499     },
34500     "bitdepth" : {
34501         "description": "Bit (Colour) depth is either the number of bits used to indicate the
34502 colour of a single pixel, in a bitmapped image or video framebuffer, or the number of bits used for
34503 each colour component of a single pixel.",
34504         "type": "integer"
34505     },
34506     "size" : {
34507         "description": "The size of the video in KB - Kilo-Bytes",
34508         "type": "number"
34509     },
34510     "duration": {
34511         "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
34512 schema.json#/definitions/duration",
34513         "description": "Duration is the total length of the media audio with format pattern
34514 according to ISO 8601 (duration). For example, P0Y0M0DT1H22M59S represents a duration of 1 hour, 22
34515 minutes, and 59 seconds."
34516     },
34517     "location" : {
34518         "description": "Location is the user-friendly string of the geographic location of the
34519 video.",
34520         "type": "string"
34521     },
34522     "geolocation" : {
34523         "$ref":
34524 "https://openconnectivityfoundation.github.io/IoTDataModels/GeolocationResURI.swagger.json#/definiti
34525 ons/Geolocation"
34526     },
34527     "language": {
34528         "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
34529 schema.json#/definitions/language-tag",
34530         "description": "Current language of the video media content with format pattern according
34531 to RFC 5646 language tag"
34532     },
34533     "n": {
34534         "$ref":
34535 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
34536 schema.json#/definitions/n"
34537     },
34538     "id": {
34539         "$ref":
34540 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
34541 schema.json#/definitions/id"
34542     },
34543     "if": {
34544         "description": "The OCF Interface set supported by this Resource",
34545         "items": {
34546             "enum": ["oic.if.rw", "oic.if.baseline"],
34547             "type": "string"
34548         },
34549         "minItems": 1,
34550         "uniqueItems": true,
34551         "readOnly": true,
34552         "type": "array"
34553     }
34554 },

```

```

34555     "type" : "object",
34556     "required": ["mediacore"]
34557 },
34558 "MediaVideoUpdate" : {
34559     "properties": {
34560         "mediacore": {
34561             "description": "The Media Core Properties common on all Media Resource Types,",
34562             "$ref":
34563 "https://openconnectivityfoundation.github.io/IoTDataModels/MediaCoreResURI.swagger.json#/definitions/MediaCore"
34564         },
34565     },
34566     "series" : {
34567         "description": "List of TV Series and episode",
34568         "items": {
34569             "type": "string"
34570         },
34571         "minItems": 1,
34572         "type": "array"
34573     },
34574     "studio" : {
34575         "description": "List of studios that produced the movie",
34576         "items": {
34577             "type": "string"
34578         },
34579         "minItems": 1,
34580         "type": "array"
34581     },
34582     "cast" : {
34583         "description": "List of casts that acted in the movie",
34584         "items": {
34585             "type": "string"
34586         },
34587         "minItems": 1,
34588         "type": "array"
34589     },
34590     "directors" : {
34591         "description": "List of directors that directed the movie",
34592         "items": {
34593             "type": "string"
34594         },
34595         "minItems": 1,
34596         "type": "array"
34597     },
34598     "producers" : {
34599         "description": "List of producers that produced the movie",
34600         "items": {
34601             "type": "string"
34602         },
34603         "minItems": 1,
34604         "type": "array"
34605     },
34606     "writers" : {
34607         "description": "List of writers that wrote the movie",
34608         "items": {
34609             "type": "string"
34610         },
34611         "minItems": 1,
34612         "type": "array"
34613     },
34614     "composers" : {
34615         "description": "List of composers that wrote the music",
34616         "items": {
34617             "type": "string"
34618         },
34619         "minItems": 1,
34620         "type": "array"
34621     },
34622     "sdp" : {
34623         "description": "Array of strings, a string for each Session Description Protocol syntax.",
34624         "items": {
34625             "description": "Session Description Protocol is a format for describing streaming media
34626 communications parameters using the media and attribute lines defined in RFC4566.",

```

```

34627         "type": "string"
34628     },
34629     "minItems": 1,
34630     "type": "array"
34631 },
34632 "width" : {
34633     "description": "The width of the video",
34634     "type": "integer"
34635 },
34636 "height" : {
34637     "description": "The height of the video",
34638     "type": "integer"
34639 },
34640 "resolution" : {
34641     "description": "The resolution of the video in pixels",
34642     "type": "integer"
34643 },
34644 "format": {
34645     "type": "string",
34646     "description": "The available video formats.",
34647     "enum": [
34648         "progressive",
34649         "interlaced",
34650         "HDR",
34651         "HDR10",
34652         "HDR10+",
34653         "Dolby Vision"
34654     ]
34655 },
34656 "framerate" : {
34657     "description": "The frame rate of the video in frames per second.",
34658     "type": "integer"
34659 },
34660 "bitdepth" : {
34661     "description": "Bit (Colour) depth is either the number of bits used to indicate the
34662 colour of a single pixel, in a bitmapped image or video framebuffer, or the number of bits used for
34663 each colour component of a single pixel.",
34664     "type": "integer"
34665 },
34666 "size" : {
34667     "description": "The size of the video in KB - Kilo-Bytes",
34668     "type": "number"
34669 },
34670 "duration": {
34671     "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
34672 schema.json#/definitions/duration",
34673     "description": "Duration is the total length of the media audio with format pattern
34674 according to ISO 8601 (duration). For example, P0Y0M0DT1H22M59S represents a duration of 1 hour, 22
34675 minutes, and 59 seconds."
34676 },
34677 "location" : {
34678     "description": "Location is the user-friendly string of the geographic location of the
34679 video.",
34680     "type": "string"
34681 },
34682 "geolocation" : {
34683     "$ref":
34684 "https://openconnectivityfoundation.github.io/IoTDataModels/GeolocationResURI.swagger.json#/definiti
34685 ons/Geolocation"
34686 },
34687 "language": {
34688     "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
34689 schema.json#/definitions/language-tag",
34690     "description": "Current language of the video media content with format pattern according
34691 to RFC 5646 language tag"
34692 },
34693 "n": {
34694     "$ref":
34695 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
34696 schema.json#/definitions/n"
34697 }
34698 },

```



```

34699     "type" : "object",
34700     "required": ["mediacore"]
34701   }
34702 }
34703 }
34704

```

34705 **6.162.5 Property definition**

34706 Table 327 defines the Properties that are part of the "oic.r.media.video" Resource Type.

34707 **Table 327 – The Property definitions of the Resource with type "rt" = "oic.r.media.video".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type of Media Video
mediacore	multiple types: see schema	Yes	Read Write	The Media Core Properties common on all Media Resource Types,
series	array: see schema	No	Read Write	List of TV Series and episode
studio	array: see schema	No	Read Write	List of studios that produced the movie
cast	array: see schema	No	Read Write	List of casts that acted in the movie
directors	array: see schema	No	Read Write	List of directors that directed the movie
producers	array: see schema	No	Read Write	List of producers that produced the movie
writers	array: see schema	No	Read Write	List of writers that wrote the movie
composers	array: see schema	No	Read Write	List of composers that wrote the music
sdp	array: see schema	No	Read Write	Array of strings, a string for each Session Description Protocol syntax.
width	integer	No	Read Write	The resolution width of the video
height	integer	No	Read Write	The resolution height of the video
resolution	integer	No	Read Write	The resolution of the video in pixels
format	string	No	Read Write	The available video formats.
framerate	integer	No	Read Write	The frame rate of the video in frames per second.
bitdepth	integer	No	Read Write	Bit (Colour) depth is either the number of bits used to indicate the colour of a single pixel, in a bitmapped image or video framebuffer, or the number of bits used for each colour

				component of a single pixel.
size	number	No	Read Write	The size of the video in KB - Kilo-Bytes
duration	multiple types: see schema	No	Read Write	Duration is the total length of the media audio with format pattern according to ISO 8601 (duration). For example, P0Y0M0DT1H22M59S represents a duration of 1 hour, 22 minutes, and 59 seconds.
location	string	No	Read Write	Location is the user-friendly string of the geographic location of the video.
geolocation	multiple types: see schema	No	Read Write	
language	multiple types: see schema	No	Read Write	Current language of the video media content with format pattern according to RFC 5646 language tag
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
mediacore	multiple types: see schema	Yes	Read Write	The Media Core Properties common on all Media Resource Types,
series	array: see schema	No	Read Write	List of TV Series and episode
studio	array: see schema	No	Read Write	List of studios that produced the movie
cast	array: see schema	No	Read Write	List of casts that acted in the movie
directors	array: see schema	No	Read Write	List of directors that directed the movie
producers	array: see schema	No	Read Write	List of producers that produced the movie
writers	array: see schema	No	Read Write	List of writers that wrote the movie
composers	array: see schema	No	Read Write	List of composers that wrote the music
sdp	array: see schema	No	Read Write	Array of strings, a string for each Session Description Protocol syntax.
width	integer	No	Read Write	The width of the video

height	integer	No	Read Write	The height of the video
resolution	integer	No	Read Write	The resolution of the video in pixels
format	string	No	Read Write	The available video formats.
framerate	integer	No	Read Write	The frame rate of the video in frames per second.
bitdepth	integer	No	Read Write	Bit (Colour) depth is either the number of bits used to indicate the colour of a single pixel, in a bitmapped image or video framebuffer, or the number of bits used for each colour component of a single pixel.
size	number	No	Read Write	The size of the video in KB - Kilo-Bytes
duration	multiple types: see schema	No	Read Write	Duration is the total length of the media audio with format pattern according to ISO 8601 (duration). For example, P0Y0M0DT1H22M59S represents a duration of 1 hour, 22 minutes, and 59 seconds.
location	string	No	Read Write	Location is the user-friendly string of the geographic location of the video.
geolocation	multiple types: see schema	No	Read Write	
language	multiple types: see schema	No	Read Write	Current language of the video media content with format pattern according to RFC 5646 language tag
n	multiple types: see schema	No	Read Write	

34708 **6.162.6 CRUDN behaviour**

34709 Table 328 defines the CRUDN operations that are supported on the "oic.r.media.video" Resource  
34710 Type.

34711 **Table 328 – The CRUDN operations of the Resource with type "rt" = "oic.r.media.video".**

Create	Read	Update	Delete	Notify
	get	post		observe

34712 **6.163 Restricted Switch**

34713 **6.163.1 Introduction**

34714 This Resource describes a switch(on/off) restricting UPDATE for 'on'.

34715 The Property "state" is a Boolean.

34716 A state of True means that the switch is turned on.

34717 A state of False means that the switch is turned off.

34718 **6.163.2 Example URI**

34719 /RestrictedSwitchResURI

34720 **6.163.3 Resource type**

34721 The Resource Type is defined as: "oic.r.switch.restricted".

34722 **6.163.4 OpenAPI 2.0 definition**

```
34723 {
34724   "swagger": "2.0",
34725   "info": {
34726     "title": "Restricted Switch",
34727     "version": "20191119",
34728     "license": {
34729       "name": "OCF Data Model License",
34730       "url":
34731 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
34732 CENSE.md",
34733     "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
34734   },
34735   "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
34736 },
34737   "schemes": ["http"],
34738   "consumes": ["application/json"],
34739   "produces": ["application/json"],
34740   "paths": {
34741     "/RestrictedSwitchResURI" : {
34742       "get": {
34743         "description": "This Resource describes a switch(on/off) restricting UPDATE for 'on'.
34744 The Property \"state\" is a Boolean.
34745 A state of True means that the switch is turned on.
34746 A state of False means that the switch is turned off.",
34747         "parameters": [
34748           { "$ref": "#/parameters/interface" }
34749         ],
34750         "responses": {
34751           "200": {
34752             "description": "",
34753             "x-example":
34754             {
34755               "rt": ["oic.r.switch.restricted"],
34756               "if": ["oic.if.a", "oic.if.baseline"],
34757               "state": true
34758             },
34759             "schema": { "$ref": "#/definitions/RestrictedSwitch" }
34760           }
34761         }
34762       },
34763       "post": {
34764         "description": "A request to set the state to true is not allowed in an UPDATE",
34765         "parameters": [
34766           { "$ref": "#/parameters/interface" },
34767           {
34768             "name": "body",
34769             "in": "body",
34770             "required": true,
34771             "schema": { "$ref": "#/definitions/RestrictedSwitchUpdate" },
34772             "x-example":
34773             {
34774               "state": false
34775             }
34776           }
34777         ]
34778       }
34779     }
34780   }
34781 }
```

```

34775     }
34776   ],
34777   "responses": {
34778     "200": {
34779       "description": "",
34780       "x-example": {
34781         "state": false
34782       },
34783       "schema": { "$ref": "#/definitions/RestrictedSwitch" }
34784     },
34785     "403": {
34786       "description": "This response is generated by the OCF server when the client
34787 sends:\nAn UPDATE with an value for True.\n403 means the request is forbidden.\n",
34788       "x-example": {
34789       }
34790     }
34791   }
34792 }
34793 }
34794 }
34795 }
34796 },
34797 "parameters": {
34798   "interface": {
34799     "in": "query",
34800     "name": "if",
34801     "type": "string",
34802     "enum": ["oic.if.a", "oic.if.baseline"]
34803   }
34804 },
34805 "definitions": {
34806   "RestrictedSwitch": {
34807     "properties": {
34808       "rt": {
34809         "description": "The Resource Type.",
34810         "items": {
34811           "enum": ["oic.r.switch.restricted"],
34812           "maxLength": 64,
34813           "type": "string"
34814         },
34815         "minItems": 1,
34816         "uniqueItems": true,
34817         "readOnly": true,
34818         "type": "array"
34819       },
34820       "state": {
34821         "description": "The status of the restricted switch.",
34822         "type": "boolean"
34823       },
34824       "n": {
34825         "$ref":
34826 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
34827 schema.json#/definitions/n"
34828       },
34829       "id": {
34830         "$ref":
34831 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
34832 schema.json#/definitions/id"
34833       },
34834       "if": {
34835         "description": "The OCF Interface set supported by this Resource.",
34836         "items": {
34837           "enum": [
34838             "oic.if.a",
34839             "oic.if.baseline"
34840           ],
34841           "type": "string"
34842         },
34843         "minItems": 2,
34844         "uniqueItems": true,
34845         "readOnly": true,
34846         "type": "array"

```

```

34847     }
34848   },
34849   "type": "object",
34850   "required": ["state"]
34851 },
34852 "RestrictedSwitchUpdate" : {
34853   "properties": {
34854     "state": {
34855       "description": "Only False, which means 'off', is allowed in an UPDATE.",
34856       "enum": [false],
34857       "type": "boolean"
34858     }
34859   },
34860   "type": "object",
34861   "required": ["state"]
34862 }
34863 }
34864 }
34865

```

34866 **6.163.5 Property definition**

34867 Table 329 defines the Properties that are part of the "oic.r.switch.restricted" Resource Type.

34868 **Table 329 – The Property definitions of the Resource with type "rt" =**  
34869 **"oic.r.switch.restricted".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
state	boolean	Yes	Read Write	The status of the restricted switch.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
state	boolean	Yes	Read Write	Only False, which means 'off', is allowed in an UPDATE.

34870 **6.163.6 CRUDN behaviour**

34871 Table 330 defines the CRUDN operations that are supported on the "oic.r.switch.restricted"  
34872 Resource Type.

34873 **Table 330 – The CRUDN operations of the Resource with type "rt" =**  
34874 **"oic.r.switch.restricted".**

Create	Read	Update	Delete	Notify
	get	post		observe

34875