

OCF Resource Type Specification

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21 CONTENTS

22

23	1	Scope	1
24	2	Normative references	1
25	3	Terms, definitions, and abbreviated terms	1
26	3.1	Terms and definitions.....	1
27	3.2	Abbreviated terms.....	1
28	4	Document conventions and organization.....	2
29	4.1	Conventions.....	2
30	4.2	Notation.....	2
31	4.3	Data types	3
32	5	Baseline Model Constructs	3
33	5.1	URI.....	3
34	5.2	Interfaces.....	3
35	5.2.1	Introduction	3
36	5.2.2	Restricting Interface Functionality.....	3
37	5.3	OpenAPI Specification 2.0 definition	4
38	5.4	Property definition.....	4
39	5.4.1	Common Properties	4
40	5.4.2	Resource Properties	5
41	5.4.3	Basic Resource Schema.....	6
42	5.4.4	CRUDN Operation Response Codes.....	6
43	5.5	Example Resource Definitions	7
44	5.6	Observable Resource Types	7
45	5.6.1	Introduction	7
46	5.6.2	Conditional Notification.....	7
47	5.7	Composite Resource Types	9
48	5.8	Document Version	10
49	6	Resource Type definitions	11
50	6.1	Introduction.....	11
51	6.2	Air Flow	14
52	6.2.1	Introduction	14
53	6.2.2	Example URI	14
54	6.2.3	Resource type	14
55	6.2.4	OpenAPI 2.0 definition.....	14
56	6.2.5	Property definition	17
57	6.2.6	CRUDN behaviour	18
58	6.3	Air Flow Control	18
59	6.3.1	Introduction	18
60	6.3.2	Example URI	18
61	6.3.3	Resource type	18
62	6.3.4	OpenAPI 2.0 definition.....	18
63	6.3.5	Property definition	24

64	6.3.6	CRUDN behaviour	25
65	6.4	Battery	25
66	6.4.1	Introduction	25
67	6.4.2	Example URI	26
68	6.4.3	Resource type	26
69	6.4.4	OpenAPI 2.0 definition.....	26
70	6.4.5	Property definition	28
71	6.4.6	CRUDN behaviour	29
72	6.5	Binary Switch.....	29
73	6.5.1	Introduction	29
74	6.5.2	Example URI	29
75	6.5.3	Resource type	29
76	6.5.4	OpenAPI 2.0 definition.....	29
77	6.5.5	Property definition	31
78	6.5.6	CRUDN behaviour	32
79	6.6	Brightness	32
80	6.6.1	Introduction	32
81	6.6.2	Example URI	32
82	6.6.3	Resource type	32
83	6.6.4	OpenAPI 2.0 definition.....	32
84	6.6.5	Property definition	34
85	6.6.6	CRUDN behaviour	34
86	6.7	Colour Chroma	35
87	6.7.1	Introduction	35
88	6.7.2	Example URI	35
89	6.7.3	Resource type	35
90	6.7.4	OpenAPI 2.0 definition.....	35
91	6.7.5	Property definition	38
92	6.7.6	CRUDN behaviour	38
93	6.8	Colour RGB	39
94	6.8.1	Introduction	39
95	6.8.2	Example URI	39
96	6.8.3	Resource type	39
97	6.8.4	OpenAPI 2.0 definition.....	39
98	6.8.5	Property definition	41
99	6.8.6	CRUDN behaviour	42
100	6.9	Dimming	42
101	6.9.1	Introduction	42
102	6.9.2	Example URI	42
103	6.9.3	Resource type	42
104	6.9.4	OpenAPI 2.0 definition.....	42
105	6.9.5	Property definition	44
106	6.9.6	CRUDN behaviour	45
107	6.10	Door	45
108	6.10.1	Introduction	45

109	6.10.2	Example URI	45
110	6.10.3	Resource type	45
111	6.10.4	OpenAPI 2.0 definition.....	45
112	6.10.5	Property definition	47
113	6.10.6	CRUDN behaviour	48
114	6.11	Energy Consumption.....	48
115	6.11.1	Introduction	48
116	6.11.2	Example URI	48
117	6.11.3	Resource type	48
118	6.11.4	OpenAPI 2.0 definition.....	49
119	6.11.5	Property definition	50
120	6.11.6	CRUDN behaviour	51
121	6.12	Energy Usage	51
122	6.12.1	Introduction	51
123	6.12.2	Example URI	51
124	6.12.3	Resource type	51
125	6.12.4	OpenAPI 2.0 definition.....	51
126	6.12.5	Property definition	56
127	6.12.6	CRUDN behaviour	58
128	6.13	Humidity	58
129	6.13.1	Introduction	58
130	6.13.2	Example URI	58
131	6.13.3	Resource type	58
132	6.13.4	OpenAPI 2.0 definition.....	58
133	6.13.5	Property definition	60
134	6.13.6	CRUDN behaviour	61
135	6.14	Ice Maker.....	61
136	6.14.1	Introduction	61
137	6.14.2	Example URI	61
138	6.14.3	Resource type	61
139	6.14.4	OpenAPI 2.0 definition.....	62
140	6.14.5	Property definition	64
141	6.14.6	CRUDN behaviour	64
142	6.15	Lock.....	65
143	6.15.1	Introduction	65
144	6.15.2	Example URI	65
145	6.15.3	Resource type	65
146	6.15.4	OpenAPI 2.0 definition.....	65
147	6.15.5	Property definition	67
148	6.15.6	CRUDN behaviour	67
149	6.16	Lock Code	67
150	6.16.1	Introduction	67
151	6.16.2	Example URI	68
152	6.16.3	Resource type	68
153	6.16.4	OpenAPI 2.0 definition.....	68

154	6.16.5	Property definition	69
155	6.16.6	CRUDN behaviour	70
156	6.17	Mode	70
157	6.17.1	Introduction	70
158	6.17.2	Example URI	70
159	6.17.3	Resource type	70
160	6.17.4	OpenAPI 2.0 definition.....	70
161	6.17.5	Property definition	73
162	6.17.6	CRUDN behaviour	73
163	6.18	Open Level	74
164	6.18.1	Introduction	74
165	6.18.2	Example URI	74
166	6.18.3	Resource type	74
167	6.18.4	OpenAPI 2.0 definition.....	74
168	6.18.5	Property definition	76
169	6.18.6	CRUDN behaviour	77
170	6.19	Operational State.....	77
171	6.19.1	Introduction	77
172	6.19.2	Example URI	77
173	6.19.3	Resource type	77
174	6.19.4	OpenAPI 2.0 definition.....	77
175	6.19.5	Property definition	80
176	6.19.6	CRUDN behaviour	81
177	6.20	Ramp Time	81
178	6.20.1	Introduction	81
179	6.20.2	Example URI	82
180	6.20.3	Resource type	82
181	6.20.4	OpenAPI 2.0 definition.....	82
182	6.20.5	Property definition	84
183	6.20.6	CRUDN behaviour	85
184	6.21	Refrigeration.....	85
185	6.21.1	Introduction	85
186	6.21.2	Example URI	85
187	6.21.3	Resource type	85
188	6.21.4	OpenAPI 2.0 definition.....	85
189	6.21.5	Property definition	88
190	6.21.6	CRUDN behaviour	89
191	6.22	Temperature	89
192	6.22.1	Introduction	89
193	6.22.2	Example URI	89
194	6.22.3	Resource type	89
195	6.22.4	OpenAPI 2.0 definition.....	89
196	6.22.5	Property definition	92
197	6.22.6	CRUDN behaviour	93
198	6.23	Time Period	93

199	6.23.1	Introduction	93
200	6.23.2	Example URI	94
201	6.23.3	Resource type	94
202	6.23.4	OpenAPI 2.0 definition.....	94
203	6.23.5	Property definition	96
204	6.23.6	CRUDN behaviour	97
205	6.24	Activity Count	97
206	6.24.1	Introduction	97
207	6.24.2	Example URI	97
208	6.24.3	Resource type	97
209	6.24.4	OpenAPI 2.0 definition.....	97
210	6.24.5	Property definition	99
211	6.24.6	CRUDN behaviour	100
212	6.25	Atmospheric Pressure Sensor.....	100
213	6.25.1	Introduction	100
214	6.25.2	Example URI	100
215	6.25.3	Resource type	100
216	6.25.4	OpenAPI 2.0 definition.....	100
217	6.25.5	Property definition	102
218	6.25.6	CRUDN behaviour	102
219	6.26	Audio Controls	103
220	6.26.1	Introduction	103
221	6.26.2	Example URI	103
222	6.26.3	Resource type	103
223	6.26.4	OpenAPI 2.0 definition.....	103
224	6.26.5	Property definition	105
225	6.26.6	CRUDN behaviour	106
226	6.27	Auto Focus	106
227	6.27.1	Introduction	106
228	6.27.2	Example URI	106
229	6.27.3	Resource type	106
230	6.27.4	OpenAPI 2.0 definition.....	106
231	6.27.5	Property definition	108
232	6.27.6	CRUDN behaviour	109
233	6.28	Automatic Document Feeder.....	109
234	6.28.1	Introduction	109
235	6.28.2	Example URI	109
236	6.28.3	Resource type	109
237	6.28.4	OpenAPI 2.0 definition.....	109
238	6.28.5	Property definition	111
239	6.28.6	CRUDN behaviour	111
240	6.29	Button Switch.....	111
241	6.29.1	Introduction	111
242	6.29.2	Example URI	112
243	6.29.3	Resource type	112

244	6.29.4	OpenAPI 2.0 definition.....	112
245	6.29.5	Property definition	113
246	6.29.6	CRUDN behaviour	114
247	6.30	Carbon Dioxide Sensor	114
248	6.30.1	Introduction	114
249	6.30.2	Example URI	114
250	6.30.3	Resource type	114
251	6.30.4	OpenAPI 2.0 definition.....	114
252	6.30.5	Property definition	115
253	6.30.6	CRUDN behaviour	116
254	6.31	Carbon Monoxide Sensor.....	116
255	6.31.1	Introduction	116
256	6.31.2	Example URI	116
257	6.31.3	Resource type	116
258	6.31.4	OpenAPI 2.0 definition.....	116
259	6.31.5	Property definition	118
260	6.31.6	CRUDN behaviour	118
261	6.32	Auto White Balance	119
262	6.32.1	Introduction	119
263	6.32.2	Example URI	119
264	6.32.3	Resource type	119
265	6.32.4	OpenAPI 2.0 definition.....	119
266	6.32.5	Property definition	121
267	6.32.6	CRUDN behaviour	121
268	6.33	Colour Saturation.....	121
269	6.33.1	Introduction	121
270	6.33.2	Example URI	122
271	6.33.3	Resource type	122
272	6.33.4	OpenAPI 2.0 definition.....	122
273	6.33.5	Property definition	124
274	6.33.6	CRUDN behaviour	124
275	6.34	Contact Sensor	124
276	6.34.1	Introduction	124
277	6.34.2	Example URI	124
278	6.34.3	Resource type	125
279	6.34.4	OpenAPI 2.0 definition.....	125
280	6.34.5	Property definition	126
281	6.34.6	CRUDN behaviour	127
282	6.35	Demand Response Load Control (DRLC).....	127
283	6.35.1	Introduction	127
284	6.35.2	Example URI	127
285	6.35.3	Resource type	127
286	6.35.4	OpenAPI 2.0 definition.....	127
287	6.35.5	Property definition	130
288	6.35.6	CRUDN behaviour	131

289	6.36	Energy Overload/Circuit Breaker.....	131
290	6.36.1	Introduction	131
291	6.36.2	Example URI	131
292	6.36.3	Resource type	131
293	6.36.4	OpenAPI 2.0 definition.....	131
294	6.36.5	Property definition	133
295	6.36.6	CRUDN behaviour	133
296	6.37	Generic Sensor.....	133
297	6.37.1	Introduction	133
298	6.37.2	Example URI	134
299	6.37.3	Resource type	134
300	6.37.4	OpenAPI 2.0 definition.....	134
301	6.37.5	Property definition	135
302	6.37.6	CRUDN behaviour	136
303	6.38	Glass Break Sensor	136
304	6.38.1	Introduction	136
305	6.38.2	Example URI	136
306	6.38.3	Resource type	136
307	6.38.4	OpenAPI 2.0 definition.....	136
308	6.38.5	Property definition	137
309	6.38.6	CRUDN behaviour	138
310	6.39	Heart Rate Zone	138
311	6.39.1	Introduction	138
312	6.39.2	Example URI	138
313	6.39.3	Resource type	138
314	6.39.4	OpenAPI 2.0 definition.....	139
315	6.39.5	Property definition	140
316	6.39.6	CRUDN behaviour	141
317	6.40	Illuminance Sensor	141
318	6.40.1	Introduction	141
319	6.40.2	Example URI	141
320	6.40.3	Resource type	141
321	6.40.4	OpenAPI 2.0 definition.....	141
322	6.40.5	Property definition	142
323	6.40.6	CRUDN behaviour	143
324	6.41	Magnetic Field Direction Sensor	143
325	6.41.1	Introduction	143
326	6.41.2	Example URI	143
327	6.41.3	Resource type	143
328	6.41.4	OpenAPI 2.0 definition.....	143
329	6.41.5	Property definition	145
330	6.41.6	CRUDN behaviour	146
331	6.42	Media	146
332	6.42.1	Introduction	146
333	6.42.2	Example URI	146

334	6.42.3	Resource type	146
335	6.42.4	OpenAPI 2.0 definition	146
336	6.42.5	Property definition	148
337	6.42.6	CRUDN behaviour	149
338	6.43	Media Source.....	149
339	6.43.1	Introduction	149
340	6.43.2	Example URI	149
341	6.43.3	Resource type	149
342	6.43.4	OpenAPI 2.0 definition.....	149
343	6.43.5	Property definition	151
344	6.43.6	CRUDN behaviour	152
345	6.44	Media Source List	152
346	6.44.1	Introduction	152
347	6.44.2	Example URI	153
348	6.44.3	Resource type	153
349	6.44.4	OpenAPI 2.0 definition.....	153
350	6.44.5	Property definition	155
351	6.44.6	CRUDN behaviour	156
352	6.45	Media Source Input.....	156
353	6.45.1	Introduction	156
354	6.45.2	Example URI	156
355	6.45.3	Resource type	156
356	6.45.4	OpenAPI 2.0 definition.....	156
357	6.45.5	Property definition	159
358	6.45.6	CRUDN behaviour	159
359	6.46	Media Source Output	160
360	6.46.1	Introduction	160
361	6.46.2	Example URI	160
362	6.46.3	Resource type	160
363	6.46.4	OpenAPI 2.0 definition.....	160
364	6.46.5	Property definition	162
365	6.46.6	CRUDN behaviour	163
366	6.47	Motion Sensor.....	163
367	6.47.1	Introduction	163
368	6.47.2	Example URI	163
369	6.47.3	Resource type	163
370	6.47.4	OpenAPI 2.0 definition.....	163
371	6.47.5	Property definition	165
372	6.47.6	CRUDN behaviour	165
373	6.48	Night Mode	165
374	6.48.1	Introduction	165
375	6.48.2	Example URI	165
376	6.48.3	Resource type	166
377	6.48.4	OpenAPI 2.0 definition.....	166
378	6.48.5	Property definition	167

379	6.48.6	CRUDN behaviour	168
380	6.49	Presence Sensor	168
381	6.49.1	Introduction	168
382	6.49.2	Example URI	168
383	6.49.3	Resource type	168
384	6.49.4	OpenAPI 2.0 definition.....	168
385	6.49.5	Property definition	170
386	6.49.6	CRUDN behaviour	170
387	6.50	Pan Tilt Zoom Movement	171
388	6.50.1	Introduction	171
389	6.50.2	Example URI	171
390	6.50.3	Resource type	171
391	6.50.4	OpenAPI 2.0 definition.....	171
392	6.50.5	Property definition	174
393	6.50.6	CRUDN behaviour	175
394	6.51	Signal Strength	175
395	6.51.1	Introduction	175
396	6.51.2	Example URI	175
397	6.51.3	Resource type	175
398	6.51.4	OpenAPI 2.0 definition.....	175
399	6.51.5	Property definition	176
400	6.51.6	CRUDN behaviour	177
401	6.52	Speech Synthesis-TTS.....	177
402	6.52.1	Introduction	177
403	6.52.2	Example URI	178
404	6.52.3	Resource type	178
405	6.52.4	OpenAPI 2.0 definition.....	178
406	6.52.5	Property definition	180
407	6.52.6	CRUDN behaviour	181
408	6.53	Touch Sensor	181
409	6.53.1	Introduction	181
410	6.53.2	Example URI	182
411	6.53.3	Resource type	182
412	6.53.4	OpenAPI 2.0 definition.....	182
413	6.53.5	Property definition	183
414	6.53.6	CRUDN behaviour	184
415	6.54	UV Radiation	184
416	6.54.1	Introduction	184
417	6.54.2	Example URI	184
418	6.54.3	Resource type	184
419	6.54.4	OpenAPI 2.0 definition.....	184
420	6.54.5	Property definition	185
421	6.54.6	CRUDN behaviour	186
422	6.55	Water Sensor.....	186
423	6.55.1	Introduction	186

424	6.55.2	Example URI	186
425	6.55.3	Resource type	186
426	6.55.4	OpenAPI 2.0 definition.....	186
427	6.55.5	Property definition	188
428	6.55.6	CRUDN behaviour	188
429	6.56	Acceleration Sensor	189
430	6.56.1	Introduction	189
431	6.56.2	Example URI	189
432	6.56.3	Resource type	189
433	6.56.4	OpenAPI 2.0 definition.....	189
434	6.56.5	Property definition	191
435	6.56.6	CRUDN behaviour	191
436	6.57	Movement.....	191
437	6.57.1	Introduction	191
438	6.57.2	Example URI	192
439	6.57.3	Resource type	192
440	6.57.4	OpenAPI 2.0 definition.....	192
441	6.57.5	Property definition	194
442	6.57.6	CRUDN behaviour	194
443	6.58	Sleep Sensor	195
444	6.58.1	Introduction	195
445	6.58.2	Example URI	195
446	6.58.3	Resource type	195
447	6.58.4	OpenAPI 2.0 definition.....	195
448	6.58.5	Property definition	196
449	6.58.6	CRUDN behaviour	197
450	6.59	Smoke Sensor	197
451	6.59.1	Introduction	197
452	6.59.2	Example URI	197
453	6.59.3	Resource type	197
454	6.59.4	OpenAPI 2.0 definition.....	197
455	6.59.5	Property definition	199
456	6.59.6	CRUDN behaviour	199
457	6.60	Three Axis Sensor	200
458	6.60.1	Introduction	200
459	6.60.2	Example URI	200
460	6.60.3	Resource type	200
461	6.60.4	OpenAPI 2.0 definition.....	200
462	6.60.5	Property definition	201
463	6.60.6	CRUDN behaviour	202
464	6.61	Altimeter	202
465	6.61.1	Introduction	202
466	6.61.2	Example URI	202
467	6.61.3	Resource type	202
468	6.61.4	OpenAPI 2.0 definition.....	202

469	6.61.5	Property definition	204
470	6.61.6	CRUDN behaviour	205
471	6.62	Clock	205
472	6.62.1	Introduction	205
473	6.62.2	Example URI	205
474	6.62.3	Resource type	205
475	6.62.4	OpenAPI 2.0 definition.....	205
476	6.62.5	Property definition	207
477	6.62.6	CRUDN behaviour	208
478	6.63	Geolocation	208
479	6.63.1	Introduction	208
480	6.63.2	Example URI	208
481	6.63.3	Resource type	208
482	6.63.4	OpenAPI 2.0 definition.....	208
483	6.63.5	Property definition	210
484	6.63.6	CRUDN behaviour	212
485	6.64	Height.....	212
486	6.64.1	Introduction	212
487	6.64.2	Example URI	212
488	6.64.3	Resource type	212
489	6.64.4	OpenAPI 2.0 definition.....	212
490	6.64.5	Property definition	215
491	6.64.6	CRUDN behaviour	216
492	6.65	Weight	216
493	6.65.1	Introduction	216
494	6.65.2	Example URI	216
495	6.65.3	Resource type	216
496	6.65.4	OpenAPI 2.0 definition.....	216
497	6.65.5	Property definition	219
498	6.65.6	CRUDN behaviour	219
499	6.66	Air Quality.....	220
500	6.66.1	Introduction	220
501	6.66.2	Example URI	220
502	6.66.3	Resource type	220
503	6.66.4	OpenAPI 2.0 definition.....	220
504	6.66.5	Property definition	222
505	6.66.6	CRUDN behaviour	223
506	6.67	Air Quality Collection	223
507	6.67.1	Introduction	223
508	6.67.2	Example URI	223
509	6.67.3	Resource type	223
510	6.67.4	OpenAPI 2.0 definition.....	223
511	6.67.5	Property definition	228
512	6.67.6	CRUDN behaviour	229
513	6.68	Consumable.....	229

514	6.68.1	Introduction	229
515	6.68.2	Example URI	230
516	6.68.3	Resource type	230
517	6.68.4	OpenAPI 2.0 definition.....	230
518	6.68.5	Property definition	231
519	6.68.6	CRUDN behaviour	232
520	6.69	Consumables	233
521	6.69.1	Introduction	233
522	6.69.2	Example URI	233
523	6.69.3	Resource type	233
524	6.69.4	OpenAPI 2.0 definition.....	233
525	6.69.5	Property definition	237
526	6.69.6	CRUDN behaviour	239
527	6.70	Delay Defrost.....	239
528	6.70.1	Introduction	239
529	6.70.2	Example URI	239
530	6.70.3	Resource type	240
531	6.70.4	OpenAPI 2.0 definition.....	240
532	6.70.5	Property definition	242
533	6.70.6	CRUDN behaviour	243
534	6.71	Eco Mode	243
535	6.71.1	Introduction	243
536	6.71.2	Example URI	243
537	6.71.3	Resource type	243
538	6.71.4	OpenAPI 2.0 definition.....	243
539	6.71.5	Property definition	246
540	6.71.6	CRUDN behaviour	247
541	6.72	Heating Zone	247
542	6.72.1	Introduction	247
543	6.72.2	Example URI	247
544	6.72.3	Resource type	247
545	6.72.4	OpenAPI 2.0 definition.....	247
546	6.72.5	Property definition	249
547	6.72.6	CRUDN behaviour	249
548	6.73	Heating Zone Collection.....	249
549	6.73.1	Introduction	249
550	6.73.2	Example URI	250
551	6.73.3	Resource type	250
552	6.73.4	OpenAPI 2.0 definition.....	250
553	6.73.5	Property definition	254
554	6.73.6	CRUDN behaviour	256
555	6.74	Selectable Levels.....	256
556	6.74.1	Introduction	256
557	6.74.2	Example URI	256
558	6.74.3	Resource type	256

559	6.74.4	OpenAPI 2.0 definition.....	256
560	6.74.5	Property definition	258
561	6.74.6	CRUDN behaviour	259
562	6.75	Value Conditional.....	259
563	6.75.1	Introduction	259
564	6.75.2	Example URI	259
565	6.75.3	Resource type	259
566	6.75.4	OpenAPI 2.0 definition.....	259
567	6.75.5	Property definition	262
568	6.75.6	CRUDN behaviour	263
569	6.76	Colour Space Coordinates	263
570	6.76.1	Introduction	263
571	6.76.2	Example URI	263
572	6.76.3	Resource type	263
573	6.76.4	OpenAPI 2.0 definition.....	263
574	6.76.5	Property definition	265
575	6.76.6	CRUDN behaviour	266
576	6.77	Colour Temperature	266
577	6.77.1	Introduction	266
578	6.77.2	Example URI	266
579	6.77.3	Resource type	266
580	6.77.4	OpenAPI 2.0 definition.....	266
581	6.77.5	Property definition	268
582	6.77.6	CRUDN behaviour	269
583	6.78	Colour Hue and Saturation.....	269
584	6.78.1	Introduction	269
585	6.78.2	Example URI	269
586	6.78.3	Resource type	269
587	6.78.4	OpenAPI 2.0 definition.....	269
588	6.78.5	Property definition	272
589	6.78.6	CRUDN behaviour	272
590	6.79	Battery Material	273
591	6.79.1	Introduction	273
592	6.79.2	Example URI	273
593	6.79.3	Resource type	273
594	6.79.4	OpenAPI 2.0 definition.....	273
595	6.79.5	Property definition	275
596	6.79.6	CRUDN behaviour	276
597	6.80	Brewing	276
598	6.80.1	Introduction	276
599	6.80.2	Example URI	276
600	6.80.3	Resource type	276
601	6.80.4	OpenAPI 2.0 definition.....	276
602	6.80.5	Property definition	278
603	6.80.6	CRUDN behaviour	279

604	6.81	Energy	279
605	6.81.1	Introduction	279
606	6.81.2	Example URI	279
607	6.81.3	Resource type	279
608	6.81.4	OpenAPI 2.0 definition.....	279
609	6.81.5	Property definition	282
610	6.81.6	CRUDN behaviour	283
611	6.82	Energy Generation	283
612	6.82.1	Introduction	283
613	6.82.2	Example URI	283
614	6.82.3	Resource type	283
615	6.82.4	OpenAPI 2.0 definition.....	283
616	6.82.5	Property definition	285
617	6.82.6	CRUDN behaviour	285
618	6.83	Foaming	286
619	6.83.1	Introduction	286
620	6.83.2	Example URI	286
621	6.83.3	Resource type	286
622	6.83.4	OpenAPI 2.0 definition.....	286
623	6.83.5	Property definition	288
624	6.83.6	CRUDN behaviour	288
625	6.84	Grinder	289
626	6.84.1	Introduction	289
627	6.84.2	Example URI	289
628	6.84.3	Resource type	289
629	6.84.4	OpenAPI 2.0 definition.....	289
630	6.84.5	Property definition	291
631	6.84.6	CRUDN behaviour	292
632	6.85	Liquid Level	292
633	6.85.1	Introduction	292
634	6.85.2	Example URI	292
635	6.85.3	Resource type	292
636	6.85.4	OpenAPI 2.0 definition.....	292
637	6.85.5	Property definition	295
638	6.85.6	CRUDN behaviour	295
639	6.86	Vehicle Connector	295
640	6.86.1	Introduction	295
641	6.86.2	Example URI	296
642	6.86.3	Resource type	296
643	6.86.4	OpenAPI 2.0 definition.....	296
644	6.86.5	Property definition	297
645	6.86.6	CRUDN behaviour	298
646	6.87	Time Stamp	298
647	6.87.1	Introduction	298
648	6.87.2	Example URI	298

649	6.87.3	Resource type	298
650	6.87.4	OpenAPI 2.0 definition	298
651	6.87.5	Property definition	300
652	6.87.6	CRUDN behaviour	301
653	6.88	3D Printer	301
654	6.88.1	Introduction	301
655	6.88.2	Example URI	301
656	6.88.3	Resource type	301
657	6.88.4	OpenAPI 2.0 definition	301
658	6.88.5	Property definition	303
659	6.88.6	CRUDN behaviour	304
660	6.89	Blood Pressure	305
661	6.89.1	Introduction	305
662	6.89.2	Example URI	305
663	6.89.3	Resource type	305
664	6.89.4	OpenAPI 2.0 definition	305
665	6.89.5	Property definition	307
666	6.89.6	CRUDN behaviour	308
667	6.90	Blood Pressure Monitor Atomic Measurement	308
668	6.90.1	Introduction	308
669	6.90.2	Example URI	308
670	6.90.3	Resource type	308
671	6.90.4	OpenAPI 2.0 definition	308
672	6.90.5	Property definition	315
673	6.90.6	CRUDN behaviour	316
674	6.91	Body Mass Index(BMI)	317
675	6.91.1	Introduction	317
676	6.91.2	Example URI	317
677	6.91.3	Resource type	317
678	6.91.4	OpenAPI 2.0 definition	317
679	6.91.5	Property definition	319
680	6.91.6	CRUDN behaviour	319
681	6.92	Body Fat	320
682	6.92.1	Introduction	320
683	6.92.2	Example URI	320
684	6.92.3	Resource type	320
685	6.92.4	OpenAPI 2.0 definition	320
686	6.92.5	Property definition	322
687	6.92.6	CRUDN behaviour	323
688	6.93	Body Fat Free Mass	323
689	6.93.1	Introduction	323
690	6.93.2	Example URI	323
691	6.93.3	Resource type	323
692	6.93.4	OpenAPI 2.0 definition	323
693	6.93.5	Property definition	325

694	6.93.6	CRUDN behaviour	326
695	6.94	Body Location Temperature	326
696	6.94.1	Introduction	326
697	6.94.2	Example URI	326
698	6.94.3	Resource type	326
699	6.94.4	OpenAPI 2.0 definition.....	326
700	6.94.5	Property definition	328
701	6.94.6	CRUDN behaviour	329
702	6.95	Body Scale Atomic Measurement.....	329
703	6.95.1	Introduction	329
704	6.95.2	Example URI	329
705	6.95.3	Resource type	329
706	6.95.4	OpenAPI 2.0 definition.....	329
707	6.95.5	Property definition	338
708	6.95.6	CRUDN behaviour	339
709	6.96	Body Soft Lean Mass	340
710	6.96.1	Introduction	340
711	6.96.2	Example URI	340
712	6.96.3	Resource type	340
713	6.96.4	OpenAPI 2.0 definition.....	340
714	6.96.5	Property definition	342
715	6.96.6	CRUDN behaviour	343
716	6.97	Body Thermometer Atomic Measurement.....	343
717	6.97.1	Introduction	343
718	6.97.2	Example URI	343
719	6.97.3	Resource type	343
720	6.97.4	OpenAPI 2.0 definition.....	343
721	6.97.5	Property definition	350
722	6.97.6	CRUDN behaviour	351
723	6.98	Body Water.....	351
724	6.98.1	Introduction	351
725	6.98.2	Example URI	351
726	6.98.3	Resource type	351
727	6.98.4	OpenAPI 2.0 definition.....	352
728	6.98.5	Property definition	354
729	6.98.6	CRUDN behaviour	354
730	6.99	Glucose	355
731	6.99.1	Introduction	355
732	6.99.2	Example URI	355
733	6.99.3	Resource type	355
734	6.99.4	OpenAPI 2.0 definition.....	355
735	6.99.5	Property definition	357
736	6.99.6	CRUDN behaviour	358
737	6.100	Context Carbohydrates for Glucose Meter.....	358
738	6.100.1	Introduction	358

739	6.100.2	Example URI	358
740	6.100.3	Resource type	358
741	6.100.4	OpenAPI 2.0 definition.....	358
742	6.100.5	Property definition	360
743	6.100.6	CRUDN behaviour	361
744	6.101	Exercise for Glucose Meter	361
745	6.101.1	Introduction	361
746	6.101.2	Example URI	362
747	6.101.3	Resource type	362
748	6.101.4	OpenAPI 2.0 definition.....	362
749	6.101.5	Property definition	364
750	6.101.6	CRUDN behaviour	364
751	6.102	Hemoglobin Bound to Glucose A1c Form (HbA1c) for Glucose Meter.....	365
752	6.102.1	Introduction	365
753	6.102.2	Example URI	365
754	6.102.3	Resource type	365
755	6.102.4	OpenAPI 2.0 definition.....	365
756	6.102.5	Property definition	367
757	6.102.6	CRUDN behaviour	367
758	6.103	Context Health for Glucose Meter	368
759	6.103.1	Introduction	368
760	6.103.2	Example URI	368
761	6.103.3	Resource type	368
762	6.103.4	OpenAPI 2.0 definition.....	368
763	6.103.5	Property definition	370
764	6.103.6	CRUDN behaviour	370
765	6.104	Context Meal for Glucose Meter.....	370
766	6.104.1	Introduction	370
767	6.104.2	Example URI	370
768	6.104.3	Resource type	371
769	6.104.4	OpenAPI 2.0 definition.....	371
770	6.104.5	Property definition	372
771	6.104.6	CRUDN behaviour	373
772	6.105	Context Medication for Glucose Meter	373
773	6.105.1	Introduction	373
774	6.105.2	Example URI	373
775	6.105.3	Resource type	373
776	6.105.4	OpenAPI 2.0 definition.....	373
777	6.105.5	Property definition	376
778	6.105.6	CRUDN behaviour	376
779	6.106	Glucose Meter Atomic Measurement.....	377
780	6.106.1	Introduction	377
781	6.106.2	Example URI	377
782	6.106.3	Resource type	377
783	6.106.4	OpenAPI 2.0 definition.....	377

784	6.106.5	Property definition	387
785	6.106.6	CRUDN behaviour	388
786	6.107	Context Sample Location for Glucose Meter	389
787	6.107.1	Introduction	389
788	6.107.2	Example URI	389
789	6.107.3	Resource type	389
790	6.107.4	OpenAPI 2.0 definition.....	389
791	6.107.5	Property definition	391
792	6.107.6	CRUDN behaviour	391
793	6.108	Context Tester for Glucose Meter	392
794	6.108.1	Introduction	392
795	6.108.2	Example URI	392
796	6.108.3	Resource type	392
797	6.108.4	OpenAPI 2.0 definition.....	392
798	6.108.5	Property definition	394
799	6.108.6	CRUDN behaviour	394
800	6.109	Optical RFID Station	394
801	6.109.1	Introduction	394
802	6.109.2	Example URI	394
803	6.109.3	Resource type	394
804	6.109.4	OpenAPI 2.0 definition.....	395
805	6.109.5	Property definition	397
806	6.109.6	CRUDN behaviour	397
807	6.110	Optical RFID Tag	398
808	6.110.1	Introduction	398
809	6.110.2	Example URI	398
810	6.110.3	Resource type	398
811	6.110.4	OpenAPI 2.0 definition.....	398
812	6.110.5	Property definition	399
813	6.110.6	CRUDN behaviour	400
814	6.111	Power Source	400
815	6.111.1	Introduction	400
816	6.111.2	Example URI	400
817	6.111.3	Resource type	400
818	6.111.4	OpenAPI 2.0 definition.....	400
819	6.111.5	Property definition	402
820	6.111.6	CRUDN behaviour	403
821	6.112	Print Queue	403
822	6.112.1	Introduction	403
823	6.112.2	Example URI	403
824	6.112.3	Resource type	403
825	6.112.4	OpenAPI 2.0 definition.....	403
826	6.112.5	Property definition	405
827	6.112.6	CRUDN behaviour	405
828	6.113	Pulse Rate.....	406

829	6.113.1	Introduction	406
830	6.113.2	Example URI	406
831	6.113.3	Resource type	406
832	6.113.4	OpenAPI 2.0 definition.....	406
833	6.113.5	Property definition	408
834	6.113.6	CRUDN behaviour	408
835	6.114	Sensor Properties	408
836	6.114.1	Introduction	408
837	6.114.2	Example URI	409
838	6.114.3	Resource type	409
839	6.114.4	OpenAPI 2.0 definition.....	409
840	6.114.5	Property definition	411
841	6.114.6	CRUDN behaviour	412
842	6.115	User ID	412
843	6.115.1	Introduction	412
844	6.115.2	Example URI	412
845	6.115.3	Resource type	412
846	6.115.4	OpenAPI 2.0 definition.....	412
847	6.115.5	Property definition	414
848	6.115.6	CRUDN behaviour	414
849	6.116	Calorific Value	415
850	6.116.1	Introduction	415
851	6.116.2	Example URI	415
852	6.116.3	Resource type	415
853	6.116.4	OpenAPI 2.0 definition.....	415
854	6.116.5	Property definition	416
855	6.116.6	CRUDN behaviour	417
856	6.117	Conversion Factor	417
857	6.117.1	Introduction	417
858	6.117.2	Example URI	417
859	6.117.3	Resource type	417
860	6.117.4	OpenAPI 2.0 definition.....	417
861	6.117.5	Property definition	419
862	6.117.6	CRUDN behaviour	420
863	6.118	Gas Consumption	420
864	6.118.1	Introduction	420
865	6.118.2	Example URI	420
866	6.118.3	Resource type	420
867	6.118.4	OpenAPI 2.0 definition.....	420
868	6.118.5	Property definition	422
869	6.118.6	CRUDN behaviour	422
870	6.119	Gas Usage.....	423
871	6.119.1	Introduction	423
872	6.119.2	Example URI	423
873	6.119.3	Resource type	423

874	6.119.4	OpenAPI 2.0 definition.....	423
875	6.119.5	Property definition	428
876	6.119.6	CRUDN behaviour	430
877	6.120	Impact Sensor.....	430
878	6.120.1	Introduction	430
879	6.120.2	Example URI	430
880	6.120.3	Resource type	430
881	6.120.4	OpenAPI 2.0 definition.....	430
882	6.120.5	Property definition	432
883	6.120.6	CRUDN behaviour	433
884	6.121	Keypad Character	433
885	6.121.1	Introduction	433
886	6.121.2	Example URI	433
887	6.121.3	Resource type	433
888	6.121.4	OpenAPI 2.0 definition.....	433
889	6.121.5	Property definition	435
890	6.121.6	CRUDN behaviour	436
891	6.122	Opaque Data	436
892	6.122.1	Introduction	436
893	6.122.2	Example URI	436
894	6.122.3	Resource type	436
895	6.122.4	OpenAPI 2.0 definition.....	436
896	6.122.5	Property definition	439
897	6.122.6	CRUDN behaviour	440
898	6.123	User Info for Application Layer.....	440
899	6.123.1	Introduction	440
900	6.123.2	Example URI	440
901	6.123.3	Resource type	440
902	6.123.4	OpenAPI 2.0 definition.....	440
903	6.123.5	Property definition	442
904	6.123.6	CRUDN behaviour	443
905	6.124	IAS Zone Info.....	443
906	6.124.1	Introduction	443
907	6.124.2	Example URI	443
908	6.124.3	Resource type	443
909	6.124.4	OpenAPI 2.0 definition.....	443
910	6.124.5	Property definition	446
911	6.124.6	CRUDN behaviour	447
912	6.125	IAS Zone Collection	447
913	6.125.1	Introduction	447
914	6.125.2	Example URI	447
915	6.125.3	Resource type	447
916	6.125.4	OpenAPI 2.0 definition.....	448
917	6.125.5	Property definition	453
918	6.125.6	CRUDN behaviour	454

919	6.126 Window Covering	455
920	6.126.1 Introduction	455
921	6.126.2 Example URI	455
922	6.126.3 Resource type	455
923	6.126.4 OpenAPI 2.0 definition.....	455
924	6.126.5 Property definition	459
925	6.126.6 CRUDN behaviour	460
926		
927		

928 Figures

929

930 Figure 1 – Overall conditional notification logic8

931 Figure 2 – Conditional Notification Example Flow9

932 Figure 3 – Composite Resource Example 10

933

934

935

936 Tables

937

938 Table 1 – Conversion between OCF CRUDN and OpenAPI Specification 2.0 definitions4

939 Table 2 – Common Properties for OCF Resources.....4

940 Table 3 – Property definitions of a Resource Type in the OpenAPI Specification 2.0 file5

941 Table 4 – Return codes behaviour in OpenAPI Specification 2.0 6

942 Table 5 – Conditional Notification Properties7

943 Table 6 – Alphabetical list of Resource Types..... 11

944 Table 7 – The Property definitions of the Resource with type "rt" = "oic.r.airflow"..... 17

945 Table 8 – The CRUDN operations of the Resource with type "rt" = "oic.r.airflow". 18

946 Table 9 – The Property definitions of the Resource with type "rt" = "oic.r.airflowcontrol".24

947 Table 10 – The CRUDN operations of the Resource with type "rt" = "oic.r.airflowcontrol".....25

948 Table 11 – The Property definitions of the Resource with type "rt" = "oic.r.energy.battery"....28

949 Table 12 – The CRUDN operations of the Resource with type "rt" = "oic.r.energy.battery". ...29

950 Table 13 – The Property definitions of the Resource with type "rt" = "oic.r.switch.binary".....31

951 Table 14 – The CRUDN operations of the Resource with type "rt" = "oic.r.switch.binary".32

952 Table 15 – The Property definitions of the Resource with type "rt" = "oic.r.light.brightness". .34

953 Table 16 – The CRUDN operations of the Resource with type "rt" = "oic.r.light.brightness"...35

954 Table 17 – The Property definitions of the Resource with type "rt" = "oic.r.colour.chroma".38

955 Table 18 – The CRUDN operations of the Resource with type "rt" = "oic.r.colour.chroma". ...38

956 Table 19 – The Property definitions of the Resource with type "rt" = "oic.r.colour.rgb".41

957 Table 20 – The CRUDN operations of the Resource with type "rt" = "oic.r.colour.rgb".....42

958 Table 21 – The Property definitions of the Resource with type "rt" = "oic.r.light.dimming".44

959 Table 22 – The CRUDN operations of the Resource with type "rt" = "oic.r.light.dimming".....45

960 Table 23 – The Property definitions of the Resource with type "rt" = "oic.r.door".47

961 Table 24 – The CRUDN operations of the Resource with type "rt" = "oic.r.door".....48

962 Table 25 – The Property definitions of the Resource with type "rt" =

963 "oic.r.energy.consumption".50

964 Table 26 – The CRUDN operations of the Resource with type "rt" =

965 "oic.r.energy.consumption".51

966 Table 27 – The Property definitions of the Resource with type "rt" = "oic.r.energy.usage".....56

967 Table 28 – The CRUDN operations of the Resource with type "rt" = "oic.r.energy.usage".58

968 Table 29 – The Property definitions of the Resource with type "rt" = "oic.r.humidity".60

969 Table 30 – The CRUDN operations of the Resource with type "rt" = "oic.r.humidity".61

970 Table 31 – The Property definitions of the Resource with type "rt" = "oic.r.icemaker".64

971 Table 32 – The CRUDN operations of the Resource with type "rt" = "oic.r.icemaker".64

972 Table 33 – The Property definitions of the Resource with type "rt" = "oic.r.lock.status".67

973 Table 34 – The CRUDN operations of the Resource with type "rt" = "oic.r.lock.status".....67

974 Table 35 – The Property definitions of the Resource with type "rt" = "oic.r.lock.code".70

975 Table 36 – The CRUDN operations of the Resource with type "rt" = "oic.r.lock.code".....70

976	Table 37 – The Property definitions of the Resource with type "rt" = "oic.r.mode".	73
977	Table 38 – The CRUDN operations of the Resource with type "rt" = "oic.r.mode".	73
978	Table 39 – The Property definitions of the Resource with type "rt" = "oic.r.openlevel".	76
979	Table 40 – The CRUDN operations of the Resource with type "rt" = "oic.r.openlevel".	77
980	Table 41 – The Property definitions of the Resource with type "rt" =	
981	"oic.r.operational.state".	80
982	Table 42 – The CRUDN operations of the Resource with type "rt" =	
983	"oic.r.operational.state".	81
984	Table 43 – The Property definitions of the Resource with type "rt" = "oic.r.light.ramptime".	84
985	Table 44 – The CRUDN operations of the Resource with type "rt" = "oic.r.light.ramptime".	85
986	Table 45 – The Property definitions of the Resource with type "rt" = "oic.r.refrigeration".	88
987	Table 46 – The CRUDN operations of the Resource with type "rt" = "oic.r.refrigeration".	89
988	Table 47 – The Property definitions of the Resource with type "rt" = "oic.r.temperature".	92
989	Table 48 – The CRUDN operations of the Resource with type "rt" = "oic.r.temperature".	93
990	Table 49 – The Property definitions of the Resource with type "rt" = "oic.r.time.period".	96
991	Table 50 – The CRUDN operations of the Resource with type "rt" = "oic.r.time.period".	97
992	Table 51 – The Property definitions of the Resource with type "rt" =	
993	"oic.r.sensor.activity.count".	99
994	Table 52 – The CRUDN operations of the Resource with type "rt" =	
995	"oic.r.sensor.activity.count".	100
996	Table 53 – The Property definitions of the Resource with type "rt" =	
997	"oic.r.sensor.atmosphericpressure".	102
998	Table 54 – The CRUDN operations of the Resource with type "rt" =	
999	"oic.r.sensor.atmosphericpressure".	103
1000	Table 55 – The Property definitions of the Resource with type "rt" = "oic.r.audio".	105
1001	Table 56 – The CRUDN operations of the Resource with type "rt" = "oic.r.audio".	106
1002	Table 57 – The Property definitions of the Resource with type "rt" = "oic.r.autofocus".	108
1003	Table 58 – The CRUDN operations of the Resource with type "rt" = "oic.r.autofocus".	109
1004	Table 59 – The Property definitions of the Resource with type "rt" =	
1005	"oic.r.automaticdocumentfeeder".	111
1006	Table 60 – The CRUDN operations of the Resource with type "rt" =	
1007	"oic.r.automaticdocumentfeeder".	111
1008	Table 61 – The Property definitions of the Resource with type "rt" = "oic.r.button".	113
1009	Table 62 – The CRUDN operations of the Resource with type "rt" = "oic.r.button".	114
1010	Table 63 – The Property definitions of the Resource with type "rt" =	
1011	"oic.r.sensor.carbondioxide".	116
1012	Table 64 – The CRUDN operations of the Resource with type "rt" =	
1013	"oic.r.sensor.carbondioxide".	116
1014	Table 65 – The Property definitions of the Resource with type "rt" =	
1015	"oic.r.sensor.carbonmonoxide".	118
1016	Table 66 – The CRUDN operations of the Resource with type "rt" =	
1017	"oic.r.sensor.carbonmonoxide".	119
1018	Table 67 – The Property definitions of the Resource with type "rt" =	
1019	"oic.r.colour.autowhitebalance".	121

1020	Table 68 – The CRUDN operations of the Resource with type "rt" =	
1021	"oic.r.colour.autowhitebalance".	121
1022	Table 69 – The Property definitions of the Resource with type "rt" =	
1023	"oic.r.colour.saturation".	124
1024	Table 70 – The CRUDN operations of the Resource with type "rt" =	
1025	"oic.r.colour.saturation".	124
1026	Table 71 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.contact".	126
1027	Table 72 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.contact".	127
1028	Table 73 – The Property definitions of the Resource with type "rt" = "oic.r.energy.drlc".	130
1029	Table 74 – The CRUDN operations of the Resource with type "rt" = "oic.r.energy.drlc".	131
1030	Table 75 – The Property definitions of the Resource with type "rt" =	
1031	"oic.r.energy.overload".	133
1032	Table 76 – The CRUDN operations of the Resource with type "rt" =	
1033	"oic.r.energy.overload".	133
1034	Table 77 – The Property definitions of the Resource with type "rt" = "oic.r.sensor".	135
1035	Table 78 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor".	136
1036	Table 79 – The Property definitions of the Resource with type "rt" =	
1037	"oic.r.sensor.glassbreak".	138
1038	Table 80 – The CRUDN operations of the Resource with type "rt" =	
1039	"oic.r.sensor.glassbreak".	138
1040	Table 81 – The Property definitions of the Resource with type "rt" =	
1041	"oic.r.sensor.heart.zone".	140
1042	Table 82 – The CRUDN operations of the Resource with type "rt" =	
1043	"oic.r.sensor.heart.zone".	141
1044	Table 83 – The Property definitions of the Resource with type "rt" =	
1045	"oic.r.sensor.illuminance".	143
1046	Table 84 – The CRUDN operations of the Resource with type "rt" =	
1047	"oic.r.sensor.illuminance".	143
1048	Table 85 – The Property definitions of the Resource with type "rt" =	
1049	"oic.r.sensor.magneticfielddirection".	145
1050	Table 86 – The CRUDN operations of the Resource with type "rt" =	
1051	"oic.r.sensor.magneticfielddirection".	146
1052	Table 87 – The Property definitions of the Resource with type "rt" = "oic.r.media".	148
1053	Table 88 – The CRUDN operations of the Resource with type "rt" = "oic.r.media".	149
1054	Table 89 – The Property definitions of the Resource with type "rt" = "oic.r.mediasource".	151
1055	Table 90 – The CRUDN operations of the Resource with type "rt" = "oic.r.mediasource".	152
1056	Table 91 – The Property definitions of the Resource with type "rt" =	
1057	"oic.r.mediasourcelist".	155
1058	Table 92 – The CRUDN operations of the Resource with type "rt" = "oic.r.mediasourcelist".	156
1059	Table 93 – The Property definitions of the Resource with type "rt" = "oic.r.media.input".	159
1060	Table 94 – The CRUDN operations of the Resource with type "rt" = "oic.r.media.input".	159
1061	Table 95 – The Property definitions of the Resource with type "rt" = "oic.r.media.output".	162
1062	Table 96 – The CRUDN operations of the Resource with type "rt" = "oic.r.media.output".	163
1063	Table 97 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.motion".	165

1064	Table 98 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.motion"...	165
1065	Table 99 – The Property definitions of the Resource with type "rt" = "oic.r.nightmode".....	167
1066	Table 100 – The CRUDN operations of the Resource with type "rt" = "oic.r.nightmode".	168
1067	Table 101 – The Property definitions of the Resource with type "rt" =	
1068	"oic.r.sensor.presence".....	170
1069	Table 102 – The CRUDN operations of the Resource with type "rt" =	
1070	"oic.r.sensor.presence".....	170
1071	Table 103 – The Property definitions of the Resource with type "rt" = "oic.r.ptz".	174
1072	Table 104 – The CRUDN operations of the Resource with type "rt" = "oic.r.ptz".	175
1073	Table 105 – The Property definitions of the Resource with type "rt" = "oic.r.signalstrength".	177
1074	Table 106 – The CRUDN operations of the Resource with type "rt" = "oic.r.signalstrength".	177
1075	Table 107 – The Property definitions of the Resource with type "rt" = "oic.r.speech.tts".	181
1076	Table 108 – The CRUDN operations of the Resource with type "rt" = "oic.r.speech.tts".....	181
1077	Table 109 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.touch".	183
1078	Table 110 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.touch"...	184
1079	Table 111 – The Property definitions of the Resource with type "rt" =	
1080	"oic.r.sensor.radiation.uv".	186
1081	Table 112 – The CRUDN operations of the Resource with type "rt" =	
1082	"oic.r.sensor.radiation.uv".	186
1083	Table 113 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.water".	188
1084	Table 114 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.water"...	189
1085	Table 115 – The Property definitions of the Resource with type "rt" =	
1086	"oic.r.sensor.acceleration".	191
1087	Table 116 – The CRUDN operations of the Resource with type "rt" =	
1088	"oic.r.sensor.acceleration".	191
1089	Table 117 – The Property definitions of the Resource with type "rt" =	
1090	"oic.r.movement.linear".	194
1091	Table 118 – The CRUDN operations of the Resource with type "rt" =	
1092	"oic.r.movement.linear".	195
1093	Table 119 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.sleep".	196
1094	Table 120 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.sleep"...	197
1095	Table 121 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.smoke".	199
1096	Table 122 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.smoke".	199
1097	Table 123 – The Property definitions of the Resource with type "rt" =	
1098	"oic.r.sensor.threeaxis".	201
1099	Table 124 – The CRUDN operations of the Resource with type "rt" =	
1100	"oic.r.sensor.threeaxis".	202
1101	Table 125 – The Property definitions of the Resource with type "rt" = "oic.r.altimeter".....	204
1102	Table 126 – The CRUDN operations of the Resource with type "rt" = "oic.r.altimeter".	205
1103	Table 127 – The Property definitions of the Resource with type "rt" = "oic.r.clock".	207
1104	Table 128 – The CRUDN operations of the Resource with type "rt" = "oic.r.clock".....	208
1105	Table 129 – The Property definitions of the Resource with type "rt" =	
1106	"oic.r.sensor.geolocation".	211

1107	Table 130 – The CRUDN operations of the Resource with type "rt" =	
1108	"oic.r.sensor.geolocation".	212
1109	Table 131 – The Property definitions of the Resource with type "rt" = "oic.r.height".	215
1110	Table 132 – The CRUDN operations of the Resource with type "rt" = "oic.r.height".	216
1111	Table 133 – The Property definitions of the Resource with type "rt" = "oic.r.weight".	219
1112	Table 134 – The CRUDN operations of the Resource with type "rt" = "oic.r.weight".	219
1113	Table 135 – The Property definitions of the Resource with type "rt" = "oic.r.airquality".	222
1114	Table 136 – The CRUDN operations of the Resource with type "rt" = "oic.r.airquality".	223
1115	Table 137 – The Property definitions of the Resource with type "rt" =	
1116	"oic.r.airqualitycollection, oic.wk.col".	228
1117	Table 138 – The CRUDN operations of the Resource with type "rt" =	
1118	"oic.r.airqualitycollection, oic.wk.col".	229
1119	Table 139 – The Property definitions of the Resource with type "rt" = "oic.r.consumable".	232
1120	Table 140 – The CRUDN operations of the Resource with type "rt" = "oic.r.consumable".	232
1121	Table 141 – The Property definitions of the Resource with type "rt" =	
1122	"oic.r.consumablecollection, oic.wk.col".	237
1123	Table 142 – The CRUDN operations of the Resource with type "rt" =	
1124	"oic.r.consumablecollection, oic.wk.col".	239
1125	Table 143 – The Property definitions of the Resource with type "rt" = "oic.r.delaydefrost".	242
1126	Table 144 – The CRUDN operations of the Resource with type "rt" = "oic.r.delaydefrost".	243
1127	Table 145 – The Property definitions of the Resource with type "rt" = "oic.r.ecomode".	246
1128	Table 146 – The CRUDN operations of the Resource with type "rt" = "oic.r.ecomode".	247
1129	Table 147 – The Property definitions of the Resource with type "rt" = "oic.r.heatingzone".	249
1130	Table 148 – The CRUDN operations of the Resource with type "rt" = "oic.r.heatingzone".	249
1131	Table 149 – The Property definitions of the Resource with type "rt" =	
1132	"oic.r.heatingzonecollection, oic.wk.col".	254
1133	Table 150 – The CRUDN operations of the Resource with type "rt" =	
1134	"oic.r.heatingzonecollection, oic.wk.col".	256
1135	Table 151 – The Property definitions of the Resource with type "rt" =	
1136	"oic.r.selectablelevels".	258
1137	Table 152 – The CRUDN operations of the Resource with type "rt" =	
1138	"oic.r.selectablelevels".	259
1139	Table 153 – The Property definitions of the Resource with type "rt" =	
1140	"oic.r.value.conditional".	262
1141	Table 154 – The CRUDN operations of the Resource with type "rt" =	
1142	"oic.r.value.conditional".	263
1143	Table 155 – The Property definitions of the Resource with type "rt" = "oic.r.colour.csc".	265
1144	Table 156 – The CRUDN operations of the Resource with type "rt" = "oic.r.colour.csc".	266
1145	Table 157 – The Property definitions of the Resource with type "rt" =	
1146	"oic.r.colour.colourtemperature".	268
1147	Table 158 – The CRUDN operations of the Resource with type "rt" =	
1148	"oic.r.colour.colourtemperature".	269
1149	Table 159 – The Property definitions of the Resource with type "rt" = "oic.r.colour.hs".	272
1150	Table 160 – The CRUDN operations of the Resource with type "rt" = "oic.r.colour.hs".	272

1151	Table 161 – The Property definitions of the Resource with type "rt" =	
1152	"oic.r.batterymaterial".	275
1153	Table 162 – The CRUDN operations of the Resource with type "rt" =	
1154	"oic.r.batterymaterial".	276
1155	Table 163 – The Property definitions of the Resource with type "rt" = "oic.r.brewing".	278
1156	Table 164 – The CRUDN operations of the Resource with type "rt" = "oic.r.brewing".	279
1157	Table 165 – The Property definitions of the Resource with type "rt" =	
1158	"oic.r.energy.electrical".	282
1159	Table 166 – The CRUDN operations of the Resource with type "rt" =	
1160	"oic.r.energy.electrical".	283
1161	Table 167 – The Property definitions of the Resource with type "rt" =	
1162	"oic.r.energy.generation".	285
1163	Table 168 – The CRUDN operations of the Resource with type "rt" =	
1164	"oic.r.energy.generation".	286
1165	Table 169 – The Property definitions of the Resource with type "rt" = "oic.r.foaming".	288
1166	Table 170 – The CRUDN operations of the Resource with type "rt" = "oic.r.foaming".	289
1167	Table 171 – The Property definitions of the Resource with type "rt" = "oic.r.grinder".	291
1168	Table 172 – The CRUDN operations of the Resource with type "rt" = "oic.r.grinder".	292
1169	Table 173 – The Property definitions of the Resource with type "rt" = "oic.r.liquid.level".	295
1170	Table 174 – The CRUDN operations of the Resource with type "rt" = "oic.r.liquid.level".	295
1171	Table 175 – The Property definitions of the Resource with type "rt" =	
1172	"oic.r.vehicle.connector".	297
1173	Table 176 – The CRUDN operations of the Resource with type "rt" =	
1174	"oic.r.vehicle.connector".	298
1175	Table 177 – The Property definitions of the Resource with type "rt" = "oic.r.time.stamp".	300
1176	Table 178 – The CRUDN operations of the Resource with type "rt" = "oic.r.time.stamp".	301
1177	Table 179 – The Property definitions of the Resource with type "rt" = "oic.r.printer.3d".	303
1178	Table 180 – The CRUDN operations of the Resource with type "rt" = "oic.r.printer.3d".	305
1179	Table 181 – The Property definitions of the Resource with type "rt" =	
1180	"oic.r.blood.pressure".	307
1181	Table 182 – The CRUDN operations of the Resource with type "rt" =	
1182	"oic.r.blood.pressure".	308
1183	Table 183 – The Property definitions of the Resource with type "rt" =	
1184	"oic.r.bloodpressuremonitor-am, oic.wk.atomicmeasurement".	315
1185	Table 184 – The CRUDN operations of the Resource with type "rt" =	
1186	"oic.r.bloodpressuremonitor-am, oic.wk.atomicmeasurement".	316
1187	Table 185 – The Property definitions of the Resource with type "rt" = "oic.r.bmi".	319
1188	Table 186 – The CRUDN operations of the Resource with type "rt" = "oic.r.bmi".	319
1189	Table 187 – The Property definitions of the Resource with type "rt" = "oic.r.body.fat".	322
1190	Table 188 – The CRUDN operations of the Resource with type "rt" = "oic.r.body.fat".	323
1191	Table 189 – The Property definitions of the Resource with type "rt" = "oic.r.body.ffmpeg".	325
1192	Table 190 – The CRUDN operations of the Resource with type "rt" = "oic.r.body.ffmpeg".	326
1193	Table 191 – The Property definitions of the Resource with type "rt" =	
1194	"oic.r.body.location.temperature".	328

1195	Table 192 – The CRUDN operations of the Resource with type "rt" =	
1196	"oic.r.body.location.temperature".....	329
1197	Table 193 – The Property definitions of the Resource with type "rt" = "oic.r.bodyscale-am,	
1198	oic.wk.atomicmeasurement".....	338
1199	Table 194 – The CRUDN operations of the Resource with type "rt" = "oic.r.bodyscale-am,	
1200	oic.wk.atomicmeasurement".....	340
1201	Table 195 – The Property definitions of the Resource with type "rt" = "oic.r.body.slm".	342
1202	Table 196 – The CRUDN operations of the Resource with type "rt" = "oic.r.body.slm".....	343
1203	Table 197 – The Property definitions of the Resource with type "rt" =	
1204	"oic.r.bodythermometer-am, oic.wk.atomicmeasurement".....	350
1205	Table 198 – The CRUDN operations of the Resource with type "rt" =	
1206	"oic.r.bodythermometer-am, oic.wk.atomicmeasurement".....	351
1207	Table 199 – The Property definitions of the Resource with type "rt" = "oic.r.body.water".	354
1208	Table 200 – The CRUDN operations of the Resource with type "rt" = "oic.r.body.water".....	354
1209	Table 201 – The Property definitions of the Resource with type "rt" = "oic.r.glucose".	357
1210	Table 202 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose".....	358
1211	Table 203 – The Property definitions of the Resource with type "rt" = "oic.r.glucose.carb".	360
1212	Table 204 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose.carb"...	361
1213	Table 205 – The Property definitions of the Resource with type "rt" =	
1214	"oic.r.glucose.exercise".....	364
1215	Table 206 – The CRUDN operations of the Resource with type "rt" =	
1216	"oic.r.glucose.exercise".....	364
1217	Table 207 – The Property definitions of the Resource with type "rt" =	
1218	"oic.r.glucose.hba1c".	367
1219	Table 208 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose.hba1c".	367
1220	Table 209 – The Property definitions of the Resource with type "rt" =	
1221	"oic.r.glucose.health".	370
1222	Table 210 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose.health".	370
1223	Table 211 – The Property definitions of the Resource with type "rt" = "oic.r.glucose.meal".	372
1224	Table 212 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose.meal".	373
1225	Table 213 – The Property definitions of the Resource with type "rt" =	
1226	"oic.r.glucose.medication".....	376
1227	Table 214 – The CRUDN operations of the Resource with type "rt" =	
1228	"oic.r.glucose.medication".....	377
1229	Table 215 – The Property definitions of the Resource with type "rt" = "oic.r.glucosemeter-	
1230	am, oic.wk.atomicmeasurement".....	387
1231	Table 216 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucosemeter-	
1232	am, oic.wk.atomicmeasurement".....	389
1233	Table 217 – The Property definitions of the Resource with type "rt" =	
1234	"oic.r.glucose.samplelocation".	391
1235	Table 218 – The CRUDN operations of the Resource with type "rt" =	
1236	"oic.r.glucose.samplelocation".	391
1237	Table 219 – The Property definitions of the Resource with type "rt" = "oic.r.glucose.testers".	394
1238	Table 220 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose.testers".	394

1239	Table 221 – The Property definitions of the Resource with type "rt" = "oic.r.orfid.station". ...	397
1240	Table 222 – The CRUDN operations of the Resource with type "rt" = "oic.r.orfid.station". ...	397
1241	Table 223 – The Property definitions of the Resource with type "rt" = "oic.r.orfid.tag".	399
1242	Table 224 – The CRUDN operations of the Resource with type "rt" = "oic.r.orfid.tag".	400
1243	Table 225 – The Property definitions of the Resource with type "rt" = "oic.r.powersource". .	402
1244	Table 226 – The CRUDN operations of the Resource with type "rt" = "oic.r.powersource"....	403
1245	Table 227 – The Property definitions of the Resource with type "rt" = "oic.r.printer.queue".	405
1246	Table 228 – The CRUDN operations of the Resource with type "rt" = "oic.r.printer.queue". .	405
1247	Table 229 – The Property definitions of the Resource with type "rt" = "oic.r.pulserate".	408
1248	Table 230 – The CRUDN operations of the Resource with type "rt" = "oic.r.pulserate".	408
1249	Table 231 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.props". .	411
1250	Table 232 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.props"....	412
1251	Table 233 – The Property definitions of the Resource with type "rt" = "oic.r.userid".	414
1252	Table 234 – The CRUDN operations of the Resource with type "rt" = "oic.r.userid".	415
1253	Table 235 – The Property definitions of the Resource with type "rt" = "oic.r.calorificvalue". .	416
1254	Table 236 – The CRUDN operations of the Resource with type "rt" = "oic.r.calorificvalue". .	417
1255	Table 237 – The Property definitions of the Resource with type "rt" =	
1256	"oic.r.conversionfactor".	419
1257	Table 238 – The CRUDN operations of the Resource with type "rt" =	
1258	"oic.r.conversionfactor".	420
1259	Table 239 – The Property definitions of the Resource with type "rt" =	
1260	"oic.r.gas.consumption".	422
1261	Table 240 – The CRUDN operations of the Resource with type "rt" =	
1262	"oic.r.gas.consumption".	422
1263	Table 241 – The Property definitions of the Resource with type "rt" = "oic.r.gas.usage".	428
1264	Table 242 – The CRUDN operations of the Resource with type "rt" = "oic.r.gas.usage".	430
1265	Table 243 – The Property definitions of the Resource with type "rt" = "oic.r.impactsensor".	432
1266	Table 244 – The CRUDN operations of the Resource with type "rt" = "oic.r.impactsensor". .	433
1267	Table 245 – The Property definitions of the Resource with type "rt" = "oic.r.keypadchar". ...	436
1268	Table 246 – The CRUDN operations of the Resource with type "rt" = "oic.r.keypadchar".	436
1269	Table 247 – The Property definitions of the Resource with type "rt" = "oic.r.opaquedata". ...	439
1270	Table 248 – The CRUDN operations of the Resource with type "rt" = "oic.r.opaquedata". ...	440
1271	Table 249 – The Property definitions of the Resource with type "rt" = "oic.r.userinfo".	442
1272	Table 250 – The CRUDN operations of the Resource with type "rt" = "oic.r.userinfo".	443
1273	Table 251 – The Property definitions of the Resource with type "rt" = "oic.r.iaszoneinfo". ...	446
1274	Table 252 – The CRUDN operations of the Resource with type "rt" = "oic.r.iaszoneinfo".	447
1275	Table 253 – The Property definitions of the Resource with type "rt" = "oic.r.iaszone".	453
1276	Table 254 – The CRUDN operations of the Resource with type "rt" = "oic.r.iaszone".	454
1277	Table 255 – The Property definitions of the Resource with type "rt" =	
1278	"oic.r.windowcovering".	459
1279	Table 256 – The CRUDN operations of the Resource with type "rt" =	
1280	"oic.r.windowcovering".	460

1282 **1 Scope**

1283 This document specifies the Resources that have been defined by OCF that may be exposed by
1284 an OCF Device.

1285 Application profile device specifications (for example those created for Smart Home or Healthcare)
1286 specify device types appropriate to the profile; such specifications use Resource Type definitions
1287 from this document.

1288 This document is built on top of ISO/IEC 30118-1:2018. ISO/IEC 30118-1:2018 specifies the OCF
1289 Framework that enables the implementation of profiles for IoT usages and ecosystems. The OCF
1290 Core Framework is scalable to support simple devices (constrained device) and more capable
1291 devices (smart device).

1292 **2 Normative references**

1293 The following documents are referred to in the text in such a way that some or all of their content
1294 constitutes requirements of this document. For dated references, only the edition cited applies. For
1295 undated references, the latest edition of the referenced document (including any amendments)
1296 applies.

1297 ISO/IEC 30118-1:2018 Information technology -- Open Connectivity Foundation (OCF)
1298 Specification -- Part 1: Core specification
1299 <https://www.iso.org/standard/53238.html>
1300 Latest version available at: https://openconnectivity.org/specs/OCF_Core_Specification.pdf

1301 OpenAPI specification, fka *Swagger RESTful API Documentation Specification*, Version 2.0
1302 <https://github.com/OAI/OpenAPI-Specification/blob/master/versions/2.0.md>

1303 **3 Terms, definitions, and abbreviated terms**

1304 For the purposes of this document, the terms and definitions given in ISO/IEC 30118-1:2018 and
1305 the following apply.

1306 ISO and IEC maintain terminological databases for use in standardization at the following
1307 addresses:

- 1308 – ISO Online browsing platform: available at <https://www.iso.org/obp>
- 1309 – IEC Electropedia: available at <http://www.electropedia.org/>

1310 **3.1 Terms and definitions**

1311 **3.1.1**

1312 **actuator**

1313 resource with support of the UPDATE operation

1314 **3.1.2**

1315 **Composite Resource Type**

1316 a Resource Type defined as an OCF Collection of other Resource Types

1317 **3.1.3**

1318 **sensor**

1319 resource without support of the UPDATE operation

1320 **3.2 Abbreviated terms**

1321 **3.2.1**

1322 **CRUDN**

1323 Create Retrieve Update Delete Notify

1324 This is an acronym indicating which operations are possible on the Resource.

1325 **4 Document conventions and organization**

1326 **4.1 Conventions**

1327 In this document a number of terms, conditions, mechanisms, sequences, parameters, events,
1328 states, or similar terms are printed with the first letter of each word in uppercase and the rest
1329 lowercase (e.g., Resource Type). Any lowercase uses of these words have the normal technical
1330 English meaning.

1331 **4.2 Notation**

1332 In this document, features are described as required, recommended, allowed or DEPRECATED as
1333 follows:

1334 Required (or shall or mandatory).

1335 These basic features shall be implemented to comply with OCF Resource Type Specification.
1336 The phrases "shall not", and "PROHIBITED" indicate behaviour that is prohibited, i.e. that if
1337 performed means the implementation is not in compliance.

1338 Recommended (or should).

1339 These features add functionality supported by the OCF Resource Type Specification and should
1340 be implemented. Recommended features take advantage of the capabilities of the OCF
1341 Resource Type Specification, usually without imposing major increase of complexity. Notice
1342 that for compliance testing, if a recommended feature is implemented, it shall meet the specified
1343 requirements to be in compliance with these guidelines. Some recommended features could
1344 become requirements in the future. The phrase "should not" indicates behaviour that is
1345 permitted but not recommended.

1346 Allowed (or allowed).

1347 These features are neither required nor recommended by OCF Resource Type Specification,
1348 but if the feature is implemented, it shall meet the specified requirements to be in compliance
1349 with these guidelines.

1350 DEPRECATED

1351 Although these features are still described in this document, they should not be implemented
1352 except for backward compatibility. The occurrence of a deprecated feature during operation of
1353 an implementation compliant with the current document has no effect on the implementation's
1354 operation and does not produce any error conditions. Backward compatibility may require that
1355 a feature is implemented and functions as specified but it shall never be used by
1356 implementations compliant with this document.

1357 Conditionally allowed (CA)

1358 The definition or behaviour depends on a condition. If the specified condition is met, then the
1359 definition or behaviour is allowed, otherwise it is not allowed.

1360 Conditionally required (CR)

1361 The definition or behaviour depends on a condition. If the specified condition is met, then the
1362 definition or behaviour is required. Otherwise the definition or behaviour is allowed as default
1363 unless specifically defined as not allowed.

1364 Strings that are to be taken literally are enclosed in "double quotes".

1365 Words that are emphasized are printed in *italic*.

1366 **4.3 Data types**

1367 This document adopts the types defined in ISO/IEC 30118-1:2018 with the exceptions defined in
1368 this clause

1369 All Properties in this document that are defined as JSON number type shall be transmitted encoded
1370 as floating point values and not integer values. Reception of Properties defined as JSON number
1371 type shall be as defined in ISO/IEC 30118-1:2018. See ISO/IEC 30118-1:2018 clause 12.4 for
1372 specifics.

1373 **5 Baseline Model Constructs**

1374 **5.1 URI**

1375 The URIs mentioned in this document are non-normative, they may be vendor defined.

1376 An Instance of a Resource is indicated by the URI. When more than one instance of the same
1377 Resource Type is used in an OCF Device, different URIs for the different Resource instances shall
1378 be used.

1379 An implementation shall follow the requirements defined in ISO/IEC 30118-1:2018 with respect to
1380 population of the URI. Please refer to the ISO/IEC 30118-1:2018 clauses 6.2 and 6.3 for specific
1381 details.

1382 **5.2 Interfaces**

1383 **5.2.1 Introduction**

1384 ISO/IEC 30118-1:2018 specifies that all Resource Types have associated with them at least one
1385 Interface; this Interface is advertised during Resource discovery. In addition ISO/IEC 30118-1:2018
1386 defines a number of Interfaces that can be applied to an instance of a Resource Type.

1387 The difference between using sensor/actuator and read/write interfaces is due to the fact that a
1388 sensor/actuator interface describes an action that has immediate effect on the device, either by
1389 reading the sensed value and putting the value on the wire, or as an UPDATE action that something
1390 needs to happen (e.g. actuate) on the device. The read/write interface is typically used to set a
1391 settings value on the device that might be used later when an action occurs. A typical example is
1392 setting the coffee strength that will be used when the coffee is brewed.

1393 **5.2.2 Restricting Interface Functionality**

1394 Note that the functionality associated with, or visibility of, an instance of any Resource exposed by
1395 a Device may be restricted depending upon local (per country or legislative region) regulatory
1396 requirements or other restrictions (e.g. with respect to Binary Switch in some jurisdictions the ability
1397 to remotely power on a connected device is restricted; a lock status could be read-only depending
1398 on the context).

1399 The actual implementation of a resource can be limited by:

- 1400 – Not implementing the optional properties defined in the payload of a CRUDN operation.
- 1401 – Removing CRUDN operations

1402 If an UPDATE operation of a resource that can be actuated is not implemented, this change in
1403 behaviour is indicated by changing the interfaces accordingly.

1404 When the resource is defined with the interface "oic.if.a", and the UPDATE operation is removed
1405 then the interface listed is "oic.if.s".

1406 When the resource is defined with the interface "oic.if.rw", and the UPDATE operation is removed
1407 then the interface listed is "oic.if.r".

1408 **5.3 OpenAPI Specification 2.0 definition**

1409 The OpenAPI Specification 2.0 definitions provided in clause 6 in this document are normative.

1410 The OpenAPI Specification 2.0 definitions are used to describe the payloads of the CRUDN
 1411 operations on the specified Resource Type. The CRUDN operations are defined in ISO/IEC 30118-
 1412 1:2018. ISO/IEC 30118-1:2018 also specifies additional Properties in the payloads of the CRUDN
 1413 operations. The OpenAPI Specification 2.0 definitions in this document are not of themselves
 1414 sufficient to create an implementation, additional Properties defined in ISO/IEC 30118-1:2018 need
 1415 to be added to create a compliant implementation. This document makes use of a subset of the
 1416 responses supported by OpenAPI Specification 2.0, specifics on the use of these responses are
 1417 defined in Table 4. Note that the actual values of success and error conditions are defined in
 1418 ISO/IEC 30118-1:2018.

1419 The OpenAPI Specification 2.0 definitions map the OCF CRUDN behaviour to the OpenAPI
 1420 Specification 2.0 as defined in Table 1.

1421 **Table 1 – Conversion between OCF CRUDN and OpenAPI Specification 2.0 definitions¹**

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

1422 Notify is not part of an OpenAPI Specification 2.0 definition but is defined in ISO/IEC 30118-1:2018.
 1423 All Resource Types defined in this document support notification via the use of observe as defined
 1424 in ISO/IEC 30118-1:2018 clause 11.4.2.

1425 **5.4 Property definition**

1426 **5.4.1 Common Properties**

1427 ISO/IEC 30118-1:2018 specifies a number of Properties that may be defined for OCF Resources.
 1428 The Common Properties “if” and “rt” shall be specified for all Resource Types defined in this
 1429 document; they are exposed within the ISO/IEC 30118-1:2018 defined “/oic/res/” Resource Type
 1430 through which the OCF Server and its available Resources are discovered. The Common
 1431 Properties “id” and “n” may be specified for all Resource Types defined in this document. Table 2
 1432 lists all of the noted Common Properties.

1433 If an OCF Client requires that these Properties be included in a Resource representation that is
 1434 provided in response to a RETRIEVE operation then the client shall select the ISO/IEC 30118-
 1435 1:2018 defined baseline interface (oic.if.baseline) by specifying this in a query parameter.

1436 **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

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

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)

1437

1438 **5.4.2 Resource Properties**

1439 **5.4.2.1 Introduction**

1440 The Properties against which the CRUDN operations are specified are defined as part of an
1441 OpenAPI Specification 2.0 definition.

1442 A basic Resource Type is formulated around one single value denoting a physical property.

1443 Such a Resource Type is specified with the Properties as defined Table 3. Mandatory in the table
1444 means that the Property shall be defined as part of the overall Resource Type schema; actual
1445 inclusion of the Property as part of a returned or generated payload is dependent upon the schema
1446 that applies to the operation being invoked.

1447 **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.

1448

1449 For Resources, which by their nature have more than one physical parameter, the value Property
 1450 can be replaced with multiple Properties specifying the different physical parameters, or with further
 1451 structures such as arrays of Properties, objects, or Collections. The type of the value shall be
 1452 indicated in the OpenAPI Specification 2.0 definition of the Resource Type and should be suitable
 1453 for the conveyed value. All Property Names and Property Values defined in this document are case
 1454 sensitive.

1455 **5.4.2.2 "range" Property**

1456 The "range" defines the valid range for the Property in the Resource as a two element array. This
 1457 is either an integer or a number range. The first value in the array is the minimum value, the second
 1458 value in the array is the maximum value.

1459 **5.4.2.3 "step" Property**

1460 The "step" defines the step value across the defined "range" as either an integer or a number. This
 1461 is the increment for valid values across the range. For example, for the integer case if the "range"
 1462 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
 1463 0.0..10.0 and "step" is 2.5 then valid values are 0.0,2.5,5.0,7.5,10.0.

1464 **5.4.2.4 "precision" Property**

1465 When exposed the value in "precision" provides a +/- tolerance against the Properties in the
 1466 Resource. Thus if a Property is UPDATED to a value and that Property then RETRIEVED, the
 1467 RETRIEVED value is valid if in the range of the set value +/- precision

1468 **5.4.3 Basic Resource Schema**

1469 All Resource Types defined herein are represented as previously noted by OpenAPI Specification
 1470 2.0 files.

1471 **5.4.4 CRUDN Operation Response Codes**

1472 A Resource can be created or updated depending on the Resource Type definition and the allowed
 1473 CRUDN operations. The operation may have different response codes with different meanings.
 1474 This is explained in Table 4.

1475 **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.

	<p>Case 2:</p> <p>The server could not CREATE or UPDATE the Resource due to a problem with the provided payload.</p> <p>For an UPDATE, unless otherwise stated in the Resource Type definition, the response payload should include the same schema defined for a 200; indicating the current Resource Property value(s).</p>
--	---

1476

1477 **5.5 Example Resource Definitions**

1478 Please see the OCF Resource Types in Clause 6 for examples of Resource Definitions. For an
 1479 example Resource Type that models an actuator refer to the definition of Dimming; for an example
 1480 Resource Type that models a sensor refer to the definition of an Illuminance Sensor.

1481 **5.6 Observable Resource Types**

1482 **5.6.1 Introduction**

1483 ISO/IEC 30118-1:2018 defines a mechanism by which Resources can advertise themselves as
 1484 "Observable" to an OCF Client. All Resource Types defined in this document may be observed.
 1485 Whether or not a Resource Type is made observable via use of the Policy Link Parameter is entirely
 1486 implementation dependent.

1487 **5.6.2 Conditional Notification**

1488 **5.6.2.1 General**

1489 All observable Resources may apply conditions to the generation of notifications that result from
 1490 the observe action, these conditions can be time based or value based or time and value based.
 1491 This is achieved by composing the Conditional Notification (oic.r.value.conditional) Resource Type
 1492 with an instance of an observable Resource; that is the Resource that is exposed by the Server
 1493 has an "rt" of "["oic.r.<resource>" , "oic.r.value.conditional"]".

1494 **5.6.2.2 Conditional Notification Property Summary**

1495 Table 5 summarizes the Properties provided by the Conditional Notification Resource Type. At
 1496 least one Property from the table shall be present in an instance of the Resource Type.

1497 **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

1498

1499 All Properties if exposed shall be set with initial values. All Properties may be exposed with a value
 1500 of "0" (zero); this indicates that the functionality associated with the Property is not active. Any
 1501 Client may update the exposed values subject to any ACL restrictions; such changes are global
 1502 and apply to all notifications that are sent to all observers. A notifier may reject an update to the
 1503 Property values; in such cases a diagnostic payload should be included in the rejection response
 1504 indicating the valid ranges for the Properties.

1505 **5.6.2.3 Property Definition: threshold**

1506 Minimum value change between two notifications. A notification shall be sent (within the constraints
 1507 of "minnotifyperiod") when the change since the last notification is greater than or equal to this
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1508 value. The measurement is done against the value in the last notification that was sent; thus all
1509 notifications (within any “maxnotifyperiod” constraints that may be present) will carry values that
1510 differ by at least “threshold”. A “threshold” value of “0” means that no “threshold” is applied.

1511 **5.6.2.4 Property Definition: minnotifyperiod**

1512 Minimum time (in ms) that shall occur between notifications. If a value change condition is met
1513 (“threshold” equalled or exceeded or any change in value if threshold is not present) before
1514 expiration the notification shall not be sent till the period expires. If the Property is present and set
1515 to “0” then no minimum notify period timer is run; if the Property is present and with a value greater
1516 than “0” then a minimum notify period timer shall be run equal to the value. The Property value
1517 itself is initially populated by the notifier. If the Property is not present, the minimum notify period
1518 is up to the notifier. The timer shall be reset each time a notification is sent.

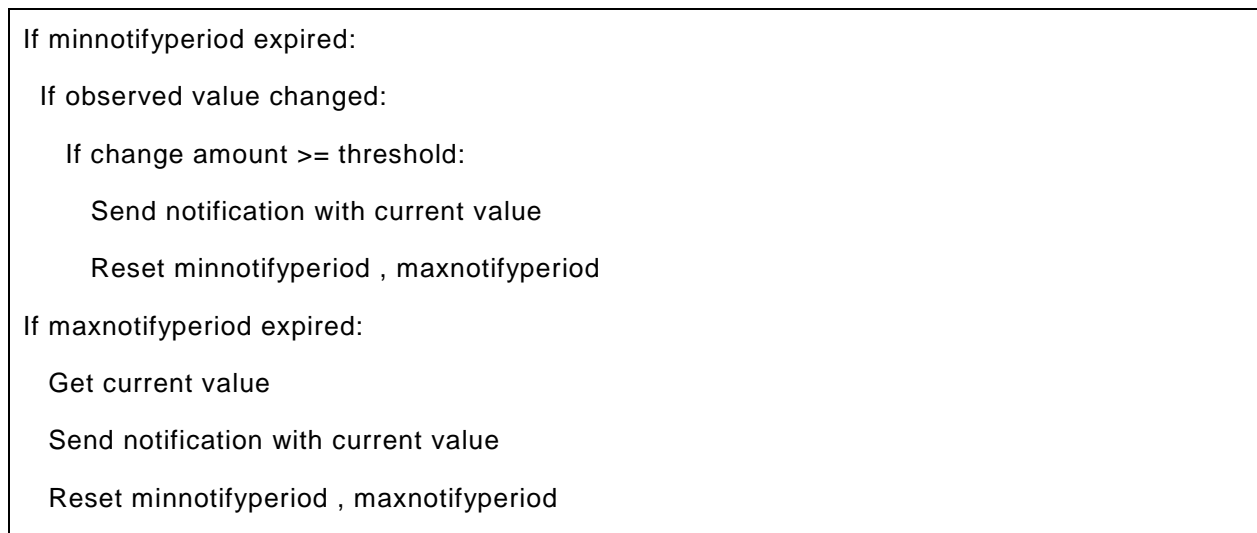
1519 **5.6.2.5 Property Definition: maxnotifyperiod**

1520 Maximum time (in ms) that the notifier shall not exceed between notifications. When the timer
1521 expires a notification shall be sent. If present and set to “0” then no maximum notify period timer
1522 is run; if present and with a value greater than 0 then a maximum notify period timer shall be run
1523 equal to the value. The Property value itself shall be initially populated by the notifier. When both
1524 “minnotifyperiod” and “maxnotifyperiod” are present and both are non-zero the value of
1525 “maxnotifyperiod” shall be larger than the “minnotifyperiod”. If not present, the value shall be set
1526 by the notifier. The timer shall be reset each time a notification is sent.

1527 **5.6.2.6 Governing State Machine**

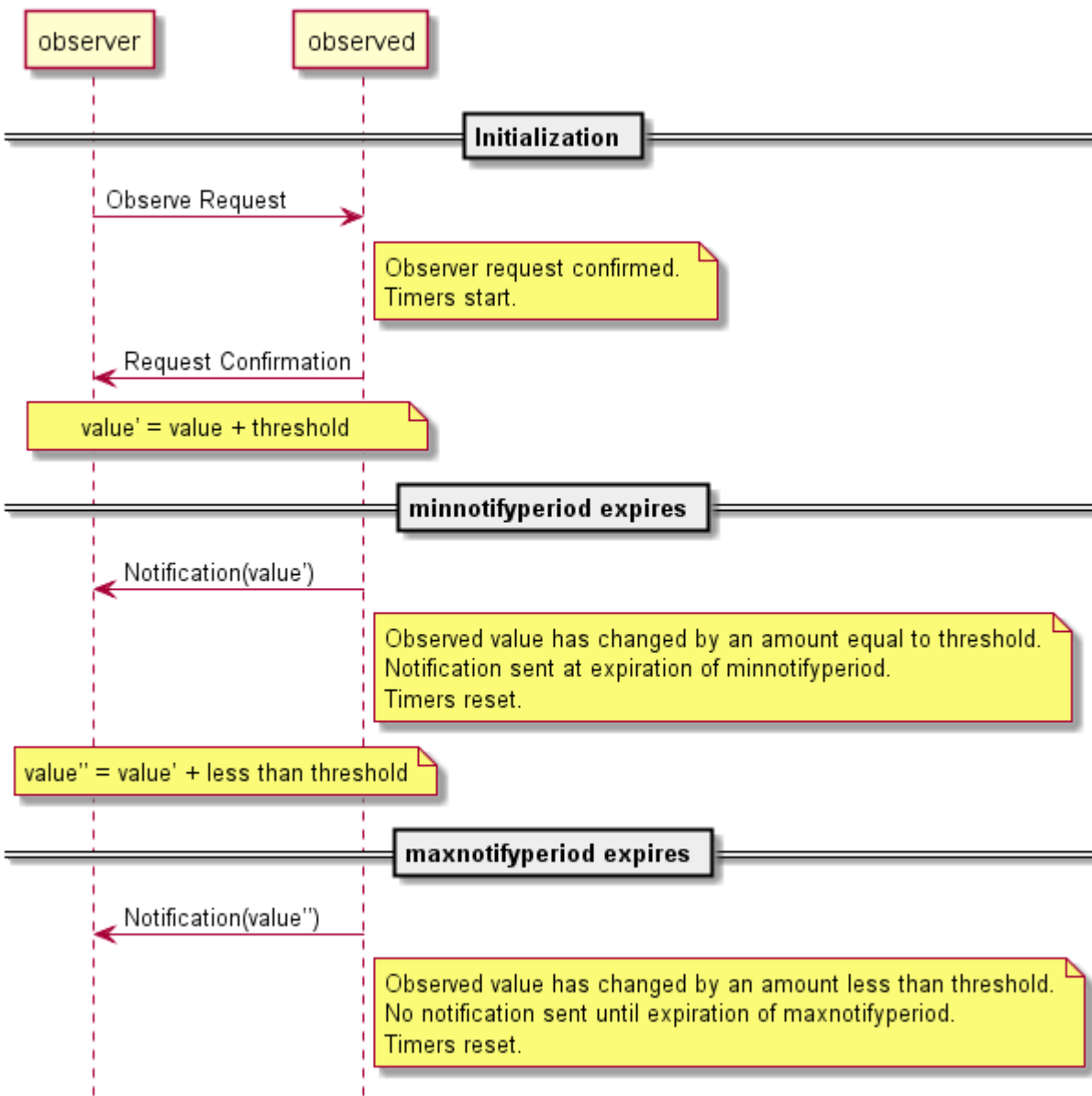
1528 The “minnotifyperiod” and “maxnotifyperiod” timers are restarted each time a notification is sent
1529 (response to the Observe). A notification is sent when value change condition (threshold) and
1530 “minnotifyperiod” are both met if both are present. If the observed Property value subsequently
1531 drops beneath threshold before the expiration of “minnotifyperiod” the notifier may take no action
1532 or a notification may be sent on expiration of “minnotifyperiod” containing the current observed
1533 Property value (at the time of the notification). If there are no timer constraints; then notifications
1534 are sent whenever the observed Property value has changed by an amount greater than or equal
1535 to “threshold”.

1536 Overall logic is defined in Figure 1. Figure 2 provides an illustrative sequence.



1537 **Figure 1 – Overall conditional notification logic**

1538



1539

1540

Figure 2 – Conditional Notification Example Flow

1541

1542 **5.7 Composite Resource Types**

1543 Composite Resource Types are Resources that comprises of one or more single or other composite
 1544 Resource Types, an example of which is shown in Figure 3. The Composite Resource Type can be
 1545 viewed upon as a new single Resource Type. The Composite Resource Type mechanism is a
 1546 powerful concept since it uses existing Resource Types in a new combination to express more
 1547 contexts to a Resource without specifying new single unit Resource Types.

1548 Composite Resource Types are defined by linking the referenced existing Resource values in to a
 1549 Collection.

1550 The linking is done by using an array of Links; refer to ISO/IEC 30118-1:2018 clause 7.8.2 for more
1551 details. Note that the example in Figure 3 contains a partial schema of this definition as it is for
1552 descriptive purpose only. The Property name of the array in the example is “resources”.

1553 The contents of the listed Resources can be achieved in a single operation by using the ISO/IEC
1554 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": [
          {"$ref": "#/parameters/interface-baseline"}
        ],
        "responses": {
          "200": {
            "description": "Success path response for the Resource",
            "x-example": {
              "rt": ["oic.r.exaple"],
              "if": ["oic.if.ll", "oic.if.b", "oic.if.baseline"],
              "id": "unique_example_id",
              "resources": [
                {
                  "href": "/TimeIntervalResURI",
                  "rt": ["oic.r.time.period"],
                  "if": ["oic.if.a", "oic.if.baseline"],
                  "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
                },
                {
                  "href": "/GasConsumptionResURI",
                  "rt": ["oic.r.gas.consumption"],
                  "if": ["oic.if.s", "oic.if.baseline"],
                  "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
                }
              ]
            },
            "schema": {"$ref": "#/definitions/composite"}
          }
        }
      }
    }
  }
}
```

Figure 3 – Composite Resource Example

1555 **5.8 Document Version**

1556 Devices conformant to this document version shall add the string “ocf.res.1.3.0” to the dmV Property
1557 in “oic.wk.d”. This Property is for legacy Device support only and will no longer be revised in
1558 alignment with document versions.
1559

1560 **6 Resource Type definitions**

1561 **6.1 Introduction**

1562 This clause contains definitions for all Resource Types; the complete set is listed in Table 6 –
1563 Alphabetical list of Resource Types.

1564 All Resource Types shall be created in accordance with ISO/IEC 30118-1:2018 clause 7.4. All
1565 comparisons against a Resource Type shall be case insensitive.

1566 All Resource Types in this document are prefixed with “oic.r” denoting that it is an OCF defined
1567 Resource Type.

1568 **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 Count	oic.r.sensor.activity.count	6.24
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
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
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.ffmpeg	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

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
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
Conversion Factor	oic.r.conversionfactor	6.117
Delay Defrost	oic.r.delaydefrost	6.70
Demand Response Load Control (DRLC)	oic.r.energy.drlc	6.35
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
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.medication	6.105
Glucose Meter Atomic Measurement	oic.r.glucosemeter-am	6.106

Glucose Meter Context Sample Location	oic.r.glucose.samplelocation	6.107
Glucose Meter Context Tester	oic.r.glucose.testter	6.108
Grinder	oic.r.grinder	6.84
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
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 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
Mode	oic.r.mode	6.17
Movement	oic.r.movement.linear	6.57
Motion Sensor	oic.r.sensor.motion	6.47
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.orfid.station	6.109
Optical RFID Tag	oic.r.orfid.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
Pulse Rate	oic.r.pulserate	6.113
Ramp Time	oic.r.light.ramptime	6.20
Refrigeration	oic.r.refrigeration	6.21
Selectable Levels	oic.r.selectablelevels	6.74
Sensor Properties	oic.r.sensor.props	6.114

Signal Strength	oic.r.signalstrength	6.51
Sleep Sensor	oic.r.sensor.sleep	6.58
Smoke Sensor	oic.r.sensor.smoke	6.59
Speech Synthesis	oic.r.speech.tts	6.52
Temperature	oic.r.temperature	6.22
Three Axis Sensor	oic.r.sensor.threeaxis	6.60
Time Period	oic.r.time.period	6.23
Time Stamp	oic.r.time.stamp	6.87
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 Sensor	oic.r.sensor.water	6.55
Weight	oic.r.weight	6.65
Window Covering	oic.r.windowcovering	6.126

1569

1570 6.2 Air Flow

1571 6.2.1 Introduction

1572 This Resource describes Properties associated with air flow.
 1573 The Property "supporteddirections" is the set of valid values for the direction property for a
 1574 particular instance of this Resource Type.
 1575 The Property "direction" is the directionality of the air flow if applicable, if Property
 1576 "supporteddirections" is also present it must be a value from that set.
 1577 The values of Property "direction" are dependent on the capabilities of the unit.
 1578 The Property "speed" is an integer representing the current speed level for the unit.
 1579 The Property "range" is an array of the min,max values for the speed level. If not present the
 1580 "range" defaults to [0,100].
 1581 Property "automode" is the status of the automode feature; Off means automode is not enabled,
 1582 On means automode is active and the speed is automatically controlled by the Device.

1583 6.2.2 Example URI

1584 /AirFlowResURI

1585 6.2.3 Resource type

1586 The Resource Type is defined as: "oic.r.airflow".

1587 6.2.4 OpenAPI 2.0 definition

```

1588 {
1589   "swagger": "2.0",
1590   "info": {
1591     "title": "Air Flow",
1592     "version": "20190215",
1593     "license": {
1594       "name": "OCF Data Model License",
1595       "url":
1596         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
1597         CENSE.md",
1598       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
1599         reserved."
1600     },

```

```

1601     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
1602   },
1603   "schemes": ["http"],
1604   "consumes": ["application/json"],
1605   "produces": ["application/json"],
1606   "paths": {
1607     "/AirFlowResURI" : {
1608       "get": {
1609         "description": "This Resource describes Properties associated with air flow.\nThe Property
1610 \n\"supporteddirections\" is the set of valid values for the direction property for a particular
1611 instance of this Resource Type.\nThe Property \"direction\" is the directionality of the air flow if
1612 applicable, if Property \"supporteddirections\" is also present it must be a value from that set.\n
1613 The values of Property \"direction\" are dependent on the capabilities of the unit.\nThe Property
1614 \"speed\" is an integer representing the current speed level for the unit.\nThe Property \"range\"
1615 is an array of the min,max values for the speed level. If not present the \"range\" defaults to
1616 [0,100].\nProperty \"automode\" is the status of the automode feature; Off means automode is not
1617 enabled, On means automode is active and the speed is automatically controlled by the Device.",
1618       "parameters": [
1619         {"$ref": "#/parameters/interface"}
1620       ],
1621       "responses": {
1622         "200": {
1623           "description": "",
1624           "x-example":
1625             {
1626               "rt": ["oic.r.airflow"],
1627               "if": ["oic.if.a", "oic.if.baseline"],
1628               "supporteddirections": ["left", "right", "centre"],
1629               "direction": "left",
1630               "speed": 5,
1631               "range": [1, 7],
1632               "automode": "Off"
1633             },
1634           "schema": { "$ref": "#/definitions/AirFlow" }
1635         }
1636       }
1637     },
1638     "post": {
1639       "description": "Sets the current air flow values.\nOnly \"direction\" and \"speed\"
1640 Properties may be set by an UPDATE operation.\n",
1641       "parameters": [
1642         {"$ref": "#/parameters/interface"},
1643         {
1644           "name": "body",
1645           "in": "body",
1646           "required": true,
1647           "schema": { "$ref": "#/definitions/AirFlow" },
1648           "x-example":
1649             {
1650               "direction": "right",
1651               "speed": 3
1652             }
1653         }
1654       ],
1655       "responses": {
1656         "200": {
1657           "description": "",
1658           "x-example":
1659             {
1660               "direction": "right",
1661               "speed": 3
1662             },
1663           "schema": {"$ref": "#/definitions/AirFlow" }
1664         },
1665         "403": {
1666           "description": "This response is generated by the OCF Server when the client sends:\n
1667 An UPDATE with an invalid Property value for direction.\n An UPDATE with an out of range property
1668 value for speed.\nThe server may respond with the current resource representation.\n",
1669           "x-example":
1670             {
1671               "supporteddirections": ["left", "right", "centre"],
1672               "direction": "right",

```



```

1673         "speed": 3
1674     },
1675     "schema": { "$ref": "#/definitions/AirFlow" }
1676 }
1677 }
1678 }
1679 }
1680 },
1681 "parameters": {
1682     "interface" : {
1683         "in": "query",
1684         "name": "if",
1685         "type": "string",
1686         "enum": ["oic.if.a", "oic.if.baseline"]
1687     }
1688 },
1689 "definitions": {
1690     "AirFlow" : {
1691         "properties": {
1692             "rt" : {
1693                 "description": "The Resource Type",
1694                 "items": {
1695                     "enum": ["oic.r.airflow"],
1696                     "maxLength": 64,
1697                     "type": "string"
1698                 },
1699                 "minItems": 1,
1700                 "uniqueItems": true,
1701                 "readOnly": true,
1702                 "type": "array"
1703             },
1704             "speed" : {
1705                 "description": "The current speed level.",
1706                 "type": "integer"
1707             },
1708             "direction" : {
1709                 "description": "The directionality of the air flow, a value indicated by
1710 \"supporteddirections\".",
1711                 "type": "string"
1712             },
1713             "automode" : {
1714                 "description": "The status of the automode feature, if on speed is set by the Device.",
1715                 "enum": [
1716                     "On",
1717                     "Off"
1718                 ],
1719                 "type": "string"
1720             },
1721             "supporteddirections" : {
1722                 "description": "The array of possible direction settings for this instance of the Resource
1723 Type.",
1724                 "items": {
1725                     "minItems": 1,
1726                     "type": "string",
1727                     "uniqueItems": true
1728                 },
1729                 "readOnly": true,
1730                 "type": "array"
1731             },
1732             "n": {
1733                 "$ref":
1734 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
1735 schema.json#/definitions/n"
1736             },
1737             "id": {
1738                 "$ref":
1739 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
1740 schema.json#/definitions/id"
1741             },
1742             "range": {
1743                 "$ref":
1744 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-

```

```

1745 schema.json#/definitions/range_integer"
1746     },
1747     "step": {
1748       "$ref":
1749       "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
1750       schema.json#/definitions/step_integer"
1751     },
1752     "if": {
1753       "description": "The OCF Interface set supported by this Resource.",
1754       "items": {
1755         "enum": [
1756           "oic.if.a",
1757           "oic.if.baseline"
1758         ],
1759         "type": "string"
1760       },
1761       "minItems": 2,
1762       "uniqueItems": true,
1763       "readOnly": true,
1764       "type": "array"
1765     }
1766   },
1767   "type": "object",
1768   "required": ["speed"]
1769 }
1770 }
1771 }
1772

```

6.2.5 Property definition

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

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

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
direction	string	No	Read Write	The directionality of the air flow, a value indicated by "supporteddirections".
rt	array: see schema	No	Read Only	The Resource Type
speed	integer	Yes	Read Write	The current speed level.
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	
range	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	

1776 **6.2.6 CRUDN behaviour**

1777 Table 8 defines the CRUDN operations that are supported on the "oic.r.airflow" Resource Type.

1778 **Table 8 – The CRUDN operations of the Resource with type "rt" = "oic.r.airflow".**

Create	Read	Update	Delete	Notify
	get	post		observe

1779 **6.3 Air Flow Control**

1780 **6.3.1 Introduction**

1781 This Resource describes the attributes associated with control of air flow,
 1782 for example as modelled by a Thermostat (fan), Room A/C or other device.
 1783 The Resource is a Collection of:
 1784 AirFlow Resource
 1785 BinarySwitch Resource
 1786

1787 **6.3.2 Example URI**

1788 /AirFlowControlResURI

1789 **6.3.3 Resource type**

1790 The Resource Type is defined as: "oic.r.airflowcontrol".

1791 **6.3.4 OpenAPI 2.0 definition**

```

1792 {
1793   "swagger": "2.0",
1794   "info": {
1795     "title": "Air Flow Control",
1796     "version": "20190307",
1797     "license": {
1798       "name": "OCF Data Model License",
1799       "url":
1800 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
1801 CENSE.md",
1802       "x-copyright": "copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
1803     },
1804     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
1805   },
1806   "schemes": ["http"],
1807   "consumes": ["application/json"],

```

```

1808     "produces": ["application/json"],
1809     "paths": {
1810         "/AirFlowControlResURI?if=oic.if.ll" : {
1811             "get": {
1812                 "description": "This Resource describes the attributes associated with control of air
1813 flow,\nfor example as modelled by a Thermostat (fan), Room A/C or other device.\nThe Resource is a
1814 Collection of:\n AirFlow Resource\n BinarySwitch Resource\n",
1815                 "parameters": [
1816                     {"$ref": "#/parameters/interface-all"}
1817                 ],
1818                 "responses": {
1819                     "200": {
1820                         "description" : "",
1821                         "x-example": [
1822                             {"href": "/BinarySwitchResURI", "rt":["oic.r.switch.binary"],
1823 "if":["oic.if.a","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80:bld6]:1122"}]},
1824                             {"href": "/AirFlowResURI", "rt":["oic.r.airflow"],
1825 "if":["oic.if.a","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80:bld6]:1122"}]}
1826                         ],
1827                         "schema": { "$ref": "#/definitions/AirFlowControl-ll" }
1828                     }
1829                 }
1830             }
1831         },
1832         "/AirFlowControlResURI?if=oic.if.b" : {
1833             "get": {
1834                 "description": "This Resource describes the attributes associated with control of air
1835 flow,\nfor example as modelled by a Thermostat (fan), Room A/C or other device.\nThe Resource is a
1836 Collection of:\n AirFlow Resource\n BinarySwitch Resource\n",
1837                 "parameters": [
1838                     {"$ref": "#/parameters/interface-all"}
1839                 ],
1840                 "responses": {
1841                     "200": {
1842                         "description" : "",
1843                         "x-example": [
1844                             {
1845                                 "href": "/BinarySwitchResURI",
1846                                 "rep": {
1847                                     "value": true
1848                                 }
1849                             },
1850                             {
1851                                 "href": "/AirFlowResURI",
1852                                 "rep": {
1853                                     "supporteddirections": ["left","right","centre"],
1854                                     "direction": "right",
1855                                     "speed": 3,
1856                                     "range": [1,7],
1857                                     "automode": "Off"
1858                                 }
1859                             }
1860                         ],
1861                         "schema": { "$ref": "#/definitions/AirFlowControlBatch-Retrieve" }
1862                     }
1863                 }
1864             },
1865             "post": {
1866                 "description": "Sets the current air flow control values using the batch OCF Interface\n",
1867                 "parameters": [
1868                     {"$ref": "#/parameters/interface-b"},
1869                     {
1870                         "name": "body",
1871                         "in": "body",
1872                         "required": true,
1873                         "schema": { "$ref": "#/definitions/AirFlowControlBatch-Update" },
1874                         "x-example": [
1875                             {
1876                                 "href": "/AirFlowResURI",
1877                                 "rep": {
1878                                     "direction": "left",
1879                                     "speed": 4

```

```

1880     }
1881   }
1882 ]
1883 }
1884 ],
1885 "responses": {
1886   "200": {
1887     "description" : "",
1888     "x-example": [
1889       {
1890         "href": "/BinarySwitchResURI",
1891         "rep": {
1892           "value": true
1893         }
1894       },
1895       {
1896         "href": "/AirFlowResURI",
1897         "rep": {
1898           "supporteddirections": ["left","right","centre"],
1899           "direction": "left",
1900           "speed": 4,
1901           "range": [1,7],
1902           "automode": "Off"
1903         }
1904       }
1905     ],
1906     "schema": { "$ref": "#/definitions/AirFlowControlBatch-Retrieve" }
1907   }
1908 }
1909 },
1910 },
1911 "/AirFlowControlResURI?if=oic.if.baseline" : {
1912   "get": {
1913     "description": "This Resource describes the attributes associated with control of air
1914 flow,\nfor example as modelled by a Thermostat (fan), Room A/C or other device.\nThe Resource is a
1915 Collection of:\n AirFlow Resource\n BinarySwitch Resource\n",
1916     "parameters": [
1917       {"$ref": "#/parameters/interface-all"}
1918     ],
1919     "responses": {
1920       "200": {
1921         "description" : "",
1922         "x-example": {
1923           "rt": ["oic.r.airflowcontrol"],
1924           "rts": ["oic.r.airflow","oic.r.switch.binary"],
1925           "if": ["oic.if.ll","oic.if.b","oic.if.baseline"],
1926           "links": [
1927             {"href": "/BinarySwitchResURI", "rt":["oic.r.switch.binary"],
1928 "if":["oic.if.a","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
1929             {"href": "/AirFlowResURI", "rt":["oic.r.airflow"],
1930 "if":["oic.if.a","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
1931           ]
1932         },
1933         "schema": { "$ref": "#/definitions/AirFlowControl-baseline" }
1934       }
1935     }
1936   }
1937 },
1938 },
1939 "parameters": {
1940   "interface-b" : {
1941     "in" : "query",
1942     "name" : "if",
1943     "type" : "string",
1944     "enum" : ["oic.if.b"]
1945   },
1946   "interface-all" : {
1947     "in" : "query",
1948     "name" : "if",
1949     "type" : "string",
1950     "enum" : ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
1951   }

```

```

1952     },
1953     "definitions": {
1954         "AirFlowControl-ll" : {
1955             "type": "array",
1956             "minItems": 2,
1957             "uniqueItems": true,
1958             "readOnly": true,
1959             "items": {
1960                 "$ref": "#/definitions/oic.oic-link"
1961             }
1962         },
1963         "oic.oic-link": {
1964             "type": "object",
1965             "properties": {
1966                 "anchor": {
1967                     "$ref":
1968 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
1969 schema.json#/definitions/anchor"
1970                 },
1971                 "di": {
1972                     "$ref":
1973 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
1974 schema.json#/definitions/di"
1975                 },
1976                 "eps": {
1977                     "$ref":
1978 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
1979 schema.json#/definitions/eps"
1980                 },
1981                 "href": {
1982                     "$ref":
1983 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
1984 schema.json#/definitions/href"
1985                 },
1986                 "ins": {
1987                     "$ref":
1988 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
1989 schema.json#/definitions/ins"
1990                 },
1991                 "p": {
1992                     "$ref":
1993 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
1994 schema.json#/definitions/p"
1995                 },
1996                 "rel": {
1997                     "$ref":
1998 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
1999 schema.json#/definitions/rel_array"
2000                 },
2001                 "title": {
2002                     "$ref":
2003 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2004 schema.json#/definitions/title"
2005                 },
2006                 "type": {
2007                     "$ref":
2008 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2009 schema.json#/definitions/type"
2010                 },
2011                 "if": {
2012                     "description": "The OCF Interfaces supported by the target Resource",
2013                     "items": {
2014                         "enum": [
2015                             "oic.if.a",
2016                             "oic.if.baseline"
2017                         ],
2018                         "type": "string",
2019                         "maxLength": 64
2020                     },
2021                     "minItems": 2,
2022                     "uniqueItems": true,
2023                     "type": "array",

```

```

2024         "readOnly": true
2025     },
2026     "rt": {
2027         "description": "Resource Type of the target Resource",
2028         "items": {
2029             "maxLength": 64,
2030             "type": "string",
2031             "enum": ["oic.r.switch.binary", "oic.r.airflow"]
2032         },
2033         "minItems": 1,
2034         "type": "array",
2035         "uniqueItems": true,
2036         "readOnly": true
2037     }
2038 },
2039 "required": [
2040     "href",
2041     "rt",
2042     "if"
2043 ]
2044 },
2045 "AirFlowControl-baseline" : {
2046     "properties": {
2047         "n": {
2048             "$ref" :
2049 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2050 schema.json#/definitions/n"
2051         },
2052         "id": {
2053             "$ref" :
2054 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2055 schema.json#/definitions/id"
2056         },
2057         "rt": {
2058             "description": "Resource Type of this Resource",
2059             "items": {
2060                 "maxLength": 64,
2061                 "type": "string",
2062                 "enum": ["oic.r.airflowcontrol"]
2063             },
2064             "minItems": 1,
2065             "uniqueItems": true,
2066             "readOnly": true,
2067             "type": "array"
2068         },
2069         "rts": {
2070             "items": {
2071                 "type": "string",
2072                 "enum": ["oic.r.airflow", "oic.r.switch.binary"],
2073                 "maxLength": 64
2074             },
2075             "minItems": 1,
2076             "type": "array",
2077             "uniqueItems": true,
2078             "readOnly": true
2079         },
2080         "if": {
2081             "description": "The OCF Interfaces supported by this Resource",
2082             "items": {
2083                 "enum": [
2084                     "oic.if.ll",
2085                     "oic.if.b",
2086                     "oic.if.baseline"
2087                 ],
2088                 "type": "string",
2089                 "maxLength": 64
2090             },
2091             "minItems": 1,
2092             "readOnly": true,
2093             "uniqueItems": true,
2094             "type": "array"
2095         },

```

```

2096     "links": {
2097         "description": "A set of simple or individual OCF Links.",
2098         "items": {
2099             "$ref": "#/definitions/oic.oic-link"
2100         },
2101         "type": "array",
2102         "minItems": 2,
2103         "uniqueItems": true,
2104         "readOnly": true
2105     }
2106 },
2107 "type" : "object",
2108 "required": ["rt","rts","if","links"]
2109 },
2110 "AirFlowControlBatch-Retrieve" : {
2111     "type": "array",
2112     "minItems": 2,
2113     "uniqueItems": true,
2114     "items": {
2115         "type": "object",
2116         "additionalProperties": true,
2117         "properties": {
2118             "href": {
2119                 "$ref":
2120 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2121 schema.json#/definitions/href"
2122             },
2123             "rep": {
2124                 "anyOf": [
2125                     {"$ref":
2126 "https://openconnectivityfoundation.github.io/IoTDataModels/AirFlowResURI.swagger.json#/definitions/
2127 AirFlow"},
2128                     {"$ref":
2129 "https://openconnectivityfoundation.github.io/IoTDataModels/BinarySwitchResURI.swagger.json#/definit
2130 ions/BinarySwitch"}
2131                 ]
2132             }
2133         },
2134         "required": [
2135             "href",
2136             "rep"
2137         ]
2138     }
2139 },
2140 "AirFlowControlBatch-Update" : {
2141     "type": "array",
2142     "minItems": 1,
2143     "uniqueItems": true,
2144     "items": {
2145         "type": "object",
2146         "additionalProperties": true,
2147         "properties": {
2148             "href": {
2149                 "$ref":
2150 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2151 schema.json#/definitions/href"
2152             },
2153             "rep": {
2154                 "anyOf": [
2155                     {"$ref":
2156 "https://openconnectivityfoundation.github.io/IoTDataModels/AirFlowResURI.swagger.json#/definitions/
2157 AirFlow"},
2158                     {"$ref":
2159 "https://openconnectivityfoundation.github.io/IoTDataModels/BinarySwitchResURI.swagger.json#/definit
2160 ions/BinarySwitch"}
2161                 ]
2162             }
2163         },
2164         "required": [
2165             "href",
2166             "rep"
2167         ]

```


2168 }
 2169 }
 2170 }
 2171 }
 2172 }

2173 **6.3.5 Property definition**

2174 Table 9 defines the Properties that are part of the "oic.r.airflowcontrol" Resource Type.

2175 **Table 9 – The Property definitions of the Resource with type "rt" = "oic.r.airflowcontrol".**

Property name	Value type	Mandatory	Access mode	Description
eps	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
anchor	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rt	array: see schema	Yes	Read Only	Resource Type of the target Resource
href	multiple types: see schema	Yes	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
di	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
ins	multiple types: see schema	No	Read Write	
rts	array: see schema	Yes	Read Only	

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

2176 **6.3.6 CRUDN behaviour**

2177 Table 10 defines the CRUDN operations that are supported on the "oic.r.airflowcontrol" Resource
2178 Type.

2179 **Table 10 – The CRUDN operations of the Resource with type "rt" = "oic.r.airflowcontrol".**

Create	Read	Update	Delete	Notify
	get			observe

2180 **6.4 Battery**

2181 **6.4.1 Introduction**

2182 This Resource describes the attributes associated with a battery. The Property "charge" is an
2183 integer showing the current battery charge level as a percentage in the range 0 (fully discharged)
2184 to 100 (fully charged). The Property "capacity" represents the total capacity of battery in Amp
2185 Hours (Ah). The "charging" status and "discharging" status are represented by boolean values
2186 set to "true" indicating enabled and "false" indicating disabled. Low battery status is represented
2187 by a boolean value set to "true" indicating low charge level and "false" indicating otherwise,
2188 based upon the battery threshold represented as a percentage.

2189 6.4.2 Example URI

2190 /BatteryResURI

2191 6.4.3 Resource type

2192 The Resource Type is defined as: "oic.r.energy.battery".

2193 6.4.4 OpenAPI 2.0 definition

```
2194 {
2195   "swagger": "2.0",
2196   "info": {
2197     "title": "Battery",
2198     "version": "20190513",
2199     "license": {
2200       "name": "OCF Data Model License",
2201       "url":
2202         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
2203         CENSE.md",
2204       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
2205     },
2206     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
2207   },
2208   "schemes": ["http"],
2209   "consumes": ["application/json"],
2210   "produces": ["application/json"],
2211   "paths": {
2212     "/BatteryResURI" : {
2213       "get": {
2214         "description": "This Resource describes the attributes associated with a battery. The
2215         Property \"charge\" is an integer showing the current battery charge level as a percentage in the
2216         range 0 (fully discharged) to 100 (fully charged). The Property \"capacity\" represents the total
2217         capacity of battery in Amp Hours (Ah). The \"charging\" status and \"discharging\" status are
2218         represented by boolean values set to \"true\" indicating enabled and \"false\" indicating disabled.
2219         Low battery status is represented by a boolean value set to \"true\" indicating low charge level and
2220         \"false\" indicating otherwise, based upon the battery threshold represented as a percentage.",
2221         "parameters": [
2222           { "$ref": "#/parameters/interface" }
2223         ],
2224         "responses": {
2225           "200": {
2226             "description" : "",
2227             "x-example":
2228               {
2229                 "rt": ["oic.r.energy.battery"],
2230                 "if": ["oic.if.rw", "oic.if.baseline"],
2231                 "charge": 50,
2232                 "capacity": 3000,
2233                 "charging": true,
2234                 "discharging": false,
2235                 "lowbattery": false,
2236                 "batterythreshold": 20,
2237                 "defect": false
2238               },
2239             "schema": { "$ref": "#/definitions/Battery" }
2240           }
2241         }
2242       },
2243       "post": {
2244         "description": "Sets current battery values\n",
2245         "parameters": [
2246           { "$ref": "#/parameters/interface" },
2247           {
2248             "name": "body",
2249             "in": "body",
2250             "required": true,
2251             "schema": { "$ref": "#/definitions/BatteryUpdate" },
2252             "x-example":
2253               {
2254                 "batterythreshold": 20
2255               }
2256           }
2257         ]
2258       }
2259     }
2260   }
2261 }
```

```

2256     }
2257   ],
2258   "responses": {
2259     "200": {
2260       "description": "",
2261       "x-example":
2262         {
2263           "batterythreshold": 20
2264         },
2265       "schema": { "$ref": "#/definitions/BatteryUpdate" }
2266     }
2267   }
2268 }
2269 },
2270 },
2271 "parameters": {
2272   "interface": {
2273     "in": "query",
2274     "name": "if",
2275     "type": "string",
2276     "enum": ["oic.if.rw", "oic.if.baseline"]
2277   }
2278 },
2279 "definitions": {
2280   "Battery": {
2281     "properties": {
2282       "rt": {
2283         "description": "The Resource Type.",
2284         "items": {
2285           "enum": ["oic.r.energy.battery"],
2286           "maxLength": 64,
2287           "type": "string"
2288         },
2289         "minItems": 1,
2290         "uniqueItems": true,
2291         "readOnly": true,
2292         "type": "array"
2293       },
2294       "discharging": {
2295         "description": "The status of discharging.",
2296         "readOnly": true,
2297         "type": "boolean"
2298       },
2299       "lowbattery": {
2300         "description": "The status of the low battery warning based upon the defined threshold.",
2301         "readOnly": true,
2302         "type": "boolean"
2303       },
2304       "capacity": {
2305         "description": "The total capacity in Amp-hours (Ah).",
2306         "readOnly": true,
2307         "type": "number"
2308       },
2309       "batterythreshold": {
2310         "description": "The threshold percentage for the low battery warning.",
2311         "maximum": 100,
2312         "minimum": 0,
2313         "type": "integer"
2314       },
2315       "charge": {
2316         "description": "The current charge percentage.",
2317         "maximum": 100,
2318         "minimum": 0,
2319         "readOnly": true,
2320         "type": "integer"
2321       },
2322       "charging": {
2323         "description": "The status of charging.",
2324         "readOnly": true,
2325         "type": "boolean"
2326       },
2327       "defect": {

```

```

2328         "description": "Battery defect detected. True = defect, False = no defect",
2329         "readOnly": true,
2330         "type": "boolean"
2331     },
2332     "n": {
2333         "$ref":
2334         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2335         schema.json#/definitions/n"
2336     },
2337     "id": {
2338         "$ref":
2339         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2340         schema.json#/definitions/id"
2341     },
2342     "if": {
2343         "description": "The OCF Interface set supported by this Resource.",
2344         "items": {
2345             "enum": [
2346                 "oic.if.rw",
2347                 "oic.if.baseline"
2348             ],
2349             "type": "string"
2350         },
2351         "minItems": 2,
2352         "uniqueItems": true,
2353         "readOnly": true,
2354         "type": "array"
2355     }
2356 },
2357 "type" : "object",
2358 "required": ["charge"]
2359 },
2360 "BatteryUpdate": {
2361     "properties": {
2362         "batterythreshold": {
2363             "description": "The threshold percentage for the low battery warning.",
2364             "maximum": 100,
2365             "minimum": 0,
2366             "type": "integer"
2367         }
2368     },
2369     "type" : "object",
2370     "required": ["batterythreshold"]
2371 }
2372 }
2373 }
2374

```

2375 6.4.5 Property definition

2376 Table 11 defines the Properties that are part of the "oic.r.energy.battery" Resource Type.

2377 **Table 11 – The Property definitions of the Resource with type "rt" = "oic.r.energy.battery".**

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
capacity	number	No	Read Only	The total capacity in Amp-hours (Ah).
id	multiple types: see schema	No	Read Write	
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	

discharging	boolean	No	Read Only	The status of discharging.
defect	boolean	No	Read Only	Battery defect detected. True = defect, False = no defect
batterythreshold	integer	No	Read Write	The threshold percentage for the low battery warning.
lowbattery	boolean	No	Read Only	The status of the low battery warning based upon the defined threshold.
charge	integer	Yes	Read Only	The current charge percentage.
charging	boolean	No	Read Only	The status of charging.
batterythreshold	integer	Yes	Read Write	The threshold percentage for the low battery warning.

2378 **6.4.6 CRUDN behaviour**

2379 Table 12 defines the CRUDN operations that are supported on the "oic.r.energy.battery" Resource
2380 Type.

2381 **Table 12 – The CRUDN operations of the Resource with type "rt" = "oic.r.energy.battery".**

Create	Read	Update	Delete	Notify
	get	post		observe

2382 **6.5 Binary Switch**

2383 **6.5.1 Introduction**

2384 This Resource describes a binary switch (on/off). The Property "value" is a boolean. A value of
2385 "true" means that the switch is on. A value of "false" means that the switch is off.
2386

2387 **6.5.2 Example URI**

2388 /BinarySwitchResURI

2389 **6.5.3 Resource type**

2390 The Resource Type is defined as: "oic.r.switch.binary".

2391 **6.5.4 OpenAPI 2.0 definition**

```
2392 {
2393   "swagger": "2.0",
2394   "info": {
2395     "title": "Binary Switch",
2396     "version": "20190222",
2397     "license": {
2398       "name": "OCF Data Model License",
2399       "url":
2400 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
2401 CENSE.md",
2402     "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."

```

```

2403     },
2404     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
2405 },
2406 "schemes": ["http"],
2407 "consumes": ["application/json"],
2408 "produces": ["application/json"],
2409 "paths": {
2410   "/BinarySwitchResURI" : {
2411     "get": {
2412       "description": "This Resource describes a binary switch (on/off).\nThe Property \"value\" is
2413 a boolean.\nA value of 'true' means that the switch is on.\nA value of 'false' means that the switch
2414 is off.\n",
2415       "parameters": [
2416         { "$ref": "#/parameters/interface" }
2417       ],
2418       "responses": {
2419         "200": {
2420           "description": "",
2421           "x-example":
2422             {
2423               "rt": ["oic.r.switch.binary"],
2424               "if": ["oic.if.a", "oic.if.baseline"],
2425               "value": false
2426             },
2427           "schema": { "$ref": "#/definitions/BinarySwitch" }
2428         }
2429       }
2430     },
2431     "post": {
2432       "description": "",
2433       "parameters": [
2434         { "$ref": "#/parameters/interface" },
2435         {
2436           "name": "body",
2437           "in": "body",
2438           "required": true,
2439           "schema": { "$ref": "#/definitions/BinarySwitch" },
2440           "x-example":
2441             {
2442               "value": true
2443             }
2444         }
2445       ],
2446       "responses": {
2447         "200": {
2448           "description": "",
2449           "x-example":
2450             {
2451               "value": true
2452             },
2453           "schema": { "$ref": "#/definitions/BinarySwitch" }
2454         }
2455       }
2456     }
2457   },
2458 },
2459 "parameters": {
2460   "interface" : {
2461     "in": "query",
2462     "name": "if",
2463     "type": "string",
2464     "enum": ["oic.if.a", "oic.if.baseline"]
2465   }
2466 },
2467 "definitions": {
2468   "BinarySwitch" : {
2469     "properties": {
2470       "rt": {
2471         "description": "The Resource Type.",
2472         "items": {
2473           "enum": ["oic.r.switch.binary"],
2474           "maxLength": 64,

```

```

2475         "type": "string"
2476     },
2477     "minItems": 1,
2478     "uniqueItems": true,
2479     "readOnly": true,
2480     "type": "array"
2481 },
2482 "value": {
2483     "description": "The status of the switch.",
2484     "type": "boolean"
2485 },
2486 "n": {
2487     "$ref":
2488 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2489 schema.json#/definitions/n"
2490 },
2491 "id": {
2492     "$ref":
2493 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2494 schema.json#/definitions/id"
2495 },
2496 "if": {
2497     "description": "The OCF Interface set supported by this Resource.",
2498     "items": {
2499         "enum": [
2500             "oic.if.a",
2501             "oic.if.baseline"
2502         ],
2503         "type": "string"
2504     },
2505     "minItems": 2,
2506     "uniqueItems": true,
2507     "readOnly": true,
2508     "type": "array"
2509 }
2510 },
2511 "type": "object",
2512 "required": ["value"]
2513 }
2514 }
2515 }
2516

```

2517 6.5.5 Property definition

2518 Table 13 defines the Properties that are part of the "oic.r.switch.binary" Resource Type.

2519 **Table 13 – The Property definitions of the Resource with type "rt" = "oic.r.switch.binary".**

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

2520 **6.5.6 CRUDN behaviour**

2521 Table 14 defines the CRUDN operations that are supported on the "oic.r.switch.binary" Resource
2522 Type.

2523 **Table 14 – The CRUDN operations of the Resource with type "rt" = "oic.r.switch.binary".**

Create	Read	Update	Delete	Notify
	get	post		observe

2524 **6.6 Brightness**

2525 **6.6.1 Introduction**

2526 This Resource describes the brightness of a light or lamp.
2527 The Property "brightness" is an integer showing the current brightness level as a quantized
2528 representation in the range 0-100.
2529 A brightness of 0 is the minimum for the resource.
2530 A brightness of 100 is the maximum for the resource.

2531 **6.6.2 Example URI**

2532 /BrightnessResURI

2533 **6.6.3 Resource type**

2534 The Resource Type is defined as: "oic.r.light.brightness".

2535 **6.6.4 OpenAPI 2.0 definition**

```

2536 {
2537   "swagger": "2.0",
2538   "info": {
2539     "title": "Brightness",
2540     "version": "20190222",
2541     "license": {
2542       "name": "OCF Data Model License",
2543       "url":
2544         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
2545         CENSE.md",
2546       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
2547     },
2548     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
2549   },
2550   "schemes": ["http"],
2551   "consumes": ["application/json"],
2552   "produces": ["application/json"],
2553   "paths": {
2554     "/BrightnessResURI" : {
2555       "get": {
2556         "description": "This Resource describes the brightness of a light or lamp.\nThe Property
2557         \"brightness\" is an integer showing the current brightness level as a quantized representation in
2558         the range 0-100.\nA brightness of 0 is the minimum for the resource.\nA brightness of 100 is the
2559         maximum for the resource.",
2560         "parameters": [
2561           {"$ref": "#/parameters/interface"}
2562         ],
2563         "responses": {
2564           "200": {
2565             "description": "",
2566             "x-example":
2567             {

```

```

2568         "rt": ["oic.r.light.brightness"],
2569         "if": ["oic.if.a", "oic.if.baseline"],
2570         "brightness": 50
2571     },
2572     "schema": { "$ref": "#/definitions/Brightness" }
2573 }
2574 },
2575 },
2576 "post": {
2577     "description": "Sets the desired brightness level.\n",
2578     "parameters": [
2579         {"$ref": "#/parameters/interface"},
2580         {
2581             "name": "body",
2582             "in": "body",
2583             "required": true,
2584             "schema": { "$ref": "#/definitions/Brightness" },
2585             "x-example":
2586                 {
2587                     "brightness": 10
2588                 }
2589         }
2590     ],
2591     "responses": {
2592         "200": {
2593             "description": "Indicates that the brightness was changed.\nThe new brightness level
2594 is provided in the response.\n",
2595             "x-example":
2596                 {
2597                     "brightness": 10
2598                 },
2599             "schema": { "$ref": "#/definitions/Brightness" }
2600         }
2601     }
2602 }
2603 },
2604 },
2605 "parameters": {
2606     "interface": {
2607         "in": "query",
2608         "name": "if",
2609         "type": "string",
2610         "enum": ["oic.if.a", "oic.if.baseline"]
2611     }
2612 },
2613 "definitions": {
2614     "Brightness": {
2615         "properties": {
2616             "rt": {
2617                 "description": "The Resource Type.",
2618                 "items": {
2619                     "enum": ["oic.r.light.brightness"],
2620                     "maxLength": 64,
2621                     "type": "string"
2622                 },
2623                 "minItems": 1,
2624                 "uniqueItems": true,
2625                 "readOnly": true,
2626                 "type": "array"
2627             },
2628             "brightness": {
2629                 "description": "The Quantized representation in the range 0-100 of the current sensed or
2630 set value for Brightness.",
2631                 "maximum": 100,
2632                 "minimum": 0,
2633                 "type": "integer"
2634             },
2635             "n": {
2636                 "$ref":
2637                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2638                 schema.json#/definitions/n"
2639             }
2640         }
2641     }
2642 }

```

```

2640     "id": {
2641         "$ref":
2642         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2643         schema.json#/definitions/id"
2644     },
2645     "if": {
2646         "description": "The OCF Interface set supported by this Resource.",
2647         "items": {
2648             "enum": [
2649                 "oic.if.a",
2650                 "oic.if.baseline"
2651             ],
2652             "type": "string"
2653         },
2654         "minItems": 2,
2655         "uniqueItems": true,
2656         "readOnly": true,
2657         "type": "array"
2658     }
2659 },
2660 "type": "object",
2661 "required": ["brightness"]
2662 }
2663 }
2664 }
2665

```

2666 **6.6.5 Property definition**

2667 Table 15 defines the Properties that are part of the "oic.r.light.brightness" Resource Type.

2668 **Table 15 – The Property definitions of the Resource with type "rt" =**
2669 **"oic.r.light.brightness".**

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

2670 **6.6.6 CRUDN behaviour**

2671 Table 16 defines the CRUDN operations that are supported on the "oic.r.light.brightness" Resource
2672 Type.

2673 **Table 16 – The CRUDN operations of the Resource with type "rt" = "oic.r.light.brightness".**

Create	Read	Update	Delete	Notify
	get	post		observe

2674 **6.7 Colour Chroma**

2675 **6.7.1 Introduction**

2676 This Resource describes the colour using chroma conventions.
 2677 Properties are "hue", "saturation", "csc", and "ct".
 2678 The Property "hue" is the hue angle, it is an integer value as defined by the CIECAM02 model
 2679 definition (see reference [CIE CIE159:2004]).
 2680 The Property "saturation" is an integer value as defined by the CIECAM02 model definition (see
 2681 reference [CIE CIE159:2004]).
 2682 The Property "maximumsaturation" is the upper bound on the saturation supported by the Device.
 2683 If not present the maximum value for "saturation" is 32767.
 2684 The Property "csc" is the colour space coordinates in CIE colour space.
 2685 The first item in the array is the X coordinate.
 2686 The second item in the array is the Y coordinate.
 2687 The Property "nct" is the Mired colour temperature.
 2688 The Resource provides the colour using chroma conventions.

2689 **6.7.2 Example URI**

2690 /example/ColourChromaResURI

2691 **6.7.3 Resource type**

2692 The Resource Type is defined as: "oic.r.colour.chroma".

2693 **6.7.4 OpenAPI 2.0 definition**

```

2694 {
2695   "swagger": "2.0",
2696   "info": {
2697     "title": "Colour Chroma",
2698     "version": "20190215",
2699     "license": {
2700       "name": "OCF Data Model License",
2701       "url":
2702         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
2703         CENSE.md",
2704       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
2705         reserved."
2706     },
2707     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
2708   },
2709   "schemes": ["http"],
2710   "consumes": ["application/json"],
2711   "produces": ["application/json"],
2712   "paths": {
2713     "/example/ColourChromaResURI" : {
2714       "get": {
2715         "description": "This Resource describes the colour using chroma conventions.\nProperties are
2716         \"hue\", \"saturation\", \"csc\", and \"ct\".\nThe Property \"hue\" is the hue angle, it is an
2717         integer value as defined by the CIECAM02 model definition (see reference [CIE CIE159:2004]).\nThe
2718         Property \"saturation\" is an integer value as defined by the CIECAM02 model definition (see
2719         reference [CIE CIE159:2004]).\nThe Property \"maximumsaturation\" is the upper bound on the
2720         saturation supported by the Device.\nIf not present the maximum value for \"saturation\" is
2721         32767.\nThe Property \"csc\" is the colour space coordinates in CIE colour space.\n The first item
2722         in the array is the X coordinate.\n The second item in the array is the Y coordinate.\nThe Property
2723         \"nct\" is the Mired colour temperature.\nThe Resource provides the colour using chroma
2724         conventions.",
2725         "parameters": [

```

```

2726     {"$ref": "#/parameters/interface"}
2727   ],
2728   "responses": {
2729     "200": {
2730       "description": "",
2731       "x-example":
2732         {
2733           "rt": ["oic.r.colour.chroma"],
2734           "if": [ "oic.if.a", "oic.if.baseline"],
2735           "hue": 256.0,
2736           "saturation": 212,
2737           "maximumsaturation": 1000,
2738           "csc": [0.41, 0.51],
2739           "ct": 457
2740         },
2741       "schema": { "$ref": "#/definitions/ColourChroma" }
2742     }
2743   },
2744 },
2745 "post": {
2746   "description": "Sets current colour chroma values\n",
2747   "parameters": [
2748     {"$ref": "#/parameters/interface"},
2749     {
2750       "name": "body",
2751       "in": "body",
2752       "required": true,
2753       "schema": { "$ref": "#/definitions/ColourChroma" },
2754       "x-example":
2755         {
2756           "hue": 300.0,
2757           "saturation": 212,
2758           "csc": [0.41, 0.51],
2759           "ct": 457
2760         }
2761     }
2762   ],
2763   "responses": {
2764     "200": {
2765       "description": "",
2766       "x-example":
2767         {
2768           "hue": 300.0,
2769           "saturation": 212,
2770           "csc": [0.41, 0.51],
2771           "ct": 467
2772         },
2773       "schema": { "$ref": "#/definitions/ColourChroma" }
2774     }
2775   }
2776 },
2777 },
2778 },
2779 "parameters": {
2780   "interface": {
2781     "in": "query",
2782     "name": "if",
2783     "type": "string",
2784     "enum": ["oic.if.a", "oic.if.baseline"]
2785   }
2786 },
2787 "definitions": {
2788   "ColourChroma": {
2789     "properties": {
2790       "rt": {
2791         "description": "The Resource Type.",
2792         "items": {
2793           "enum": ["oic.r.colour.chroma"],
2794           "maxLength": 64,
2795           "type": "string"
2796         },
2797         "minItems": 1,

```

```

2798         "uniqueItems": true,
2799         "readOnly": true,
2800         "type": "array"
2801     },
2802     "ct" : {
2803         "description": "The Mired colour temperature.",
2804         "minimum": 0,
2805         "type": "integer"
2806     },
2807     "hue" : {
2808         "description": "The hue angle as defined by the CIECAM02 model definition.",
2809         "maximum": 360.0,
2810         "minimum": 0.0,
2811         "type": "number"
2812     },
2813     "saturation" : {
2814         "description": "The saturation as defined by the CIECAM02 model definition.",
2815         "maximum": 32767,
2816         "minimum": 0,
2817         "type": "integer"
2818     },
2819     "maximumsaturation" : {
2820         "description": "The maximum supported value of \"saturation\" for this Device.",
2821         "maximum": 32767,
2822         "minimum": 0,
2823         "readOnly": true,
2824         "type": "integer"
2825     },
2826     "csc" : {
2827         "description": "The X and Y coordinates of the colour in CIE colour space",
2828         "items": {
2829             "maximum": 1,
2830             "minimum": 0,
2831             "type": "number"
2832         },
2833         "maxItems": 2,
2834         "minItems": 2,
2835         "type": "array"
2836     },
2837     "n": {
2838         "$ref":
2839         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2840         schema.json#/definitions/n"
2841     },
2842     "id": {
2843         "$ref":
2844         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2845         schema.json#/definitions/id"
2846     },
2847     "if" : {
2848         "description": "The OCF Interface set supported by this Resource.",
2849         "items": {
2850             "enum": [
2851                 "oic.if.a",
2852                 "oic.if.baseline"
2853             ],
2854             "maxLength": 64,
2855             "type": "string"
2856         },
2857         "minItems": 2,
2858         "uniqueItems": true,
2859         "readOnly": true,
2860         "type": "array"
2861     }
2862 },
2863 "type" : "object",
2864 "required": ["hue", "saturation", "csc"]
2865 }
2866 }
2867 }
2868

```

2869 **6.7.5 Property definition**

2870 Table 17 defines the Properties that are part of the "oic.r.colour.chroma" Resource Type.

2871 **Table 17 – The Property definitions of the Resource with type "rt" = "oic.r.colour.chroma".**

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

2872 **6.7.6 CRUDN behaviour**

2873 Table 18 defines the CRUDN operations that are supported on the "oic.r.colour.chroma" Resource
 2874 Type.

2875 **Table 18 – The CRUDN operations of the Resource with type "rt" = "oic.r.colour.chroma".**

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

	get	post		observe
--	-----	------	--	---------

2876 **6.8 Colour RGB**

2877 **6.8.1 Introduction**

2878 This Resource specifies the actual colour in the RGB space represented as an array of integers.
 2879 Each colour value is described with a Red, Green, Blue component.
 2880 These colour values are encoded as an array of integer values ([R,G,B]).
 2881 The minimum and maximum colour value per component may be described by the Property "range".
 2882 When "range" is omitted, then the "range" is [0,255].

2883 **6.8.2 Example URI**

2884 /ColourRGBResURI

2885 **6.8.3 Resource type**

2886 The Resource Type is defined as: "oic.r.colour.rgb".

2887 **6.8.4 OpenAPI 2.0 definition**

```

2888 {
2889   "swagger": "2.0",
2890   "info": {
2891     "title": "Colour RGB",
2892     "version": "20190215",
2893     "license": {
2894       "name": "OCF Data Model License",
2895       "url":
2896         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
2897         CENSE.md",
2898       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
2899       reserved."
2900     },
2901     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
2902   },
2903   "schemes": ["http"],
2904   "consumes": ["application/json"],
2905   "produces": ["application/json"],
2906   "paths": {
2907     "/ColourRGBResURI" : {
2908       "get": {
2909         "description": "This Resource specifies the actual colour in the RGB space represented as an
2910         array of integers.\nEach colour value is described with a Red, Green, Blue component.\nThese colour
2911         values are encoded as an array of integer values ([R,G,B]).\nThe minimum and maximum colour value
2912         per component may be described by the Property \"range\".\nWhen \"range\" is omitted, then the
2913         \"range\" is [0,255].",
2914         "parameters": [
2915           {"$ref": "#/parameters/interface"}
2916         ],
2917         "responses": {
2918           "200": {
2919             "description": "",
2920             "x-example":
2921               {
2922                 "rt": ["oic.r.colour.rgb"],
2923                 "if": ["oic.if.a", "oic.if.baseline"],
2924                 "rgbValue": [255, 255, 255],
2925                 "range": [0, 255]
2926               },
2927             "schema": { "$ref": "#/definitions/ColourRGB" }
2928           }
2929         }
2930       },
2931       "post": {
2932         "description": "Sets the current colourRGB value\n",
2933         "parameters": [
2934           {"$ref": "#/parameters/interface"},

```



```

2935     {
2936         "name": "body",
2937         "in": "body",
2938         "required": true,
2939         "schema": { "$ref": "#/definitions/ColourRGB" },
2940         "x-example":
2941             {
2942                 "rgbValue": [255, 0, 0]
2943             }
2944     },
2945 ],
2946 "responses": {
2947     "200": {
2948         "description": "",
2949         "x-example":
2950             {
2951                 "rgbValue": [255, 0, 0]
2952             },
2953         "schema": { "$ref": "#/definitions/ColourRGB" }
2954     }
2955 },
2956 },
2957 },
2958 },
2959 "parameters": {
2960     "interface": {
2961         "in": "query",
2962         "name": "if",
2963         "type": "string",
2964         "enum": ["oic.if.a", "oic.if.baseline"]
2965     },
2966 },
2967 "definitions": {
2968     "ColourRGB": {
2969         "properties": {
2970             "rt": {
2971                 "description": "The Resource Type.",
2972                 "items": {
2973                     "enum": ["oic.r.colour.rgb"],
2974                     "maxLength": 64,
2975                     "type": "string"
2976                 },
2977                 "minItems": 1,
2978                 "uniqueItems": true,
2979                 "readOnly": true,
2980                 "type": "array"
2981             },
2982             "rgbValue": {
2983                 "description": "The RGB value; the first item is the R, second the G, third the B.",
2984                 "items": {
2985                     "type": "integer"
2986                 },
2987                 "maxItems": 3,
2988                 "minItems": 3,
2989                 "type": "array"
2990             },
2991             "n": {
2992                 "$ref":
2993                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2994                 schema.json#/definitions/n"
2995             },
2996             "id": {
2997                 "$ref":
2998                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2999                 schema.json#/definitions/id"
3000             },
3001             "range": {
3002                 "$ref":
3003                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
3004                 schema.json#/definitions/range_integer"
3005             },
3006             "step": {

```

```

3007         "$ref":
3008         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
3009         schema.json#/definitions/step_integer"
3010     },
3011     "if": {
3012         "description": "The OCF Interface set supported by this Resource.",
3013         "items": {
3014             "enum": [
3015                 "oic.if.a",
3016                 "oic.if.baseline"
3017             ],
3018             "type": "string"
3019         },
3020         "minItems": 2,
3021         "uniqueItems": true,
3022         "readOnly": true,
3023         "type": "array"
3024     }
3025 },
3026 "type": "object",
3027 "required": ["rgbValue"]
3028 }
3029 }
3030 }
3031

```

3032 **6.8.5 Property definition**

3033 Table 19 defines the Properties that are part of the "oic.r.colour.rgb" Resource Type.

3034 **Table 19 – The Property definitions of the Resource with type "rt" = "oic.r.colour.rgb".**

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema	No	Read Write	
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.
id	multiple types: see schema	No	Read Write	
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	

3035 **6.8.6 CRUDN behaviour**

3036 Table 20 defines the CRUDN operations that are supported on the "oic.r.colour.rgb" Resource Type.

3037 **Table 20 – The CRUDN operations of the Resource with type "rt" = "oic.r.colour.rgb".**

Create	Read	Update	Delete	Notify
	get	post		observe

3038 **6.9 Dimming**

3039 **6.9.1 Introduction**

3040 This Resource describes a dimming function.
 3041 The Property "dimmingSetting" is an integer showing the current dimming level.
 3042 If Property "step" is present then it represents the increment between dimmer values.
 3043 When the Property "range" is omitted, then the range is [0,100].
 3044 A value of 0 means total dimming; a value of 100 means no dimming.

3045 **6.9.2 Example URI**

3046 /DimmingResURI

3047 **6.9.3 Resource type**

3048 The Resource Type is defined as: "oic.r.light.dimming".

3049 **6.9.4 OpenAPI 2.0 definition**

```

3050 {
3051   "swagger": "2.0",
3052   "info": {
3053     "title": "Dimming",
3054     "version": "20190215",
3055     "license": {
3056       "name": "OCF Data Model License",
3057       "url":
3058 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
3059 CENSE.md",
3060       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
3061 reserved."
3062     },
3063     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
3064   },
3065   "schemes": ["http"],
3066   "consumes": ["application/json"],
3067   "produces": ["application/json"],
3068   "paths": {
3069     "/DimmingResURI" : {
3070       "get": {
3071         "description": "This Resource describes a dimming function.\n\nThe Property \"dimmingSetting\"
3072 is an integer showing the current dimming level.\n\nIf Property \"step\" is present then it represents
3073 the increment between dimmer values.\n\nWhen the Property \"range\" is omitted, then the range is
3074 [0,100].\n\nA value of 0 means total dimming; a value of 100 means no dimming.",
3075         "parameters": [
3076           {"$ref": "#/parameters/interface"}
3077         ],
3078         "responses": {
3079           "200": {
3080             "description": "",
3081             "x-example":
3082             {
3083               "rt": ["oic.r.light.dimming"],
3084               "if": ["oic.if.a", "oic.if.baseline"],
3085               "dimmingSetting": 30,
3086               "step": 5,
3087               "range": [0, 100]

```

```

3088         },
3089         "schema": { "$ref": "#/definitions/Dimming" }
3090     }
3091 }
3092 },
3093 "post": {
3094     "description": "Sets the desired dimming level.\n",
3095     "parameters": [
3096         { "$ref": "#/parameters/interface" },
3097         {
3098             "name": "body",
3099             "in": "body",
3100             "required": true,
3101             "schema": { "$ref": "#/definitions/Dimming" },
3102             "x-example":
3103                 {
3104                     "dimmingSetting": 40
3105                 }
3106         }
3107     ],
3108     "responses": {
3109         "200": {
3110             "description": "Indicates that the dimming was changed.\nThe new dimming level is
3111 provided in the response.\n",
3112             "x-example":
3113                 {
3114                     "dimmingSetting": 40
3115                 },
3116             "schema": { "$ref": "#/definitions/Dimming" }
3117         },
3118         "403": {
3119             "description": "This response is generated by the OCF Server when the client sends:\n
3120 An update with an out of range property value for dimmingSetting.\nThe server responds with the
3121 current resource representation.\n",
3122             "x-example":
3123                 {
3124                     "dimmingSetting": 40
3125                 },
3126             "schema": { "$ref": "#/definitions/Dimming" }
3127         }
3128     }
3129 }
3130 },
3131 "parameters": {
3132     "interface": {
3133         "in": "query",
3134         "name": "if",
3135         "type": "string",
3136         "enum": ["oic.if.a", "oic.if.baseline"]
3137     }
3138 },
3139 "definitions": {
3140     "Dimming": {
3141         "properties": {
3142             "rt": {
3143                 "description": "The Resource Type.",
3144                 "items": {
3145                     "enum": ["oic.r.light.dimming"],
3146                     "maxLength": 64,
3147                     "type": "string"
3148                 },
3149             },
3150             "minItems": 1,
3151             "uniqueItems": true,
3152             "readOnly": true,
3153             "type": "array"
3154         },
3155         "dimmingSetting": {
3156             "description": "The current dimming value.",
3157             "type": "integer"
3158         },
3159     }
3160 }

```

```

3160         "$ref":
3161         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3162         schema.json#/definitions/n"
3163     },
3164     "id": {
3165         "$ref":
3166         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3167         schema.json#/definitions/id"
3168     },
3169     "range": {
3170         "$ref":
3171         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
3172         schema.json#/definitions/range_integer"
3173     },
3174     "step": {
3175         "$ref":
3176         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
3177         schema.json#/definitions/step_integer"
3178     },
3179     "if": {
3180         "description": "The OCF Interface set supported by this Resource.",
3181         "items": {
3182             "enum": [
3183                 "oic.if.a",
3184                 "oic.if.baseline"
3185             ],
3186             "type": "string"
3187         },
3188         "minItems": 2,
3189         "uniqueItems": true,
3190         "readOnly": true,
3191         "type": "array"
3192     }
3193 },
3194 "type": "object",
3195 "required": ["dimmingSetting"]
3196 }
3197 }
3198 }
3199

```

6.9.5 Property definition

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

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

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

dimmingSetting	integer	Yes	Read Write	The current dimming value.
id	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	

3203 **6.9.6 CRUDN behaviour**

3204 Table 22 defines the CRUDN operations that are supported on the "oic.r.light.dimming" Resource
3205 Type.

3206 **Table 22 – The CRUDN operations of the Resource with type "rt" = "oic.r.light.dimming".**

Create	Read	Update	Delete	Notify
	get	post		observe

3207 **6.10 Door**

3208 **6.10.1 Introduction**

3209 This Resource describes the open state of the door.
3210 A door is modelled by means of openState (Open/Closed), openDuration (ISO 8601 Time), and
3211 openAlarm (boolean).
3212 For Property "openState", the value 'Open' indicates the door is open.
3213 The value 'Closed' indicates the door is closed.
3214 The type of Property "openDuration" is an RFC Time encoded string.
3215 The Property "openAlarm" value 'true' indicates that the open alarm is active.
3216 The openAlarm value 'false' indicates that open alarm is not active.
3217 retrieves the state of the Door.

3218 **6.10.2 Example URI**

3219 /DoorResURI

3220 **6.10.3 Resource type**

3221 The Resource Type is defined as: "oic.r.door".

3222 **6.10.4 OpenAPI 2.0 definition**

```
3223 {
3224   "swagger": "2.0",
3225   "info": {
3226     "title": "Door",
3227     "version": "20190215",
3228     "license": {
3229       "name": "OCF Data Model License",
3230       "url":
3231         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
3232         CENSE.md",
3233       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
3234         reserved."
3235     },
3236     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
3237   },
3238   "schemes": ["http"],
3239   "consumes": ["application/json"],
3240   "produces": ["application/json"],
```

```

3241     "paths": {
3242         "/DoorResURI" : {
3243             "get": {
3244                 "description": "This Resource describes the open state of the door.\nA door is modelled by
3245 means of openState (Open/Closed), openDuration (ISO 8601 Time), and openAlarm (boolean).\nFor
3246 Property \"openState\", the value 'Open' indicates the door is open.\nThe value 'Closed' indicates
3247 the door is closed.\nThe type of Property \"openDuration\" is an RFC Time encoded string.\nThe
3248 Property \"openAlarm\" value 'true' indicates that the open alarm is active.\nThe openAlarm value
3249 'false' indicates that open alarm is not active.\nretrieves the state of the Door.",
3250                 "parameters": [
3251                     { "$ref": "#/parameters/interface" }
3252                 ],
3253                 "responses": {
3254                     "200": {
3255                         "description": "",
3256                         "x-example": {
3257                             "rt": ["oic.r.door"],
3258                             "if": ["oic.if.a", "oic.if.baseline"],
3259                             "openState": "Open",
3260                             "openDuration": "P0Y0M0DT2H25M5S",
3261                             "openAlarm": true
3262                         },
3263                         "schema": { "$ref": "#/definitions/Door" }
3264                     }
3265                 }
3266             },
3267             "post": {
3268                 "description": "Sets the current Door properties.\nThe only property that can be set as part
3269 of an update operation is\n the openAlarm.\nThis can be made active (true) or inactive (false)\n",
3270                 "parameters": [
3271                     { "$ref": "#/parameters/interface" },
3272                     {
3273                         "name": "body",
3274                         "in": "body",
3275                         "required": true,
3276                         "schema": { "$ref": "#/definitions/DoorUpdate" },
3277                         "x-example": {
3278                             "openAlarm": false
3279                         }
3280                     }
3281                 ],
3282                 "responses": {
3283                     "200": {
3284                         "description": "",
3285                         "x-example": {
3286                             "openAlarm": false
3287                         },
3288                         "schema": { "$ref": "#/definitions/DoorUpdate" }
3289                     }
3290                 }
3291             }
3292         }
3293     },
3294     "parameters": {
3295         "interface": {
3296             "in": "query",
3297             "name": "if",
3298             "type": "string",
3299             "enum": ["oic.if.a", "oic.if.baseline"]
3300         }
3301     },
3302     "definitions": {
3303         "Door" : {
3304             "properties": {
3305                 "rt": {
3306                     "description": "The Resource Type.",
3307                     "items": {
3308                         "enum": ["oic.r.door"],
3309                         "maxLength": 64,
3310                         "type": "string"
3311                     },
3312                     "minItems": 1,

```

```

3313         "uniqueItems": true,
3314         "readOnly": true,
3315         "type": "array"
3316     },
3317     "openDuration": {
3318         "$ref": "http://openconnectivityfoundation.github.io/core/schemas/oic.types-
3319 schema.json#/definitions/duration"
3320     },
3321     "openState": {
3322         "description": "The state of the door (open or closed).",
3323         "enum": [
3324             "Open",
3325             "Closed"
3326         ],
3327         "readOnly": true,
3328         "type": "string"
3329     },
3330     "openAlarm": {
3331         "description": "The state of the door open alarm.",
3332         "type": "boolean"
3333     },
3334     "n": {
3335         "$ref":
3336 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3337 schema.json#/definitions/n"
3338     },
3339     "id": {
3340         "$ref":
3341 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3342 schema.json#/definitions/id"
3343     },
3344     "if": {
3345         "description": "The OCF Interface set supported by this Resource.",
3346         "items": {
3347             "enum": [
3348                 "oic.if.a",
3349                 "oic.if.baseline"
3350             ],
3351             "type": "string"
3352         },
3353         "minItems": 2,
3354         "uniqueItems": true,
3355         "readOnly": true,
3356         "type": "array"
3357     }
3358 },
3359 "type": "object",
3360 "required": ["openState"]
3361 },
3362 "DoorUpdate" : {
3363     "properties": {
3364         "openAlarm": {
3365             "description": "The state of the door open alarm.",
3366             "type": "boolean"
3367         }
3368     },
3369     "type": "object",
3370     "required": ["openAlarm"]
3371 }
3372 }
3373 }
3374

```

3375 6.10.5 Property definition

3376 Table 23 defines the Properties that are part of the "oic.r.door" Resource Type.

3377 **Table 23 – The Property definitions of the Resource with type "rt" = "oic.r.door".**

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

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.
if	array: see schema	No	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	
openDuration	multiple types: see schema	No	Read Write	
rt	array: see schema	No	Read Only	The Resource Type.
openAlarm	boolean	Yes	Read Write	The state of the door open alarm.

3378 **6.10.6 CRUDN behaviour**

3379 Table 24 defines the CRUDN operations that are supported on the "oic.r.door" Resource Type.

3380 **Table 24 – The CRUDN operations of the Resource with type "rt" = "oic.r.door".**

Create	Read	Update	Delete	Notify
	get	post		observe

3381 **6.11 Energy Consumption**

3382 **6.11.1 Introduction**

3383 This Resource describes the energy consumed by the Device since power up (the energy value is
3384 in Watt Hours [Wh])
3385 and the instantaneous power draw of the device (the power value is in Watts [W]) at the time the
3386 resource was queried.
3387 The Property "power" value is in Watts [W].
3388 The Property "energy" value is in Watt Hours [Wh].
3389 The Resource provides the current power draw and cumulative energy usage.

3390 **6.11.2 Example URI**

3391 /EnergyConsumptionResURI

3392 **6.11.3 Resource type**

3393 The Resource Type is defined as: "oic.r.energy.consumption".

3394 6.11.4 OpenAPI 2.0 definition

```
3395 {
3396   "swagger": "2.0",
3397   "info": {
3398     "title": "Energy Consumption",
3399     "version": "20190215",
3400     "license": {
3401       "name": "OCF Data Model License",
3402       "url":
3403         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
3404         CENSE.md",
3405       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
3406         reserved."
3407     },
3408     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
3409   },
3410   "schemes": ["http"],
3411   "consumes": ["application/json"],
3412   "produces": ["application/json"],
3413   "paths": {
3414     "/EnergyConsumptionResURI" : {
3415       "get": {
3416         "description": "This Resource describes the energy consumed by the Device since power up
3417         (the energy value is in Watt Hours [Wh]) \nand the instantaneous power draw of the device (the power
3418         value is in Watts [W]) at the time the resource was queried.\n\nThe Property \"power\" value is in
3419         Watts [W].\n\nThe Property \"energy\" value is in Watt Hours [Wh].\n\nThe Resource provides the current
3420         power draw and cumulative energy usage.",
3421         "parameters": [
3422           { "$ref": "#/parameters/interface" }
3423         ],
3424         "responses": {
3425           "200": {
3426             "description": "",
3427             "x-example":
3428               {
3429                 "rt": ["oic.r.energy.consumption"],
3430                 "if": ["oic.if.s", "oic.if.baseline"],
3431                 "power": 2000.1,
3432                 "energy": 3500.4
3433               },
3434             "schema": { "$ref": "#/definitions/Consumption" }
3435           }
3436         }
3437       }
3438     }
3439   },
3440   "parameters": {
3441     "interface" : {
3442       "in" : "query",
3443       "name" : "if",
3444       "type" : "string",
3445       "enum" : ["oic.if.s", "oic.if.baseline"]
3446     }
3447   },
3448   "definitions": {
3449     "Consumption" : {
3450       "properties": {
3451         "rt": {
3452           "description": "The Resource Type.",
3453           "items": {
3454             "enum": ["oic.r.energy.consumption"],
3455             "maxLength": 64,
3456             "type": "string"
3457           },
3458           "minItems": 1,
3459           "uniqueItems": true,
3460           "readOnly": true,
3461           "type": "array"
3462         },
3463         "power": {
3464           "description": "The instantaneous Power.",
```

```

3465         "readOnly": true,
3466         "type": "number"
3467     },
3468     "energy": {
3469         "description": "The energy consumed.",
3470         "readOnly": true,
3471         "type": "number"
3472     },
3473     "n": {
3474         "$ref":
3475 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3476 schema.json#/definitions/n"
3477     },
3478     "id": {
3479         "$ref":
3480 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3481 schema.json#/definitions/id"
3482     },
3483     "if": {
3484         "description": "The OCF Interface set supported by this Resource.",
3485         "items": {
3486             "enum": [
3487                 "oic.if.s",
3488                 "oic.if.baseline"
3489             ],
3490             "type": "string"
3491         },
3492         "minItems": 2,
3493         "uniqueItems": true,
3494         "readOnly": true,
3495         "type": "array"
3496     }
3497 },
3498 "type": "object",
3499 "required": ["power", "energy"]
3500 }
3501 }
3502 }
3503

```

3504 6.11.5 Property definition

3505 Table 25 defines the Properties that are part of the "oic.r.energy.consumption" Resource Type.

3506 **Table 25 – The Property definitions of the Resource with type "rt" =**
3507 **"oic.r.energy.consumption".**

Property name	Value type	Mandatory	Access mode	Description
energy	number	Yes	Read Only	The energy consumed.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
power	number	Yes	Read Only	The instantaneous Power.

rt	array: see schema	No	Read Only	The Resource Type.
id	multiple types: see schema	No	Read Write	

3508 **6.11.6 CRUDN behaviour**

3509 Table 26 defines the CRUDN operations that are supported on the "oic.r.energy.consumption"
 3510 Resource Type.

3511 **Table 26 – The CRUDN operations of the Resource with type "rt" =**
 3512 **"oic.r.energy.consumption".**

Create	Read	Update	Delete	Notify
	get			observe

3513 **6.12 Energy Usage**

3514 **6.12.1 Introduction**

3515 This Resource describes a cumulative time-based energy usage query..
 3516 The Resource is a Collection of:
 3517 TimePeriod Resource
 3518 EnergyConsumption Resource
 3519

3520 **6.12.2 Example URI**

3521 /EnergyUsageResURI

3522 **6.12.3 Resource type**

3523 The Resource Type is defined as: "oic.r.energy.usage".

3524 **6.12.4 OpenAPI 2.0 definition**

```

3525 {
3526   "swagger": "2.0",
3527   "info": {
3528     "title": "Energy Usage",
3529     "version": "20190307",
3530     "license": {
3531       "name": "OCF Data Model License",
3532       "url":
3533         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
3534         CENSE.md",
3535       "x-copyright": "copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
3536     },
3537     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
3538   },
3539   "schemes": ["http"],
3540   "consumes": ["application/json"],
3541   "produces": ["application/json"],
3542   "paths": {
3543     "/EnergyUsageResURI?if=oic.if.ll": {
3544       "get": {
3545         "description": "This Resource describes a cumulative time-based energy usage query.\nThe
3546         Resource is a Collection of:\n TimePeriod Resource\n EnergyConsumption Resource\n",
3547         "parameters": [
3548           {"$ref": "#/parameters/interface"}
3549         ],
3550         "responses": {
  
```

```

3551         "200": {
3552             "description" : "",
3553             "x-example":
3554             [
3555                 {"href": "/TimePeriodResURI", "rt":["oic.r.time.period"],
3556 "if":["oic.if.a","oic.if.baseline"], "eps":[{"ep": "coaps://[fe80::b1d6]:1122"}]},
3557                 {"href": "/EnergyConsumptionResURI", "rt":["oic.r.energy.consumption"],
3558 "if":["oic.if.s","oic.if.baseline"], "eps":[{"ep": "coaps://[fe80::b1d6]:1122"}]}
3559             ],
3560             "schema": { "$ref": "#/definitions/Usage-11" }
3561         }
3562     }
3563 },
3564 ],
3565 "/EnergyUsageResURI?if=oic.if.b" : {
3566     "get": {
3567         "description": "This Resource describes a cumulative time-based energy usage query.\nThe
3568 Resource is a Collection of:\n TimePeriod Resource\n EnergyConsumption Resource\n",
3569         "parameters": [
3570             {"$ref": "#/parameters/interface"}
3571         ],
3572         "responses": {
3573             "200": {
3574                 "description" : "",
3575                 "x-example": [
3576                     {
3577                         "href": "/TimePeriodResURI",
3578                         "rep": {
3579                             "startTime": "2015-01-09T14:30Z",
3580                             "stopTime": "2015-01-09T14:45Z"
3581                         }
3582                     },
3583                     {
3584                         "href": "/EnergyConsumptionResURI",
3585                         "rep": {
3586                             "power": 2000.1,
3587                             "energy": 3500.4
3588                         }
3589                     }
3590                 ],
3591                 "schema": { "$ref": "#/definitions/EnergyUsageBatch-Retrieve" }
3592             }
3593         }
3594     },
3595     "post": {
3596         "description": "Sets the timer period of the query using the batch OCF Interface\n",
3597         "parameters": [
3598             {"$ref": "#/parameters/interface-b"},
3599             {
3600                 "name": "body",
3601                 "in": "body",
3602                 "required": true,
3603                 "schema": { "$ref": "#/definitions/EnergyUsageBatch-Update" },
3604                 "x-example": [
3605                     {
3606                         "href": "/TimePeriodResURI",
3607                         "rep": {
3608                             "startTime": "2015-03-15T10:30Z",
3609                             "stopTime": "2015-03-15T10:45Z"
3610                         }
3611                     }
3612                 ]
3613             }
3614         ],
3615         "responses": {
3616             "200": {
3617                 "description" : "",
3618                 "x-example": [
3619                     {
3620                         "href": "/TimePeriodResURI",
3621                         "rep": {
3622                             "startTime": "2015-03-15T10:30Z",

```

```

3623         "stopTime": "2015-03-15T10:45Z"
3624     }
3625 },
3626 {
3627     "href": "/EnergyConsumptionResURI",
3628     "rep": {
3629         "power": 1500.1,
3630         "energy": 2200.4
3631     }
3632 }
3633 ],
3634 "schema": { "$ref": "#/definitions/EnergyUsageBatch-Retrieve" }
3635 }
3636 }
3637 },
3638 },
3639 "/EnergyUsageResURI?if=oic.if.baseline" : {
3640     "get": {
3641         "description": "This Resource describes a cumulative time-based energy usage query..\n\nThe
3642 Resource is a Collection of:\n TimePeriod Resource\n EnergyConsumption Resource\n",
3643         "parameters": [
3644             { "$ref": "#/parameters/interface" }
3645         ],
3646         "responses": {
3647             "200": {
3648                 "description" : "",
3649                 "x-example":
3650                 {
3651                     "rt": ["oic.r.energy.usage"],
3652                     "if": ["oic.if.ll", "oic.if.b", "oic.if.baseline"],
3653                     "rts": ["oic.r.time.period", "oic.r.energy.consumption"],
3654                     "links": [
3655                         { "href": "/TimePeriodResURI", "rt": ["oic.r.time.period"],
3656 "if": ["oic.if.a", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
3657                         { "href": "/EnergyConsumptionResURI", "rt": ["oic.r.energy.consumption"],
3658 "if": ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
3659                     ]
3660                 },
3661                 "schema": { "$ref": "#/definitions/Usage-baseline" }
3662             }
3663         }
3664     }
3665 },
3666 "parameters": {
3667     "interface" : {
3668         "in" : "query",
3669         "name" : "if",
3670         "type" : "string",
3671         "enum" : ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
3672     },
3673     "interface-b" : {
3674         "in" : "query",
3675         "name" : "if",
3676         "type" : "string",
3677         "enum" : ["oic.if.b"]
3678     }
3679 },
3680 "definitions": {
3681     "Usage-ll": {
3682         "items": {
3683             "$ref": "#/definitions/oic.oic-link"
3684         },
3685         "type": "array"
3686     },
3687     "oic.oic-link": {
3688         "type": "object",
3689         "properties": {
3690             "anchor": {
3691                 "$ref":
3692 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
3693 schema.json#/definitions/anchor"

```

```

3695     },
3696     "di": {
3697       "$ref":
3698       "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
3699       schema.json#/definitions/di"
3700     },
3701     "eps": {
3702       "$ref":
3703       "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
3704       schema.json#/definitions/eps"
3705     },
3706     "href": {
3707       "$ref":
3708       "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
3709       schema.json#/definitions/href"
3710     },
3711     "ins": {
3712       "$ref":
3713       "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
3714       schema.json#/definitions/ins"
3715     },
3716     "p": {
3717       "$ref":
3718       "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
3719       schema.json#/definitions/p"
3720     },
3721     "rel": {
3722       "$ref":
3723       "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
3724       schema.json#/definitions/rel_array"
3725     },
3726     "title": {
3727       "$ref":
3728       "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
3729       schema.json#/definitions/title"
3730     },
3731     "type": {
3732       "$ref":
3733       "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
3734       schema.json#/definitions/type"
3735     },
3736     "if": {
3737       "description": "The OCF Interfaces supported by the target Resource",
3738       "items": {
3739         "enum": [
3740           "oic.if.a",
3741           "oic.if.s",
3742           "oic.if.baseline"
3743         ],
3744         "type": "string",
3745         "maxLength": 64
3746       },
3747       "minItems": 2,
3748       "uniqueItems": true,
3749       "type": "array",
3750       "readOnly": true
3751     },
3752     "rt": {
3753       "description": "Resource Type of the target Resource",
3754       "items": {
3755         "maxLength": 64,
3756         "type": "string",
3757         "enum": ["oic.r.time.period", "oic.r.energy.consumption"]
3758       },
3759       "minItems": 1,
3760       "type": "array",
3761       "uniqueItems": true,
3762       "readOnly": true
3763     }
3764   },
3765   "required": [
3766     "href",

```

```

3767     "rt",
3768     "if"
3769   ]
3770 },
3771 "Usage-baseline": {
3772   "properties": {
3773     "rt": {
3774       "description": "Resource Type of this Resource",
3775       "items": {
3776         "maxLength": 64,
3777         "type": "string",
3778         "enum": ["oic.r.energy.usage"]
3779       },
3780       "minItems": 1,
3781       "readOnly": true,
3782       "uniqueItems": true,
3783       "type": "array"
3784     },
3785     "rts": {
3786       "items": {
3787         "enum": [
3788           "oic.r.time.period",
3789           "oic.r.energy.consumption"
3790         ],
3791         "type": "string",
3792         "maxLength": 64
3793       },
3794       "minItems": 1,
3795       "type": "array",
3796       "readOnly": true,
3797       "uniqueItems": true
3798     },
3799     "links": {
3800       "description": "A set of simple or individual OCF Links.",
3801       "type": "array",
3802       "items": {
3803         "$ref": "#/definitions/oic.oic-link"
3804       }
3805     },
3806     "n": {
3807       "$ref":
3808 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3809 schema.json#/definitions/n"
3810     },
3811     "id": {
3812       "$ref":
3813 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3814 schema.json#/definitions/id"
3815     },
3816     "if": {
3817       "description": "The OCF Interfaces supported by this Resource",
3818       "items": {
3819         "enum": [
3820           "oic.if.ll",
3821           "oic.if.b",
3822           "oic.if.baseline"
3823         ],
3824         "type": "string",
3825         "maxLength": 64
3826       },
3827       "minItems": 1,
3828       "readOnly": true,
3829       "uniqueItems": true,
3830       "type": "array"
3831     }
3832   },
3833   "type": "object",
3834   "required": ["rt", "if", "links"]
3835 },
3836 "EnergyUsageBatch-Retrieve" : {
3837   "type": "array",
3838   "minItems": 2,

```



```

3839     "uniqueItems": true,
3840     "items": {
3841       "type": "object",
3842       "additionalProperties": true,
3843       "properties": {
3844         "href": {
3845           "$ref":
3846 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
3847 schema.json#/definitions/href"
3848         },
3849         "rep": {
3850           "anyOf": [
3851             {"$ref":
3852 "https://openconnectivityfoundation.github.io/IoTDataModels/TimePeriodResURI.swagger.json#/definitio
3853 ns/TimePeriod"},
3854             {"$ref":
3855 "https://openconnectivityfoundation.github.io/IoTDataModels/EnergyConsumptionResURI.swagger.json#/de
3856 finitions/Consumption"}
3857           ]
3858         }
3859       },
3860       "required": [
3861         "href",
3862         "rep"
3863       ]
3864     }
3865   },
3866   "EnergyUsageBatch-Update" : {
3867     "type": "array",
3868     "minItems": 1,
3869     "uniqueItems": true,
3870     "items": {
3871       "type": "object",
3872       "additionalProperties": true,
3873       "properties": {
3874         "href": {
3875           "$ref":
3876 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
3877 schema.json#/definitions/href"
3878         },
3879         "rep": {
3880           "anyOf": [
3881             {"$ref":
3882 "https://openconnectivityfoundation.github.io/IoTDataModels/TimePeriodResURI.swagger.json#/definitio
3883 ns/TimePeriod"}
3884           ]
3885         }
3886       },
3887       "required": [
3888         "href",
3889         "rep"
3890       ]
3891     }
3892   }
3893 }
3894 }
3895

```

3896 6.12.5 Property definition

3897 Table 27 defines the Properties that are part of the "oic.r.energy.usage" Resource Type.

3898 **Table 27 – The Property definitions of the Resource with type "rt" = "oic.r.energy.usage".**

Property name	Value type	Mandatory	Access mode	Description
rep	multiple types: see schema	Yes	Read Write	

href	multiple types: see schema	Yes	Read Write	
anchor	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
href	multiple types: see schema	Yes	Read Write	
title	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rt	array: see schema	Yes	Read Only	Resource Type of the target Resource
eps	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
ins	multiple types: see schema	No	Read Write	
rep	multiple types: see schema	Yes	Read Write	
href	multiple types: see schema	Yes	Read Write	
if	array: see schema	Yes	Read Only	The OCF Interfaces supported by this Resource

links	array: see schema	Yes	Read Write	A set of simple or individual OCF Links.
rts	array: see schema	No	Read Only	
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

3899 **6.12.6 CRUDN behaviour**

3900 Table 28 defines the CRUDN operations that are supported on the "oic.r.energy.usage" Resource
3901 Type.

3902 **Table 28 – The CRUDN operations of the Resource with type "rt" = "oic.r.energy.usage".**

Create	Read	Update	Delete	Notify
	get			observe

3903 **6.13 Humidity**

3904 **6.13.1 Introduction**

3905 This Resource describes a sensed or desired humidity.
3906 The Property "humidity" is an integer describing the percentage measured relative humidity.
3907 The Property "desiredHumidity" is an integer showing the desired target relative humidity.

3908 **6.13.2 Example URI**

3909 /HumidityResURI

3910 **6.13.3 Resource type**

3911 The Resource Type is defined as: "oic.r.humidity".

3912 **6.13.4 OpenAPI 2.0 definition**

```
3913 {
3914   "swagger": "2.0",
3915   "info": {
3916     "title": "Humidity",
3917     "version": "20190215",
3918     "license": {
3919       "name": "OCF Data Model License",
3920       "url":
3921         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
3922         CENSE.md",
3923       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
3924       reserved."
3925     },
3926     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
3927   },
3928   "schemes": ["http"],
```

```

3929     "consumes": ["application/json"],
3930     "produces": ["application/json"],
3931     "paths": {
3932         "/HumidityResURI" : {
3933             "get": {
3934                 "description": "This Resource describes a sensed or desired humidity.\nThe Property
3935 \\"humidity\\" is an integer describing the percentage measured relative humidity.\nThe Property
3936 \\"desiredHumidity\\" is an integer showing the desired target relative humidity.",
3937                 "parameters": [
3938                     { "$ref": "#/parameters/interface" }
3939                 ],
3940                 "responses": {
3941                     "200": {
3942                         "description": "RETRIEVES the current (relative) humidity level.",
3943                         "x-example":
3944                             {
3945                                 "rt": ["oic.r.humidity"],
3946                                 "if": ["oic.if.a", "oic.if.baseline"],
3947                                 "humidity": 40,
3948                                 "desiredHumidity": 40
3949                             },
3950                         "schema": { "$ref": "#/definitions/Humidity" }
3951                     }
3952                 }
3953             },
3954             "post": {
3955                 "description": "Sets the desired relative humidity level.",
3956                 "parameters": [
3957                     { "$ref": "#/parameters/interface" },
3958                     {
3959                         "name": "body",
3960                         "in": "body",
3961                         "required": true,
3962                         "schema": { "$ref": "#/definitions/HumidityUpdate" },
3963                         "x-example":
3964                             {
3965                                 "desiredHumidity" : 45
3966                             }
3967                     }
3968                 ],
3969                 "responses": {
3970                     "200": {
3971                         "description": "Indicates that the relative humidity level was changed.\nThe new
3972 relative humidity level is provided in the response.",
3973                         "x-example":
3974                             {
3975                                 "desiredHumidity": 45
3976                             },
3977                         "schema": { "$ref": "#/definitions/HumidityUpdate" }
3978                     }
3979                 }
3980             }
3981         }
3982     },
3983     "parameters": {
3984         "interface": {
3985             "in": "query",
3986             "name": "if",
3987             "type": "string",
3988             "enum": ["oic.if.a", "oic.if.s", "oic.if.baseline"]
3989         }
3990     },
3991     "definitions": {
3992         "Humidity" : {
3993             "properties": {
3994                 "rt": {
3995                     "description": "The Resource Type.",
3996                     "items": {
3997                         "enum": ["oic.r.humidity"],
3998                         "maxLength": 64,
3999                         "type": "string"
4000                     },

```

```

4001         "minItems": 1,
4002         "uniqueItems": true,
4003         "readOnly": true,
4004         "type": "array"
4005     },
4006     "desiredHumidity": {
4007         "description": "The desired value for humidity.",
4008         "maximum": 100,
4009         "minimum": 0,
4010         "type": "integer"
4011     },
4012     "humidity": {
4013         "description": "The current sensed value for humidity.",
4014         "maximum": 100,
4015         "minimum": 0,
4016         "readOnly": true,
4017         "type": "integer"
4018     },
4019     "n": {
4020         "$ref":
4021         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4022         schema.json#/definitions/n"
4023     },
4024     "id": {
4025         "$ref":
4026         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4027         schema.json#/definitions/id"
4028     },
4029     "if": {
4030         "description": "The OCF Interface set supported by this Resource.",
4031         "items": {
4032             "enum": [
4033                 "oic.if.a",
4034                 "oic.if.s",
4035                 "oic.if.baseline"
4036             ],
4037             "type": "string"
4038         },
4039         "minItems": 2,
4040         "uniqueItems": true,
4041         "readOnly": true,
4042         "type": "array"
4043     }
4044 },
4045 "type": "object",
4046 "required": ["humidity"]
4047 },
4048 "HumidityUpdate" : {
4049     "properties": {
4050         "desiredHumidity": {
4051             "description": "Desired value for Humidity",
4052             "maximum": 100,
4053             "minimum": 0,
4054             "type": "integer"
4055         }
4056     },
4057     "type": "object",
4058     "required": ["desiredHumidity"]
4059 }
4060 }
4061 }
4062

```

4063 6.13.5 Property definition

4064 Table 29 defines the Properties that are part of the "oic.r.humidity" Resource Type.

4065 **Table 29 – The Property definitions of the Resource with type "rt" = "oic.r.humidity".**

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

if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
humidity	integer	Yes	Read Only	The current sensed value for humidity.
desiredHumidity	integer	No	Read Write	The desired value for humidity.
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	
desiredHumidity	integer	Yes	Read Write	Desired value for Humidity

4066 **6.13.6 CRUDN behaviour**

4067 Table 30 defines the CRUDN operations that are supported on the "oic.r.humidity" Resource Type.

4068 **Table 30 – The CRUDN operations of the Resource with type "rt" = "oic.r.humidity".**

Create	Read	Update	Delete	Notify
	get	post		observe

4069 **6.14 Ice Maker**

4070 **6.14.1 Introduction**

4071 This Resource describes an the operational state of an Ice Maker.
 4072 The Property "status" is a string containing a value from the set of possible ice maker statuses.
 4073 The possible statuses are defined by the enumeration ["on", "off", "full"]
 4074 A status of "on" means that the Ice Maker is operating.
 4075 A status of "off" means that the Ice Maker is not operating.
 4076 A status of "full" means that the ice collection bin is full (Ice Maker is operating).

4077 **6.14.2 Example URI**

4078 /IceMakerResURI

4079 **6.14.3 Resource type**

4080 The Resource Type is defined as: "oic.r.icemaker".

4081 6.14.4 OpenAPI 2.0 definition

```
4082 {
4083   "swagger": "2.0",
4084   "info": {
4085     "title": "Ice Maker",
4086     "version": "20190215",
4087     "license": {
4088       "name": "OCF Data Model License",
4089       "url":
4090 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
4091 CENSE.md",
4092       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
4093 reserved."
4094     },
4095     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
4096   },
4097   "schemes": ["http"],
4098   "consumes": ["application/json"],
4099   "produces": ["application/json"],
4100   "paths": {
4101     "/IceMakerResURI" : {
4102       "get": {
4103         "description": "This Resource describes an the operational state of an Ice Maker.\n\nThe
4104 Property \"status\" is a string containing a value from the set of possible ice maker statuses.\n\nThe
4105 possible statuses are defined by the enumeration [\"on\", \"off\", \"full\"]\n\nA status of \"on\"
4106 means that the Ice Maker is operating.\n\nA status of \"off\" means that the Ice Maker is not
4107 operating.\n\nA status of \"full\" means that the ice collection bin is full (Ice Maker is
4108 operating).",
4109         "parameters": [
4110           { "$ref": "#/parameters/interface" }
4111         ],
4112         "responses": {
4113           "200": {
4114             "description": "RETRIEVES the current Ice Maker status.",
4115             "x-example":
4116               {
4117                 "rt": ["oic.r.icemaker"],
4118                 "if": ["oic.if.a", "oic.if.baseline"],
4119                 "status": "on"
4120               },
4121             "schema": { "$ref": "#/definitions/IceMaker" }
4122           }
4123         }
4124       },
4125       "post": {
4126         "description": "Sets the desired Ice Maker status.\n\nOnly valid settings for \"status\" in a
4127 UPDATE shall be \"on\" or \"off\".",
4128         "parameters": [
4129           { "$ref": "#/parameters/interface" },
4130           {
4131             "name": "body",
4132             "in": "body",
4133             "required": true,
4134             "schema": { "$ref": "#/definitions/IceMakerUpdate" },
4135             "x-example":
4136               {
4137                 "status": "off"
4138               }
4139           }
4140         ],
4141         "responses": {
4142           "200": {
4143             "description": "Indicates that the Ice Maker status was changed.\n\nThe new status is
4144 provided in the response.\n\n",
4145             "x-example":
4146               {
4147                 "status": "off"
4148               },
4149             "schema": { "$ref": "#/definitions/IceMakerUpdate" }
4150           },
4151           "403": {
```

```

4152         "description" : "This response is generated by the OCF Server when the client sends:\n
4153 An UPDATE with an invalid property value for \"status\".\n\nThe OCF Server responds with the current
4154 resource representation.\n",
4155         "x-example":
4156         {
4157             "status": "off"
4158         },
4159         "schema": { "$ref": "#/definitions/IceMakerUpdate" }
4160     }
4161 }
4162 }
4163 }
4164 },
4165 "parameters": {
4166     "interface": {
4167         "in": "query",
4168         "name": "if",
4169         "type": "string",
4170         "enum": ["oic.if.a", "oic.if.baseline"]
4171     }
4172 },
4173 "definitions": {
4174     "IceMaker" : {
4175         "properties": {
4176             "rt": {
4177                 "description": "The Resource Type.",
4178                 "items": {
4179                     "enum": ["oic.r.icemaker"],
4180                     "maxLength": 64,
4181                     "type": "string"
4182                 },
4183                 "minItems": 1,
4184                 "uniqueItems": true,
4185                 "readOnly": true,
4186                 "type": "array"
4187             },
4188             "status": {
4189                 "description": "The status of the Ice Maker.",
4190                 "enum": [
4191                     "on",
4192                     "off",
4193                     "full"
4194                 ],
4195                 "type": "string"
4196             },
4197             "n": {
4198                 "$ref":
4199 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4200 schema.json#/definitions/n"
4201             },
4202             "id": {
4203                 "$ref":
4204 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4205 schema.json#/definitions/id"
4206             },
4207             "if": {
4208                 "description": "The OCF Interface set supported by this Resource.",
4209                 "items": {
4210                     "enum": [
4211                         "oic.if.a",
4212                         "oic.if.baseline"
4213                     ],
4214                     "type": "string"
4215                 },
4216                 "minItems": 2,
4217                 "uniqueItems": true,
4218                 "readOnly": true,
4219                 "type": "array"
4220             }
4221         },
4222         "type": "object",
4223         "required": ["status"]

```



```

4224     },
4225     "IceMakerUpdate" : {
4226       "properties": {
4227         "status": {
4228           "description": "Set the status of the Ice Maker.",
4229           "enum": [
4230             "on",
4231             "off"
4232           ]
4233         }
4234       },
4235       "type": "object",
4236       "required": ["status"]
4237     }
4238   }
4239 }
4240

```

4241 **6.14.5 Property definition**

4242 Table 31 defines the Properties that are part of the "oic.r.icemaker" Resource Type.

4243 **Table 31 – The Property definitions of the Resource with type "rt" = "oic.r.icemaker".**

Property name	Value type	Mandatory	Access mode	Description
id	multiple types: see schema	No	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.
status	string	Yes	Read Write	The status of the Ice Maker.
status	multiple types: see schema	Yes	Read Write	Set the status of the Ice Maker.

4244 **6.14.6 CRUDN behaviour**

4245 Table 32 defines the CRUDN operations that are supported on the "oic.r.icemaker" Resource Type.

4246 **Table 32 – The CRUDN operations of the Resource with type "rt" = "oic.r.icemaker".**

Create	Read	Update	Delete	Notify
	get	post		observe

4247 6.15 Lock

4248 6.15.1 Introduction

4249 The Resource describing a lock.
4250 The Property "lockState" is a string. The value 'Locked' indicates that the door is Locked.
4251 The value 'Unlocked' indicates that the door is Unlocked.

4252 6.15.2 Example URI

4253 /LockStatusResURI

4254 6.15.3 Resource type

4255 The Resource Type is defined as: "oic.r.lock.status".

4256 6.15.4 OpenAPI 2.0 definition

```
4257 {  
4258   "swagger": "2.0",  
4259   "info": {  
4260     "title": "Lock",  
4261     "version": "20190215",  
4262     "license": {  
4263       "name": "OCF Data Model License",  
4264       "url":  
4265       "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
4266       CENSE.md",  
4267       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
4268       reserved."  
4269     },  
4270     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
4271   },  
4272   "schemes": ["http"],  
4273   "consumes": ["application/json"],  
4274   "produces": ["application/json"],  
4275   "paths": {  
4276     "/LockStatusResURI" : {  
4277       "get": {  
4278         "description": "The Resource describing a lock.\nThe Property \"lockState\" is a string. The  
4279         value 'Locked' indicates that the door is Locked.\nThe value 'Unlocked' indicates that the door is  
4280         Unlocked.",  
4281         "parameters": [  
4282           {"$ref": "#/parameters/interface"}  
4283         ],  
4284         "responses": {  
4285           "200": {  
4286             "description": "RETRIEVES the state of the lock.",  
4287             "x-example":  
4288             {  
4289               "rt": ["oic.r.lock.status"],  
4290               "if": ["oic.if.a", "oic.if.baseline"],  
4291               "lockState": "Locked"  
4292             },  
4293             "schema": { "$ref": "#/definitions/Lock" }  
4294           }  
4295         }  
4296       },  
4297       "post": {  
4298         "description": "Sets the current lock state.\n",  
4299         "parameters": [  
4300           {"$ref": "#/parameters/interface"},  
4301           {  
4302             "name": "body",  
4303             "in": "body",  
4304             "required": true,  
4305             "schema": { "$ref": "#/definitions/Lock" },  
4306             "x-example":  
4307             {  
4308               "lockState": "Unlocked"  
4309             }  
4310           }  
4311         ]  
4312       }  
4313     }  
4314   }  
4315 }
```

```

4311     ],
4312     "responses": {
4313         "200": {
4314             "description": "",
4315             "x-example":
4316                 {
4317                     "lockState": "Unlocked"
4318                 },
4319             "schema": { "$ref": "#/definitions/Lock" }
4320         },
4321         "403": {
4322             "description": "This response is generated by the OCF Server when the client sends:\n
4323 An UPDATE with an invalid property value for \"lockState\".\n
4324 The server responds with the current
4325 resource representation.\n",
4326             "x-example":
4327                 {
4328                     "lockState": "Unlocked"
4329                 },
4330             "schema": { "$ref": "#/definitions/Lock" }
4331         }
4332     }
4333 },
4334 },
4335 "parameters": {
4336     "interface": {
4337         "in": "query",
4338         "name": "if",
4339         "type": "string",
4340         "enum": ["oic.if.a", "oic.if.baseline"]
4341     }
4342 },
4343 "definitions": {
4344     "Lock": {
4345         "properties": {
4346             "rt": {
4347                 "description": "Resource Type",
4348                 "items": {
4349                     "enum": ["oic.r.lock.status"],
4350                     "maxLength": 64,
4351                     "type": "string"
4352                 },
4353                 "minItems": 1,
4354                 "uniqueItems": true,
4355                 "readOnly": true,
4356                 "type": "array"
4357             },
4358             "lockState": {
4359                 "description": "The state of the lock.",
4360                 "enum": [
4361                     "Locked",
4362                     "Unlocked"
4363                 ],
4364                 "type": "string"
4365             },
4366             "n": {
4367                 "$ref":
4368                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4369                 schema.json#/definitions/n"
4370             },
4371             "id": {
4372                 "$ref":
4373                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4374                 schema.json#/definitions/id"
4375             },
4376             "if": {
4377                 "description": "The OCF Interface set supported by this Resource.",
4378                 "items": {
4379                     "enum": [
4380                         "oic.if.a",
4381                         "oic.if.baseline"
4382                     ],

```

```

4383         "type": "string"
4384     },
4385     "minItems": 2,
4386     "uniqueItems": true,
4387     "readOnly": true,
4388     "type": "array"
4389 }
4390 },
4391 "type": "object",
4392 "required": ["lockState"]
4393 }
4394 }
4395 }
4396

```

4397 **6.15.5 Property definition**

4398 Table 33 defines the Properties that are part of the "oic.r.lock.status" Resource Type.

4399 **Table 33 – The Property definitions of the Resource with type "rt" = "oic.r.lock.status".**

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

4400 **6.15.6 CRUDN behaviour**

4401 Table 34 defines the CRUDN operations that are supported on the "oic.r.lock.status" Resource
4402 Type.

4403 **Table 34 – The CRUDN operations of the Resource with type "rt" = "oic.r.lock.status".**

Create	Read	Update	Delete	Notify
	get	post		observe

4404 **6.16 Lock Code**

4405 **6.16.1 Introduction**

4406 The Resource describing a lock code.
4407 The Property "lockCodeList" is an array of possible codes that may be associated with a lock.
4408 The codes are all presented as strings.

4409 **6.16.2 Example URI**

4410 /LockCodeResURI

4411 **6.16.3 Resource type**

4412 The Resource Type is defined as: "oic.r.lock.code".

4413 **6.16.4 OpenAPI 2.0 definition**

```
4414 {
4415   "swagger": "2.0",
4416   "info": {
4417     "title": "Lock Code",
4418     "version": "20190215",
4419     "license": {
4420       "name": "OCF Data Model License",
4421       "url":
4422         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
4423         CENSE.md",
4424       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
4425         reserved."
4426     },
4427     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
4428   },
4429   "schemes": ["http"],
4430   "consumes": ["application/json"],
4431   "produces": ["application/json"],
4432   "paths": {
4433     "/LockCodeResURI" : {
4434       "get": {
4435         "description": "The Resource describing a lock code.\n\nThe Property \"lockCodeList\" is an
4436         array of possible codes that may be associated with a lock.\n\nThe codes are all presented as
4437         strings.",
4438         "parameters": [
4439           {"$ref": "#/parameters/interface"}
4440         ],
4441         "responses": {
4442           "200": {
4443             "description": "RETRIEVES the current lock code values.",
4444             "x-example":
4445               {
4446                 "rt": ["oic.r.lock.code"],
4447                 "if": ["oic.if.a", "oic.if.baseline"],
4448                 "lockCodeList": ["012345", "112233"]
4449               },
4450             "schema": { "$ref": "#/definitions/LockCode" }
4451           }
4452         }
4453       },
4454       "post": {
4455         "description": "Updates the current lock code values. e.g. all value in the property
4456         \"lockCodeList\"",
4457         "parameters": [
4458           {"$ref": "#/parameters/interface"},
4459           {
4460             "name": "body",
4461             "in": "body",
4462             "required": true,
4463             "schema": { "$ref": "#/definitions/LockCode" },
4464             "x-example":
4465               {
4466                 "lockCodeList": ["543210", "332211"]
4467               }
4468           }
4469         ],
4470         "responses": {
4471           "200": {
4472             "description": "",
4473             "x-example":
4474               {
4475                 "lockCodeList": ["543210", "332211"]
```

```

4476         },
4477         "schema": { "$ref": "#/definitions/LockCode" }
4478     }
4479 }
4480 }
4481 }
4482 },
4483 "parameters": {
4484     "interface" : {
4485         "in" : "query",
4486         "name" : "if",
4487         "type" : "string",
4488         "enum" : ["oic.if.a", "oic.if.baseline"]
4489     }
4490 },
4491 "definitions": {
4492     "LockCode" : {
4493         "properties": {
4494             "rt": {
4495                 "description": "The Resource Type.",
4496                 "items": {
4497                     "enum": ["oic.r.lock.code"],
4498                     "maxLength": 64,
4499                     "type": "string"
4500                 },
4501                 "minItems": 1,
4502                 "uniqueItems": true,
4503                 "readOnly": true,
4504                 "type": "array"
4505             },
4506             "lockCodeList": {
4507                 "items": {
4508                     "description": "The value for the lock code.",
4509                     "type": "string"
4510                 },
4511                 "type": "array"
4512             },
4513             "n": {
4514                 "$ref":
4515 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4516 schema.json#/definitions/n"
4517             },
4518             "id": {
4519                 "$ref":
4520 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4521 schema.json#/definitions/id"
4522             },
4523             "if": {
4524                 "description": "The OCF Interface set supported by this Resource.",
4525                 "items": {
4526                     "enum": [
4527                         "oic.if.a",
4528                         "oic.if.baseline"
4529                     ],
4530                     "type": "string"
4531                 },
4532                 "minItems": 2,
4533                 "uniqueItems": true,
4534                 "readOnly": true,
4535                 "type": "array"
4536             }
4537         },
4538         "type": "object",
4539         "required": ["lockCodeList"]
4540     }
4541 }
4542 }
4543

```

4544 6.16.5 Property definition

4545 Table 35 defines the Properties that are part of the "oic.r.lock.code" Resource Type.

4546

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

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

4547

6.16.6 CRUDN behaviour

4548

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

4549

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

Create	Read	Update	Delete	Notify
	get	post		observe

4550

6.17 Mode

4551

6.17.1 Introduction

4552

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

4553

The mode can be read or set.

4554

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

4555

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

4556

6.17.2 Example URI

4557

/ModeResURI

4558

6.17.3 Resource type

4559

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

4560

6.17.4 OpenAPI 2.0 definition

4561

```
{
  "swagger": "2.0",
  "info": {
    "title": "Mode",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url": "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
```

4562

4563

4564

4565

4566

4567

4568

4569

```

4570 CENSE.md",
4571     "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
4572 reserved."
4573 },
4574     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
4575 },
4576     "schemes": ["http"],
4577     "consumes": ["application/json"],
4578     "produces": ["application/json"],
4579     "paths": {
4580         "/ModeResURI" : {
4581             "get": {
4582                 "description": "This Resource describes the modes of operation that a Device can
4583 provide.\nThe mode can be read or set.\nThe Property \"supportedModes\" is an array of possible
4584 modes the device supports.\nThe Property \"modes\" is an array of the currently active mode(s).",
4585                 "parameters": [
4586                     {"$ref": "#/parameters/interface"}
4587                 ],
4588                 "responses": {
4589                     "200": {
4590                         "description": "RETRIEVES the current mode.",
4591                         "x-example":
4592                             {
4593                                 "rt": ["oic.r.mode"],
4594                                 "if": ["oic.if.a", "oic.if.baseline"],
4595                                 "supportedModes": ["active", "armedAway", "armedStay", "armedInstant"],
4596                                 "modes": ["active"]
4597                             },
4598                         "schema": { "$ref": "#/definitions/Mode" }
4599                     }
4600                 }
4601             },
4602             "post": {
4603                 "description": "Sets the desired mode.",
4604                 "parameters": [
4605                     {"$ref": "#/parameters/interface"},
4606                     {
4607                         "name": "body",
4608                         "in": "body",
4609                         "required": true,
4610                         "schema": { "$ref": "#/definitions/ModeUpdate" },
4611                         "x-example":
4612                             {
4613                                 "modes": ["armedAway"]
4614                             }
4615                     }
4616                 ],
4617                 "responses": {
4618                     "200": {
4619                         "description": "",
4620                         "x-example":
4621                             {
4622                                 "modes": ["armedAway"]
4623                             }
4624                     },
4625                     "schema": { "$ref": "#/definitions/ModeUpdate" }
4626                 },
4627                     "403": {
4628                         "description": "This response is generated by the OCF Server when the client sends:\n
4629 An UPDATE with an value for \"modes\" that is not found in \"supportedModes\".\n
4630 The server responds with the current resource representation.\n",
4631                         "x-example":
4632                             {
4633                                 "supportedModes": ["active", "armedAway", "armedStay", "armedInstant"],
4634                                 "modes": ["active"]
4635                             },
4636                         "schema": { "$ref": "#/definitions/Mode" }
4637                     }
4638                 }
4639             }
4640         }
4641     },

```



```

4642     "parameters": {
4643       "interface": {
4644         "in": "query",
4645         "name": "if",
4646         "type": "string",
4647         "enum": ["oic.if.a", "oic.if.baseline"]
4648       }
4649     },
4650     "definitions": {
4651       "Mode" : {
4652         "properties": {
4653           "rt": {
4654             "description": "The Resource Type.",
4655             "items": {
4656               "enum": ["oic.r.mode"],
4657               "maxLength": 64,
4658               "type": "string"
4659             },
4660             "minItems": 1,
4661             "uniqueItems": true,
4662             "readOnly": true,
4663             "type": "array"
4664           },
4665           "modes": {
4666             "description": "The array of the currently active mode(s).",
4667             "items": {
4668               "type": "string"
4669             },
4670             "type": "array"
4671           },
4672           "supportedModes": {
4673             "description": "The array of possible modes the device supports.",
4674             "items": {
4675               "type": "string"
4676             },
4677             "readOnly": true,
4678             "type": "array"
4679           },
4680           "n": {
4681             "$ref":
4682             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4683             schema.json#/definitions/n"
4684           },
4685           "id": {
4686             "$ref":
4687             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4688             schema.json#/definitions/id"
4689           },
4690           "if": {
4691             "description": "The OCF Interface set supported by this Resource.",
4692             "items": {
4693               "enum": [
4694                 "oic.if.a",
4695                 "oic.if.baseline"
4696               ],
4697               "type": "string"
4698             },
4699             "minItems": 2,
4700             "uniqueItems": true,
4701             "readOnly": true,
4702             "type": "array"
4703           }
4704         },
4705         "type": "object",
4706         "required": ["supportedModes", "modes"]
4707       },
4708       "ModeUpdate" : {
4709         "properties": {
4710           "modes": {
4711             "description": "Desired mode",
4712             "items": {
4713               "type": "string"

```

```

4714     },
4715     "type": "array"
4716   },
4717 },
4718 "type": "object",
4719 "required": ["modes"]
4720 }
4721 }
4722 }
4723

```

4724 **6.17.5 Property definition**

4725 Table 37 defines the Properties that are part of the "oic.r.mode" Resource Type.

4726 **Table 37 – The Property definitions of the Resource with type "rt" = "oic.r.mode".**

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

4727 **6.17.6 CRUDN behaviour**

4728 Table 38 defines the CRUDN operations that are supported on the "oic.r.mode" Resource Type.

4729 **Table 38 – The CRUDN operations of the Resource with type "rt" = "oic.r.mode".**

Create	Read	Update	Delete	Notify
	get	post		observe

4730 6.18 Open Level

4731 6.18.1 Introduction

4732 This Resource describes how open or ajar an entity such as a window, door, blind or shutter is.
4733 The Property "openLevel" can be read (acting as a sensor).
4734 The "openLevel" can also be set (acting as an actuator).
4735 The "openLevel" is device dependent across the range provided.
4736 When the Property "range" is omitted then 0 to 100 is assumed where 0 means closed, 100 means
4737 fully open.
4738 If a "range" is provided then the lower bound=closed, upper bound=open.
4739 If Property "step" is present then it represents the increment between possible values; if not
4740 provided 1 is assumed.

4741 6.18.2 Example URI

4742 /OpenLevelResURI

4743 6.18.3 Resource type

4744 The Resource Type is defined as: "oic.r.openlevel".

4745 6.18.4 OpenAPI 2.0 definition

```
4746 {  
4747   "swagger": "2.0",  
4748   "info": {  
4749     "title": "Open Level",  
4750     "version": "20190215",  
4751     "license": {  
4752       "name": "OCF Data Model License",  
4753       "url":  
4754       "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
4755       CENSE.md",  
4756       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
4757       reserved."  
4758     },  
4759     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
4760   },  
4761   "schemes": ["http"],  
4762   "consumes": ["application/json"],  
4763   "produces": ["application/json"],  
4764   "paths": {  
4765     "/OpenLevelResURI" : {  
4766       "get": {  
4767         "description": "This Resource describes how open or ajar an entity such as a window, door,  
4768         blind or shutter is.\n\nThe Property \"openLevel\" can be read (acting as a sensor).\n\nThe  
4769         \"openLevel\" can also be set (acting as an actuator).\n\nThe \"openLevel\" is device dependent across  
4770         the range provided.\n\nWhen the Property \"range\" is omitted then 0 to 100 is assumed where 0 means  
4771         closed, 100 means fully open.\n\nIf a \"range\" is provided then the lower bound=closed, upper  
4772         bound=open.\n\nIf Property \"step\" is present then it represents the increment between possible  
4773         values; if not provided 1 is assumed.",  
4774         "parameters": [  
4775           { "$ref": "#/parameters/interface" }  
4776         ],  
4777         "responses": {  
4778           "200": {  
4779             "description": "RETRIEVES the current openLevel.",  
4780             "x-example":  
4781               {  
4782                 "rt": ["oic.r.openlevel"],  
4783                 "if": ["oic.if.a", "oic.if.baseline"],  
4784                 "openLevel": 50,  
4785                 "step": 2,  
4786                 "range": [0, 100]  
4787               },  
4788             "schema": { "$ref": "#/definitions/OpenLevel" }  
4789           }  
4790         }  
4791       }  
4792     },
```

```

4792     "post": {
4793       "description": "Sets the desired openLevel.",
4794       "parameters": [
4795         { "$ref": "#/parameters/interface" },
4796         {
4797           "name": "body",
4798           "in": "body",
4799           "required": true,
4800           "schema": { "$ref": "#/definitions/OpenLevel" },
4801           "x-example":
4802             {
4803               "openLevel": 0
4804             }
4805         }
4806       ],
4807       "responses": {
4808         "200": {
4809           "description": "",
4810           "x-example":
4811             {
4812               "openLevel": 0
4813             },
4814           "schema": { "$ref": "#/definitions/OpenLevel" }
4815         },
4816         "403": {
4817           "description": "This response is generated by the OCF Server when the client sends:\n
4818 An UPDATE with an out of range property value for \"openLevel\".\n
4819 The OCF Server responds with the
4820 current resource representation.\n",
4821           "x-example":
4822             {
4823               "openLevel": 50,
4824               "step": 2,
4825               "range": [0, 100]
4826             },
4827           "schema": { "$ref": "#/definitions/OpenLevel" }
4828         }
4829       }
4830     },
4831     "parameters": {
4832       "interface": {
4833         "in": "query",
4834         "name": "if",
4835         "type": "string",
4836         "enum": ["oic.if.a", "oic.if.baseline"]
4837       }
4838     },
4839     "definitions": {
4840       "OpenLevel": {
4841         "properties": {
4842           "rt": {
4843             "description": "The Resource Type.",
4844             "items": {
4845               "maxLength": 64,
4846               "type": "string",
4847               "enum": ["oic.r.openlevel"]
4848             },
4849             "minItems": 1,
4850             "uniqueItems": true,
4851             "readOnly": true,
4852             "type": "array"
4853           },
4854           "openLevel": {
4855             "description": "How open or ajar the entity is.",
4856             "type": "integer"
4857           },
4858           "n": {
4859             "$ref":
4860               "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4861 schema.json#/definitions/n"
4862           }
4863         }

```

```

4864         "id": {
4865             "$ref":
4866 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4867 schema.json#/definitions/id"
4868         },
4869         "range": {
4870             "$ref":
4871 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
4872 schema.json#/definitions/range_integer"
4873         },
4874         "step": {
4875             "$ref":
4876 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
4877 schema.json#/definitions/step_integer"
4878         },
4879         "if": {
4880             "description": "The OCF Interface set supported by this Resource.",
4881             "items": {
4882                 "enum": [
4883                     "oic.if.a",
4884                     "oic.if.baseline"
4885                 ],
4886                 "type": "string"
4887             },
4888             "minItems": 2,
4889             "uniqueItems": true,
4890             "readOnly": true,
4891             "type": "array"
4892         }
4893     },
4894     "type": "object",
4895     "required": ["openLevel"]
4896 }
4897 }
4898 }
4899

```

6.18.5 Property definition

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

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.
if	array: see schema	No	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	
openLevel	integer	Yes	Read Write	How open or ajar the entity is.

step	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	

4903 **6.18.6 CRUDN behaviour**

4904 Table 40 defines the CRUDN operations that are supported on the "oic.r.openlevel" Resource Type.

4905 **Table 40 – The CRUDN operations of the Resource with type "rt" = "oic.r.openlevel".**

Create	Read	Update	Delete	Notify
	get	post		observe

4906 **6.19 Operational State**

4907 **6.19.1 Introduction**

4908 This Resource describes the operational and job states on a device.
 4909 The states can be read or set, setting indicates a desired state.
 4910 A device may reject an attempt to set a state that would result
 4911 in adverse operational characteristics.
 4912 The Property "machineStates" is an array of the possible operational states.
 4913 The Property "currentMachineState" is the current state of operation of the device.
 4914 The Property "jobStates" is an array of the possible job states.
 4915 The Property "currentJobState" is the currently active jobState.
 4916 The Property "runningTime" is the ISO8601 encoded elapsed time in the current operational state.
 4917 The Property "remainingTime" is the ISO8601 encoded time till completion of the current
 4918 operational state.
 4919 The Property "progressPercentage" is the percentage completeness of the current jobState.

4920 **6.19.2 Example URI**

4921 /OperationalStateResURI

4922 **6.19.3 Resource type**

4923 The Resource Type is defined as: "oic.r.operational.state".

4924 **6.19.4 OpenAPI 2.0 definition**

```

4925 {
4926   "swagger": "2.0",
4927   "info": {
4928     "title": "Operational State",
4929     "version": "20190215",
4930     "license": {
4931       "name": "OCF Data Model License",
4932       "url":
4933         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
4934         CENSE.md",
4935       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
4936         reserved."
4937     },
4938     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
4939   },
4940   "schemes": ["http"],
4941   "consumes": ["application/json"],
4942   "produces": ["application/json"],
4943   "paths": {
4944     "/OperationalStateResURI": {

```

```

4945     "get": {
4946         "description": "This Resource describes the operational and job states on a device.\nThe
4947 states can be read or set, setting indicates a desired state.\nA device may reject an attempt to set
4948 a state that would result\nin adverse operational characteristics.\n\nThe Property \"machineStates\"
4949 is an array of the possible operational states.\n\nThe Property \"currentMachineState\" is the current
4950 state of operation of the device.\n\nThe Property \"jobStates\" is an array of the possible job
4951 states.\n\nThe Property \"currentJobState\" is the currently active jobState.\n\nThe Property
4952 \"runningTime\" is the ISO8601 encoded elapsed time in the current operational state.\n\nThe Property
4953 \"remainingTime\" is the ISO8601 encoded time till completion of the current operational state.\n\nThe
4954 Property \"progressPercentage\" is the percentage completeness of the current jobState.",
4955         "parameters": [
4956             { "$ref": "#/parameters/interface" }
4957         ],
4958         "responses": {
4959             "200": {
4960                 "description" : "RETRIEVES the current operational and job states.",
4961                 "x-example": {
4962                     "rt": ["oic.r.operational.state"],
4963                     "if": ["oic.if.a", "oic.if.baseline"],
4964                     "machineStates": ["pause", "stopped", "idle", "active"],
4965                     "currentMachineState": "active",
4966                     "jobStates": ["preWash", "wash", "rinse", "spin", "dry", "airDry", "wrinklePrevent"],
4967                     "currentJobState": "rinse",
4968                     "runningTime": "PT15M20S",
4969                     "remainingTime": "PT10M40S",
4970                     "progressPercentage": 75
4971                 },
4972                 "schema": { "$ref": "#/definitions/Operation" }
4973             }
4974         },
4975     },
4976     "post": {
4977         "description": "Sets the desired operational or job state.",
4978         "parameters": [
4979             { "$ref": "#/parameters/interface" },
4980             {
4981                 "name": "body",
4982                 "in": "body",
4983                 "required": true,
4984                 "schema": { "$ref": "#/definitions/OperationUpdate" },
4985                 "x-example": {
4986                     "currentMachineState": "pause",
4987                     "currentJobState": "wash"
4988                 }
4989             }
4990         ],
4991         "responses": {
4992             "200": {
4993                 "description" : "",
4994                 "x-example": {
4995                     "currentMachineState": "pause",
4996                     "currentJobState": "wash"
4997                 },
4998                 "schema": { "$ref": "#/definitions/OperationUpdate" }
4999             },
5000             "403": {
5001                 "description" : "This response is generated by the OCF Server when the client sends:\n
5002 An UPDATE with an value for \"currentMachineState\" that is not found in \"machineStates\".\n\n An
5003 UPDATE with an value for \"currentJobState\" that is not found in \"jobStates\".\n\nThe OCF Server
5004 responds with the current resource representation.\n",
5005                 "x-example": {
5006                     "machineStates": ["pause", "stopped", "idle", "active"],
5007                     "currentMachineState": "active",
5008                     "jobStates": ["preWash", "wash", "rinse", "spin", "dry", "airDry", "wrinklePrevent"],
5009                     "currentJobState": "rinse",
5010                     "runningTime": "PT15M20S",
5011                     "remainingTime": "PT10M40S",
5012                     "progressPercentage": 75
5013                 },
5014                 "schema": { "$ref": "#/definitions/Operation" }
5015             }
5016         }
5017     }

```

```

5017     }
5018   }
5019 },
5020 "parameters": {
5021   "interface": {
5022     "in": "query",
5023     "name": "if",
5024     "type": "string",
5025     "enum": ["oic.if.a", "oic.if.baseline"]
5026   }
5027 },
5028 "definitions": {
5029   "Operation": {
5030     "properties": {
5031       "rt": {
5032         "description": "The Resource Type.",
5033         "items": {
5034           "enum": ["oic.r.operational.state"],
5035           "maxLength": 64,
5036           "type": "string"
5037         },
5038         "minItems": 1,
5039         "uniqueItems": true,
5040         "readOnly": true,
5041         "type": "array"
5042       },
5043       "currentMachineState": {
5044         "description": "The current state of operation of the device.",
5045         "type": "string"
5046       },
5047       "currentJobState": {
5048         "description": "The currently active jobState.",
5049         "type": "string"
5050       },
5051       "machineStates": {
5052         "description": "The array of the possible operational states.",
5053         "items": {
5054           "type": "string"
5055         },
5056         "readOnly": true,
5057         "type": "array"
5058       },
5059       "runningTime": {
5060         "$ref": "http://openconnectivityfoundation.github.io/core/schemas/oic.types-
5061 schema.json#/definitions/duration"
5062       },
5063       "remainingTime": {
5064         "$ref": "http://openconnectivityfoundation.github.io/core/schemas/oic.types-
5065 schema.json#/definitions/duration"
5066       },
5067       "progressPercentage": {
5068         "description": "The percentage completeness of the current jobState.",
5069         "maximum": 100,
5070         "minimum": 0,
5071         "readOnly": true,
5072         "type": "integer"
5073       },
5074       "jobStates": {
5075         "description": "The Array of the possible job states.",
5076         "items": {
5077           "type": "string"
5078         },
5079         "readOnly": true,
5080         "type": "array"
5081       },
5082       "n": {
5083         "$ref":
5084 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5085 schema.json#/definitions/n"
5086       },
5087       "id": {
5088         "$ref":

```



```

5089 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5090 schema.json#/definitions/id"
5091 },
5092 "if": {
5093   "description": "The OCF Interface set supported by this Resource.",
5094   "items": {
5095     "enum": [
5096       "oic.if.a",
5097       "oic.if.baseline"
5098     ],
5099     "type": "string"
5100   },
5101   "minItems": 2,
5102   "uniqueItems": true,
5103   "readOnly": true,
5104   "type": "array"
5105 }
5106 },
5107 "type": "object",
5108 "required": ["machineStates", "currentMachineState"]
5109 },
5110 "OperationUpdate" : {
5111   "properties": {
5112     "currentMachineState": {
5113       "description": "The current state of operation of the device.",
5114       "type": "string"
5115     },
5116     "currentJobState": {
5117       "description": "The currently active jobState.",
5118       "type": "string"
5119     }
5120   },
5121   "type": "object"
5122 }
5123 }
5124 }
5125

```

5126 6.19.5 Property definition

5127 Table 41 defines the Properties that are part of the "oic.r.operational.state" Resource Type.

5128 **Table 41 – The Property definitions of the Resource with type "rt" =**
5129 **"oic.r.operational.state".**

Property name	Value type	Mandatory	Access mode	Description
currentMachineState	string	Yes	Read Write	The current state of operation of the device.
machineStates	array: see schema	Yes	Read Only	The array of the possible operational states.
n	multiple types: see schema	No	Read Write	
jobStates	array: see schema	No	Read Only	The Array of the possible job states.

progressPercentage	integer	No	Read Only	The percentage completeness of the current jobState.
currentJobState	string	No	Read Write	The currently active jobState.
id	multiple types: see schema	No	Read Write	
runningTime	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
remainingTime	multiple types: see schema	No	Read Write	
rt	array: see schema	No	Read Only	The Resource Type.
currentMachineState	string		Read Write	The current state of operation of the device.
currentJobState	string		Read Write	The currently active jobState.

5130 **6.19.6 CRUDN behaviour**

5131 Table 42 defines the CRUDN operations that are supported on the "oic.r.operational.state"
5132 Resource Type.

5133 **Table 42 – The CRUDN operations of the Resource with type "rt" = "oic.r.operational.state".**

Create	Read	Update	Delete	Notify
	get	post		observe

5134 **6.20 Ramp Time**

5135 **6.20.1 Introduction**

5136 This Resource that describes the ramp time of a dimming function.
5137 It specifies the actual speed of changing between 2 dimming values.
5138 The Property "ramptime" is specified in milliseconds [ms].
5139 When range is omitted the maximum value is 100 ms.
5140 The ramp time of 0ms indicates the minimal delay possible by the implementation.

5141 **6.20.2 Example URI**

5142 /RampTimeResURI

5143 **6.20.3 Resource type**

5144 The Resource Type is defined as: "oic.r.light.ramptime".

5145 **6.20.4 OpenAPI 2.0 definition**

```
5146 {
5147   "swagger": "2.0",
5148   "info": {
5149     "title": "Ramp Time",
5150     "version": "20190215",
5151     "license": {
5152       "name": "OCF Data Model License",
5153       "url":
5154         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
5155         CENSE.md",
5156       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
5157         reserved."
5158     },
5159     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
5160   },
5161   "schemes": ["http"],
5162   "consumes": ["application/json"],
5163   "produces": ["application/json"],
5164   "paths": {
5165     "/RampTimeResURI" : {
5166       "get": {
5167         "description": "This Resource that describes the ramp time of a dimming function.\nIt
5168         specifies the actual speed of changing between 2 dimming values.\nThe Property \"ramptime\" is
5169         specified in milliseconds [ms].\nWhen range is omitted the maximum value is 100 ms.\nThe ramp time
5170         of 0ms indicates the minimal delay possible by the implementation.",
5171         "parameters": [
5172           { "$ref": "#/parameters/interface" }
5173         ],
5174         "responses": {
5175           "200": {
5176             "description": "RETRIEVES the current RampTime.",
5177             "x-example":
5178               {
5179                 "rt": ["oic.r.light.ramptime"],
5180                 "if": ["oic.if.a", "oic.if.baseline"],
5181                 "rampTime": 40,
5182                 "range": [0, 100]
5183               },
5184             "schema": { "$ref": "#/definitions/RampTime" }
5185           }
5186         }
5187       },
5188       "post": {
5189         "description": "Sets the current RampTime.\n",
5190         "parameters": [
5191           { "$ref": "#/parameters/interface" },
5192           {
5193             "name": "body",
5194             "in": "body",
5195             "required": true,
5196             "schema": { "$ref": "#/definitions/RampTime" },
5197             "x-example":
5198               {
5199                 "rampTime": 50
5200               }
5201           }
5202         ],
5203         "responses": {
5204           "200": {
5205             "description": "This response is generated by the OCF Server when the client sends an
5206             UPDATE with an in range Property value for \"ramptime\". The OCF Server responds with the current
5207             resource representation.",
```

```

5208         "x-example":
5209             {
5210                 "rampTime": 50,
5211                 "range": [0, 100]
5212             },
5213         "schema": { "$ref": "#/definitions/RampTime" }
5214     },
5215     "403": {
5216         "description": "Error response. This response is generated by the OCF Server when the
client sends an UPDATE with an out of range Property value for \"rampTime\".",
5217         "x-example":
5218             {
5219                 "rampTime": 40,
5220                 "range": [0, 100]
5221             },
5222         "schema": { "$ref": "#/definitions/RampTime" }
5223     }
5224 }
5225 }
5226 }
5227 }
5228 },
5229 "parameters": {
5230     "interface": {
5231         "in": "query",
5232         "name": "if",
5233         "type": "string",
5234         "enum": ["oic.if.a", "oic.if.baseline"]
5235     }
5236 },
5237 "definitions": {
5238     "RampTime": {
5239         "properties": {
5240             "rt": {
5241                 "description": "The Resource Type.",
5242                 "items": {
5243                     "enum": ["oic.r.light.ramptime"],
5244                     "maxLength": 64,
5245                     "type": "string"
5246                 },
5247                 "minItems": 1,
5248                 "uniqueItems": true,
5249                 "readOnly": true,
5250                 "type": "array"
5251             },
5252             "rampTime": {
5253                 {
5254                     "description": "The actual speed of changing between 2 dimming values.",
5255                     "type": "integer"
5256                 },
5257             "n": {
5258                 "$ref":
5259 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5260 schema.json#/definitions/n"
5261             },
5262             "id": {
5263                 "$ref":
5264 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5265 schema.json#/definitions/id"
5266             },
5267             "range": {
5268                 "$ref":
5269 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
5270 schema.json#/definitions/range_integer"
5271             },
5272             "step": {
5273                 "$ref":
5274 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
5275 schema.json#/definitions/step_integer"
5276             },
5277             "precision": {
5278                 "$ref":
5279 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-

```

```

5280 schema.json#/definitions/precision"
5281     },
5282     "if": {
5283       "description": "The OCF Interface set supported by this Resource.",
5284       "items": {
5285         "enum": [
5286           "oic.if.a",
5287           "oic.if.baseline"
5288         ],
5289         "type": "string"
5290       },
5291       "minItems": 2,
5292       "uniqueItems": true,
5293       "readOnly": true,
5294       "type": "array"
5295     }
5296   },
5297   "type": "object",
5298   "required": ["rampTime"]
5299 }
5300 }
5301 }
5302

```

5303 6.20.5 Property definition

5304 Table 43 defines the Properties that are part of the "oic.r.light.ramptime" Resource Type.

5305 **Table 43 – The Property definitions of the Resource with type "rt" = "oic.r.light.ramptime".**

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

5306 **6.20.6 CRUDN behaviour**

5307 Table 44 defines the CRUDN operations that are supported on the "oic.r.light.ramptime" Resource
5308 Type.

5309 **Table 44 – The CRUDN operations of the Resource with type "rt" = "oic.r.light.ramptime".**

Create	Read	Update	Delete	Notify
	get	post		observe

5310 **6.21 Refrigeration**

5311 **6.21.1 Introduction**

5312 This Resource describes a refrigeration function.
5313 The Property "filter" is a read-only value providing the percentage life time remaining for the water
5314 filter.

5315 The Property "rapidFreeze" is a boolean that controls the rapid freeze capability if present.
5316 The Property "rapidCool" is a boolean that controls the rapid cool capability if present.
5317 The Property "defrost" is a boolean that controls the defrost cycle if present.
5318 At least one of the listed Properties shall be present in a Resource Instance.

5319 **6.21.2 Example URI**

5320 /RefrigerationResURI

5321 **6.21.3 Resource type**

5322 The Resource Type is defined as: "oic.r.refrigeration".

5323 **6.21.4 OpenAPI 2.0 definition**

```

5324 {
5325   "swagger": "2.0",
5326   "info": {
5327     "title": "Refrigeration",
5328     "version": "20190215",
5329     "license": {
5330       "name": "OCF Data Model License",
5331       "url":
5332         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
5333         CENSE.md",
5334       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
5335         reserved."
5336     },
5337     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
5338   },
5339   "schemes": ["http"],
5340   "consumes": ["application/json"],
5341   "produces": ["application/json"],
5342   "paths": {
5343     "/RefrigerationResURI" : {
5344       "get": {
5345         "description": "This Resource describes a refrigeration function.\nThe Property \"filter\"
5346         is a read-only value providing the percentage life time remaining for the water filter.\nThe
5347         Property \"rapidFreeze\" is a boolean that controls the rapid freeze capability if present.\nThe
5348         Property \"rapidCool\" is a boolean that controls the rapid cool capability if present.\nThe
5349         Property \"defrost\" is a boolean that controls the defrost cycle if present.\nAt least one of the
5350         listed Properties shall be present in a Resource Instance.",
5351         "parameters": [
5352           {"$ref": "#/parameters/interface"}
5353         ],
5354         "responses": {
5355           "200": {
5356             "description": "Retrieves the current Refrigeration function status; all Properties
5357             supported by the Device are returned.",

```

```

5358         "x-example":
5359             {
5360                 "rt": ["oic.r.refrigeration"],
5361                 "if": ["oic.if.a", "oic.if.baseline"],
5362                 "filter": 75,
5363                 "rapidFreeze": false,
5364                 "rapidCool": false,
5365                 "defrost": true
5366             },
5367         "schema": { "$ref": "#/definitions/Refrigeration" }
5368     }
5369 },
5370 },
5371 "post": {
5372     "description": "Activates the desired Refrigeration functions.\nSuported values are
5373 \\"rapidFreeze\\", \\"rapidCool\\" and \\"defrost\\".\nAt least on of the supported values shall be
5374 provided.\n",
5375     "parameters": [
5376         { "$ref": "#/parameters/interface" },
5377         {
5378             "name": "body",
5379             "in": "body",
5380             "required": true,
5381             "schema": { "$ref": "#/definitions/RefrigerationUpdate" },
5382             "x-example":
5383                 {
5384                     "rapidFreeze": true
5385                 }
5386         },
5387     ],
5388     "responses": {
5389         "200": {
5390             "description": "Indicates that the Refrigeration function was changed.\nThe new
5391 status can be provided in the response.\n",
5392             "x-example":
5393                 {
5394                     "rapidFreeze": true
5395                 },
5396             "schema": { "$ref": "#/definitions/RefrigerationUpdate" }
5397         }
5398     }
5399 },
5400 },
5401 "parameters": {
5402     "interface": {
5403         "in": "query",
5404         "name": "if",
5405         "type": "string",
5406         "enum": ["oic.if.a", "oic.if.baseline"]
5407     }
5408 },
5409 },
5410 "definitions": {
5411     "Refrigeration" : {
5412         "properties": {
5413             "rt": {
5414                 "description": "The Resource Type.",
5415                 "items": {
5416                     "enum": ["oic.r.refrigeration"],
5417                     "maxLength": 64,
5418                     "type": "string"
5419                 },
5420                 "minItems": 1,
5421                 "uniqueItems": true,
5422                 "readOnly": true,
5423                 "type": "array"
5424             },
5425             "rapidFreeze": {
5426                 "description": "Indicates whether the unit has a rapid freeze capability active.",
5427                 "type": "boolean"
5428             },
5429             "defrost": {

```

```

5430         "description": "Indicates whether a defrost cycle is currently active.",
5431         "type": "boolean"
5432     },
5433     "filter": {
5434         "description": "Percentage life time remaining for the water filter.",
5435         "maximum": 100,
5436         "minimum": 0,
5437         "readOnly": true,
5438         "type": "integer"
5439     },
5440     "rapidCool": {
5441         "description": "Indicates whether the unit has a rapid cool capability active.",
5442         "type": "boolean"
5443     },
5444     "n": {
5445         "$ref":
5446         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5447         schema.json#/definitions/n"
5448     },
5449     "id": {
5450         "$ref":
5451         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5452         schema.json#/definitions/id"
5453     },
5454     "if": {
5455         "description": "The OCF Interface set supported by this Resource.",
5456         "items": {
5457             "enum": [
5458                 "oic.if.a",
5459                 "oic.if.baseline"
5460             ],
5461             "type": "string"
5462         },
5463         "minItems": 2,
5464         "readOnly": true,
5465         "type": "array"
5466     }
5467 },
5468 "anyOf": [
5469     {
5470         "required": ["filter"]
5471     },
5472     {
5473         "required": ["rapidFreeze"]
5474     },
5475     {
5476         "required": ["rapidCool"]
5477     },
5478     {
5479         "required": ["defrost"]
5480     }
5481 ],
5482 "type": "object"
5483 },
5484 "RefrigerationUpdate": {
5485     "properties": {
5486         "rapidFreeze": {
5487             "description": "Indicates whether the unit has a rapid freeze capability active.",
5488             "type": "boolean"
5489         },
5490         "defrost": {
5491             "description": "Indicates whether a defrost cycle is currently active.",
5492             "type": "boolean"
5493         },
5494         "rapidCool": {
5495             "description": "Indicates whether the unit has a rapid cool capability active.",
5496             "type": "boolean"
5497         }
5498     },
5499     "anyOf": [
5500         {
5501             "required": ["rapidFreeze"]

```



```

5502         },
5503         {
5504             "required": ["rapidCool"]
5505         },
5506         {
5507             "required": ["defrost"]
5508         }
5509     ],
5510     "type": "object"
5511 }
5512 }
5513 }
5514

```

5515 **6.21.5 Property definition**

5516 Table 45 defines the Properties that are part of the "oic.r.refrigeration" Resource Type.

5517 **Table 45 – The Property definitions of the Resource with type "rt" = "oic.r.refrigeration".**

Property name	Value type	Mandatory	Access mode	Description
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.
rapidFreeze	boolean	No	Read Write	Indicates whether the unit has a rapid freeze capability active.
rapidCool	boolean	No	Read Write	Indicates whether the unit has a rapid cool capability active.
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.

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.
filter	integer	No	Read Only	Percentage life time remaining for the water filter.

5518 **6.21.6 CRUDN behaviour**

5519 Table 46 defines the CRUDN operations that are supported on the "oic.r.refrigeration" Resource
5520 Type.

5521 **Table 46 – The CRUDN operations of the Resource with type "rt" = "oic.r.refrigeration".**

Create	Read	Update	Delete	Notify
	get	post		observe

5522 **6.22 Temperature**

5523 **6.22.1 Introduction**

5524 This Resource describes a sensed or actuated Temperature value.
5525 The Property "temperature" describes the current value measured.
5526 The Property "units" is a single value that is one of "C", "F" or "K".
5527 It provides the unit of measurement for the "temperature" value.
5528 It is a read-only value that is provided by the server.
5529 If the "units" Property is missing the default is Celsius [C].
5530 When the Property "range" is omitted the default is +/- MAXINT.
5531 A client can specify the units for the requested temperature by use of a query parameter.
5532 If no query parameter is provided the server provides its default measure or set value.
5533 It is recommended to return always the units Property in the result.

5534 **6.22.2 Example URI**

5535 /TemperatureResURI

5536 **6.22.3 Resource type**

5537 The Resource Type is defined as: "oic.r.temperature".

5538 **6.22.4 OpenAPI 2.0 definition**

```
5539 {
5540   "swagger": "2.0",
5541   "info": {
5542     "title": "Temperature",
5543     "version": "20190215",
5544     "license": {
5545       "name": "OCF Data Model License",
5546       "url":
```

```

5547 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
5548 CENSE.md",
5549   "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
5550 reserved."
5551   },
5552   "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
5553   },
5554   "schemes": ["http"],
5555   "consumes": ["application/json"],
5556   "produces": ["application/json"],
5557   "paths": {
5558     "/TemperatureResURI" : {
5559       "get": {
5560         "description": "This Resource describes a sensed or actuated Temperature value.\nThe
5561 Property \"temperature\" describes the current value measured.\nThe Property \"units\" is a single
5562 value that is one of \"C\", \"F\" or \"K\".\nIt provides the unit of measurement for the
5563 \"temperature\" value.\nIt is a read-only value that is provided by the server.\nIf the \"units\"
5564 Property is missing the default is Celsius [C].\nWhen the Property \"range\" is omitted the default
5565 is +/- MAXINT.\nA client can specify the units for the requested temperature by use of a query
5566 parameter.\nIf no query parameter is provided the server provides its default measure or set
5567 value.\nIt is recommended to return always the units Property in the result.",
5568         "parameters": [
5569           { "$ref": "#/parameters/interface" },
5570           { "$ref": "#/parameters/unit" }
5571         ],
5572         "responses": {
5573           "200": {
5574             "description": "Retrieves the current temperature value.",
5575             "x-example":
5576               {
5577                 "rt": ["oic.r.temperature"],
5578                 "if": [ "oic.if.a", "oic.if.baseline"],
5579                 "temperature": 20.0,
5580                 "units": "C"
5581               }
5582           },
5583           "schema": { "$ref": "#/definitions/Temperature" }
5584         },
5585         "403": {
5586           "description": "This response is generated by the OCF Server when the client sends:\n
5587 A RETRIEVE with queryParameter indicating a unit that the server does not support.\nThe server
5588 responds with the current resource representation including the\n\"units\" property illustrating the
5589 supported units and the error.",
5590           "x-example":
5591             {
5592               "temperature": 20.0,
5593               "units": "C"
5594             },
5595           "schema": { "$ref": "#/definitions/Temperature" }
5596         }
5597       }
5598     },
5599     "post": {
5600       "description": "Sets the desired temperature value.\nIf a \"unit\" is included and the
5601 server may not support the unit indicated the request will fail.\nIf the units are omitted value is
5602 taken to be in C.",
5603       "parameters": [
5604         { "$ref": "#/parameters/interface" },
5605         {
5606           "name": "body",
5607           "in": "body",
5608           "required": true,
5609           "schema": { "$ref": "#/definitions/Temperature" },
5610           "x-example":
5611             {
5612               "temperature": 18.0,
5613               "units": "F"
5614             }
5615         }
5616       ],
5617       "responses": {
5618         "200": {

```

```

5619         "description" : "",
5620         "x-example":
5621         {
5622             "temperature": 18.0,
5623             "units": "F"
5624         }
5625     },
5626     "schema": { "$ref": "#/definitions/Temperature" }
5627 },
5628 "403": {
5629     "description": "This response is generated by the OCF Server when the client sends:\n
5630 An UPDATE with an out of range property value for temperature.\n An UPDATE with an unsupported unit
5631 for this server.\nThe OCF Server responds with the current resource representation including\nthe
5632 \"range\" property illustrating the supported range and the error.",
5633     "x-example":
5634     {
5635         "temperature": 20.0,
5636         "units": "C"
5637     }
5638 },
5639     "schema": { "$ref": "#/definitions/Temperature" }
5640 }
5641 }
5642 }
5643 },
5644 },
5645 "parameters": {
5646     "interface" : {
5647         "in" : "query",
5648         "name" : "if",
5649         "type" : "string",
5650         "enum" : ["oic.if.a", "oic.if.s", "oic.if.baseline"]
5651     },
5652     "unit" : {
5653         "in": "query",
5654         "description": "Units",
5655         "type": "string",
5656         "enum": ["C", "F", "K"],
5657         "name": "units",
5658         "x-queryexample" : "/TemperatureResURI?units=C"
5659     }
5660 },
5661 "definitions": {
5662     "Temperature" : {
5663         "properties": {
5664             "rt" : {
5665                 "description": "The Resource Type.",
5666                 "items": {
5667                     "maxLength": 64,
5668                     "type": "string",
5669                     "enum": ["oic.r.temperature"]
5670                 },
5671                 "minItems": 1,
5672                 "uniqueItems": true,
5673                 "readOnly": true,
5674                 "type": "array"
5675             },
5676             "temperature" : {
5677                 "description": "The current temperature setting or measurement.",
5678                 "type": "number"
5679             },
5680             "units" : {
5681                 "description": "The unit for the conveyed temperature value, Note that when doing an
5682 UPDATE, the unit on the device does NOT change, it only indicates the unit of the conveyed value
5683 during the UPDATE operation.",
5684                 "enum": [
5685                     "C",
5686                     "F",
5687                     "K"
5688                 ],
5689                 "type": "string"
5690             }
5691         }
5692     }
5693 }

```

```

5691         "n": {
5692             "$ref":
5693             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5694             schema.json#/definitions/n"
5695         },
5696         "id": {
5697             "$ref":
5698             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5699             schema.json#/definitions/id"
5700         },
5701         "range" : {
5702             "$ref":
5703             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
5704             schema.json#/definitions/range_number"
5705         },
5706         "step" : {
5707             "$ref":
5708             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
5709             schema.json#/definitions/step_number"
5710         },
5711         "precision" : {
5712             "$ref":
5713             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
5714             schema.json#/definitions/precision"
5715         },
5716         "if" : {
5717             "description": "The OCF Interface set supported by this Resource.",
5718             "items": {
5719                 "enum": [
5720                     "oic.if.baseline",
5721                     "oic.if.s",
5722                     "oic.if.a"
5723                 ],
5724                 "maxLength": 64,
5725                 "type": "string"
5726             },
5727             "minItems": 2,
5728             "uniqueItems": true,
5729             "readOnly": true,
5730             "type": "array"
5731         }
5732     },
5733     "type" : "object",
5734     "required": ["temperature"]
5735 }
5736 }
5737 }

```

5738 6.22.5 Property definition

5739 Table 47 defines the Properties that are part of the "oic.r.temperature" Resource Type.

5740 **Table 47 – The Property definitions of the Resource with type "rt" = "oic.r.temperature".**

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

5741 **6.22.6 CRUDN behaviour**

5742 Table 48 defines the CRUDN operations that are supported on the "oic.r.temperature" Resource
5743 Type.

5744 **Table 48 – The CRUDN operations of the Resource with type "rt" = "oic.r.temperature".**

Create	Read	Update	Delete	Notify
	get	post		observe

5745 **6.23 Time Period**

5746 **6.23.1 Introduction**

5747 This Resource describes the time period over which any additionally provided information is derived
5748 or bounded.
5749 The Property "startTime" and "stopTime" are RFC3339 encoded strings. The Property "startTime"
5750 must be present.
5751 The interval is the interval of the time period in minutes, if present this value must be no less than
5752 1 minute.
5753 The Property "stoptime" and "interval" are mutually exclusive; both Properties cannot be present

5754 in a Resource instance.
5755 The Resource defines a time period for information retrieval, action or other behaviour.

5756 6.23.2 Example URI

5757 /TimePeriodResURI

5758 6.23.3 Resource type

5759 The Resource Type is defined as: "oic.r.time.period".

5760 6.23.4 OpenAPI 2.0 definition

```
5761 {
5762   "swagger": "2.0",
5763   "info": {
5764     "title": "Time Period",
5765     "version": "20190215",
5766     "license": {
5767       "name": "OCF Data Model License",
5768       "url":
5769 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
5770 CENSE.md",
5771       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
5772 reserved."
5773     },
5774     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
5775   },
5776   "schemes": ["http"],
5777   "consumes": ["application/json"],
5778   "produces": ["application/json"],
5779   "paths": {
5780     "/TimePeriodResURI" : {
5781       "get": {
5782         "description": "This Resource describes the time period over which any additionally provided
5783 information is derived or bounded.\nThe Property \"startTime\" and \"stopTime\" are RFC3339 encoded
5784 strings. The Property \"startTime\" must be present.\nThe interval is the interval of the time
5785 period in minutes, if present this value must be no less than 1 minute.\nThe Property \"stoptime\"
5786 and \"interval\" are mutually exclusive; both Properties cannot be present in a Resource
5787 instance.\nThe Resource defines a time period for information retrieval, action or other
5788 behaviour.",
5789         "parameters": [
5790           { "$ref": "#/parameters/interface" }
5791         ],
5792         "responses": {
5793           "200": {
5794             "description": "",
5795             "x-example":
5796               {
5797                 "rt": ["oic.r.time.period"],
5798                 "if": ["oic.if.a", "oic.if.baseline"],
5799                 "startTime": "2015-01-09T14:30:00Z",
5800                 "stopTime": "2015-01-09T14:45:00Z"
5801               },
5802             "schema": { "$ref": "#/definitions/TimePeriod" }
5803           }
5804         }
5805       },
5806       "post": {
5807         "description": "Sets or updates a time period for information retrieval, action or other
5808 behavior.",
5809         "parameters": [
5810           { "$ref": "#/parameters/interface" },
5811           {
5812             "name": "body",
5813             "in": "body",
5814             "required": true,
5815             "schema": { "$ref": "#/definitions/TimePeriod" },
5816             "x-example":
5817               {
5818                 "startTime": "2015-01-09T14:30:00Z",
```

```

5819         "stopTime": "2015-01-09T14:45:00Z"
5820     }
5821 }
5822 ],
5823 "responses": {
5824     "200": {
5825         "description": "",
5826         "x-example":
5827         {
5828             "startTime": "2015-01-09T14:30:00Z",
5829             "stopTime": "2015-01-09T14:45:00Z"
5830         },
5831         "schema": { "$ref": "#/definitions/TimePeriod" }
5832     }
5833 }
5834 }
5835 },
5836 },
5837 "parameters": {
5838     "interface": {
5839         "in": "query",
5840         "name": "if",
5841         "type": "string",
5842         "enum": ["oic.if.a", "oic.if.baseline"]
5843     }
5844 },
5845 "definitions": {
5846     "TimePeriod": {
5847         "properties": {
5848             "rt": {
5849                 "description": "The Resource Type.",
5850                 "items": {
5851                     "enum": ["oic.r.time.period"],
5852                     "maxLength": 64,
5853                     "type": "string"
5854                 },
5855                 "minItems": 1,
5856                 "uniqueItems": true,
5857                 "readOnly": true,
5858                 "type": "array"
5859             },
5860             "interval": {
5861                 "description": "The time interval in minutes after the \"startTime\", if present the
5862 Property \"stopTime\" cannot be present.",
5863                 "type": "integer"
5864             },
5865             "stopTime": {
5866                 "description": "The stop time for the time period, if present the Property \"interval\"
5867 cannot be present.",
5868                 "type": "string",
5869                 "format": "date-time"
5870             },
5871             "startTime": {
5872                 "description": "The start time for the time period.",
5873                 "type": "string",
5874                 "format": "date-time"
5875             },
5876             "n": {
5877                 "$ref":
5878 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5879 schema.json#/definitions/n"
5880             },
5881             "id": {
5882                 "$ref":
5883 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5884 schema.json#/definitions/id"
5885             },
5886             "if": {
5887                 "description": "The OCF Interface set supported by this Resource.",
5888                 "items": {
5889                     "enum": [
5890                         "oic.if.a",

```



```

5891         "oic.if.baseline"
5892     ],
5893     "type": "string"
5894 },
5895     "minItems": 2,
5896     "uniqueItems": true,
5897     "readOnly": true,
5898     "type": "array"
5899 }
5900 },
5901     "type": "object",
5902     "required": ["startTime"]
5903 }
5904 }
5905 }
5906

```

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
interval	integer	No	Read Write	The time interval in minutes after the "startTime", if present the Property "stopTime" cannot be present.
n	multiple types: see schema	No	Read Write	
startTime	string	Yes	Read Write	The start time for the time period.
id	multiple types: see schema	No	Read Write	
stopTime	string	No	Read Write	The stop time for the time period, if present the Property "interval" cannot be present.
rt	array: see schema	No	Read Only	The Resource Type.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

5910 **6.23.6 CRUDN behaviour**

5911 Table 50 defines the CRUDN operations that are supported on the "oic.r.time.period" Resource
5912 Type.

5913 **Table 50 – The CRUDN operations of the Resource with type "rt" = "oic.r.time.period".**

Create	Read	Update	Delete	Notify
	get	post		observe

5914 **6.24 Activity Count**

5915 **6.24.1 Introduction**

5916 This Resource specifies an activity count.
5917 The Resource can be readonly (oic.if.s interface) in which instance it represents a count.
5918 The Resource can be readwrite (oic.if.a interface) in which instance it represents a goal or target
5919 for a count.
5920 The Property "count" is an integer representing either the current count or goal value.

5921 **6.24.2 Example URI**

5922 /ActivityCountResURI

5923 **6.24.3 Resource type**

5924 The Resource Type is defined as: "oic.r.sensor.activity.count".

5925 **6.24.4 OpenAPI 2.0 definition**

```
5926 {  
5927   "swagger": "2.0",  
5928   "info": {  
5929     "title": "Activity Count",  
5930     "version": "20190222",  
5931     "license": {  
5932       "name": "OCF Data Model License",  
5933       "url":  
5934       "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
5935       CENSE.md",  
5936       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."  
5937     },  
5938     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
5939   },  
5940   "schemes": ["http"],  
5941   "consumes": ["application/json"],  
5942   "produces": ["application/json"],  
5943   "paths": {  
5944     "/ActivityCountResURI" : {  
5945       "get": {  
5946         "description": "This Resource specifies an activity count.\n\nThe Resource can be readonly  
5947 (oic.if.s interface) in which instance it represents a count.\n\nThe Resource can be readwrite  
5948 (oic.if.a interface) in which instance it represents a goal or target for a count.\n\nThe Property  
5949 \"count\" is an integer representing either the current count or goal value.",  
5950         "parameters": [  
5951           {"$ref": "#/parameters/interface"}  
5952         ],  
5953         "responses": {  
5954           "200": {  
5955             "description": "",  
5956             "x-example":  
5957               {  
5958                 "rt": ["oic.r.sensor.activity.count"],  
5959                 "if": ["oic.if.a", "oic.if.baseline"],  
5960                 "count": 2500  
5961               },  
5962             "schema": { "$ref": "#/definitions/Count" }  
5963           }  
5964         }  
5965       }  
5966     }  
5967   }  
5968 }
```

```

5963     }
5964   },
5965 },
5966 "post": {
5967   "description": "Sets the \"count\" target.",
5968   "parameters": [
5969     { "$ref": "#/parameters/interface" },
5970     {
5971       "name": "body",
5972       "in": "body",
5973       "required": true,
5974       "schema": { "$ref": "#/definitions/Count" },
5975       "x-example":
5976         {
5977           "count": 5000
5978         }
5979     }
5980   ],
5981   "responses": {
5982     "200": {
5983       "description": "",
5984       "x-example":
5985         {
5986           "count": 5000
5987         },
5988       "schema": { "$ref": "#/definitions/Count" }
5989     }
5990   }
5991 },
5992 },
5993 },
5994 "parameters": {
5995   "interface": {
5996     "in": "query",
5997     "name": "if",
5998     "type": "string",
5999     "enum": ["oic.if.a", "oic.if.s", "oic.if.baseline"]
6000   }
6001 },
6002 "definitions": {
6003   "Count": {
6004     "properties": {
6005       "rt": {
6006         "description": "The Resource Type.",
6007         "items": {
6008           "maxLength": 64,
6009           "type": "string",
6010           "enum": ["oic.r.sensor.activity.count"]
6011         },
6012         "minItems": 1,
6013         "uniqueItems": true,
6014         "readOnly": true,
6015         "type": "array"
6016       },
6017       "count": {
6018         "description": "The current or Target count.",
6019         "type": "integer"
6020       },
6021       "n": {
6022         "$ref":
6023           "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6024           schema.json#/definitions/n"
6025       },
6026       "id": {
6027         "$ref":
6028           "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6029           schema.json#/definitions/id"
6030       },
6031       "range": {
6032         "$ref":
6033           "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6034           schema.json#/definitions/range_integer"

```

```

6035     },
6036     "step": {
6037         "$ref":
6038         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6039         schema.json#/definitions/step_integer"
6040     },
6041     "if": {
6042         "description": "The OCF Interface set supported by this Resource.",
6043         "items": {
6044             "enum": [
6045                 "oic.if.a",
6046                 "oic.if.s",
6047                 "oic.if.baseline"
6048             ],
6049             "type": "string"
6050         },
6051         "minItems": 2,
6052         "readOnly": true,
6053         "uniqueItems": true,
6054         "type": "array"
6055     }
6056 },
6057 "type": "object",
6058 "required": ["count"]
6059 }
6060 }
6061 }
6062

```

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
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
rt	array: see schema	No	Read Only	The Resource Type.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
id	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
count	integer	Yes	Read Write	The current or Target count.

6067 **6.24.6 CRUDN behaviour**

6068 Table 52 defines the CRUDN operations that are supported on the "oic.r.sensor.activity.count"
 6069 Resource Type.

6070 **Table 52 – The CRUDN operations of the Resource with type "rt" =**
 6071 **"oic.r.sensor.activity.count".**

Create	Read	Update	Delete	Notify
	get	post		observe

6072 **6.25 Atmospheric Pressure Sensor**

6073 **6.25.1 Introduction**

6074 This Resource provides a measurement of Mean Sea Level Pressure experienced at the measuring
 6075 point expressed in millibars.
 6076 The Property "atmosphericPressure" is a float which describes the atmospheric pressure in hPa
 6077 (hectoPascals).
 6078 Note that hPa and the also commonly used unit of millibars (mbar) are numerically equivalent.

6079 **6.25.2 Example URI**

6080 /AtmosphericPressureResURI

6081 **6.25.3 Resource type**

6082 The Resource Type is defined as: "oic.r.sensor.atmosphericpressure".

6083 **6.25.4 OpenAPI 2.0 definition**

```

6084 {
6085   "swagger": "2.0",
6086   "info": {
6087     "title": "Atmospheric Pressure Sensor",
6088     "version": "20190225",
6089     "license": {
6090       "name": "OCF Data Model License",
6091       "url":
6092         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
6093         CENSE.md",
6094       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
6095         reserved."
6096     },
6097     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
6098   },
6099   "schemes": ["http"],
6100   "consumes": ["application/json"],
6101   "produces": ["application/json"],
6102   "paths": {
6103     "/AtmosphericPressureResURI" : {
6104       "get": {
6105         "description": "This Resource provides a measurement of Mean Sea Level Pressure experienced
6106         at the measuring point expressed in millibars.\nThe Property \"atmosphericPressure\" is a float
6107         which describes the atmospheric pressure in hPa (hectoPascals).\nNote that hPa and the also commonly
6108         used unit of millibars (mbar) are numerically equivalent.",
6109         "parameters": [
6110           {"$ref": "#/parameters/interface"}
6111         ],
6112         "responses": {
6113           "200": {
6114             "description": "",
6115             "x-example":
6116               {
6117                 "rt": ["oic.r.sensor.atmosphericpressure"],
6118                 "if": ["oic.if.s", "oic.if.baseline"],

```

```

6119         "atmosphericPressure": 1000.4
6120     },
6121     "schema": { "$ref": "#/definitions/atmosphericPressure" }
6122 }
6123 }
6124 }
6125 }
6126 },
6127 "parameters": {
6128     "interface" : {
6129         "in": "query",
6130         "name": "if",
6131         "type": "string",
6132         "enum": ["oic.if.s", "oic.if.baseline"]
6133     }
6134 },
6135 "definitions": {
6136     "atmosphericPressure" : {
6137         "properties": {
6138             "rt" : {
6139                 "description": "The Resource Type.",
6140                 "items": {
6141                     "enum": ["oic.r.sensor.atmosphericpressure"],
6142                     "maxLength": 64,
6143                     "type": "string"
6144                 },
6145                 "minItems": 1,
6146                 "uniqueItems": true,
6147                 "readOnly": true,
6148                 "type": "array"
6149             },
6150             "atmosphericPressure": {
6151                 "description": "The current atmospheric pressure in hPa.",
6152                 "readOnly": true,
6153                 "type": "number"
6154             },
6155             "n": {
6156                 "$ref":
6157 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6158 schema.json#/definitions/n"
6159             },
6160             "id": {
6161                 "$ref":
6162 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6163 schema.json#/definitions/id"
6164             },
6165             "precision": {
6166                 "$ref":
6167 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6168 schema.json#/definitions/precision"
6169             },
6170             "range": {
6171                 "$ref":
6172 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6173 schema.json#/definitions/range_number"
6174             },
6175             "step": {
6176                 "$ref":
6177 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6178 schema.json#/definitions/step_number"
6179             },
6180             "if": {
6181                 "description": "The OCF Interface set supported by this Resource.",
6182                 "items": {
6183                     "enum": [
6184                         "oic.if.s",
6185                         "oic.if.baseline"
6186                     ],
6187                     "type": "string"
6188                 },
6189                 "minItems": 2,
6190                 "uniqueItems": true,

```

```

6191         "readOnly": true,
6192         "type": "array"
6193     },
6194 },
6195     "type": "object",
6196     "required": ["atmosphericPressure"]
6197 }
6198 }
6199 }
6200

```

6201 **6.25.5 Property definition**

6202 Table 53 defines the Properties that are part of the "oic.r.sensor.atmosphericpressure" Resource
6203 Type.

6204 **Table 53 – The Property definitions of the Resource with type "rt" =**
6205 **"oic.r.sensor.atmosphericpressure".**

Property name	Value type	Mandatory	Access mode	Description
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.
rt	array: see schema	No	Read Only	The Resource Type.
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
atmosphericPressure	number	Yes	Read Only	The current atmospheric pressure in hPa.
range	multiple types: see schema	No	Read Write	

6206 **6.25.6 CRUDN behaviour**

6207 Table 54 defines the CRUDN operations that are supported on the
6208 "oic.r.sensor.atmosphericpressure" Resource Type.

6209
6210

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

Create	Read	Update	Delete	Notify
	get			observe

6211 **6.26 Audio Controls**

6212 **6.26.1 Introduction**

6213 This Resource defines basic audio control functions.
6214 The Property "volume" is an integer containing a percentage [0,100].
6215 A volume of 0 (zero) means no sound produced.
6216 A volume of 100 means maximum sound production.
6217 The Property "mute" is implemented as a boolean.
6218 A mute value of true means that the device is muted (no audio).
6219 A mute value of false means that the device is not muted (audio).

6220 **6.26.2 Example URI**

6221 /AudioResURI

6222 **6.26.3 Resource type**

6223 The Resource Type is defined as: "oic.r.audio".

6224 **6.26.4 OpenAPI 2.0 definition**

```
6225 {  
6226   "swagger": "2.0",  
6227   "info": {  
6228     "title": "Audio Controls",  
6229     "version": "20190225",  
6230     "license": {  
6231       "name": "OCF Data Model License",  
6232       "url":  
6233         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
6234         CENSE.md",  
6235       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
6236       reserved."  
6237     },  
6238     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
6239   },  
6240   "schemes": ["http"],  
6241   "consumes": ["application/json"],  
6242   "produces": ["application/json"],  
6243   "paths": {  
6244     "/AudioResURI" : {  
6245       "get": {  
6246         "description": "This Resource defines basic audio control functions.\n\nThe Property  
6247         \nvolume\n is an integer containing a percentage [0,100].\n\nA volume of 0 (zero) means no sound  
6248         produced.\n\nA volume of 100 means maximum sound production.\n\nThe Property \nmute\n is implemented as  
6249         a boolean.\n\nA mute value of true means that the device is muted (no audio).\n\nA mute value of false  
6250         means that the device is not muted (audio).",  
6251         "parameters": [  
6252           {"$ref": "#/parameters/interface"}  
6253         ],  
6254         "responses": {  
6255           "200": {  
6256             "description": "",  
6257             "x-example":  
6258               {  
6259                 "rt": ["oic.r.audio"],  
6260                 "if": ["oic.if.a", "oic.if.baseline"],  
6261                 "volume": 50,  
6262                 "mute": false
```



```

6263         },
6264         "schema": { "$ref": "#/definitions/Audio" }
6265     }
6266 }
6267 },
6268 "post": {
6269     "description": "",
6270     "parameters": [
6271         { "$ref": "#/parameters/interface" },
6272         {
6273             "name": "body",
6274             "in": "body",
6275             "required": true,
6276             "schema": { "$ref": "#/definitions/Audio" },
6277             "x-example":
6278                 {
6279                     "volume": 75,
6280                     "mute": false
6281                 }
6282         }
6283     ],
6284     "responses": {
6285         "200": {
6286             "description": "",
6287             "x-example":
6288                 {
6289                     "volume": 75,
6290                     "mute": false
6291                 },
6292             "schema": { "$ref": "#/definitions/Audio" }
6293         }
6294     }
6295 }
6296 },
6297 },
6298 "parameters": {
6299     "interface": {
6300         "in": "query",
6301         "name": "if",
6302         "type": "string",
6303         "enum": ["oic.if.a", "oic.if.baseline"]
6304     }
6305 },
6306 "definitions": {
6307     "Audio": {
6308         "properties": {
6309             "rt": {
6310                 "description": "The Resource Type.",
6311                 "items": {
6312                     "enum": ["oic.r.audio"],
6313                     "maxLength": 64,
6314                     "type": "string"
6315                 },
6316                 "minItems": 1,
6317                 "uniqueItems": true,
6318                 "readOnly": true,
6319                 "type": "array"
6320             },
6321             "mute": {
6322                 "description": "The mute setting of an audio rendering device.",
6323                 "type": "boolean"
6324             },
6325             "volume": {
6326                 "description": "The volume setting of an audio rendering device.",
6327                 "maximum": 100,
6328                 "minimum": 0,
6329                 "type": "integer"
6330             },
6331             "n": {
6332                 "$ref":
6333                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6334                 schema.json#/definitions/n"

```

```

6335     },
6336     "id": {
6337       "$ref":
6338       "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6339       schema.json#/definitions/id"
6340     },
6341     "range": {
6342       "$ref":
6343       "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6344       schema.json#/definitions/range_integer"
6345     },
6346     "step": {
6347       "$ref":
6348       "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6349       schema.json#/definitions/step_integer"
6350     },
6351     "if": {
6352       "description": "The OCF Interface set supported by this Resource.",
6353       "items": {
6354         "enum": [
6355           "oic.if.a",
6356           "oic.if.baseline"
6357         ],
6358         "type": "string"
6359       },
6360       "minItems": 2,
6361       "uniqueItems": true,
6362       "readOnly": true,
6363       "type": "array"
6364     }
6365   },
6366   "type": "object",
6367   "required": ["volume", "mute"]
6368 }
6369 }
6370 }
6371

```

6.26.5 Property definition

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

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

Property name	Value type	Mandatory	Access mode	Description
volume	integer	Yes	Read Write	The volume setting of an audio rendering device.
range	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.

step	multiple types: see schema	No	Read Write	
rt	array: see schema	No	Read Only	The Resource Type.
mute	boolean	Yes	Read Write	The mute setting of an audio rendering device.
n	multiple types: see schema	No	Read Write	

6375 **6.26.6 CRUDN behaviour**

6376 Table 56 defines the CRUDN operations that are supported on the "oic.r.audio" Resource Type.

6377 **Table 56 – The CRUDN operations of the Resource with type "rt" = "oic.r.audio".**

Create	Read	Update	Delete	Notify
	get	post		observe

6378 **6.27 Auto Focus**

6379 **6.27.1 Introduction**

6380 This Resource describes an auto focus on/off feature.
6381 The Property "autoFocus" is a boolean.
6382 An "autoFocus" value of 'true' means that the auto focus feature is on.
6383 An "autoFocus" value of 'false' means that the auto focus feature is off.
6384 Note that when Pan Tilt Zoom (see 'Pan Tilt Zoom' Resource definition) is used the autofocus works
6385 only in the selected area.

6386 **6.27.2 Example URI**

6387 /AutoFocusResURI

6388 **6.27.3 Resource type**

6389 The Resource Type is defined as: "oic.r.autofocus".

6390 **6.27.4 OpenAPI 2.0 definition**

```

6391 {
6392   "swagger": "2.0",
6393   "info": {
6394     "title": "Auto Focus",
6395     "version": "20190222",
6396     "license": {
6397       "name": "OCF Data Model License",
6398       "url":
6399 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
6400 CENSE.md",
6401       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
6402     },
6403     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
6404   },
6405   "schemes": ["http"],
6406   "consumes": ["application/json"],
6407   "produces": ["application/json"],
6408   "paths": {

```

```

6409     "/AutoFocusResURI" : {
6410         "get": {
6411             "description": "This Resource describes an auto focus on/off feature.\n\nThe Property
6412 \ "autoFocus\" is a boolean.\n\nAn \"autoFocus\" value of 'true' means that the auto focus feature is
6413 on.\n\nAn \"autoFocus\" value of 'false' means that the auto focus feature is off.\n\nNote that when Pan
6414 Tilt Zoom (see 'Pan Tilt Zoom' Resource definition) is used the autofocus works only in the selected
6415 area.",
6416         "parameters": [
6417             { "$ref": "#/parameters/interface" }
6418         ],
6419         "responses": {
6420             "200": {
6421                 "description": "",
6422                 "x-example":
6423                 {
6424                     "rt": ["oic.r.autofocus"],
6425                     "if": ["oic.if.a", "oic.if.baseline"],
6426                     "autoFocus": false
6427                 },
6428                 "schema": { "$ref": "#/definitions/AutoFocus" }
6429             }
6430         },
6431     },
6432     "post": {
6433         "description": "",
6434         "parameters": [
6435             { "$ref": "#/parameters/interface" },
6436             {
6437                 "name": "body",
6438                 "in": "body",
6439                 "required": true,
6440                 "schema": { "$ref": "#/definitions/AutoFocus" },
6441                 "x-example":
6442                 {
6443                     "autoFocus": true
6444                 }
6445             }
6446         ],
6447         "responses": {
6448             "200": {
6449                 "description": "",
6450                 "x-example":
6451                 {
6452                     "autoFocus": true
6453                 },
6454                 "schema": { "$ref": "#/definitions/AutoFocus" }
6455             }
6456         }
6457     },
6458 },
6459 },
6460 "parameters": {
6461     "interface" : {
6462         "in": "query",
6463         "name": "if",
6464         "type": "string",
6465         "enum": ["oic.if.a", "oic.if.baseline"]
6466     }
6467 },
6468 "definitions": {
6469     "AutoFocus" : {
6470         "properties": {
6471             "rt": {
6472                 "description": "The Resource Type.",
6473                 "items": {
6474                     "enum": ["oic.r.autofocus"],
6475                     "maxLength": 64,
6476                     "type": "string"
6477                 },
6478                 "minItems": 1,
6479                 "uniqueItems": true,
6480                 "readOnly": true,

```

```

6481         "type": "array"
6482     },
6483     "autoFocus": {
6484         "description": "The status of the Auto Focus feature.",
6485         "type": "boolean"
6486     },
6487     "n": {
6488         "$ref":
6489         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6490         schema.json#/definitions/n"
6491     },
6492     "id": {
6493         "$ref":
6494         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6495         schema.json#/definitions/id"
6496     },
6497     "if": {
6498         "description": "The OCF Interface set supported by this Resource.",
6499         "items": {
6500             "enum": [
6501                 "oic.if.a",
6502                 "oic.if.baseline"
6503             ],
6504             "type": "string"
6505         },
6506         "minItems": 2,
6507         "readOnly": true,
6508         "uniqueItems": true,
6509         "type": "array"
6510     }
6511 },
6512 "type": "object",
6513 "required": ["autoFocus"]
6514 }
6515 }
6516 }
6517

```

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

6521 **6.27.6 CRUDN behaviour**

6522 Table 58 defines the CRUDN operations that are supported on the "oic.r.autofocus" Resource Type.

6523 **Table 58 – The CRUDN operations of the Resource with type "rt" = "oic.r.autofocus".**

Create	Read	Update	Delete	Notify
	get	post		observe

6524 **6.28 Automatic Document Feeder**

6525 **6.28.1 Introduction**

6526 This Resource describes the state of an automatic document feeder, typically used with a scanner.
6527 The Property "adfstates" and "currentAdfState" are read only. The Property "adfStates" is an array
6528 of the possible operational states. The Property "adfProcessing" is the OK state, other states are
6529 errors or require "user attention". The "currentAdfState" is the current value of the ADF state on
6530 the device.

6531 **6.28.2 Example URI**

6532 /AutomaticDocumentFeederResURI

6533 **6.28.3 Resource type**

6534 The Resource Type is defined as: "oic.r.automaticdocumentfeeder".

6535 **6.28.4 OpenAPI 2.0 definition**

```

6536 {
6537   "swagger": "2.0",
6538   "info": {
6539     "title": "Automatic Document Feeder",
6540     "version": "20190222",
6541     "license": {
6542       "name": "OCF Data Model License",
6543       "url":
6544         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
6545         CENSE.md",
6546       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
6547     },
6548     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
6549   },
6550   "schemes": ["http"],
6551   "consumes": ["application/json"],
6552   "produces": ["application/json"],
6553   "paths": {
6554     "/AutomaticDocumentFeederResURI" : {
6555       "get": {
6556         "description": "This Resource describes the state of an automatic document feeder, typically
6557         used with a scanner.\n\nThe Property \"adfstates\" and \"currentAdfState\" are read only.\n\nThe
6558         Property \"adfStates\" is an array of the possible operational states.\n\nThe Property
6559         \"adfProcessing\" is the OK state, other states are errors or require 'user attention'.\n\nThe
6560         currentAdfState is the current value of the ADF state on the device.",
6561         "parameters": [
6562           {"$ref": "#/parameters/interface"}
6563         ],
6564         "responses": {
6565           "200": {
6566             "description": "",
6567             "x-example":
6568               {
6569                 "rt": ["oic.r.automaticdocumentfeeder"],
6570                 "if": ["oic.if.s", "oic.if.baseline"],
6571                 "adfStates": ["adfProcessing", "adfEmpty", "adfJam", "adfLoaded", "adfMispick",
6572                 "adfHatchOpen", "adfDuplexPageTooShort", "adfDuplexPageTooLong", "adfMultipickDetected",
6573                 "adfInputTrayFailed", "adfInputTrayOverloaded"],

```

```

6574         "currentAdfState": "adfProcessing"
6575     },
6576     "schema": { "$ref": "#/definitions/AutomaticDocumentFeeder" }
6577 }
6578 }
6579 }
6580 }
6581 },
6582 "parameters": {
6583     "interface" : {
6584         "in": "query",
6585         "name": "if",
6586         "type": "string",
6587         "enum": ["oic.if.s", "oic.if.baseline"]
6588     }
6589 },
6590 "definitions": {
6591     "AutomaticDocumentFeeder" : {
6592         "properties": {
6593             "rt": {
6594                 "description": "The Resource Type.",
6595                 "items": {
6596                     "enum": ["oic.r.automaticdocumentfeeder"],
6597                     "maxLength": 64,
6598                     "type": "string"
6599                 },
6600                 "minItems": 1,
6601                 "uniqueItems": true,
6602                 "readOnly": true,
6603                 "type": "array"
6604             },
6605             "adfStates": {
6606                 "description": "The array of the possible adf states.",
6607                 "items": {
6608                     "type": "string"
6609                 },
6610                 "readOnly": true,
6611                 "uniqueItems": true,
6612                 "type": "array"
6613             },
6614             "currentAdfState": {
6615                 "description": "The current adf state.",
6616                 "readOnly": true,
6617                 "type": "string"
6618             },
6619             "n": {
6620                 "$ref":
6621 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6622 schema.json#/definitions/n"
6623             },
6624             "id": {
6625                 "$ref":
6626 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6627 schema.json#/definitions/id"
6628             },
6629             "if": {
6630                 "description": "The OCF Interface set supported by this Resource.",
6631                 "items": {
6632                     "enum": [
6633                         "oic.if.s",
6634                         "oic.if.baseline"
6635                     ],
6636                     "type": "string"
6637                 },
6638                 "minItems": 2,
6639                 "uniqueItems": true,
6640                 "readOnly": true,
6641                 "type": "array"
6642             }
6643         },
6644         "type": "object",
6645         "required": ["adfStates", "currentAdfState"]

```

6646 }
 6647 }
 6648 }
 6649 }

6650 **6.28.5 Property definition**

6651 Table 59 defines the Properties that are part of the "oic.r.automaticdocumentfeeder" Resource
 6652 Type.

6653 **Table 59 – The Property definitions of the Resource with type "rt" =**
 6654 **"oic.r.automaticdocumentfeeder".**

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

6655 **6.28.6 CRUDN behaviour**

6656 Table 60 defines the CRUDN operations that are supported on the "oic.r.automaticdocumentfeeder"
 6657 Resource Type.

6658 **Table 60 – The CRUDN operations of the Resource with type "rt" =**
 6659 **"oic.r.automaticdocumentfeeder".**

Create	Read	Update	Delete	Notify
	get			observe

6660 **6.29 Button Switch**

6661 **6.29.1 Introduction**

6662 This Resource describes the operation of a button style switch.
 6663 The Property "value" is a boolean.
 6664 A value of 'true' means that the button is being pushed/pressed.
 6665 A value of 'false' means that the button is not being pushed/pressed.

6666 **6.29.2 Example URI**

6667 /ButtonResURI

6668 **6.29.3 Resource type**

6669 The Resource Type is defined as: "oic.r.button".

6670 **6.29.4 OpenAPI 2.0 definition**

```
6671 {
6672   "swagger": "2.0",
6673   "info": {
6674     "title": "Button Switch",
6675     "version": "20190222",
6676     "license": {
6677       "name": "OCF Data Model License",
6678       "url":
6679         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
6680 CENSE.md",
6681       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
6682     },
6683     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
6684   },
6685   "schemes": ["http"],
6686   "consumes": ["application/json"],
6687   "produces": ["application/json"],
6688   "paths": {
6689     "/ButtonResURI" : {
6690       "get": {
6691         "description": "This Resource describes the operation of a button style switch.\n\nThe
6692 Property \"value\" is a boolean.\n\nA value of 'true' means that the button is being
6693 pushed/pressed.\n\nA value of 'false' means that the button is not being pushed/pressed.",
6694         "parameters": [
6695           { "$ref": "#/parameters/interface" }
6696         ],
6697         "responses": {
6698           "200": {
6699             "description": "",
6700             "x-example":
6701               {
6702                 "rt": ["oic.r.button"],
6703                 "if": ["oic.if.s", "oic.if.baseline"],
6704                 "value": true
6705               }
6706           },
6707           "schema": { "$ref": "#/definitions/Button" }
6708         }
6709       }
6710     }
6711   },
6712   "parameters": {
6713     "interface" : {
6714       "in": "query",
6715       "name": "if",
6716       "type": "string",
6717       "enum": ["oic.if.s", "oic.if.baseline"]
6718     }
6719   },
6720   "definitions": {
6721     "Button" : {
6722       "properties": {
6723         "rt": {
6724           "description": "The Resource Type.",
6725           "items": {
6726             "enum": ["oic.r.button"],
6727             "maxLength": 64,
6728             "type": "string"
6729           },
6730           "minItems": 1,
6731           "uniqueItems": true,
```

```

6733         "readOnly": true,
6734         "type": "array"
6735     },
6736     "value": {
6737         "description": "The status of the button",
6738         "readOnly": true,
6739         "type": "boolean"
6740     },
6741     "n": {
6742         "$ref":
6743         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6744         schema.json#/definitions/n"
6745     },
6746     "id": {
6747         "$ref":
6748         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6749         schema.json#/definitions/id"
6750     },
6751     "if": {
6752         "description": "The OCF Interface set supported by this Resource.",
6753         "items": {
6754             "enum": [
6755                 "oic.if.s",
6756                 "oic.if.baseline"
6757             ],
6758             "type": "string"
6759         },
6760         "minItems": 2,
6761         "uniqueItems": true,
6762         "readOnly": true,
6763         "type": "array"
6764     }
6765 },
6766 "type": "object",
6767 "required": ["value"]
6768 }
6769 }
6770 }
6771

```

6772 **6.29.5 Property definition**

6773 Table 61 defines the Properties that are part of the "oic.r.button" Resource Type.

6774 **Table 61 – The Property definitions of the Resource with type "rt" = "oic.r.button".**

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
value	boolean	Yes	Read Only	The status of the button
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	
----	-------------------------------	----	------------	--

6775 **6.29.6 CRUDN behaviour**

6776 Table 62 defines the CRUDN operations that are supported on the "oic.r.button" Resource Type.

6777 **Table 62 – The CRUDN operations of the Resource with type "rt" = "oic.r.button".**

Create	Read	Update	Delete	Notify
	get			observe

6778 **6.30 Carbon Dioxide Sensor**

6779 **6.30.1 Introduction**

6780 This Resource describes whether carbon dioxide has been sensed or not.
6781 The Property "value" is a boolean.
6782 A value of 'true' means that carbon dioxide has been detected.
6783 A value of 'false' means that carbon dioxide has not been detected.

6784 **6.30.2 Example URI**

6785 /CarbonDioxideResURI

6786 **6.30.3 Resource type**

6787 The Resource Type is defined as: "oic.r.sensor.carbondioxide".

6788 **6.30.4 OpenAPI 2.0 definition**

```

6789 {
6790   "swagger": "2.0",
6791   "info": {
6792     "title": "Carbon Dioxide Sensor",
6793     "version": "20190215",
6794     "license": {
6795       "name": "OCF Data Model License",
6796       "url":
6797         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
6798         CENSE.md",
6799       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
6800       reserved."
6801     },
6802     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
6803   },
6804   "schemes": ["http"],
6805   "consumes": ["application/json"],
6806   "produces": ["application/json"],
6807   "paths": {
6808     "/CarbonDioxideResURI" : {
6809       "get": {
6810         "description": "This Resource describes whether carbon dioxide has been sensed or not.\nThe
6811         Property \"value\" is a boolean.\nA value of 'true' means that carbon dioxide has been detected.\nA
6812         value of 'false' means that carbon dioxide has not been detected.",
6813         "parameters": [
6814           {"$ref": "#/parameters/interface"}
6815         ],
6816         "responses": {
6817           "200": {
6818             "description": "",
6819             "x-example":
6820             {
6821               "rt": ["oic.r.sensor.carbondioxide"],
6822               "if": ["oic.if.s", "oic.if.baseline"],

```

```

6823         "value": true
6824     },
6825     "schema": { "$ref": "#/definitions/CO2" }
6826 }
6827 }
6828 }
6829 }
6830 },
6831 "parameters": {
6832   "interface" : {
6833     "in" : "query",
6834     "name" : "if",
6835     "type" : "string",
6836     "enum" : ["oic.if.s", "oic.if.baseline"]
6837   }
6838 },
6839 "definitions": {
6840   "CO2" : {
6841     "properties": {
6842       "rt" : {
6843         "description": "The Resource Type.",
6844         "items": {
6845           "enum": ["oic.r.sensor.carbondioxide"],
6846           "maxLength": 64,
6847           "type": "string"
6848         },
6849         "minItems": 1,
6850         "uniqueItems": true,
6851         "readOnly": true,
6852         "type": "array"
6853       },
6854       "value" : {
6855         "description": "The carbon dioxide indicator, true = sensed, false = not sensed.",
6856         "readOnly": true,
6857         "type": "boolean"
6858       },
6859       "id" : {
6860         "$ref":
6861 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6862 schema.json#/definitions/id"
6863       },
6864       "precision": {
6865         "$ref":
6866 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6867 schema.json#/definitions/precision"
6868       },
6869       "if" : {
6870         "description": "The OCF Interface set supported by this Resource.",
6871         "items": {
6872           "enum": [
6873             "oic.if.s",
6874             "oic.if.baseline"
6875           ],
6876           "maxLength": 64,
6877           "type": "string"
6878         },
6879         "minItems": 2,
6880         "uniqueItems": true,
6881         "readOnly": true,
6882         "type": "array"
6883       }
6884     },
6885     "type" : "object",
6886     "required": ["value"]
6887   }
6888 }
6889 }
6890

```

6891 6.30.5 Property definition

6892 Table 63 defines the Properties that are part of the "oic.r.sensor.carbondioxide" Resource Type.

6893
6894

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

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

6895 **6.30.6 CRUDN behaviour**

6896 Table 64 defines the CRUDN operations that are supported on the "oic.r.sensor.carbondioxide"
6897 Resource Type.

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

Create	Read	Update	Delete	Notify
	get			observe

6900 **6.31 Carbon Monoxide Sensor**

6901 **6.31.1 Introduction**

6902 This Resource describes whether carbon monoxide has been sensed or not.
6903 The Property "value" is a boolean.
6904 A value of 'true' means that carbon monoxide has been detected.
6905 A value of 'false' means that carbon monoxide has not been detected.

6906 **6.31.2 Example URI**

6907 /CarbonMonoxideResURI

6908 **6.31.3 Resource type**

6909 The Resource Type is defined as: "oic.r.sensor.carbonmonoxide".

6910 **6.31.4 OpenAPI 2.0 definition**

6911 {
6912 "swagger": "2.0",

```

6913     "info": {
6914         "title": "Carbon Monoxide Sensor",
6915         "version": "20190215",
6916         "license": {
6917             "name": "OCF Data Model License",
6918             "url":
6919 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
6920 CENSE.md",
6921         "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
6922 reserved."
6923     },
6924     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
6925 },
6926     "schemes": ["http"],
6927     "consumes": ["application/json"],
6928     "produces": ["application/json"],
6929     "paths": {
6930         "/CarbonMonoxideResURI" : {
6931             "get": {
6932                 "description": "This Resource describes whether carbon monoxide has been sensed or not.\nThe
6933 Property \"value\" is a boolean.\nA value of 'true' means that carbon monoxide has been detected.\nA
6934 value of 'false' means that carbon monoxide has not been detected.",
6935                 "parameters": [
6936                     { "$ref": "#/parameters/interface" }
6937                 ],
6938                 "responses": {
6939                     "200": {
6940                         "description": "",
6941                         "x-example":
6942                         {
6943                             "rt": ["oic.r.sensor.carbonmonoxide"],
6944                             "if": ["oic.if.s", "oic.if.baseline"],
6945                             "value": true
6946                         },
6947                         "schema": { "$ref": "#/definitions/CO" }
6948                     }
6949                 }
6950             }
6951         }
6952     },
6953     "parameters": {
6954         "interface" : {
6955             "in" : "query",
6956             "name" : "if",
6957             "type" : "string",
6958             "enum" : ["oic.if.s", "oic.if.baseline"]
6959         }
6960     },
6961     "definitions": {
6962         "CO" : {
6963             "properties": {
6964                 "rt" : {
6965                     "description": "The Resource Type.",
6966                     "items": {
6967                         "enum": ["oic.r.sensor.carbonmonoxide"],
6968                         "maxLength": 64,
6969                         "type": "string"
6970                     },
6971                     "minItems": 1,
6972                     "readOnly": true,
6973                     "uniqueItems": true,
6974                     "type": "array"
6975                 },
6976                 "value" : {
6977                     "description": "The carbon monoxide indicator, true = sensed, false = not sensed.",
6978                     "readOnly": true,
6979                     "type": "boolean"
6980                 },
6981                 "n": {
6982                     "$ref":
6983 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6984 schema.json#/definitions/n"

```

```

6985     },
6986     "id": {
6987       "$ref":
6988       "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6989       schema.json#/definitions/id"
6990     },
6991     "if" : {
6992       "description": "The OCF Interface set supported by this Resource.",
6993       "items": {
6994         "enum": [
6995           "oic.if.s",
6996           "oic.if.baseline"
6997         ],
6998         "maxLength": 64,
6999         "type": "string"
7000       },
7001       "minItems": 2,
7002       "uniqueItems": true,
7003       "readOnly": true,
7004       "type": "array"
7005     }
7006   },
7007   "type": "object",
7008   "required": ["value"]
7009 }
7010 }
7011 }

```

7012 **6.31.5 Property definition**

7013 Table 65 defines the Properties that are part of the "oic.r.sensor.carbonmonoxide" Resource Type.

7014 **Table 65 – The Property definitions of the Resource with type "rt" =**
7015 **"oic.r.sensor.carbonmonoxide".**

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

7016 **6.31.6 CRUDN behaviour**

7017 Table 66 defines the CRUDN operations that are supported on the "oic.r.sensor.carbonmonoxide"
7018 Resource Type.

7019
7020

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

Create	Read	Update	Delete	Notify
	get			observe

7021 **6.32 Auto White Balance**

7022 **6.32.1 Introduction**

7023 This Resource describes an auto balance on/off feature.
 7024 The Property "autoWhiteBalance" is a boolean.
 7025 An AutoWhiteBalance value of 'true' means that the auto white balance feature is on.
 7026 An AutoWhiteBalance value of 'false' means that the auto white balance feature is off.
 7027

7028 **6.32.2 Example URI**

7029 /AutoWhiteBalanceResURI

7030 **6.32.3 Resource type**

7031 The Resource Type is defined as: "oic.r.colour.autowhitebalance".

7032 **6.32.4 OpenAPI 2.0 definition**

```

7033 {
7034   "swagger": "2.0",
7035   "info": {
7036     "title": "Auto White Balance",
7037     "version": "20190222",
7038     "license": {
7039       "name": "OCF Data Model License",
7040       "url":
7041         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
7042         CENSE.md",
7043       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
7044     },
7045     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
7046   },
7047   "schemes": ["http"],
7048   "consumes": ["application/json"],
7049   "produces": ["application/json"],
7050   "paths": {
7051     "/AutoWhiteBalanceResURI" : {
7052       "get": {
7053         "description": "This Resource describes an auto balance on/off feature.\n
7054         \The Property\n
7055         \"autoWhiteBalance\" is a boolean.\n
7056         \An AutoWhiteBalance value of 'true' means that the auto white\n
7057         balance feature is on.\n
7058         \An AutoWhiteBalance value of 'false' means that the auto white balance\n
7059         feature is off.\n",
7060         "parameters": [
7061           { "$ref": "#/parameters/interface" }
7062         ],
7063         "responses": {
7064           "200": {
7065             "description": "",
7066             "x-example":
7067               {
7068                 "rt": ["oic.r.colour.autowhitebalance"],
7069                 "if": ["oic.if.a", "oic.if.baseline"],
7070                 "autoWhiteBalance": false
7071               },
7072             "schema": { "$ref": "#/definitions/AutoWhiteBalance" }
7073           }
7074         }
7075       }
7076     },
7077     "post": {
  
```



```

7074     "description": "",
7075     "parameters": [
7076       { "$ref": "#/parameters/interface" },
7077       {
7078         "name": "body",
7079         "in": "body",
7080         "required": true,
7081         "schema": { "$ref": "#/definitions/AutoWhiteBalance" },
7082         "x-example":
7083           {
7084             "autoWhiteBalance": true
7085           }
7086       }
7087     ],
7088     "responses": {
7089       "200": {
7090         "description": "",
7091         "x-example":
7092           {
7093             "autoWhiteBalance": true
7094           },
7095         "schema": { "$ref": "#/definitions/AutoWhiteBalance" }
7096       }
7097     }
7098   }
7099 },
7100 },
7101 "parameters": {
7102   "interface": {
7103     "in": "query",
7104     "name": "if",
7105     "type": "string",
7106     "enum": ["oic.if.a", "oic.if.baseline"]
7107   }
7108 },
7109 "definitions": {
7110   "AutoWhiteBalance": {
7111     "properties": {
7112       "rt": {
7113         "description": "The Resource Type.",
7114         "items": {
7115           "enum": ["oic.r.colour.autowhitebalance"],
7116           "maxLength": 64,
7117           "type": "string"
7118         },
7119         "minItems": 1,
7120         "uniqueItems": true,
7121         "readOnly": true,
7122         "type": "array"
7123       },
7124       "autoWhiteBalance": {
7125         "description": "The status of the Auto White balance feature.",
7126         "type": "boolean"
7127       },
7128       "n": {
7129         "$ref":
7130           "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7131           schema.json#/definitions/n"
7132       },
7133       "id": {
7134         "$ref":
7135           "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7136           schema.json#/definitions/id"
7137       },
7138       "if": {
7139         "description": "The OCF Interface set supported by this Resource.",
7140         "items": {
7141           "enum": [
7142             "oic.if.a",
7143             "oic.if.baseline"
7144           ],
7145           "type": "string"

```

```

7146     },
7147     "minItems": 2,
7148     "uniqueItems": true,
7149     "readOnly": true,
7150     "type": "array"
7151   }
7152 },
7153 "type": "object",
7154 "required": ["autoWhiteBalance"]
7155 }
7156 }
7157 }
7158

```

7159 **6.32.5 Property definition**

7160 Table 67 defines the Properties that are part of the "oic.r.colour.autowhitebalance" Resource Type.

7161 **Table 67 – The Property definitions of the Resource with type "rt" =**
7162 **"oic.r.colour.autowhitebalance".**

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

7163 **6.32.6 CRUDN behaviour**

7164 Table 68 defines the CRUDN operations that are supported on the "oic.r.colour.autowhitebalance"
7165 Resource Type.

7166 **Table 68 – The CRUDN operations of the Resource with type "rt" =**
7167 **"oic.r.colour.autowhitebalance".**

Create	Read	Update	Delete	Notify
	get	post		observe

7168 **6.33 Colour Saturation**

7169 **6.33.1 Introduction**

7170 This Resource describes a Colour saturation value.
7171 The Property "colourSaturation" is an integer.

7172 A "colourSaturation" has a range of [0,100].
 7173 A "colourSaturation" value of 0 means producing black and white images.
 7174 A "colourSaturation" value of 50 means producing device specific normal colour images.
 7175 A "colourSaturation" value of 100 means producing device very full colour images.
 7176

7177 6.33.2 Example URI

7178 /ColourSaturationResURI

7179 6.33.3 Resource type

7180 The Resource Type is defined as: "oic.r.colour.saturation".

7181 6.33.4 OpenAPI 2.0 definition

```

7182 {
7183   "swagger": "2.0",
7184   "info": {
7185     "title": "Colour Saturation",
7186     "version": "20190215",
7187     "license": {
7188       "name": "OCF Data Model License",
7189       "url":
7190         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
7191         CENSE.md",
7192       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
7193         reserved."
7194     },
7195     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
7196   },
7197   "schemes": ["http"],
7198   "consumes": ["application/json"],
7199   "produces": ["application/json"],
7200   "paths": {
7201     "/ColourSaturationResURI" : {
7202       "get": {
7203         "description": "This Resource describes a Colour saturation value.\n\nThe Property
7204         \"colourSaturation\" is an integer.\n\nA \"colourSaturation\" has a range of [0,100].\n\nA
7205         \"colourSaturation\" value of 0 means producing black and white images.\n\nA \"colourSaturation\"
7206         value of 50 means producing device specific normal colour images.\n\nA \"colourSaturation\" value of
7207         100 means producing device very full colour images.\n\n",
7208         "parameters": [
7209           { "$ref": "#/parameters/interface" }
7210         ],
7211         "responses": {
7212           "200": {
7213             "description": "",
7214             "x-example":
7215               {
7216                 "rt": ["oic.r.colour.saturation"],
7217                 "if": ["oic.if.a", "oic.if.baseline"],
7218                 "colourSaturation": 50
7219               },
7220             "schema": { "$ref": "#/definitions/Saturation" }
7221           }
7222         }
7223       },
7224       "post": {
7225         "description": "",
7226         "parameters": [
7227           { "$ref": "#/parameters/interface" },
7228           {
7229             "name": "body",
7230             "in": "body",
7231             "required": true,
7232             "schema": { "$ref": "#/definitions/Saturation" },
7233             "x-example":
7234               {
7235                 "colourSaturation": 60
7236               }
7237           }
7238         ]
7239       }
7240     }
7241   }

```

```

7237     }
7238   ],
7239   "responses": {
7240     "200": {
7241       "description": "",
7242       "x-example":
7243         {
7244           "colourSaturation": 60
7245         }
7246       ,
7247       "schema": { "$ref": "#/definitions/Saturation" }
7248     }
7249   }
7250 },
7251 },
7252 },
7253 "parameters": {
7254   "interface": {
7255     "in": "query",
7256     "name": "if",
7257     "type": "string",
7258     "enum": ["oic.if.a", "oic.if.baseline"]
7259   }
7260 },
7261 "definitions": {
7262   "Saturation": {
7263     "properties": {
7264       "rt": {
7265         "description": "The Resource Type.",
7266         "items": {
7267           "enum": ["oic.r.colour.saturation"],
7268           "maxLength": 64,
7269           "type": "string"
7270         },
7271         "minItems": 1,
7272         "uniqueItems": true,
7273         "readOnly": true,
7274         "type": "array"
7275       },
7276       "colourSaturation": {
7277         "description": "The colour saturation value.",
7278         "maximum": 100,
7279         "minimum": 0,
7280         "type": "integer"
7281       },
7282       "n": {
7283         "$ref":
7284         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7285         schema.json#/definitions/n"
7286       },
7287       "id": {
7288         "$ref":
7289         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7290         schema.json#/definitions/id"
7291       },
7292       "if": {
7293         "description": "The OCF Interface set supported by this Resource.",
7294         "items": {
7295           "enum": [
7296             "oic.if.a",
7297             "oic.if.baseline"
7298           ],
7299           "type": "string"
7300         },
7301         "minItems": 2,
7302         "uniqueItems": true,
7303         "readOnly": true,
7304         "type": "array"
7305       }
7306     },
7307     "type": "object",
7308     "required": ["colourSaturation"]

```

7309 }
 7310 }
 7311 }
 7312 }

7313 **6.33.5 Property definition**

7314 Table 69 defines the Properties that are part of the "oic.r.colour.saturation" Resource Type.

7315 **Table 69 – The Property definitions of the Resource with type "rt" =**
 7316 **"oic.r.colour.saturation".**

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

7317 **6.33.6 CRUDN behaviour**

7318 Table 70 defines the CRUDN operations that are supported on the "oic.r.colour.saturation"
 7319 Resource Type.

7320 **Table 70 – The CRUDN operations of the Resource with type "rt" =**
 7321 **"oic.r.colour.saturation".**

Create	Read	Update	Delete	Notify
	get	post		observe

7322 **6.34 Contact Sensor**

7323 **6.34.1 Introduction**

7324 This Resource describes whether a contact sensor has been tripped or not.
 7325 Typical use case is in Security Systems detecting window or door open.
 7326 The Property "value" is a boolean.
 7327 A value of 'true' means that contact has been broken (open).
 7328 A value of 'false' means that contact is in place (closed).
 7329

7330 **6.34.2 Example URI**

7331 /ContactResURI

7332 6.34.3 Resource type

7333 The Resource Type is defined as: "oic.r.sensor.contact".

7334 6.34.4 OpenAPI 2.0 definition

```
7335 {
7336   "swagger": "2.0",
7337   "info": {
7338     "title": "Contact Sensor",
7339     "version": "20190215",
7340     "license": {
7341       "name": "OCF Data Model License",
7342       "url":
7343         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
7344         CENSE.md",
7345       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
7346         reserved."
7347     },
7348     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
7349   },
7350   "schemes": ["http"],
7351   "consumes": ["application/json"],
7352   "produces": ["application/json"],
7353   "paths": {
7354     "/ContactResURI" : {
7355       "get": {
7356         "description": "This Resource describes whether a contact sensor has been tripped or
7357         not.\nTypical use case is in Security Systems detecting window or door open.\nThe Property \"value\"
7358         is a boolean.\nA value of 'true' means that contact has been broken (open).\nA value of 'false'
7359         means that contact is in place (closed).\n",
7360         "parameters": [
7361           { "$ref": "#/parameters/interface" }
7362         ],
7363         "responses": {
7364           "200": {
7365             "description": "",
7366             "x-example":
7367               {
7368                 "rt": ["oic.r.sensor.contact"],
7369                 "if": ["oic.if.s", "oic.if.baseline"],
7370                 "value": true
7371               },
7372             "schema": { "$ref": "#/definitions/Contact" }
7373           }
7374         }
7375       }
7376     }
7377   },
7378   "parameters": {
7379     "interface" : {
7380       "in": "query",
7381       "name": "if",
7382       "type": "string",
7383       "enum": ["oic.if.s", "oic.if.baseline"]
7384     }
7385   },
7386   "definitions": {
7387     "Contact" : {
7388       "properties": {
7389         "rt": {
7390           "description": "The Resource Type.",
7391           "items": {
7392             "enum": ["oic.r.sensor.contact"],
7393             "maxLength": 64,
7394             "type": "string"
7395           },
7396           "minItems": 1,
7397           "uniqueItems": true,
7398           "readOnly": true,
7399           "type": "array"
7400         }
7401       }
7402     }
7403   }
7404 }
```

```

7401     "value": {
7402         "description": "The contact indication, true = broken (open), false = in place (closed).",
7403         "readOnly": true,
7404         "type": "boolean"
7405     },
7406     "n": {
7407         "$ref":
7408         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7409         schema.json#/definitions/n"
7410     },
7411     "id": {
7412         "$ref":
7413         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7414         schema.json#/definitions/id"
7415     },
7416     "if": {
7417         "description": "The OCF Interface set supported by this Resource.",
7418         "items": {
7419             "enum": [
7420                 "oic.if.s",
7421                 "oic.if.baseline"
7422             ],
7423             "type": "string"
7424         },
7425         "minItems": 2,
7426         "uniqueItems": true,
7427         "readOnly": true,
7428         "type": "array"
7429     }
7430 },
7431 "type": "object",
7432 "required": ["value"]
7433 }
7434 }
7435 }
7436

```

6.34.5 Property definition

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

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

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

n	multiple types: see schema	No	Read Write	
---	-------------------------------	----	------------	--

7440 **6.34.6 CRUDN behaviour**

7441 Table 72 defines the CRUDN operations that are supported on the "oic.r.sensor.contact" Resource
7442 Type.

7443 **Table 72 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.contact".**

Create	Read	Update	Delete	Notify
	get			observe

7444 **6.35 Demand Response Load Control (DRLC).**

7445 **6.35.1 Introduction**

7446 This Resource describes any to be applied or currently being applied DRLC signal.
7447 The Property "DRType" is the ApplianceLoadReductionType defined in Zigbee/HA Smart Energy
7448 Profile 2.0.

7449 The Property "Start" is a string containing an RFC3339 encoded start time.
7450 The Property "duration" value is in minutes.
7451 The Property "Override" indicates whether the consumer has overridden the request (true) or not
7452 (false).

7453 The Resource provides the current DRLC action that is being applied.

7454 **6.35.2 Example URI**

7455 /DRLCResURI

7456 **6.35.3 Resource type**

7457 The Resource Type is defined as: "oic.r.energy.drlc".

7458 **6.35.4 OpenAPI 2.0 definition**

```
7459 {
7460   "swagger": "2.0",
7461   "info": {
7462     "title": "Demand Response Load Control (DRLC).",
7463     "version": "20190215",
7464     "license": {
7465       "name": "OCF Data Model License",
7466       "url":
7467         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
7468         CENSE.md",
7469       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
7470       reserved."
7471     },
7472     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
7473   },
7474   "schemes": ["http"],
7475   "consumes": ["application/json"],
7476   "produces": ["application/json"],
7477   "paths": {
7478     "/DRLCResURI" : {
7479       "get": {
7480         "description": "This Resource describes any to be applied or currently being applied DRLC
7481         signal.\nThe Property \"DRType\" is the ApplianceLoadReductionType defined in Zigbee/HA Smart Energy
7482         Profile 2.0.\nThe Property \"Start\" is a string containing an RFC3339 encoded start time.\nThe
7483         Property \"duration\" value is in minutes.\nThe Property \"Override\" indicates whether the consumer
7484         has overridden the request (true) or not (false).\nThe Resource provides the current DRLC action
7485         that is being applied.",
7486         "parameters": [
```



```

7487     {"$ref": "#/parameters/interface"}
7488   ],
7489   "responses": {
7490     "200": {
7491       "description": "",
7492       "x-example":
7493         {
7494           "rt": ["oic.r.energy.drlc"],
7495           "if": ["oic.if.a", "oic.if.baseline"],
7496           "DRType": 1,
7497           "start": "2015-01-09T16:45:00Z",
7498           "duration": 10,
7499           "override": false,
7500           "drlevel": 2,
7501           "mandate": true
7502         },
7503       "schema": { "$ref": "#/definitions/DRLC" }
7504     }
7505   },
7506 },
7507 "post": {
7508   "description": "Provides the DRLC action to be applied to the device or updates an existing
7509 action.",
7510   "parameters": [
7511     {"$ref": "#/parameters/interface"},
7512     {
7513       "name": "body",
7514       "in": "body",
7515       "required": true,
7516       "schema": {"$ref": "#/definitions/DRLC"},
7517       "x-example":
7518         {
7519           "DRType": 1,
7520           "start": "2015-01-09T17:00:00Z",
7521           "duration": 10
7522         }
7523     }
7524   ],
7525   "responses": {
7526     "200": {
7527       "description": "Indicates that the target DRLC resource was changed.\n\nThe new
7528 resource attributes are provided in the response.",
7529       "x-example":
7530         {
7531           "DRType": 1,
7532           "start": "2015-01-09T17:00:00Z",
7533           "duration": 15,
7534           "override": false
7535         }
7536     },
7537     "schema": {"$ref": "#/definitions/DRLC"}
7538   },
7539   "201": {
7540     "description": "Indicates successful creation of the DRLC Resource with the
7541 attributes provided.\n\nThe response includes the URI of the created Resource.",
7542     "x-example":
7543       {
7544         "ResURI": "/MyDevice/MyDRLCURI"
7545       },
7546     "schema": {"$ref": "#/definitions/CreateResponse"}
7547   }
7548 }
7549 }
7550 }
7551 },
7552 "parameters": {
7553   "interface": {
7554     "in": "query",
7555     "name": "if",
7556     "type": "string",
7557     "enum": ["oic.if.a", "oic.if.baseline"]
7558   }

```

```

7559 },
7560 "definitions": {
7561   "DRLC" : {
7562     "properties": {
7563       "rt": {
7564         "description": "The Resource Type.",
7565         "items": {
7566           "enum": ["oic.r.energy.drlc"],
7567           "maxLength": 64,
7568           "type": "string"
7569         },
7570         "minItems": 1,
7571         "uniqueItems": true,
7572         "readOnly": true,
7573         "type": "array"
7574       },
7575       "start": {
7576         "description": "The start time for the application of DR.",
7577         "type": "string"
7578       },
7579       "duration": {
7580         "description": "The duration of the to be applied DR type.",
7581         "type": "integer"
7582       },
7583       "override": {
7584         "description": "Whether the consumer has overridden the application of DR.",
7585         "type": "boolean"
7586       },
7587       "DRType": {
7588         "description": "The to be applied demand-response type.",
7589         "type": "integer"
7590       },
7591       "drlevel": {
7592         "type": "integer",
7593         "minimum": 0,
7594         "maximum": 3,
7595         "description": "Indicator of the strength of the DR response that is requested; 0-0%, 1-
7596 30%, 2-50%, 3-70%"
7597       },
7598       "mandate" : {
7599         "type": "boolean",
7600         "description": "Whether overriding the DR request by the consumer is allowed"
7601       },
7602       "n": {
7603         "$ref":
7604         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7605         schema.json#/definitions/n"
7606       },
7607       "id": {
7608         "$ref":
7609         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7610         schema.json#/definitions/id"
7611       },
7612       "if": {
7613         "description": "The OCF Interface set supported by this Resource.",
7614         "items": {
7615           "enum": [
7616             "oic.if.a",
7617             "oic.if.baseline"
7618           ],
7619           "type": "string"
7620         },
7621         "minItems": 2,
7622         "uniqueItems": true,
7623         "readOnly": true,
7624         "type": "array"
7625       }
7626     },
7627     "type": "object",
7628     "required": ["DRType"]
7629   },
7630   "CreateResponse" : {

```

```

7631     "properties": {
7632       "ResURI": {
7633         "description": "The url of the created Resource.",
7634         "type": "string",
7635         "format" : "uri"
7636       }
7637     },
7638     "type": "object",
7639     "required": ["ResURI"]
7640   }
7641 }
7642 }
7643 }

```

7644 **6.35.5 Property definition**

7645 Table 73 defines the Properties that are part of the "oic.r.energy.drlc" Resource Type.

7646 **Table 73 – The Property definitions of the Resource with type "rt" = "oic.r.energy.drlc".**

Property name	Value type	Mandatory	Access mode	Description
ResURI	string	Yes	Read Write	The url of the created Resource.
duration	integer	No	Read Write	The duration of the to be applied DR type.
DRType	integer	Yes	Read Write	The to be applied demand-response type.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
start	string	No	Read Write	The start time for the application of DR.
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
override	boolean	No	Read Write	Whether the consumer has overridden the

				application of DR.
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

7647 **6.35.6 CRUDN behaviour**

7648 Table 74 defines the CRUDN operations that are supported on the "oic.r.energy.drlc" Resource
7649 Type.

7650 **Table 74 – The CRUDN operations of the Resource with type "rt" = "oic.r.energy.drlc".**

Create	Read	Update	Delete	Notify
	get	post		observe

7651 **6.36 Energy Overload/Circuit Breaker**

7652 **6.36.1 Introduction**

7653 This Resource describes whether an energy overload detector/circuit breaker is currently tripped.
7654 The Property "value" is a boolean.
7655 A value of 'true' means that energy overload has been tripped.
7656 A value of 'false' means that energy overload has not been tripped.
7657

7658 **6.36.2 Example URI**

7659 /EnergyOverloadResURI

7660 **6.36.3 Resource type**

7661 The Resource Type is defined as: "oic.r.energy.overload".

7662 **6.36.4 OpenAPI 2.0 definition**

```
7663 {
7664   "swagger": "2.0",
7665   "info": {
7666     "title": "Energy Overload/Circuit Breaker",
7667     "version": "20190215",
7668     "license": {
7669       "name": "OCF Data Model License",
7670       "url":
7671         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
7672         CENSE.md",
7673       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
7674         reserved."
7675     },
7676     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
7677   },
7678   "schemes": ["http"],
7679   "consumes": ["application/json"],
7680   "produces": ["application/json"],
```

```

7681     "paths": {
7682       "/EnergyOverloadResURI" : {
7683         "get": {
7684           "description": "This Resource describes whether an energy overload detector/circuit breaker
7685 is currently tripped.\nThe Property \"value\" is a boolean.\nA value of 'true' means that energy
7686 overload has been tripped.\nA value of 'false' means that energy overload has not been tripped.\n",
7687           "parameters": [
7688             { "$ref": "#/parameters/interface" }
7689           ],
7690           "responses": {
7691             "200": {
7692               "description": "",
7693               "x-example":
7694                 {
7695                   "rt": ["oic.r.energy.overload"],
7696                   "if": ["oic.if.s", "oic.if.baseline"],
7697                   "value": true
7698                 },
7699               "schema": { "$ref": "#/definitions/EnergyOverload" }
7700             }
7701           }
7702         }
7703       },
7704     },
7705     "parameters": {
7706       "interface": {
7707         "in": "query",
7708         "name": "if",
7709         "type": "string",
7710         "enum": ["oic.if.s", "oic.if.baseline"]
7711       }
7712     },
7713     "definitions": {
7714       "EnergyOverload" : {
7715         "properties": {
7716           "rt": {
7717             "description": "The Resource Type.",
7718             "items": {
7719               "enum": ["oic.r.energy.overload"],
7720               "maxLength": 64,
7721               "type": "string"
7722             },
7723             "minItems": 1,
7724             "uniqueItems": true,
7725             "readOnly": true,
7726             "type": "array"
7727           },
7728           "value": {
7729             "description": "The energy overload indication,true = tripped, false = not tripped.",
7730             "readOnly": true,
7731             "type": "boolean"
7732           },
7733           "n": {
7734             "$ref":
7735               "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7736 schema.json#/definitions/n"
7737           },
7738           "id": {
7739             "$ref":
7740               "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7741 schema.json#/definitions/id"
7742           },
7743           "if": {
7744             "description": "The OCF Interface set supported by this Resource.",
7745             "items": {
7746               "enum": [
7747                 "oic.if.s",
7748                 "oic.if.baseline"
7749               ],
7750               "type": "string"
7751             },
7752             "minItems": 2,

```

```

7753         "uniqueItems": true,
7754         "readOnly": true,
7755         "type": "array"
7756     }
7757 },
7758     "type": "object",
7759     "required": ["value"]
7760 }
7761 }
7762 }
7763

```

7764 **6.36.5 Property definition**

7765 Table 75 defines the Properties that are part of the "oic.r.energy.overload" Resource Type.

7766 **Table 75 – The Property definitions of the Resource with type "rt" =**
7767 **"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.

7768 **6.36.6 CRUDN behaviour**

7769 Table 76 defines the CRUDN operations that are supported on the "oic.r.energy.overload"
7770 Resource Type.

7771 **Table 76 – The CRUDN operations of the Resource with type "rt" = "oic.r.energy.overload".**

Create	Read	Update	Delete	Notify
	get			observe

7772 **6.37 Generic Sensor**

7773 **6.37.1 Introduction**

7774 This Resource describes whether some value or property or entity has been sensed or not.
7775 The Property "value" is a boolean.

7776 A value of 'true' means that the target has been sensed.
7777 A value of 'false' means that the target has not been sensed.

7778 6.37.2 Example URI

7779 /GenericSensorResURI

7780 6.37.3 Resource type

7781 The Resource Type is defined as: "oic.r.sensor".

7782 6.37.4 OpenAPI 2.0 definition

```
7783 {
7784   "swagger": "2.0",
7785   "info": {
7786     "title": "Generic Sensor",
7787     "version": "20190215",
7788     "license": {
7789       "name": "OCF Data Model License",
7790       "url":
7791         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
7792         CENSE.md",
7793       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
7794         reserved."
7795     },
7796     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
7797   },
7798   "schemes": ["http"],
7799   "consumes": ["application/json"],
7800   "produces": ["application/json"],
7801   "paths": {
7802     "/GenericSensorResURI" : {
7803       "get": {
7804         "description": "This Resource describes whether some value or property or entity has been
7805         sensed or not.\n\nThe Property \"value\" is a boolean.\n\nA value of 'true' means that the target has
7806         been sensed.\n\nA value of 'false' means that the target has not been sensed.",
7807         "parameters": [
7808           {"$ref": "#/parameters/interface"}
7809         ],
7810         "responses": {
7811           "200": {
7812             "description" : "",
7813             "x-example": {
7814               "rt": ["oic.r.sensor"],
7815               "if": ["oic.if.s", "oic.if.baseline"],
7816               "value": true
7817             },
7818             "schema": {"$ref": "#/definitions/Sensor" }
7819           }
7820         }
7821       }
7822     },
7823     "parameters": {
7824       "interface": {
7825         "in": "query",
7826         "name": "if",
7827         "type": "string",
7828         "enum": ["oic.if.s", "oic.if.baseline"]
7829       }
7830     },
7831     "definitions": {
7832       "Sensor" : {
7833         "properties": {
7834           "rt": {
7835             "description": "The Resource Type.",
7836             "items": {
7837               "enum": ["oic.r.sensor"],
7838               "maxLength": 64,
7839               "type": "string"
7840             }
7841           }
7842         }
7843       }
7844     }
7845   }
7846 }
```

```

7841     },
7842     "minItems": 1,
7843     "uniqueItems": true,
7844     "readOnly": true,
7845     "type": "array"
7846   },
7847   "value": {
7848     "description": "true = sensed, false = not sensed.",
7849     "readOnly": true,
7850     "type": "boolean"
7851   },
7852   "n": {
7853     "$ref":
7854     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7855     schema.json#/definitions/n"
7856   },
7857   "id": {
7858     "$ref":
7859     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7860     schema.json#/definitions/id"
7861   },
7862   "if": {
7863     "description": "The OCF Interface set supported by this Resource.",
7864     "items": {
7865       "enum": [
7866         "oic.if.s",
7867         "oic.if.baseline"
7868       ],
7869       "type": "string"
7870     },
7871     "minItems": 2,
7872     "uniqueItems": true,
7873     "readOnly": true,
7874     "type": "array"
7875   }
7876 },
7877 "type": "object",
7878 "required": ["value"]
7879 }
7880 }
7881 }
7882

```

7883 **6.37.5 Property definition**

7884 Table 77 defines the Properties that are part of the "oic.r.sensor" Resource Type.

7885 **Table 77 – The Property definitions of the Resource with type "rt" = "oic.r.sensor".**

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

value	boolean	Yes	Read Only	true = sensed, false = not sensed.
-------	---------	-----	-----------	---------------------------------------

7886 **6.37.6 CRUDN behaviour**

7887 Table 78 defines the CRUDN operations that are supported on the "oic.r.sensor" Resource Type.

7888 **Table 78 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor".**

Create	Read	Update	Delete	Notify
	get			observe

7889 **6.38 Glass Break Sensor**

7890 **6.38.1 Introduction**

7891 This Resource describes a glass break sensor.
 7892 The Property "value" is a boolean.
 7893 A value of 'true' means that glass break has been sensed.
 7894 A value of 'false' means that glass break not been sensed.

7895 **6.38.2 Example URI**

7896 /GlassBreakResURI

7897 **6.38.3 Resource type**

7898 The Resource Type is defined as: "oic.r.sensor.glassbreak".

7899 **6.38.4 OpenAPI 2.0 definition**

```

7900 {
7901   "swagger": "2.0",
7902   "info": {
7903     "title": "Glass Break Sensor",
7904     "version": "20190215",
7905     "license": {
7906       "name": "OCF Data Model License",
7907       "url":
7908         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
7909         CENSE.md",
7910       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
7911         reserved."
7912     },
7913     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
7914   },
7915   "schemes": ["http"],
7916   "consumes": ["application/json"],
7917   "produces": ["application/json"],
7918   "paths": {
7919     "/GlassBreakResURI" : {
7920       "get": {
7921         "description": "This Resource describes a glass break sensor.\n
7922           The Property \"value\" is a
7923           boolean.\n
7924           A value of 'true' means that glass break has been sensed.\n
7925           A value of 'false' means that
7926           glass break not been sensed.",
7927         "parameters": [
7928           {"$ref": "#/parameters/interface"}
7929         ],
7930         "responses": {
7931           "200": {
7932             "description": "",
7933             "x-example":
7934               {
7935                 "rt": ["oic.r.sensor.glassbreak"],

```

```

7933         "if": ["oic.if.s", "oic.if.baseline"],
7934         "value": true
7935     },
7936     "schema": { "$ref": "#/definitions/GlassBreak" }
7937 }
7938 }
7939 }
7940 }
7941 },
7942 "parameters": {
7943     "interface": {
7944         "in": "query",
7945         "name": "if",
7946         "type": "string",
7947         "enum": ["oic.if.s", "oic.if.baseline"]
7948     }
7949 },
7950 "definitions": {
7951     "GlassBreak": {
7952         "properties": {
7953             "rt": {
7954                 "description": "The Resource Type.",
7955                 "items": {
7956                     "enum": ["oic.r.sensor.glassbreak"],
7957                     "maxLength": 64,
7958                     "type": "string"
7959                 },
7960                 "minItems": 1,
7961                 "uniqueItems": true,
7962                 "readOnly": true,
7963                 "type": "array"
7964             },
7965             "value": {
7966                 "description": "The glassbreak indication, true = glass break
7967 not sensed.",
7968                 "readOnly": true,
7969                 "type": "boolean"
7970             },
7971             "n": {
7972                 "$ref":
7973 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7974 schema.json#/definitions/n"
7975             },
7976             "id": {
7977                 "$ref":
7978 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7979 schema.json#/definitions/id"
7980             },
7981             "if": {
7982                 "description": "The OCF Interface set supported by this Resource.",
7983                 "items": {
7984                     "enum": [
7985                         "oic.if.s",
7986                         "oic.if.baseline"
7987                     ],
7988                     "type": "string"
7989                 },
7990                 "minItems": 2,
7991                 "uniqueItems": true,
7992                 "readOnly": true,
7993                 "type": "array"
7994             }
7995         },
7996         "type": "object",
7997         "required": ["value"]
7998     }
7999 }
8000 }
8001

```

8002 6.38.5 Property definition

8003 Table 79 defines the Properties that are part of the "oic.r.sensor.glassbreak" Resource Type.
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8004
8005

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

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

8006 **6.38.6 CRUDN behaviour**

8007 Table 80 defines the CRUDN operations that are supported on the "oic.r.sensor.glassbreak"
8008 Resource Type.

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

Create	Read	Update	Delete	Notify
	get			observe

8011 **6.39 Heart Rate Zone**

8012 **6.39.1 Introduction**

8013 This Resource describes a measured heart rate by the current Zone using the Zoladz method. The
8014 Zoladz method defines Zones based on maximum heart rate; Zone 1 is the lowest, Zone 5 is the
8015 highest.

8016 The heartRateZone is an enumeration containing one of: "Zone1", "Zone2", "Zone3", "Zone4", and
8017 "Zone5".

8018

8019 **6.39.2 Example URI**

8020 /HeartRateZoneResURI

8021 **6.39.3 Resource type**

8022 The Resource Type is defined as: "oic.r.sensor.heart.zone".

8023 6.39.4 OpenAPI 2.0 definition

```
8024 {
8025   "swagger": "2.0",
8026   "info": {
8027     "title": "Heart Rate Zone",
8028     "version": "2019-03-28",
8029     "license": {
8030       "name": "OCF Data Model License",
8031       "url":
8032         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
8033         CENSE.md",
8034       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
8035         reserved."
8036     },
8037     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
8038   },
8039   "schemes": ["http"],
8040   "consumes": ["application/json"],
8041   "produces": ["application/json"],
8042   "paths": {
8043     "/HeartRateZoneResURI" : {
8044       "get": {
8045         "description": "This Resource describes a measured heart rate by the current Zone using the
8046         Zoladz method. The Zoladz method defines Zones based on maximum heart rate; Zone 1 is the lowest,
8047         Zone 5 is the highest.\nThe heartRateZone is an enumeration containing one of: \"Zone1\", \"Zone2\",
8048         \"Zone3\", \"Zone4\", and \"Zone5\".\n",
8049         "parameters": [
8050           {"$ref": "#/parameters/interface"}
8051         ],
8052         "responses": {
8053           "200": {
8054             "description": "",
8055             "x-example":
8056               {
8057                 "rt": ["oic.r.sensor.heart.zone"],
8058                 "heartRateZone": "Zone3"
8059               },
8060             "schema": {"$ref": "#/definitions/heartRateZone"}
8061           }
8062         }
8063       }
8064     },
8065   },
8066   "parameters": {
8067     "interface" : {
8068       "in" : "query",
8069       "name" : "if",
8070       "type" : "string",
8071       "enum" : ["oic.if.s", "oic.if.baseline"]
8072     }
8073   },
8074   "definitions": {
8075     "heartRateZone" : {
8076       "properties": {
8077         "rt": {
8078           "description": "Resource Type",
8079           "items": {
8080             "enum": ["oic.r.sensor.heart.zone"],
8081             "maxLength": 64,
8082             "type": "string"
8083           },
8084           "minItems": 1,
8085           "readOnly": true,
8086           "uniqueItems": true,
8087           "type": "array"
8088         },
8089         "n": {
8090           "$ref":
8091             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8092             schema.json#/definitions/n"
8093         }
8094       }
8095     }
8096   }
8097 }
```

```

8094     "id": {
8095         "$ref":
8096         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8097         schema.json#/definitions/id"
8098     },
8099     "heartRateZone": {
8100         "description": "Current heart rate zone based on the Zoladz system.",
8101         "enum": [
8102             "Zone1",
8103             "Zone2",
8104             "Zone3",
8105             "Zone4",
8106             "Zone5"
8107         ],
8108         "readOnly": true,
8109         "type": "string"
8110     },
8111     "if": {
8112         "description": "The OCF Interface set supported by this Resource",
8113         "items": {
8114             "enum": [
8115                 "oic.if.s",
8116                 "oic.if.baseline"
8117             ],
8118             "type": "string",
8119             "maxLength": 64
8120         },
8121         "minItems": 1,
8122         "readOnly": true,
8123         "uniqueItems": true,
8124         "type": "array"
8125     }
8126 },
8127 "type" : "object",
8128 "required": ["heartRateZone"]
8129 }
8130 }
8131 }
8132

```

8133 6.39.5 Property definition

8134 Table 81 defines the Properties that are part of the "oic.r.sensor.heart.zone" Resource Type.

8135 **Table 81 – The Property definitions of the Resource with type "rt" =**
8136 **"oic.r.sensor.heart.zone".**

Property name	Value type	Mandatory	Access mode	Description
n	multiple types: see schema	No	Read Write	
heartRateZone	string	Yes	Read Only	Current heart rate zone based on the Zoladz system.
rt	array: see schema	No	Read Only	Resource Type
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

id	multiple types: see schema	No	Read Write	
----	-------------------------------	----	------------	--

8137 **6.39.6 CRUDN behaviour**

8138 Table 82 defines the CRUDN operations that are supported on the "oic.r.sensor.heart.zone"
8139 Resource Type.

8140 **Table 82 – The CRUDN operations of the Resource with type "rt" =**
8141 **"oic.r.sensor.heart.zone".**

Create	Read	Update	Delete	Notify
	get			observe

8142

8143 **6.40 Illuminance Sensor**

8144 **6.40.1 Introduction**

8145 This Resource describes an illuminance sensor.
8146 The Property "illuminance" is a float and represents the sensed luminous flux per unit area in lux.

8147 **6.40.2 Example URI**

8148 /IlluminanceSensorResURI

8149 **6.40.3 Resource type**

8150 The Resource Type is defined as: "oic.r.sensor.illuminance".

8151 **6.40.4 OpenAPI 2.0 definition**

```
8152 {
8153   "swagger": "2.0",
8154   "info": {
8155     "title": "Illuminance Sensor",
8156     "version": "20190215",
8157     "license": {
8158       "name": "OCF Data Model License",
8159       "url":
8160 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
8161 CENSE.md",
8162       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
8163 reserved."
8164     },
8165     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
8166   },
8167   "schemes": ["http"],
8168   "consumes": ["application/json"],
8169   "produces": ["application/json"],
8170   "paths": {
8171     "/IlluminanceSensorResURI" : {
8172       "get": {
8173         "description": "This Resource describes an illuminance sensor.\nThe Property \"illuminance\"
8174 is a float and represents the sensed luminous flux per unit area in lux.",
8175         "parameters": [
8176           {"$ref": "#/parameters/interface"}
8177         ],
8178         "responses": {
8179           "200": {
8180             "description": "",
8181             "x-example":
8182             {
8183               "rt": ["oic.r.sensor.illuminance"],
```

```

8184         "if": ["oic.if.s", "oic.if.baseline"],
8185         "illumiance": 450.0
8186     },
8187     "schema": { "$ref": "#/definitions/Illuminance" }
8188 }
8189 }
8190 }
8191 }
8192 },
8193 "parameters": {
8194     "interface": {
8195         "in": "query",
8196         "name": "if",
8197         "type": "string",
8198         "enum": ["oic.if.s", "oic.if.baseline"]
8199     }
8200 },
8201 "definitions": {
8202     "Illuminance": {
8203         "properties": {
8204             "rt": {
8205                 "description": "The Resource Type.",
8206                 "items": {
8207                     "enum": ["oic.r.sensor.illumiance"],
8208                     "maxLength": 64,
8209                     "type": "string"
8210                 },
8211                 "minItems": 1,
8212                 "uniqueItems": true,
8213                 "readOnly": true,
8214                 "type": "array"
8215             },
8216             "illumiance": {
8217                 "description": "The sensed luminous flux per unit area in lux.",
8218                 "readOnly": true,
8219                 "type": "number"
8220             },
8221             "n": {
8222                 "$ref":
8223 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8224 schema.json#/definitions/n"
8225             },
8226             "id": {
8227                 "$ref":
8228 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8229 schema.json#/definitions/id"
8230             },
8231             "if": {
8232                 "description": "The OCF Interface set supported by this Resource.",
8233                 "items": {
8234                     "enum": [
8235                         "oic.if.s",
8236                         "oic.if.baseline"
8237                     ],
8238                     "type": "string"
8239                 },
8240                 "minItems": 2,
8241                 "uniqueItems": true,
8242                 "readOnly": true,
8243                 "type": "array"
8244             }
8245         },
8246         "type": "object",
8247         "required": ["illumiance"]
8248     }
8249 }
8250 }
8251

```

8252 6.40.5 Property definition

8253 Table 83 defines the Properties that are part of the "oic.r.sensor.illumiance" Resource Type.

8254
8255

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

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

8256 **6.40.6 CRUDN behaviour**

8257 Table 84 defines the CRUDN operations that are supported on the "oic.r.sensor.illuminance"
8258 Resource Type.

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

Create	Read	Update	Delete	Notify
	get			observe

8261 **6.41 Magnetic Field Direction Sensor**

8262 **6.41.1 Introduction**

8263 This Resource describes the direction of the Earth's magnetic field at the observer's current point
8264 in space.

8265 Typical use case includes measurement of compass readings on a personal device.
8266 The Property "value" is an array containing Hx, Hy, Hz (in that order) each of which are floats.
8267 Each of Hx, Hy and Hz are expressed in A/m (Amperes per metre).

8268 **6.41.2 Example URI**

8269 /MagneticFieldDirectionResURI

8270 **6.41.3 Resource type**

8271 The Resource Type is defined as: "oic.r.sensor.magneticfielddirection".

8272 **6.41.4 OpenAPI 2.0 definition**

8273 {
8274 "swagger": "2.0",
8275 "info": {


```

8276     "title": "Magnetic Field Direction Sensor",
8277     "version": "20190215",
8278     "license": {
8279         "name": "OCF Data Model License",
8280         "url":
8281 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
8282 CENSE.md",
8283         "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
8284 reserved."
8285     },
8286     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
8287 },
8288 "schemas": ["http"],
8289 "consumes": ["application/json"],
8290 "produces": ["application/json"],
8291 "paths": {
8292     "/MagneticFieldDirectionResURI" : {
8293         "get": {
8294             "description": "This Resource describes the direction of the Earth's magnetic field at the
8295 observer's current point in space.\nTypical use case includes measurement of compass readings on a
8296 personal device.\nThe Property \"value\" is an array containing Hx, Hy, Hz (in that order) each of
8297 which are floats.\nEach of Hx, Hy and Hz are expressed in A/m (Amperes per metre).",
8298             "parameters": [
8299                 { "$ref": "#/parameters/interface" }
8300             ],
8301             "responses": {
8302                 "200": {
8303                     "description": "",
8304                     "x-example":
8305                     {
8306                         "rt": ["oic.r.sensor.magneticfielddirection"],
8307                         "if": ["oic.if.s", "oic.if.baseline"],
8308                         "value": [100.0, 15.0, 90.0]
8309                     },
8310                     "schema": { "$ref": "#/definitions/magneticFieldDirection" }
8311                 }
8312             }
8313         }
8314     }
8315 },
8316 "parameters": {
8317     "interface" : {
8318         "in" : "query",
8319         "name" : "if",
8320         "type" : "string",
8321         "enum" : ["oic.if.s", "oic.if.baseline"]
8322     }
8323 },
8324 "definitions": {
8325     "magneticFieldDirection" : {
8326         "properties": {
8327             "rt": {
8328                 "description": "The Resource Type.",
8329                 "items": {
8330                     "enum": ["oic.r.sensor.magneticfielddirection"],
8331                     "maxLength": 64,
8332                     "type": "string"
8333                 },
8334                 "minItems": 1,
8335                 "uniqueItems": true,
8336                 "readOnly": true,
8337                 "type": "array"
8338             },
8339             "value": {
8340                 "description": "The array containing Hx, Hy, Hz.",
8341                 "items": {
8342                     "type": "number"
8343                 },
8344                 "maxItems": 3,
8345                 "minItems": 3,
8346                 "readOnly": true,
8347                 "type": "array"

```

```

8348     },
8349     "n": {
8350         "$ref":
8351         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8352         schema.json#/definitions/n"
8353     },
8354     "id": {
8355         "$ref":
8356         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8357         schema.json#/definitions/id"
8358     },
8359     "if": {
8360         "description": "The OCF Interface set supported by this Resource.",
8361         "items": {
8362             "enum": [
8363                 "oic.if.s",
8364                 "oic.if.baseline"
8365             ],
8366             "type": "string"
8367         },
8368         "minItems": 2,
8369         "uniqueItems": true,
8370         "readOnly": true,
8371         "type": "array"
8372     }
8373 },
8374 "type": "object",
8375 "required": ["value"]
8376 }
8377 }
8378 }
8379

```

6.41.5 Property definition

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

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

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

8385 **6.41.6 CRUDN behaviour**

8386 Table 86 defines the CRUDN operations that are supported on the
8387 "oic.r.sensor.magneticfielddirection" Resource Type.

8388 **Table 86 – The CRUDN operations of the Resource with type "rt" =**
8389 **"oic.r.sensor.magneticfielddirection".**

Create	Read	Update	Delete	Notify
	get			observe

8390 **6.42 Media**

8391 **6.42.1 Introduction**

8392 This Resource specifies the media types that an OCF Server supports.
8393 The resource is an array of media elements. Each element contains:
8394 A URL at which the specified media type can be accessed.
8395 A string array containing the definition of the media using SDP.
8396 Each entry in the sdp array is an SDP line.
8397 Each line shall follow the SDP description syntax as defined in the SDP specification.
8398 The SDP specification can be found at <http://tools.ietf.org/html/rfc4566>.

8399 **6.42.2 Example URI**

8400 /MediaResURI

8401 **6.42.3 Resource type**

8402 The Resource Type is defined as: "oic.r.media".

8403 **6.42.4 OpenAPI 2.0 definition**

```
8404 {
8405   "swagger": "2.0",
8406   "info": {
8407     "title": "Media",
8408     "version": "20190215",
8409     "license": {
8410       "name": "OCF Data Model License",
8411       "url":
8412         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
8413         CENSE.md",
8414       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
8415       reserved."
8416     },
8417     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
8418   },
8419   "schemes": ["http"],
8420   "consumes": ["application/json"],
8421   "produces": ["application/json"],
8422   "paths": {
8423     "/MediaResURI" : {
8424       "get": {
8425         "description": "This Resource specifies the media types that an OCF Server supports.\nThe
8426         resource is an array of media elements. Each element contains:\n  A URL at which the specified
8427         media type can be accessed.\n  A string array containing the definition of the media using SDP.\n
8428         Each entry in the sdp array is an SDP line.\n  Each line shall follow the SDP description syntax
8429         as defined in the SDP specification.\nThe SDP specification can be found at
8430         http://tools.ietf.org/html/rfc4566.",
8431         "parameters": [
8432           {"$ref": "#/parameters/interface"}
8433         ],
8434         "responses": {
8435           "200": {
8436             "description": "RETRIEVES the current media resource.",
```

```

8437     "x-example":
8438     {
8439         "rt": ["oic.r.media"],
8440         "if": ["oic.if.s", "oic.if.baseline"],
8441         "media": [
8442             {
8443                 "url": "some example url",
8444                 "sdp": [
8445                     "m=video 1 RTP/AVP 96",
8446                     "a=rtpmap:96 H264/9000",
8447                     "a=fmtp:96 profile-level-id=42A028;packetization-mode=1"
8448                 ]
8449             },
8450             {
8451                 "url": "some other example1 url",
8452                 "sdp": [
8453                     "m=audio 2 RTP/AVP 97",
8454                     "a=rtpmap:97 MP4A-LATM/90000"
8455                 ]
8456             },
8457             {
8458                 "url": "some other example2 url",
8459                 "sdp": [
8460                     "m=video 3 RTP/AVP 98",
8461                     "a=rtpmap:98 jpeg/90000",
8462                     "a=fmtp:98 sampling=YCbCr-4:2:0;width=256;height=256"
8463                 ]
8464             }
8465         ]
8466     },
8467     "schema": { "$ref": "#/definitions/Media" }
8468 }
8469 }
8470 }
8471 }
8472 },
8473 "parameters": {
8474     "interface": {
8475         "in": "query",
8476         "name": "if",
8477         "type": "string",
8478         "enum": ["oic.if.s", "oic.if.baseline"]
8479     }
8480 },
8481 "definitions": {
8482     "Media" : {
8483         "properties": {
8484             "rt": {
8485                 "description": "The Resource Type.",
8486                 "items": {
8487                     "enum": ["oic.r.media"],
8488                     "maxLength": 64,
8489                     "type": "string"
8490                 },
8491                 "minItems": 1,
8492                 "uniqueItems": true,
8493                 "readOnly": true,
8494                 "type": "array"
8495             },
8496             "media": {
8497                 "items": {
8498                     "properties": {
8499                         "sdp": {
8500                             "description": "The array of strings, one per SDP line.",
8501                             "items": {
8502                                 "description": "SDP media or attribute line",
8503                                 "type": "string"
8504                             },
8505                             "type": "array"
8506                         },
8507                         "url": {
8508                             "description": "The url for the media instance.",

```

```

8509         "type": "string"
8510     }
8511 },
8512     "type": "object"
8513 },
8514     "type": "array"
8515 },
8516     "n": {
8517         "$ref":
8518 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8519 schema.json#/definitions/n"
8520     },
8521     "id": {
8522         "$ref":
8523 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8524 schema.json#/definitions/id"
8525     },
8526     "if": {
8527         "description": "The OCF Interface set supported by this Resource.",
8528         "items": {
8529             "enum": [
8530                 "oic.if.s",
8531                 "oic.if.baseline"
8532             ],
8533             "type": "string"
8534         },
8535         "minItems": 2,
8536         "uniqueItems": true,
8537         "readOnly": true,
8538         "type": "array"
8539     }
8540 },
8541     "type": "object",
8542     "required": ["media"]
8543 }
8544 }
8545 }
8546

```

8547 **6.42.5 Property definition**

8548 Table 87 defines the Properties that are part of the "oic.r.media" Resource Type.

8549 **Table 87 – The Property definitions of the Resource with type "rt" = "oic.r.media".**

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

8550 **6.42.6 CRUDN behaviour**

8551 Table 88 defines the CRUDN operations that are supported on the "oic.r.media" Resource Type.

8552 **Table 88 – The CRUDN operations of the Resource with type "rt" = "oic.r.media".**

Create	Read	Update	Delete	Notify
	get			observe

8553 **6.43 Media Source**

8554 **6.43.1 Introduction**

8555 This Resource defines a single media source that exists on a device.
8556 The source can be an input source or output source, this resource is agnostic of that.
8557 The Property "sourceName" specifies a pre-defined media input or output (e.g."HDMI", "DVI").
8558 The Property "sourceNumber" is a numeric identifier to specify the instance (e.g. "PC", 1).
8559 The Property "sourceType" is an enumeration defining whether the source is audio, video or both.
8560 The Property "status" is a boolean that determines if the specific source instance is selected or not.
8561 A status of true means that the source instance is selected.
8562 A status of false means that the source instance is not selected.
8563

8564 **6.43.2 Example URI**

8565 /mediaSourceResURI

8566 **6.43.3 Resource type**

8567 The Resource Type is defined as: "oic.r.mediasource".

8568 **6.43.4 OpenAPI 2.0 definition**

```
8569 {  
8570   "swagger": "2.0",  
8571   "info": {  
8572     "title": "Media Source",  
8573     "version": "20190215",  
8574     "license": {  
8575       "name": "OCF Data Model License",  
8576       "url":  
8577         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
8578         CENSE.md",  
8579       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
8580       reserved."  
8581     },  
8582     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
8583   },  
8584   "schemes": ["http"],  
8585   "consumes": ["application/json"],  
8586   "produces": ["application/json"],  
8587   "paths": {  
8588     "/mediaSourceResURI" : {  
8589       "get": {  
8590         "description": "This Resource defines a single media source that exists on a device.\nThe  
8591         source can be an input source or output source, this resource is agnostic of that.\nThe Property  
8592         \"sourceName\" specifies a pre-defined media input or output (e.g.\n\"HDMI\", \"DVI\").\nThe Property  
8593         \"sourceNumber\" is a numeric identifier to specify the instance (e.g. \"PC\", 1).\nThe Property  
8594         \"sourceType\" is an enumeration defining whether the source is audio, video or both.\nThe Property  
8595         \"status\" is a boolean that determines if the specific source instance is selected or not.\nA  
8596         status of true means that the source instance is selected.\nA status of false means that the  
8597         source instance is not selected.\n",  
8598         "parameters": [  
8599           {"$ref": "#/parameters/interface"}  
8600         ],  
8601         "responses": {
```

```

8602         "200": {
8603             "description" : "",
8604             "x-example":
8605                 {
8606                     "rt": ["oic.r.mediasource"],
8607                     "if": ["oic.if.a", "oic.if.baseline"],
8608                     "sourceName": "HDMI-CEC",
8609                     "sourceNumber": "1",
8610                     "sourceType": "audioPlusVideo",
8611                     "status": true
8612                 },
8613             "schema": { "$ref": "#/definitions/mediaSource" }
8614         }
8615     },
8616 },
8617 "post": {
8618     "description": "Changes the status of the source.\nAllows changes of the \"sourceName\" and
8619 the \"status\". The sourceNumber is used to identify the object in the array.",
8620     "parameters": [
8621         { "$ref": "#/parameters/interface" },
8622         {
8623             "name": "body",
8624             "in": "body",
8625             "required": true,
8626             "schema": { "$ref": "#/definitions/mediaSource" },
8627             "x-example":
8628                 {
8629                     "sourceName": "my new name",
8630                     "sourceNumber": "1",
8631                     "status": true
8632                 }
8633         }
8634     ],
8635     "responses": {
8636         "200": {
8637             "description" : "",
8638             "x-example":
8639                 {
8640                     "sourceName": "my new name",
8641                     "sourceNumber": "1",
8642                     "status": true
8643                 },
8644             "schema": { "$ref": "#/definitions/mediaSource" }
8645         }
8646     }
8647 },
8648 },
8649 "parameters": {
8650     "interface": {
8651         "in": "query",
8652         "name": "if",
8653         "type": "string",
8654         "enum": ["oic.if.a", "oic.if.baseline"]
8655     }
8656 },
8657 "definitions": {
8658     "mediaSource" : {
8659         "properties": {
8660             "rt": {
8661                 "description": "The Resource Type.",
8662                 "items": {
8663                     "enum": ["oic.r.mediasource"],
8664                     "maxLength": 64,
8665                     "type": "string"
8666                 },
8667             },
8668             "minItems": 1,
8669             "uniqueItems": true,
8670             "readOnly": true,
8671             "type": "array"
8672         },
8673         "status": {

```

```

8674         "description": "Specifies if the specific source instance is selected or not.",
8675         "type": "boolean"
8676     },
8677     "sourceType": {
8678         "description": "Specifies the type of the source.",
8679         "enum": [
8680             "audioOnly",
8681             "videoOnly",
8682             "audioPlusVideo"
8683         ],
8684         "readOnly": true,
8685         "type": "string"
8686     },
8687     "sourceName": {
8688         "description": "Specifies a pre-defined media input or output.",
8689         "type": "string"
8690     },
8691     "sourceNumber": {
8692         "description": "Numeric identifier to specify the instance.",
8693         "type": [
8694             "integer",
8695             "string"
8696         ]
8697     },
8698     "n": {
8699         "$ref":
8700         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8701         schema.json#/definitions/n"
8702     },
8703     "id": {
8704         "$ref":
8705         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8706         schema.json#/definitions/id"
8707     },
8708     "if": {
8709         "description": "The OCF Interface set supported by this Resource.",
8710         "items": {
8711             "enum": [
8712                 "oic.if.a",
8713                 "oic.if.baseline"
8714             ],
8715             "type": "string"
8716         },
8717         "minItems": 2,
8718         "uniqueItems": true,
8719         "readOnly": true,
8720         "type": "array"
8721     }
8722 },
8723 "type": "object",
8724 "required": ["sourceName", "status"]
8725 }
8726 }
8727 }
8728

```

8729 6.43.5 Property definition

8730 Table 89 defines the Properties that are part of the "oic.r.mediasource" Resource Type.

8731 **Table 89 – The Property definitions of the Resource with type "rt" = "oic.r.mediasource".**

Property name	Value type	Mandatory	Access mode	Description
sourceType	string	No	Read Only	Specifies the type of the source.

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.
sourceName	string	Yes	Read Write	Specifies a pre-defined media input or output.
id	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
sourceNumber	['integer', 'string']	No	Read Write	Numeric identifier to specify the instance.

8732 **6.43.6 CRUDN behaviour**

8733 Table 90 defines the CRUDN operations that are supported on the "oic.r.mediasource" Resource
8734 Type.

8735 **Table 90 – The CRUDN operations of the Resource with type "rt" = "oic.r.mediasource".**

Create	Read	Update	Delete	Notify
	get	post		observe

8736 **6.44 Media Source List**

8737 **6.44.1 Introduction**

8738 This Resource provides the list of media sources available on the Device.
8739 The sources are an array of mediaSource(s) as separately defined see Resource Type
8740 "oic.r.mediasource".

8741 The basic Resource Type "oic.r.mediasourcelist" does not provide any indications whether the
8742 source is input or output.

8743 Hence, two specializations of this resource exist.

8744 When a device exposes input sources then an instance of this resource with a Resource Type of
8745 "oic.r.media.input" is exposed.

8746 When a Device exposes output sources then an instance of this resource with a Resource Type of
8747 "oic.r.media.output" is exposed.

8748 A device that exposes both input and output media sources then exposes two instances of this
8749 resource,

8750 one with a Resource Type of "oic.r.media.input" and one with a resource type of
8751 "oic.r.media.output"
8752

8753 6.44.2 Example URI

8754 /mediaSourceListResURI

8755 6.44.3 Resource type

8756 The Resource Type is defined as: "oic.r.mediasourcelist".

8757 6.44.4 OpenAPI 2.0 definition

```
8758 {  
8759   "swagger": "2.0",  
8760   "info": {  
8761     "title": "Media Source List",  
8762     "version": "20190215",  
8763     "license": {  
8764       "name": "OCF Data Model License",  
8765       "url":  
8766         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
8767         CENSE.md",  
8768       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
8769       reserved."  
8770     },  
8771     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
8772   },  
8773   "schemes": ["http"],  
8774   "consumes": ["application/json"],  
8775   "produces": ["application/json"],  
8776   "paths": {  
8777     "/mediaSourceListResURI" : {  
8778       "get": {  
8779         "description": "This Resource provides the list of media sources available on the  
8780         Device.\n\nThe sources are an array of mediaSource(s) as separately defined see Resource Type  
8781         \"oic.r.mediasource\".\n\nThe basic Resource Type \"oic.r.mediasourcelist\" does not provide any  
8782         indications whether the source is input or output.\n\nHence, two specializations of this resource  
8783         exist.\n\nWhen a device exposes input sources then an instance of this resource with a Resource Type  
8784         of \"oic.r.media.input\" is exposed.\n\nWhen a Device exposes output sources then an instance of this  
8785         resource with a Resource Type of \"oic.r.media.output\" is exposed.\n\nA device that exposes both  
8786         input and output media sources then exposes two instances of this resource,\n\nnone with a Resource  
8787         Type of \"oic.r.media.input\" and one with a resource type of \"oic.r.media.output\".\n\n",  
8788         "parameters": [  
8789           {"$ref": "#/parameters/interface"}  
8790         ],  
8791         "responses": {  
8792           "200": {  
8793             "description": "",  
8794             "x-example":  
8795               {  
8796                 "rt": ["oic.r.mediasourcelist"],  
8797                 "if": ["oic.if.a", "oic.if.baseline"],  
8798                 "sources": [  
8799                   {  
8800                     "sourceName": "HDMI-CEC",  
8801                     "sourceNumber": "1",  
8802                     "sourceType": "audioPlusVideo",  
8803                     "status": true  
8804                   },  
8805                   {  
8806                     "sourceName": "dualRCA",  
8807                     "sourceNumber": "1",  
8808                     "sourceType": "audioOnly",  
8809                     "status": false  
8810                   }  
8811                 ]  
8812               },  
8813           "schema": { "$ref": "#/definitions/mediaSourceList" }  
8814         }  
8815       }  
8816     }  
8817   }  
8818 }
```

```

8815     }
8816   },
8817   "post": {
8818     "description": "Changes the status of the source(s).\nAllows changes of the sourceName and
8819 the status. The array index at sourceNumber will be changed.",
8820     "parameters": [
8821       { "$ref": "#/parameters/interface" },
8822       {
8823         "name": "body",
8824         "in": "body",
8825         "required": true,
8826         "schema": { "$ref": "#/definitions/mediaSourceList" },
8827         "x-example":
8828           {
8829             "sources": [
8830               {
8831                 "sourceName": "my new name",
8832                 "sourceNumber": "1",
8833                 "status": true
8834               }
8835             ]
8836           }
8837       },
8838     ],
8839     "responses": {
8840       "200": {
8841         "description": "",
8842         "x-example":
8843           {
8844             "sources": [
8845               {
8846                 "sourceName": "my new name",
8847                 "sourceNumber": "1",
8848                 "status": true
8849               }
8850             ]
8851           },
8852         "schema": { "$ref": "#/definitions/mediaSourceList" }
8853       }
8854     }
8855   }
8856 },
8857 },
8858 "parameters": {
8859   "interface": {
8860     "in": "query",
8861     "name": "if",
8862     "type": "string",
8863     "enum": ["oic.if.a", "oic.if.baseline"]
8864   }
8865 },
8866 "definitions": {
8867   "mediaSourceList" : {
8868     "properties": {
8869       "rt": {
8870         "description": "The Resource Type.",
8871         "items": {
8872           "enum": ["oic.r.mediasourcelist"],
8873           "maxLength": 64,
8874           "type": "string"
8875         },
8876         "minItems": 1,
8877         "uniqueItems": true,
8878         "readOnly": true,
8879         "type": "array"
8880       },
8881     "sources": {
8882       "items": {
8883         "properties": {
8884           "sourceName": {
8885             "description": "Specifies a pre-defined media input or output.",
8886             "type": "string"

```

```

8887     },
8888     "sourceNumber": {
8889         "description": "Numeric identifier to specify the instance.",
8890         "readOnly": true,
8891         "type": [
8892             "integer",
8893             "string"
8894         ]
8895     },
8896     "sourceType": {
8897         "description": "Specifies the type of the source.",
8898         "enum": [
8899             "audioOnly",
8900             "videoOnly",
8901             "audioPlusVideo"
8902         ],
8903         "readOnly": true,
8904         "type": "string"
8905     },
8906     "status": {
8907         "description": "Specifies if the specific source instance is selected or not.",
8908         "type": "boolean"
8909     }
8910 },
8911 "type": "object"
8912 },
8913 "type": "array"
8914 },
8915 "n": {
8916     "$ref":
8917     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8918     schema.json#/definitions/n"
8919 },
8920 "id": {
8921     "$ref":
8922     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8923     schema.json#/definitions/id"
8924 },
8925 "if": {
8926     "description": "The OCF Interface set supported by this Resource.",
8927     "items": {
8928         "enum": [
8929             "oic.if.a",
8930             "oic.if.baseline"
8931         ],
8932         "type": "string"
8933     },
8934     "minItems": 2,
8935     "uniqueItems": true,
8936     "readOnly": true,
8937     "type": "array"
8938 }
8939 },
8940 "type": "object",
8941 "required": ["sources"]
8942 }
8943 }
8944 }
8945

```

8946 6.44.5 Property definition

8947 Table 91 defines the Properties that are part of the "oic.r.mediasourcelist" Resource Type.

8948 **Table 91 – The Property definitions of the Resource with type "rt" =**
8949 **"oic.r.mediasourcelist".**

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

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

8950 **6.44.6 CRUDN behaviour**

8951 Table 92 defines the CRUDN operations that are supported on the "oic.r.mediasourcelist" Resource
8952 Type.

8953 **Table 92 – The CRUDN operations of the Resource with type "rt" = "oic.r.mediasourcelist".**

Create	Read	Update	Delete	Notify
	get	post		observe

8954 **6.45 Media Source Input**

8955 **6.45.1 Introduction**

8956 This resource provides the list of input media sources available on the device.
8957 The sources are an array of mediaSource(s) see Resource Type "oic.r.mediasource"
8958

8959 **6.45.2 Example URI**

8960 /mediaSourceInputResURI

8961 **6.45.3 Resource type**

8962 The Resource Type is defined as: "oic.r.media.input".

8963 **6.45.4 OpenAPI 2.0 definition**

```
8964 {
8965   "swagger": "2.0",
8966   "info": {
8967     "title": "Media Source Input",
8968     "version": "20190215",
8969     "license": {
8970       "name": "OCF Data Model License",
8971       "url":
8972         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
8973         CENSE.md",
8974       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
8975         reserved."
8976     },
8977     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
8978   },
```

```

8979     "schemes": ["http"],
8980     "consumes": ["application/json"],
8981     "produces": ["application/json"],
8982     "paths": {
8983         "/mediaSourceInputResURI" : {
8984             "get": {
8985                 "description": "This resource provides the list of input media sources available on the
8986 device.\nThe sources are an array of mediaSource(s) see Resource Type \"oic.r.mediasource\"\n",
8987                 "parameters": [
8988                     {"$ref": "#/parameters/interface"}
8989                 ],
8990                 "responses": {
8991                     "200": {
8992                         "description": "",
8993                         "x-example":
8994                             {
8995                                 "rt": ["oic.r.media.input"],
8996                                 "if": ["oic.if.a", "oic.if.baseline"],
8997                                 "sources": [
8998                                     {
8999                                         "sourceName": "HDMI-CEC",
9000                                         "sourceNumber": "1",
9001                                         "sourceType": "audioPlusVideo",
9002                                         "status": true
9003                                     },
9004                                     {
9005                                         "sourceName": "dualRCA",
9006                                         "sourceNumber": "1",
9007                                         "sourceType": "audioOnly",
9008                                         "status": false
9009                                     }
9010                                 ]
9011                             },
9012                     "schema": { "$ref": "#/definitions/mediaSourceList" }
9013                 }
9014             }
9015         },
9016         "post": {
9017             "description": "Changes the status of the source(s).\nAllows changes of the sourceName and
9018 the status.The array index at sourceNumber will be changed.",
9019             "parameters": [
9020                 {"$ref": "#/parameters/interface"},
9021                 {
9022                     "name": "body",
9023                     "in": "body",
9024                     "required": true,
9025                     "schema": { "$ref": "#/definitions/mediaSourceList" },
9026                     "x-example":
9027                         {
9028                             "sources": [
9029                                 {
9030                                     "sourceName": "my new name",
9031                                     "sourceNumber": "1",
9032                                     "status": true
9033                                 }
9034                             ]
9035                         }
9036                 }
9037             ],
9038             "responses": {
9039                 "200": {
9040                     "description": "",
9041                     "x-example":
9042                         {
9043                             "sources": [
9044                                 {
9045                                     "sourceName": "my new name",
9046                                     "sourceNumber": "1",
9047                                     "status": true
9048                                 }
9049                             ]
9050                         }
9051                 }
9052             }
9053         }
9054     }
9055 }

```

```

9051         ,
9052         "schema": { "$ref": "#/definitions/mediaSourceList" }
9053     }
9054 }
9055 }
9056 }
9057 },
9058 "parameters": {
9059     "interface": {
9060         "in": "query",
9061         "name": "if",
9062         "type": "string",
9063         "enum": ["oic.if.a", "oic.if.baseline"]
9064     }
9065 },
9066 "definitions": {
9067     "mediaSourceList" : {
9068         "properties": {
9069             "rt": {
9070                 "description": "Resource Type",
9071                 "items": {
9072                     "enum": ["oic.r.media.input"],
9073                     "maxLength": 64,
9074                     "type": "string"
9075                 },
9076                 "minItems": 1,
9077                 "uniqueItems": true,
9078                 "readOnly": true,
9079                 "type": "array"
9080             },
9081             "sources": {
9082                 "items": {
9083                     "properties": {
9084                         "sourceName": {
9085                             "description": "Specifies a pre-defined media input or output",
9086                             "type": "string"
9087                         },
9088                         "sourceNumber": {
9089                             "description": "Numeric identifier to specify the instance",
9090                             "readOnly": true,
9091                             "type": [
9092                                 "integer",
9093                                 "string"
9094                             ]
9095                         },
9096                         "sourceType": {
9097                             "description": "Specifies the type of the source",
9098                             "enum": [
9099                                 "audioOnly",
9100                                 "videoOnly",
9101                                 "audioPlusVideo"
9102                             ],
9103                             "readOnly": true,
9104                             "type": "string"
9105                         },
9106                         "status": {
9107                             "description": "Specifies if the specific source instance is selected or not",
9108                             "type": "boolean"
9109                         }
9110                     },
9111                     "type": "object"
9112                 },
9113                 "type": "array"
9114             },
9115             "n": {
9116                 "$ref":
9117                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9118                 schema.json#/definitions/n"
9119             },
9120             "id": {
9121                 "$ref":
9122                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-

```

```

9123 schema.json#/definitions/id"
9124     },
9125     "if": {
9126         "description": "The interface set supported by this resource",
9127         "items": {
9128             "enum": [
9129                 "oic.if.a",
9130                 "oic.if.baseline"
9131             ],
9132             "type": "string"
9133         },
9134         "minItems": 2,
9135         "uniqueItems": true,
9136         "readOnly": true,
9137         "type": "array"
9138     }
9139 },
9140 "type": "object",
9141 "required": ["sources"]
9142 }
9143 }
9144 }
9145

```

9146 **6.45.5 Property definition**

9147 Table 93 defines the Properties that are part of the "oic.r.media.input" Resource Type.

9148 **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	
if	array: see schema	No	Read Only	The interface set supported by this resource
id	multiple types: see schema	No	Read Write	

9149 **6.45.6 CRUDN behaviour**

9150 Table 94 defines the CRUDN operations that are supported on the "oic.r.media.input" Resource
9151 Type.

9152 **Table 94 – The CRUDN operations of the Resource with type "rt" = "oic.r.media.input".**

Create	Read	Update	Delete	Notify
	get	post		observe

9153 6.46 Media Source Output

9154 6.46.1 Introduction

9155 This resource provides the list of output media sources available on the device.
9156 The sources are an array of mediaSource(s) see Resource Type "oic.r.mediasource"

9157 6.46.2 Example URI

9158 /mediaSourceOutputResURI

9159 6.46.3 Resource type

9160 The Resource Type is defined as: "oic.r.media.output".

9161 6.46.4 OpenAPI 2.0 definition

```
9162 {
9163   "swagger": "2.0",
9164   "info": {
9165     "title": "Media Source Output",
9166     "version": "20190215",
9167     "license": {
9168       "name": "OCF Data Model License",
9169       "url":
9170 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
9171 CENSE.md",
9172       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
9173 reserved."
9174     },
9175     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
9176   },
9177   "schemes": ["http"],
9178   "consumes": ["application/json"],
9179   "produces": ["application/json"],
9180   "paths": {
9181     "/mediaSourceOutputResURI" : {
9182       "get": {
9183         "description": "This resource provides the list of output media sources available on the
9184 device.\n\nThe sources are an array of mediaSource(s) see Resource Type \"oic.r.mediasource\"",
9185         "parameters": [
9186           {"$ref": "#/parameters/interface"}
9187         ],
9188         "responses": {
9189           "200": {
9190             "description": "",
9191             "x-example":
9192             {
9193               "rt": ["oic.r.media.output"],
9194               "if": ["oic.if.a", "oic.if.baseline"],
9195               "sources": [
9196                 {
9197                   "sourceName": "HDMI-CEC",
9198                   "sourceNumber": "1",
9199                   "sourceType": "audioPlusVideo",
9200                   "status": true
9201                 },
9202                 {
9203                   "sourceName": "dualRCA",
9204                   "sourceNumber": "1",
9205                   "sourceType": "audioOnly",
9206                   "status": false
9207                 }
9208               ]
9209             },
9210             "schema": { "$ref": "#/definitions/mediaSourceList" }
9211           }
9212         }
9213       },
9214       "post": {
9215         "description": "Changes the status of the source(s).\n\nAllows changes of the sourceName and
9216 the status. The array index at sourceNumber will be changed.",
```

```

9217     "parameters": [
9218         { "$ref": "#/parameters/interface" },
9219         {
9220             "name": "body",
9221             "in": "body",
9222             "required": true,
9223             "schema": { "$ref": "#/definitions/mediaSourceList" },
9224             "x-example":
9225                 {
9226                     "sources": [
9227                         {
9228                             "sourceName": "my new name",
9229                             "sourceNumber": "1",
9230                             "status": true
9231                         }
9232                     ]
9233                 }
9234         },
9235     ],
9236     "responses": {
9237         "200": {
9238             "description": "",
9239             "x-example":
9240                 {
9241                     "sources": [
9242                         {
9243                             "sourceName": "my new name",
9244                             "sourceNumber": "1",
9245                             "status": true
9246                         }
9247                     ]
9248                 },
9249             "schema": { "$ref": "#/definitions/mediaSourceList" }
9250         }
9251     }
9252 },
9253 },
9254 },
9255 "parameters": {
9256     "interface": {
9257         "in": "query",
9258         "name": "if",
9259         "type": "string",
9260         "enum": ["oic.if.a", "oic.if.baseline"]
9261     }
9262 },
9263 "definitions": {
9264     "mediaSourceList": {
9265         "properties": {
9266             "rt": {
9267                 "description": "Resource Type",
9268                 "items": {
9269                     "enum": ["oic.r.media.output"],
9270                     "maxLength": 64,
9271                     "type": "string"
9272                 },
9273                 "minItems": 1,
9274                 "uniqueItems": true,
9275                 "readOnly": true,
9276                 "type": "array"
9277             },
9278             "sources": {
9279                 "items": {
9280                     "properties": {
9281                         "sourceName": {
9282                             "description": "Specifies a pre-defined media input or output.",
9283                             "type": "string"
9284                         },
9285                         "sourceNumber": {
9286                             "description": "Numeric identifier to specify the instance.",
9287                             "readOnly": true,
9288                             "type": [

```

```

9289         "integer",
9290         "string"
9291     ]
9292 },
9293 "sourceType": {
9294     "description": "Specifies the type of the source.",
9295     "enum": [
9296         "audioOnly",
9297         "videoOnly",
9298         "audioPlusVideo"
9299     ],
9300     "readOnly": true,
9301     "type": "string"
9302 },
9303 "status": {
9304     "description": "Specifies if the specific source instance is selected or not.",
9305     "type": "boolean"
9306 }
9307 },
9308 "type": "object"
9309 },
9310 "type": "array"
9311 },
9312 "n": {
9313     "$ref":
9314     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9315     schema.json#/definitions/n"
9316 },
9317 "id": {
9318     "$ref":
9319     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9320     schema.json#/definitions/id"
9321 },
9322 "if": {
9323     "description": "The OCF Interface set supported by this Resource.",
9324     "items": {
9325         "enum": [
9326             "oic.if.a",
9327             "oic.if.baseline"
9328         ],
9329         "type": "string"
9330     },
9331     "minItems": 2,
9332     "uniqueItems": true,
9333     "readOnly": true,
9334     "type": "array"
9335 }
9336 },
9337 "type": "object",
9338 "required": ["sources"]
9339 }
9340 }
9341 }
9342

```

9343 6.46.5 Property definition

9344 Table 95 defines the Properties that are part of the "oic.r.media.output" Resource Type.

9345 **Table 95 – The Property definitions of the Resource with type "rt" = "oic.r.media.output".**

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

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

9346 **6.46.6 CRUDN behaviour**

9347 Table 96 defines the CRUDN operations that are supported on the "oic.r.media.output" Resource
9348 Type.

9349 **Table 96 – The CRUDN operations of the Resource with type "rt" = "oic.r.media.output".**

Create	Read	Update	Delete	Notify
	get	post		observe

9350 **6.47 Motion Sensor**

9351 **6.47.1 Introduction**

9352 This Resource describes whether motion has been sensed or not.
9353 The Property "value" is a boolean.
9354 A value of 'true' means that motion has been sensed.
9355 A value of 'false' means that motion not been sensed.
9356

9357 **6.47.2 Example URI**

9358 /MotionResURI

9359 **6.47.3 Resource type**

9360 The Resource Type is defined as: "oic.r.sensor.motion".

9361 **6.47.4 OpenAPI 2.0 definition**

```
9362 {
9363   "swagger": "2.0",
9364   "info": {
9365     "title": "Motion Sensor",
9366     "version": "20190215",
9367     "license": {
9368       "name": "OCF Data Model License",
9369       "url":
9370 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
9371 CENSE.md",
9372       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
9373 reserved."
9374     },
9375     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
9376   },
9377   "schemes": ["http"],
9378   "consumes": ["application/json"],
9379   "produces": ["application/json"],
9380   "paths": {
9381     "/MotionResURI" : {
9382       "get": {
```

```

9383     "description": "This Resource describes whether motion has been sensed or not.\nThe Property
9384 \"value\" is a boolean.\nA value of 'true' means that motion has been sensed.\nA value of 'false'
9385 means that motion not been sensed.\n",
9386     "parameters": [
9387       {"$ref": "#/parameters/interface"}
9388     ],
9389     "responses": {
9390       "200": {
9391         "description": "",
9392         "x-example":
9393           {
9394             "rt": ["oic.r.sensor.motion"],
9395             "if": ["oic.if.s", "oic.if.baseline"],
9396             "value": true
9397           },
9398         "schema": { "$ref": "#/definitions/Motion" }
9399       }
9400     }
9401   },
9402 },
9403 },
9404 "parameters": {
9405   "interface": {
9406     "in": "query",
9407     "name": "if",
9408     "type": "string",
9409     "enum": ["oic.if.s", "oic.if.baseline"]
9410   }
9411 },
9412 "definitions": {
9413   "Motion": {
9414     "properties": {
9415       "rt": {
9416         "description": "The Resource Type.",
9417         "items": {
9418           "enum": ["oic.r.sensor.motion"],
9419           "maxLength": 64,
9420           "type": "string"
9421         },
9422         "minItems": 1,
9423         "uniqueItems": true,
9424         "readOnly": true,
9425         "type": "array"
9426       },
9427       "value": {
9428         "description": "The motion sensor, true = motion sensed, false = motion not sensed.",
9429         "readOnly": true,
9430         "type": "boolean"
9431       },
9432       "n": {
9433         "$ref":
9434           "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9435           schema.json#/definitions/n"
9436       },
9437       "id": {
9438         "$ref":
9439           "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9440           schema.json#/definitions/id"
9441       },
9442       "if": {
9443         "description": "The OCF Interface set supported by this Resource.",
9444         "items": {
9445           "enum": [
9446             "oic.if.s",
9447             "oic.if.baseline"
9448           ],
9449           "type": "string"
9450         },
9451         "minItems": 2,
9452         "uniqueItems": true,
9453         "readOnly": true,
9454         "type": "array"

```

```

9455     }
9456     },
9457     "type": "object",
9458     "required": ["value"]
9459   }
9460 }
9461 }
9462

```

9463 6.47.5 Property definition

9464 Table 97 defines the Properties that are part of the "oic.r.sensor.motion" Resource Type.

9465 **Table 97 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.motion".**

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

9466 6.47.6 CRUDN behaviour

9467 Table 98 defines the CRUDN operations that are supported on the "oic.r.sensor.motion" Resource
9468 Type.

9469 **Table 98 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.motion".**

Create	Read	Update	Delete	Notify
	get			observe

9470 6.48 Night Mode

9471 6.48.1 Introduction

9472 This Resource describes a night mode on/off feature.
9473 A nightMode value of 'true' means that the feature is on.
9474 A nightMode value of 'false' means that the feature is off.

9475 6.48.2 Example URI

9476 /NightModeResURI

9477 **6.48.3 Resource type**

9478 The Resource Type is defined as: "oic.r.nightmode".

9479 **6.48.4 OpenAPI 2.0 definition**

```
9480 {
9481   "swagger": "2.0",
9482   "info": {
9483     "title": "Night Mode",
9484     "version": "20190215",
9485     "license": {
9486       "name": "OCF Data Model License",
9487       "url":
9488         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
9489         CENSE.md",
9490       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
9491         reserved."
9492     },
9493     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
9494   },
9495   "schemes": ["http"],
9496   "consumes": ["application/json"],
9497   "produces": ["application/json"],
9498   "paths": {
9499     "/NightModeResURI" : {
9500       "get": {
9501         "description": "This Resource describes a night mode on/off feature.\nA nightMode value of
9502         'true' means that the feature is on.\nA nightMode value of 'false' means that the feature is off.",
9503         "parameters": [
9504           { "$ref": "#/parameters/interface" }
9505         ],
9506         "responses": {
9507           "200": {
9508             "description": "",
9509             "x-example":
9510               {
9511                 "rt": ["oic.r.nightmode"],
9512                 "if": ["oic.if.a", "oic.if.baseline"],
9513                 "nightMode": false
9514               },
9515             "schema": { "$ref": "#/definitions/NightMode" }
9516           }
9517         }
9518       },
9519       "post": {
9520         "description": "",
9521         "parameters": [
9522           { "$ref": "#/parameters/interface" },
9523           {
9524             "name": "body",
9525             "in": "body",
9526             "required": true,
9527             "schema": { "$ref": "#/definitions/NightMode" },
9528             "x-example":
9529               {
9530                 "nightMode": true
9531               }
9532           }
9533         ],
9534         "responses": {
9535           "200": {
9536             "description": "",
9537             "x-example":
9538               {
9539                 "nightMode": true
9540               },
9541             "schema": { "$ref": "#/definitions/NightMode" }
9542           }
9543         }
9544       }
9545     }
9546   }
9547 }
```

```

9546 },
9547 "parameters": {
9548   "interface": {
9549     "in": "query",
9550     "name": "if",
9551     "type": "string",
9552     "enum": ["oic.if.a", "oic.if.baseline"]
9553   }
9554 },
9555 "definitions": {
9556   "NightMode": {
9557     "properties": {
9558       "rt": {
9559         "description": "The Resource Type.",
9560         "items": {
9561           "enum": ["oic.r.nightmode"],
9562           "maxLength": 64,
9563           "type": "string"
9564         },
9565         "minItems": 1,
9566         "uniqueItems": true,
9567         "readOnly": true,
9568         "type": "array"
9569       },
9570       "nightMode": {
9571         "description": "The status of the Night Mode.",
9572         "type": "boolean"
9573       },
9574       "n": {
9575         "$ref":
9576         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9577         schema.json#/definitions/n"
9578       },
9579       "id": {
9580         "$ref":
9581         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9582         schema.json#/definitions/id"
9583       },
9584       "if": {
9585         "description": "The OCF Interface set supported by this Resource.",
9586         "items": {
9587           "enum": [
9588             "oic.if.a",
9589             "oic.if.baseline"
9590           ],
9591           "type": "string"
9592         },
9593         "minItems": 2,
9594         "uniqueItems": true,
9595         "readOnly": true,
9596         "type": "array"
9597       }
9598     },
9599     "type": "object",
9600     "required": ["nightMode"]
9601   }
9602 }
9603 }
9604

```

9605 6.48.5 Property definition

9606 Table 99 defines the Properties that are part of the "oic.r.nightmode" Resource Type.

9607 **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	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
id	multiple types: see schema	No	Read Write	

9608 **6.48.6 CRUDN behaviour**

9609 Table 100 defines the CRUDN operations that are supported on the "oic.r.nightmode" Resource
 9610 Type.

9611 **Table 100 – The CRUDN operations of the Resource with type "rt" = "oic.r.nightmode".**

Create	Read	Update	Delete	Notify
	get	post		observe

9612 **6.49 Presence Sensor**

9613 **6.49.1 Introduction**

9614 This Resource describes whether presence has been sensed or not.
 9615 The Property "value" is a boolean.
 9616 A value of 'true' means that presence has been sensed.
 9617 A value of 'false' means that presence not been sensed.

9618 **6.49.2 Example URI**

9619 /PresenceResURI

9620 **6.49.3 Resource type**

9621 The Resource Type is defined as: "oic.r.sensor.presence".

9622 **6.49.4 OpenAPI 2.0 definition**

```

9623 {
9624   "swagger": "2.0",
9625   "info": {
9626     "title": "Presence Sensor",
9627     "version": "20190215",
9628     "license": {
9629       "name": "OCF Data Model License",
9630       "url":
9631 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
9632 CENSE.md",
9633       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
9634 reserved."
9635     },

```

```

9636     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
9637   },
9638   "schemas": ["http"],
9639   "consumes": ["application/json"],
9640   "produces": ["application/json"],
9641   "paths": {
9642     "/PresenceResURI" : {
9643       "get": {
9644         "description": "This Resource describes whether presence has been sensed or not.\nThe
9645 Property \"value\" is a boolean.\nA value of 'true' means that presence has been sensed.\nA value of
9646 'false' means that presence not been sensed.",
9647         "parameters": [
9648           { "$ref": "#/parameters/interface" }
9649         ],
9650         "responses": {
9651           "200": {
9652             "description": "",
9653             "x-example":
9654               {
9655                 "rt": ["oic.r.sensor.presence"],
9656                 "if": ["oic.if.s", "oic.if.baseline"],
9657                 "value": true
9658               },
9659             "schema": { "$ref": "#/definitions/Presence" }
9660           }
9661         }
9662       }
9663     }
9664   },
9665   "parameters": {
9666     "interface": {
9667       "in": "query",
9668       "name": "if",
9669       "type": "string",
9670       "enum": ["oic.if.s", "oic.if.baseline"]
9671     }
9672   },
9673   "definitions": {
9674     "Presence" : {
9675       "properties": {
9676         "rt": {
9677           "description": "The Resource Type.",
9678           "items": {
9679             "enum": ["oic.r.sensor.presence"],
9680             "maxLength": 64,
9681             "type": "string"
9682           },
9683           "minItems": 1,
9684           "uniqueItems": true,
9685           "readOnly": true,
9686           "type": "array"
9687         },
9688         "value": {
9689           "description": "The presences sensor, true = precense sensed, false = precensenot
9690 sensed.",
9691           "readOnly": true,
9692           "type": "boolean"
9693         },
9694         "n": {
9695           "$ref":
9696 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9697 schema.json#/definitions/n"
9698         },
9699         "id": {
9700           "$ref":
9701 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9702 schema.json#/definitions/id"
9703         },
9704         "if": {
9705           "description": "The OCF Interface set supported by this Resource.",
9706           "items": {
9707             "enum": [

```

```

9708         "oic.if.s",
9709         "oic.if.baseline"
9710     ],
9711     "type": "string"
9712 },
9713     "minItems": 2,
9714     "uniqueItems": true,
9715     "readOnly": true,
9716     "type": "array"
9717 }
9718 },
9719     "type": "object",
9720     "required": ["value"]
9721 }
9722 }
9723 }
9724 }

```

9725 **6.49.5 Property definition**

9726 Table 101 defines the Properties that are part of the "oic.r.sensor.presence" Resource Type.

9727 **Table 101 – The Property definitions of the Resource with type "rt" =**
9728 **"oic.r.sensor.presence".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
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	

9729 **6.49.6 CRUDN behaviour**

9730 Table 102 defines the CRUDN operations that are supported on the "oic.r.sensor.presence"
9731 Resource Type.

9732 **Table 102 – The CRUDN operations of the Resource with type "rt" =**
9733 **"oic.r.sensor.presence".**

Create	Read	Update	Delete	Notify

	get			observe
--	-----	--	--	---------

9734 **6.50 Pan Tilt Zoom Movement**

9735 **6.50.1 Introduction**

9736 This Resource specifies the pan tilt and zoom capabilities of a device.
 9737 The Resource Type is dynamic and reflects whether the values apply to
 9738 physical movement of the device or digital/virtual enhancements to the image.
 9739 For physical movement the Resource Type is "oic.r.movement.ptz".
 9740 For digital/virtual image enhancements the Resource Type is "oic.r.image.ptz".
 9741 The Properties "pan" and "tilt" are specified in degrees.
 9742 The Property "zoomFactor" is a value in the range 1-100 for linear (optical) zoom.
 9743 The zoom factor is a value in the range [1x, 2x, 4x, 8x, 16x, 32x] for digital zoom.
 9744 If there is no zoom value to set the zoom factor shall be '1x'.
 9745 The value 0 degrees means neutral, this is a vendor defined setting.
 9746 Note that this resource also can be used to create an offset for physical movement.
 9747 When that is the case, the Resource Type value is: "oic.r.movement.offset.ptz"
 9748 Note that this resource also can be used to create an offset for image movement.
 9749 When that is the case, the Resource Type value is: "oic.r.image.offset.ptz".
 9750 When the Property "pan_range" value is omitted, then the range is [-180.0,180.0].
 9751 If "pan" is not supported then the range shall be [0.0,0.0]
 9752 When the Property "tilt_range" value is omitted, then the range is [-180.0,180.0].
 9753 If "tilt" is not supported then the range shall be [0.0,0.0].

9754 **6.50.2 Example URI**

9755 /PanTiltZoomResURI

9756 **6.50.3 Resource type**

9757 The Resource Type is defined as: "oic.r.ptz".

9758 **6.50.4 OpenAPI 2.0 definition**

```

9759 {
9760   "swagger": "2.0",
9761   "info": {
9762     "title": "Pan Tilt Zoom Movement",
9763     "version": "20190215",
9764     "license": {
9765       "name": "OCF Data Model License",
9766       "url":
9767         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
9768         CENSE.md",
9769       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
9770       reserved."
9771     },
9772     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
9773   },
9774   "schemes": ["http"],
9775   "consumes": ["application/json"],
9776   "produces": ["application/json"],
9777   "paths": {
9778     "/PanTiltZoomResURI" : {
9779       "get": {
9780         "description": "This Resource specifies the pan tilt and zoom capabilities of a device.\nThe
9781         Resource Type is dynamic and reflects whether the values apply to\n physical movement of the device
9782         or digital/virtual enhancements to the image.\nFor physical movement the Resource Type is
9783         \"oic.r.movement.ptz\".\nFor digital/virtual image enhancements the Resource Type is
9784         \"oic.r.image.ptz\".\nThe Properties \"pan\" and \"tilt\" are specified in degrees.\nThe Property
9785         \"zoomFactor\" is a value in the range 1-100 for linear (optical) zoom.\nThe zoom factor is a value
9786         in the range [1x, 2x, 4x, 8x, 16x, 32x] for digital zoom.\nIf there is no zoom value to set the zoom
9787         factor shall be '1x'.\nThe value 0 degrees means neutral, this is a vendor defined setting.\nNote
9788         that this resource also can be used to create an offset for physical movement.\nWhen that is the
9789         case, the Resource Type value is: \"oic.r.movement.offset.ptz\".\nNote that this resource also can be

```

```

9790 used to create an offset for image movement.\nWhen that is the case, the Resource Type value is:
9791 \"oic.r.image.offset.ptz\".\nWhen the Property \"pan_range\" value is omitted, then the range is [-
9792 180.0,180.0].\nIf \"pan\" is not supported then the range shall be [0.0,0.0]\nWhen the Property
9793 \"tilt_range\" value is omitted, then the range is [-180.0,180.0].\nIf \"tilt\" is not supported
9794 then the range shall be [0.0,0.0].\",
9795     \"parameters\": [
9796         { \"$ref\": \"#/parameters/interface\"}
9797     ],
9798     \"responses\": {
9799         \"200\": {
9800             \"description\": \"Retrieves the current pan, tilt and zoom setting.\",
9801             \"x-example\":
9802                 {
9803                     \"rt\": [\"oic.r.ptz\"],
9804                     \"if\": [\"oic.if.a\", \"oic.if.baseline\"],
9805                     \"pan\": 0.0,
9806                     \"tilt\": 0.0,
9807                     \"zoomFactor\": \"2x\"
9808                 },
9809             \"schema\": { \"$ref\": \"#/definitions/PanTiltZoom\" }
9810         }
9811     },
9812 },
9813 \"post\": {
9814     \"description\": \"Sets the current pan, tilt and zoom value.\",
9815     \"parameters\": [
9816         { \"$ref\": \"#/parameters/interface\"},
9817         {
9818             \"name\": \"body\",
9819             \"in\": \"body\",
9820             \"required\": true,
9821             \"schema\": { \"$ref\": \"#/definitions/PanTiltZoom\" },
9822             \"x-example\":
9823                 {
9824                     \"pan\": 10.0,
9825                     \"tilt\": -10.0,
9826                     \"zoomFactor\": \"4x\"
9827                 }
9828         }
9829     ],
9830     \"responses\": {
9831         \"200\": {
9832             \"description\": \"\",
9833             \"x-example\":
9834                 {
9835                     \"pan\": 10.0,
9836                     \"tilt\": -10.0,
9837                     \"zoomFactor\": \"4x\"
9838                 },
9839             \"schema\": { \"$ref\": \"#/definitions/PanTiltZoom\" }
9840         }
9841     }
9842 },
9843 },
9844 },
9845 \"parameters\": {
9846     \"interface\": {
9847         \"in\": \"query\",
9848         \"name\": \"if\",
9849         \"type\": \"string\",
9850         \"enum\": [\"oic.if.a\", \"oic.if.baseline\"]
9851     }
9852 },
9853 \"definitions\": {
9854     \"PanTiltZoom\" : {
9855         \"properties\": {
9856             \"rt\": {
9857                 \"description\": \"The Resource Type.\",
9858                 \"items\": {
9859                     \"enum\": [\"oic.r.ptz\"],
9860                     \"maxLength\": 64,
9861                     \"type\": \"string\"

```

```

9862     },
9863     "minItems": 1,
9864     "uniqueItems": true,
9865     "readOnly": true,
9866     "type": "array"
9867   },
9868   "tilt_range": {
9869     "$ref":
9870     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
9871     schema.json#/definitions/range_number"
9872   },
9873   "zoomFactor": {
9874     "description": "The zoom factor value.",
9875     "type": "string"
9876   },
9877   "tilt": {
9878     "description": "The vertical tilt in degrees.",
9879     "type": "number"
9880   },
9881   "precision": {
9882     "$ref":
9883     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
9884     schema.json#/definitions/precision"
9885   },
9886   "pan_range": {
9887     "$ref":
9888     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
9889     schema.json#/definitions/range_number"
9890   },
9891   "zoomFactorRange": {
9892     "description": "The allowed Zoom Factor values. Linear equates to a 1-100 min/max.",
9893     "enum": [
9894       "linear",
9895       "1x",
9896       "2x",
9897       "4x",
9898       "8x",
9899       "16x",
9900       "32x"
9901     ],
9902     "readOnly": true,
9903     "type": "string"
9904   },
9905   "pan": {
9906     "description": "The horizontal pan in degrees.",
9907     "type": "number"
9908   },
9909   "n": {
9910     "$ref":
9911     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9912     schema.json#/definitions/n"
9913   },
9914   "id": {
9915     "$ref":
9916     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9917     schema.json#/definitions/id"
9918   },
9919   "if": {
9920     "description": "The OCF Interface set supported by this Resource.",
9921     "items": {
9922       "enum": [
9923         "oic.if.a",
9924         "oic.if.baseline"
9925       ],
9926       "type": "string"
9927     },
9928     "minItems": 2,
9929     "uniqueItems": true,
9930     "readOnly": true,
9931     "type": "array"
9932   }
9933 },

```

```

9934     "type": "object",
9935     "required": ["pan", "tilt", "zoomFactor"]
9936   }
9937 }
9938 }
9939

```

9940 **6.50.5 Property definition**

9941 Table 103 defines the Properties that are part of the "oic.r.ptz" Resource Type.

9942 **Table 103 – The Property definitions of the Resource with type "rt" = "oic.r.ptz".**

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

9943 **6.50.6 CRUDN behaviour**

9944 Table 104 defines the CRUDN operations that are supported on the "oic.r.ptz" Resource Type.

9945 **Table 104 – The CRUDN operations of the Resource with type "rt" = "oic.r.ptz".**

Create	Read	Update	Delete	Notify
	get	post		observe

9946 **6.51 Signal Strength**

9947 **6.51.1 Introduction**

9948 This Resource describes the strength of a signal by means of lqi and rssi.
9949 The Property "lqi" is a floating point number that represents Link Quality Indicator.
9950 The Property "rssi" is a floating point number that represents the received signal strength indicator.

9951 **6.51.2 Example URI**

9952 /SignalStrengthResURI

9953 **6.51.3 Resource type**

9954 The Resource Type is defined as: "oic.r.signalstrength".

9955 **6.51.4 OpenAPI 2.0 definition**

```
9956 {  
9957   "swagger": "2.0",  
9958   "info": {  
9959     "title": "Signal Strength",  
9960     "version": "20190215",  
9961     "license": {  
9962       "name": "OCF Data Model License",  
9963       "url":  
9964       "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
9965       CENSE.md",  
9966       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
9967       reserved."  
9968     },  
9969     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
9970   },  
9971   "schemes": ["http"],  
9972   "consumes": ["application/json"],  
9973   "produces": ["application/json"],  
9974   "paths": {  
9975     "/SignalStrengthResURI" : {  
9976       "get": {  
9977         "description": "This Resource describes the strength of a signal by means of lqi and  
9978         rssi.\n\nThe Property \"lqi\" is a floating point number that represents Link Quality Indicator.\n\nThe  
9979         Property \"rssi\" is a floating point number that represents the received signal strength  
9980         indicator.",  
9981         "parameters": [  
9982           { "$ref": "#/parameters/interface" }  
9983         ],  
9984         "responses": {  
9985           "200": {  
9986             "description": "",  
9987             "x-example":  
9988               {  
9989                 "rt": ["oic.r.signalstrength"],  
9990                 "if": ["oic.if.s", "oic.if.baseline"],  
9991                 "lqi": 10.0,  
9992                 "rssi": 55.0  
9993               }  
9994             },  
9995             "schema": { "$ref": "#/definitions/SignalStrength" }  
9996           }  
9997         }  
9998       }  
9999     }  
10000   }  
10001 }
```



```

9996     }
9997   }
9998 }
9999 }
10000 },
10001 "parameters": {
10002   "interface": {
10003     "in": "query",
10004     "name": "if",
10005     "type": "string",
10006     "enum": ["oic.if.s", "oic.if.baseline"]
10007   }
10008 },
10009 "definitions": {
10010   "SignalStrength" : {
10011     "properties": {
10012       "rt": {
10013         "description": "The Resource Type.",
10014         "items": {
10015           "enum": ["oic.r.signalstrength"],
10016           "maxLength": 64,
10017           "type": "string"
10018         },
10019         "minItems": 1,
10020         "uniqueItems": true,
10021         "readOnly": true,
10022         "type": "array"
10023       },
10024       "lqi": {
10025         "description": "The current value of Link Quality Indicator.",
10026         "readOnly": true,
10027         "type": "number"
10028       },
10029       "rssi": {
10030         "description": "The current value of Received Signal Strength Indicator.",
10031         "readOnly": true,
10032         "type": "number"
10033       },
10034       "n": {
10035         "$ref":
10036         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10037         schema.json#/definitions/n"
10038       },
10039       "id": {
10040         "$ref":
10041         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10042         schema.json#/definitions/id"
10043       },
10044       "if": {
10045         "description": "The OCF Interface set supported by this Resource.",
10046         "items": {
10047           "enum": [
10048             "oic.if.s",
10049             "oic.if.baseline"
10050           ],
10051           "type": "string"
10052         },
10053         "minItems": 2,
10054         "uniqueItems": true,
10055         "readOnly": true,
10056         "type": "array"
10057       }
10058     },
10059     "type": "object",
10060     "required": ["lqi", "rssi"]
10061   }
10062 }
10063 }
10064

```

10065 6.51.5 Property definition

10066 Table 105 defines the Properties that are part of the "oic.r.signalstrength" Resource Type.
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10067 **Table 105 – The Property definitions of the Resource with type "rt" = "oic.r.signalstrength".**

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

10068 **6.51.6 CRUDN behaviour**

10069 Table 106 defines the CRUDN operations that are supported on the "oic.r.signalstrength" Resource
10070 Type.

10071 **Table 106 – The CRUDN operations of the Resource with type "rt" = "oic.r.signalstrength".**

Create	Read	Update	Delete	Notify
	get			observe

10072 **6.52 Speech Synthesis-TTS**

10073 **6.52.1 Introduction**

10074 This Resource may be created on the OCF Server that is capable of rendering speech by an OCF
10075 Client and allows the client to provide an SSML document with text to render
10076 or may be created on the OIC Server by some resident application.
10077 The audio rendered is at this stage local to the Server (i.e. not streamed).
10078 The utterance is an SSML document.
10079 The supportedLanguages is an array of the RFC5646 defined language tags that are supported.
10080 The supportedVoices is an SSML document fragment indicating the voices that are supported.
10081 Utterance in the example shall be a properly escaped (JSON rules) SSML document. An example:
10082 "<?xml version="1.0" encoding="ISO-8859-1"?>

10083
10084 <speak version="1.1" xmlns="http://www.w3.org/2001/10/synthesis"

```

10086
10087
10088     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
10089
10090
10091     xsi:schemaLocation="http://www.w3.org/2001/10/synthesis
10092
10093     http://www.w3.org/TR/speech-synthesis11/synthesis.xsd"
10094
10095
10096     xml:lang="en-US">
10097
10098
10099
10100
10101
10102
10103     The         title         of         the         movie         is:
10104
10105     "Monty         Pythons         The         Meaning         of         Life"
10106
10107
10108     which         is         directed         by         Terry         Jones.
10109
10110
10111
10112     </speak"
10113

```

10114 6.52.2 Example URI

10115 /SpeechTTSResURI

10116 6.52.3 Resource type

10117 The Resource Type is defined as: "oic.r.speech.tts".

10118 6.52.4 OpenAPI 2.0 definition

```

10119 {
10120   "swagger": "2.0",
10121   "info": {
10122     "title": "Speech Synthesis-TTS",
10123     "version": "20190215",
10124     "license": {
10125       "name": "OCF Data Model License",
10126       "url":
10127         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
10128         CENSE.md",
10129       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
10130         reserved."
10131     },
10132     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
10133   },
10134   "schemes": ["http"],
10135   "consumes": ["application/json"],
10136   "produces": ["application/json"],
10137   "paths": {
10138     "/SpeechTTSResURI" : {
10139       "get": {
10140         "description": "This Resource may be created on the OCF Server that is capable of rendering
10141         speech by an OCF Client and allows the client to provide an SSML document with text to render\n
10142         or may be created on the OIC Server by some resident application.\nThe audio rendered is at this stage
10143         local to the Server (i.e. not streamed).\nThe utterance is an SSML document.\nThe supportedLanguages

```

```

10144 is an array of the RFC5646 defined language tags that are supported.\nThe supportedVoices is an SSML
10145 document fragment indicating the voices that are supported.\nUtterance in the example shall be a
10146 properly escaped (JSON rules) SSML document. An example:\n \n<?xml version="1.0" encoding="ISO-
10147 8859-1"?">\n\r\n < speak version="1.1" xmlns="http://www.w3.org/2001/10/synthesis" \n\r\n
10148 \txmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" \n\r\n
10149 \txsi:schemaLocation="http://www.w3.org/2001/10/synthesis" \n\r\n
10150 \thttp://www.w3.org/TR/speech-synthesis11/synthesis.xsd" \n\r\n \txml:lang="en-US">\n\r\n
10151 \n\r\n \tThe title of the movie is:\n\r\n \t"Monty Pythons The Meaning of Life"\n\r\n \twhich
10152 is directed by Terry Jones.\n\r\n </speak" \n",
10153     "parameters": [
10154         {"$ref": "#/parameters/interface"}
10155     ],
10156     "responses": {
10157         "200": {
10158             "description": "",
10159             "x-example":
10160             {
10161                 "rt": ["oic.r.speech.tts"],
10162                 "if": ["oic.if.a", "oic.if.baseline"],
10163                 "utterance": "Strange women lying in ponds distributing swords is no basis for a
10164 system of government.",
10165                 "supportedLanguages": ["en-US", "en-GB", "fr-CA"],
10166                 "supportedVoices": "<voice gender="female" variant="2"></voice>\n\r<voice
10167 name="Mike"></voice>"
10168             },
10169             "schema": { "$ref": "#/definitions/Speech" }
10170         }
10171     },
10172 },
10173 "post": {
10174     "description": "Changes the utterance being rendered.\nExample shows a change in language
10175 selected.\n",
10176     "parameters": [
10177         {"$ref": "#/parameters/interface"},
10178         {
10179             "name": "body",
10180             "in": "body",
10181             "required": true,
10182             "schema": { "$ref": "#/definitions/Speech" },
10183             "x-example":
10184             {
10185                 "utterance": "Alright, but apart from the sanitation, the medicine, education, wine,
10186 public order, irrigation, roads, the fresh-water system, and public health, what have the Romans
10187 ever done for us?"
10188             }
10189         },
10190     ],
10191     "responses": {
10192         "200": {
10193             "description": "",
10194             "x-example":
10195             {
10196                 "utterance": "Alright, but apart from the sanitation, the medicine, education,
10197 wine, public order, irrigation, roads, the fresh-water system, and public health, what have the
10198 Romans ever done for us?"
10199             },
10200             "schema": { "$ref": "#/definitions/Speech" }
10201         }
10202     }
10203 },
10204 },
10205 },
10206 "parameters": {
10207     "interface": {
10208         "in": "query",
10209         "name": "if",
10210         "type": "string",
10211         "enum": ["oic.if.a", "oic.if.baseline"]
10212     }
10213 },
10214 "definitions": {
10215     "Speech": {

```

```

10216     "properties": {
10217       "rt": {
10218         "description": "The Resource Type.",
10219         "items": {
10220           "enum": ["oic.r.speech.tts"],
10221           "maxLength": 64,
10222           "type": "string"
10223         },
10224         "minItems": 1,
10225         "uniqueItems": true,
10226         "readOnly": true,
10227         "type": "array"
10228       },
10229       "supportedLanguages": {
10230         "description": "The array of supported language tags.",
10231         "items": {
10232           "type": "string"
10233         },
10234         "readOnly": true,
10235         "type": "array"
10236       },
10237       "supportedVoices": {
10238         "description": "The SSML document fragment indicating supported voices.",
10239         "readOnly": true,
10240         "maxLength": 1024,
10241         "type": "string"
10242       },
10243       "utterance": {
10244         "description": "The SSML document including the speech body.",
10245         "maxLength": 1024,
10246         "type": "string"
10247       },
10248       "n": {
10249         "$ref":
10250         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10251         schema.json#/definitions/n"
10252       },
10253       "id": {
10254         "$ref":
10255         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10256         schema.json#/definitions/id"
10257       },
10258       "if": {
10259         "description": "The OCF Interface set supported by this Resource.",
10260         "items": {
10261           "enum": [
10262             "oic.if.a",
10263             "oic.if.baseline"
10264           ],
10265           "type": "string"
10266         },
10267         "minItems": 2,
10268         "uniqueItems": true,
10269         "readOnly": true,
10270         "type": "array"
10271       }
10272     },
10273     "type": "object",
10274     "required": ["utterance"]
10275   }
10276 }
10277 }
10278

```

10279 6.52.5 Property definition

10280 Table 107 defines the Properties that are part of the "oic.r.speech.tts" Resource Type.

10281 **Table 107 – The Property definitions of the Resource with type "rt" = "oic.r.speech.tts".**

Property name	Value type	Mandatory	Access mode	Description
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
supportedVoices	string	No	Read Only	The SSML document fragment indicating supported voices.
supportedLanguages	array: see schema	No	Read Only	The array of supported language tags.
id	multiple types: see schema	No	Read Write	
utterance	string	Yes	Read Write	The SSML document including the speech body.
rt	array: see schema	No	Read Only	The Resource Type.

10282 **6.52.6 CRUDN behaviour**

10283 Table 108 defines the CRUDN operations that are supported on the "oic.r.speech.tts" Resource
10284 Type.

10285 **Table 108 – The CRUDN operations of the Resource with type "rt" = "oic.r.speech.tts".**

Create	Read	Update	Delete	Notify
	get	post		observe

10286 **6.53 Touch Sensor**

10287 **6.53.1 Introduction**

10288 This Resource describes whether a touch has been sensed or not.
10289 The Property "value" is a boolean.
10290 A value of 'true' means that touch has been sensed.
10291 A value of 'false' means that touch not been sensed.
10292

10293 **6.53.2 Example URI**

10294 /TouchResURI

10295 **6.53.3 Resource type**

10296 The Resource Type is defined as: "oic.r.sensor.touch".

10297 **6.53.4 OpenAPI 2.0 definition**

```
10298 {
10299   "swagger": "2.0",
10300   "info": {
10301     "title": "Touch Sensor",
10302     "version": "20190215",
10303     "license": {
10304       "name": "OCF Data Model License",
10305       "url":
10306         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
10307         CENSE.md",
10308       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
10309         reserved."
10310     },
10311     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
10312   },
10313   "schemes": ["http"],
10314   "consumes": ["application/json"],
10315   "produces": ["application/json"],
10316   "paths": {
10317     "/TouchResURI" : {
10318       "get": {
10319         "description": "This Resource describes whether a touch has been sensed or not.\nThe
10320         Property \"value\" is a boolean.\nA value of 'true' means that touch has been sensed.\nA value of
10321         'false' means that touch not been sensed.\n",
10322         "parameters": [
10323           {"$ref": "#/parameters/interface"}
10324         ],
10325         "responses": {
10326           "200": {
10327             "description": "",
10328             "x-example":
10329               {
10330                 "rt": ["oic.r.sensor.touch"],
10331                 "if": ["oic.if.s", "oic.if.baseline"],
10332                 "value": true
10333               },
10334             "schema": { "$ref": "#/definitions/Touch" }
10335           }
10336         }
10337       }
10338     }
10339   },
10340   "parameters": {
10341     "interface" : {
10342       "in" : "query",
10343       "name" : "if",
10344       "type" : "string",
10345       "enum" : ["oic.if.s", "oic.if.baseline"]
10346     }
10347   },
10348   "definitions": {
10349     "Touch" : {
10350       "properties": {
10351         "rt": {
10352           "description": "The Resource Type.",
10353           "items": {
10354             "enum": ["oic.r.sensor.touch"],
10355             "maxLength": 64,
10356             "type": "string"
10357           },
10358           "minItems": 1,
10359           "uniqueItems": true,
```

```

10360         "readOnly": true,
10361         "type": "array"
10362     },
10363     "value": {
10364         "description": "The touch sensor, true = sensed, false = not sensed.",
10365         "readOnly": true,
10366         "type": "boolean"
10367     },
10368     "n": {
10369         "$ref":
10370 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10371 schema.json#/definitions/n"
10372     },
10373     "id": {
10374         "$ref":
10375 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10376 schema.json#/definitions/id"
10377     },
10378     "if": {
10379         "description": "The OCF Interface set supported by this Resource.",
10380         "items": {
10381             "enum": [
10382                 "oic.if.s",
10383                 "oic.if.baseline"
10384             ],
10385             "type": "string"
10386         },
10387         "minItems": 2,
10388         "uniqueItems": true,
10389         "readOnly": true,
10390         "type": "array"
10391     }
10392 },
10393 "type": "object",
10394 "required": ["value"]
10395 }
10396 }
10397 }
10398

```

10399 **6.53.5 Property definition**

10400 Table 109 defines the Properties that are part of the "oic.r.sensor.touch" Resource Type.

10401 **Table 109 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.touch".**

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

id	multiple types: see schema	No	Read Write	
----	-------------------------------	----	------------	--

10402 **6.53.6 CRUDN behaviour**

10403 Table 110 defines the CRUDN operations that are supported on the "oic.r.sensor.touch" Resource
10404 Type.

10405 **Table 110 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.touch".**

Create	Read	Update	Delete	Notify
	get			observe

10406 **6.54 UV Radiation**

10407 **6.54.1 Introduction**

10408 This Resource specifies UV radiation measurement.
10409 The Property "measurement" is the current measured UV Index

10410 **6.54.2 Example URI**

10411 /UVRadiationResURI

10412 **6.54.3 Resource type**

10413 The Resource Type is defined as: "oic.r.sensor.radiation.uv".

10414 **6.54.4 OpenAPI 2.0 definition**

```

10415 {
10416   "swagger": "2.0",
10417   "info": {
10418     "title": "UV Radiation",
10419     "version": "20190215",
10420     "license": {
10421       "name": "OCF Data Model License",
10422       "url":
10423         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
10424         CENSE.md",
10425       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
10426       reserved."
10427     },
10428     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
10429   },
10430   "schemes": ["http"],
10431   "consumes": ["application/json"],
10432   "produces": ["application/json"],
10433   "paths": {
10434     "/UVRadiationResURI" : {
10435       "get": {
10436         "description": "This Resource specifies UV radiation measurement.\n\nThe Property
10437         \\"measurement\\" is the current measured UV Index",
10438         "parameters": [
10439           {"$ref": "#/parameters/interface"}
10440         ],
10441         "responses": {
10442           "200": {
10443             "description": "",
10444             "x-example":
10445               {
10446                 "rt": ["oic.r.sensor.radiation.uv"],
10447                 "if": ["oic.if.s", "oic.if.baseline"],
10448                 "measurement": 3.5
10449               }
10450           }
10451         }
10452       }
10453     }
10454   }

```

```

10451         "schema": { "$ref": "#/definitions/UVRadiation" }
10452     }
10453 }
10454 }
10455 }
10456 },
10457 "parameters": {
10458     "interface": {
10459         "in": "query",
10460         "name": "if",
10461         "type": "string",
10462         "enum": ["oic.if.s", "oic.if.baseline"]
10463     }
10464 },
10465 "definitions": {
10466     "UVRadiation": {
10467         "properties": {
10468             "rt": {
10469                 "description": "The Resource Type.",
10470                 "items": {
10471                     "enum": ["oic.r.sensor.radiation.uv"],
10472                     "maxLength": 64,
10473                     "type": "string"
10474                 },
10475                 "minItems": 1,
10476                 "uniqueItems": true,
10477                 "readOnly": true,
10478                 "type": "array"
10479             },
10480             "measurement": {
10481                 "description": "The measured UV Index.",
10482                 "readOnly": true,
10483                 "type": "number"
10484             },
10485             "n": {
10486                 "$ref":
10487 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10488 schema.json#/definitions/n"
10489             },
10490             "id": {
10491                 "$ref":
10492 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10493 schema.json#/definitions/id"
10494             },
10495             "if" :
10496             {
10497                 "description": "The OCF Interface set supported by this Resource.",
10498                 "items": {
10499                     "enum": [
10500                         "oic.if.s",
10501                         "oic.if.baseline"
10502                     ],
10503                     "type": "string"
10504                 },
10505                 "minItems": 2,
10506                 "uniqueItems": true,
10507                 "readOnly": true,
10508                 "type": "array"
10509             }
10510         },
10511         "type": "object",
10512         "required": ["measurement"]
10513     }
10514 }
10515 }
10516 }

```

10517 6.54.5 Property definition

10518 Table 111 defines the Properties that are part of the "oic.r.sensor.radiation.uv" Resource Type.

10519
10520

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

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

10521 **6.54.6 CRUDN behaviour**

10522 Table 112 defines the CRUDN operations that are supported on the "oic.r.sensor.radiation.uv"
10523 Resource Type.

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

Create	Read	Update	Delete	Notify
	get			observe

10526 **6.55 Water Sensor**

10527 **6.55.1 Introduction**

10528 This Resource describes whether water has been sensed or not.
10529 The Property "value" is a boolean.
10530 A value of 'true' means that water has been sensed.
10531 A value of 'false' means that water not been sensed.
10532

10533 **6.55.2 Example URI**

10534 /WaterResURI

10535 **6.55.3 Resource type**

10536 The Resource Type is defined as: "oic.r.sensor.water".

10537 **6.55.4 OpenAPI 2.0 definition**

```
10538 {
10539   "swagger": "2.0",
10540   "info": {
10541     "title": "Water Sensor",
```

```

10542     "version": "20190215",
10543     "license": {
10544         "name": "OCF Data Model License",
10545         "url":
10546         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
10547         CENSE.md",
10548         "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
10549         reserved."
10550     },
10551     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
10552 },
10553     "schemes": ["http"],
10554     "consumes": ["application/json"],
10555     "produces": ["application/json"],
10556     "paths": {
10557         "/WaterResURI" : {
10558             "get": {
10559                 "description": "This Resource describes whether water has been sensed or not.\nThe Property
10560                 \n"value\" is a boolean.\nA value of 'true' means that water has been sensed.\nA value of 'false'
10561                 means that water not been sensed.\n",
10562                 "parameters": [
10563                     { "$ref": "#/parameters/interface" }
10564                 ],
10565                 "responses": {
10566                     "200": {
10567                         "description": "",
10568                         "x-example":
10569                         {
10570                             "rt": ["oic.r.sensor.water"],
10571                             "if": ["oic.if.s", "oic.if.baseline"],
10572                             "value": true
10573                         },
10574                         "schema": { "$ref": "#/definitions/Water" }
10575                     }
10576                 }
10577             }
10578         }
10579     },
10580     "parameters": {
10581         "interface": {
10582             "in": "query",
10583             "name": "if",
10584             "type": "string",
10585             "enum": ["oic.if.s", "oic.if.baseline"]
10586         }
10587     },
10588     "definitions": {
10589         "Water" : {
10590             "properties": {
10591                 "rt": {
10592                     "description": "The Resource Type.",
10593                     "items": {
10594                         "enum": ["oic.r.sensor.water"],
10595                         "maxLength": 64,
10596                         "type": "string"
10597                     },
10598                     "minItems": 1,
10599                     "uniqueItems": true,
10600                     "readOnly": true,
10601                     "type": "array"
10602                 },
10603                 "value": {
10604                     "description": "The water sensor, true = sensed, false = not sensed.",
10605                     "readOnly": true,
10606                     "type": "boolean"
10607                 },
10608                 "n": {
10609                     "$ref":
10610                     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10611                     schema.json#/definitions/n"
10612                 },
10613                 "id": {

```

```

10614         "$ref":
10615         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10616         schema.json#/definitions/id"
10617     },
10618     "if": {
10619         "description": "The OCF Interface set supported by this Resource.",
10620         "items": {
10621             "enum": [
10622                 "oic.if.s",
10623                 "oic.if.baseline"
10624             ],
10625             "type": "string"
10626         },
10627         "minItems": 2,
10628         "uniqueItems": true,
10629         "readOnly": true,
10630         "type": "array"
10631     }
10632 },
10633 "type": "object",
10634 "required": ["value"]
10635 }
10636 }
10637 }
10638

```

10639 **6.55.5 Property definition**

10640 Table 113 defines the Properties that are part of the "oic.r.sensor.water" Resource Type.

10641 **Table 113 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.water".**

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

10642 **6.55.6 CRUDN behaviour**

10643 Table 114 defines the CRUDN operations that are supported on the "oic.r.sensor.water" Resource
10644 Type.

10645 **Table 114 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.water".**

Create	Read	Update	Delete	Notify
	get			observe

10646 **6.56 Acceleration Sensor**

10647 **6.56.1 Introduction**

10648 This Resource provides a measure of proper acceleration (g force) as opposed to co-ordinate
 10649 acceleration (which is dependent on the co-ordinate system and the observer).
 10650 The Property "value" is a float which describes the acceleration experienced by the object in "g".

10651 **6.56.2 Example URI**

10652 /AccelerationResURI

10653 **6.56.3 Resource type**

10654 The Resource Type is defined as: "oic.r.sensor.acceleration".

10655 **6.56.4 OpenAPI 2.0 definition**

```

10656 {
10657   "swagger": "2.0",
10658   "info": {
10659     "title": "Acceleration Sensor",
10660     "version": "20190215",
10661     "license": {
10662       "name": "OCF Data Model License",
10663       "url":
10664         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
10665         CENSE.md",
10666       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
10667     },
10668     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
10669   },
10670   "schemes": ["http"],
10671   "consumes": ["application/json"],
10672   "produces": ["application/json"],
10673   "paths": {
10674     "/AccelerationResURI" : {
10675       "get": {
10676         "description": "This Resource provides a measure of proper acceleration (g force) as opposed
10677         to co-ordinate acceleration (which is dependent on the co-ordinate system and the observer).\nThe
10678         Property \"value\" is a float which describes the acceleration experienced by the object in \"g\".",
10679         "parameters": [
10680           { "$ref": "#/parameters/interface" }
10681         ],
10682         "responses": {
10683           "200": {
10684             "description": "",
10685             "x-example":
10686               {
10687                 "rt": ["oic.r.sensor.acceleration"],
10688                 "if": ["oic.if.s", "oic.if.baseline"],
10689                 "acceleration": 0.5
10690               },
10691             "schema": { "$ref": "#/definitions/acceleration" }
10692           }
10693         }
10694       }
10695     }
10696   },
10697   "parameters": {
10698     "interface" : {
10699       "in": "query",
10700       "name": "if",

```

```

10701         "type": "string",
10702         "enum": ["oic.if.s", "oic.if.baseline"]
10703     },
10704 },
10705 "definitions": {
10706     "acceleration": {
10707         "properties": {
10708             "rt": {
10709                 "description": "Resource Type",
10710                 "items": {
10711                     "maxLength": 64,
10712                     "type": "string",
10713                     "enum": ["oic.r.sensor.acceleration"]
10714                 },
10715                 "minItems": 1,
10716                 "uniqueItems": true,
10717                 "readOnly": true,
10718                 "type": "array"
10719             },
10720             "acceleration": {
10721                 "description": "The sensed acceleration experienced in 'g'.",
10722                 "readOnly": true,
10723                 "type": "number"
10724             },
10725             "n": {
10726                 "$ref":
10727                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10728                 schema.json#/definitions/n"
10729             },
10730             "id": {
10731                 "$ref":
10732                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10733                 schema.json#/definitions/id"
10734             },
10735             "range": {
10736                 "$ref":
10737                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
10738                 schema.json#/definitions/range_number"
10739             },
10740             "step": {
10741                 "$ref":
10742                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
10743                 schema.json#/definitions/step_number"
10744             },
10745             "precision": {
10746                 "$ref":
10747                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
10748                 schema.json#/definitions/precision"
10749             },
10750             "if": {
10751                 "description": "The OCF Interface set supported by this Resource.",
10752                 "items": {
10753                     "enum": [
10754                         "oic.if.s",
10755                         "oic.if.baseline"
10756                     ],
10757                     "type": "string"
10758                 },
10759                 "minItems": 2,
10760                 "readOnly": true,
10761                 "uniqueItems": true,
10762                 "type": "array"
10763             }
10764         },
10765         "type": "object",
10766         "required": ["acceleration"]
10767     }
10768 }
10769 }
10770

```

10771 **6.56.5 Property definition**

10772 Table 115 defines the Properties that are part of the "oic.r.sensor.acceleration" Resource Type.

10773 **Table 115 – The Property definitions of the Resource with type "rt" =**
 10774 **"oic.r.sensor.acceleration".**

Property name	Value type	Mandatory	Access mode	Description
precision	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
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	
rt	array: see schema	No	Read Only	Resource Type
step	multiple types: see schema	No	Read Write	
acceleration	number	Yes	Read Only	The sensed acceleration experienced in 'g'.

10775 **6.56.6 CRUDN behaviour**

10776 Table 116 defines the CRUDN operations that are supported on the "oic.r.sensor.acceleration"
 10777 Resource Type.

10778 **Table 116 – The CRUDN operations of the Resource with type "rt" =**
 10779 **"oic.r.sensor.acceleration".**

Create	Read	Update	Delete	Notify
	get			observe

10780 **6.57 Movement**

10781 **6.57.1 Introduction**

10782 This Resource specifies linear movement.
 10783 The Property "movementSettings" is an array of strings containing possible movement values (e.g.

10784 spin, stop, left, right).
10785 The Property "movement" is the currently selected movement value.
10786 The Property "movementModifier" is a modifier to the movement value (e.g. "spin", "90")
10787

10788 6.57.2 Example URI

10789 /MovementResURI

10790 6.57.3 Resource type

10791 The Resource Type is defined as: "oic.r.movement.linear".

10792 6.57.4 OpenAPI 2.0 definition

```
10793 {  
10794   "swagger": "2.0",  
10795   "info": {  
10796     "title": "Movement",  
10797     "version": "20190215",  
10798     "license": {  
10799       "name": "OCF Data Model License",  
10800       "url":  
10801         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
10802         CENSE.md",  
10803       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
10804       reserved."  
10805     },  
10806     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
10807   },  
10808   "schemes": ["http"],  
10809   "consumes": ["application/json"],  
10810   "produces": ["application/json"],  
10811   "paths": {  
10812     "/MovementResURI" : {  
10813       "get": {  
10814         "description": "This Resource specifies linear movement.\n\nThe Property \"movementSettings\  
10815 is an array of strings containing possible movement values (e.g. spin, stop, left, right).\n\nThe  
10816 Property \"movement\" is the currently selected movement value.\n\nThe Property \"movementModifier\  
10817 is a modifier to the movement value (e.g. \"spin\", \"90\")\n\n",  
10818         "parameters": [  
10819           {"$ref": "#/parameters/interface"}  
10820         ],  
10821         "responses": {  
10822           "200": {  
10823             "description": "",  
10824             "x-example":  
10825               {  
10826                 "rt": ["oic.r.movement.linear"],  
10827                 "if": ["oic.if.s", "oic.if.baseline"],  
10828                 "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],  
10829                 "movement": "rotate",  
10830                 "movementModifier": "90"  
10831               },  
10832             "schema": { "$ref": "#/definitions/movement" }  
10833           }  
10834         }  
10835       },  
10836       "post": {  
10837         "description": "Sets the current device movement.",  
10838         "parameters": [  
10839           {"$ref": "#/parameters/interface"},  
10840           {  
10841             "name": "body",  
10842             "in": "body",  
10843             "required": true,  
10844             "schema": { "$ref": "#/definitions/movement" },  
10845             "x-example":  
10846               {  
10847                 "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],  
10848                 "movement": "stop"  
10849               }  
10850           }  
10851         ]  
10852       }  
10853     }  
10854   }  
10855 }
```

```

10849     }
10850   }
10851 ],
10852 "responses": {
10853   "200": {
10854     "description": "",
10855     "x-example":
10856       {
10857         "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
10858         "movement": "stop"
10859       },
10860     "schema": { "$ref": "#/definitions/movement" }
10861   }
10862 }
10863 }
10864 },
10865 },
10866 "parameters": {
10867   "interface": {
10868     "in": "query",
10869     "name": "if",
10870     "type": "string",
10871     "enum": ["oic.if.s", "oic.if.baseline"]
10872   }
10873 },
10874 "definitions": {
10875   "movement": {
10876     "properties": {
10877       "rt": {
10878         "description": "The Resource Type.",
10879         "items": {
10880           "enum": ["oic.r.movement.linear"],
10881           "maxLength": 64,
10882           "type": "string"
10883         },
10884         "minItems": 1,
10885         "uniqueItems": true,
10886         "readOnly": true,
10887         "type": "array"
10888       },
10889       "movementSettings": {
10890         "description": "The array of possible movement values.",
10891         "items": {
10892           "type": "string"
10893         },
10894         "readOnly": true,
10895         "type": "array"
10896       },
10897       "movementModifier": {
10898         "description": "The modifier to the movement value (e.g. spin-90, left-20), units are
10899 device dependent.",
10900         "type": "string"
10901       },
10902       "movement": {
10903         "description": "The current movement value.",
10904         "type": "string"
10905       },
10906       "n": {
10907         "$ref":
10908 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10909 schema.json#/definitions/n"
10910       },
10911       "id": {
10912         "$ref":
10913 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10914 schema.json#/definitions/id"
10915       },
10916       "if": {
10917         "description": "The OCF Interface set supported by this Resource.",
10918         "items": {
10919           "enum": [
10920             "oic.if.s",

```

```

10921         "oic.if.baseline"
10922     ],
10923     "type": "string"
10924 },
10925     "minItems": 2,
10926     "uniqueItems": true,
10927     "readOnly": true,
10928     "type": "array"
10929 }
10930 },
10931     "type": "object",
10932     "required": ["movementSettings", "movement"]
10933 }
10934 }
10935 }
10936

```

10937 6.57.5 Property definition

10938 Table 117 defines the Properties that are part of the "oic.r.movement.linear" Resource Type.

10939 **Table 117 – The Property definitions of the Resource with type "rt" =**
10940 **"oic.r.movement.linear".**

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

10941 6.57.6 CRUDN behaviour

10942 Table 118 defines the CRUDN operations that are supported on the "oic.r.movement.linear"
10943 Resource Type.

10944
10945

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

Create	Read	Update	Delete	Notify
	get	post		observe

10946 **6.58 Sleep Sensor**

10947 **6.58.1 Introduction**

10948 This Resource describes whether human sleep has been sensed or not.
10949 The Property "value" is a boolean.
10950 A value of 'true' means that sleep has been sensed.
10951 A value of 'false' means that sleep not been sensed.
10952

10953 **6.58.2 Example URI**

10954 /SleepSensorResURI

10955 **6.58.3 Resource type**

10956 The Resource Type is defined as: "oic.r.sensor.sleep".

10957 **6.58.4 OpenAPI 2.0 definition**

```
10958 {  
10959   "swagger": "2.0",  
10960   "info": {  
10961     "title": "Sleep Sensor",  
10962     "version": "20190215",  
10963     "license": {  
10964       "name": "OCF Data Model License",  
10965       "url":  
10966         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
10967         CENSE.md",  
10968       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
10969       reserved."  
10970     },  
10971     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
10972   },  
10973   "schemes": ["http"],  
10974   "consumes": ["application/json"],  
10975   "produces": ["application/json"],  
10976   "paths": {  
10977     "/SleepSensorResURI" : {  
10978       "get": {  
10979         "description": "This Resource describes whether human sleep has been sensed or not.\n\nThe  
10980         Property \"value\" is a boolean.\n\nA value of 'true' means that sleep has been sensed.\n\nA value of  
10981         'false' means that sleep not been sensed.\n\n",  
10982         "parameters": [  
10983           {"$ref": "#/parameters/interface"}  
10984         ],  
10985         "responses": {  
10986           "200": {  
10987             "description": "",  
10988             "x-example":  
10989               {  
10990                 "rt": ["oic.r.sensor.sleep"],  
10991                 "if": ["oic.if.s", "oic.if.baseline"],  
10992                 "value": true  
10993               },  
10994             "schema": { "$ref": "#/definitions/sleep" }  
10995           }  
10996         }  
10997       }  
10998     }  
  }
```

```

10999 },
11000 "parameters": {
11001   "interface": {
11002     "in": "query",
11003     "name": "if",
11004     "type": "string",
11005     "enum": ["oic.if.s", "oic.if.baseline"]
11006   }
11007 },
11008 "definitions": {
11009   "sleep": {
11010     "properties": {
11011       "rt": {
11012         "description": "The Resource Type.",
11013         "items": {
11014           "enum": ["oic.r.sensor.sleep"],
11015           "maxLength": 64,
11016           "type": "string"
11017         },
11018         "minItems": 1,
11019         "uniqueItems": true,
11020         "readOnly": true,
11021         "type": "array"
11022       },
11023       "value": {
11024         "description": "The sleep sensor, true = sleep sensed, false = sleep not sensed.",
11025         "readOnly": true,
11026         "type": "boolean"
11027       },
11028       "n": {
11029         "$ref":
11030 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11031 schema.json#/definitions/n"
11032       },
11033       "id": {
11034         "$ref":
11035 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11036 schema.json#/definitions/id"
11037       },
11038       "if": {
11039         "description": "The OCF Interface set supported by this Resource.",
11040         "items": {
11041           "enum": [
11042             "oic.if.s",
11043             "oic.if.baseline"
11044           ],
11045           "type": "string"
11046         },
11047         "minItems": 2,
11048         "uniqueItems": true,
11049         "readOnly": true,
11050         "type": "array"
11051       }
11052     },
11053     "type": "object",
11054     "required": ["value"]
11055   }
11056 }
11057 }
11058

```

11059 6.58.5 Property definition

11060 Table 119 defines the Properties that are part of the "oic.r.sensor.sleep" Resource Type.

11061 **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.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
value	boolean	Yes	Read Only	The sleep sensor, true = sleep sensed, false = sleep not sensed.
id	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	

11062 **6.58.6 CRUDN behaviour**

11063 Table 120 defines the CRUDN operations that are supported on the "oic.r.sensor.sleep" Resource
11064 Type.

11065 **Table 120 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.sleep".**

Create	Read	Update	Delete	Notify
	get			observe

11066 **6.59 Smoke Sensor**

11067 **6.59.1 Introduction**

11068 This Resource describes whether smoke has been sensed or not.
11069 The Property "value" is a boolean.
11070 A value of 'true' means that smoke has been sensed.
11071 A value of 'false' means that smoke not been sensed.

11072 **6.59.2 Example URI**

11073 /SmokeSensorResURI

11074 **6.59.3 Resource type**

11075 The Resource Type is defined as: "oic.r.sensor.smoke".

11076 **6.59.4 OpenAPI 2.0 definition**

```
11077 {
11078   "swagger": "2.0",
11079   "info": {
11080     "title": "Smoke Sensor",
11081     "version": "20190215",
11082     "license": {
11083       "name": "OCF Data Model License",
11084       "url":
11085         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
11086         CENSE.md",
```

```

11087         "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
11088 reserved."
11089     },
11090     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
11091 },
11092 "schemes": ["http"],
11093 "consumes": ["application/json"],
11094 "produces": ["application/json"],
11095 "paths": {
11096     "/SmokeSensorResURI" : {
11097         "get": {
11098             "description": "This Resource describes whether smoke has been sensed or not.\nThe Property
11099 \value\" is a boolean.\nA value of 'true' means that smoke has been sensed.\nA value of 'false'
11100 means that smoke not been sensed.",
11101             "parameters": [
11102                 {"$ref": "#/parameters/interface"}
11103             ],
11104             "responses": {
11105                 "200": {
11106                     "description": "",
11107                     "x-example":
11108                         {
11109                             "rt": ["oic.r.sensor.smoke"],
11110                             "if": ["oic.if.s", "oic.if.baseline"],
11111                             "value": true
11112                         }
11113                 },
11114                 "schema": { "$ref": "#/definitions/smoke" }
11115             }
11116         }
11117     }
11118 },
11119 },
11120 "parameters": {
11121     "interface": {
11122         "in": "query",
11123         "name": "if",
11124         "type": "string",
11125         "enum": ["oic.if.s", "oic.if.baseline"]
11126     }
11127 },
11128 "definitions": {
11129     "smoke" : {
11130         "properties": {
11131             "rt": {
11132                 "description": "The Resource Type.",
11133                 "items": {
11134                     "enum": ["oic.r.sensor.smoke"],
11135                     "maxLength": 64,
11136                     "type": "string"
11137                 },
11138                 "minItems": 1,
11139                 "uniqueItems": true,
11140                 "readOnly": true,
11141                 "type": "array"
11142             },
11143             "value": {
11144                 "description": "The smoke indicator, true = sensed, false = not sensed.",
11145                 "readOnly": true,
11146                 "type": "boolean"
11147             },
11148             "n": {
11149                 "$ref":
11150 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11151 schema.json#/definitions/n"
11152             },
11153             "id": {
11154                 "$ref":
11155 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11156 schema.json#/definitions/id"
11157             },
11158             "if": {

```

```

11159     "description": "The OCF Interface set supported by this Resource.",
11160     "items": {
11161         "enum": [
11162             "oic.if.s",
11163             "oic.if.baseline"
11164         ],
11165         "type": "string"
11166     },
11167     "minItems": 2,
11168     "uniqueItems": true,
11169     "readOnly": true,
11170     "type": "array"
11171 }
11172 },
11173 "type": "object",
11174 "required": ["value"]
11175 }
11176 }
11177 }
11178

```

11179 **6.59.5 Property definition**

11180 Table 21 defines the Properties that are part of the "oic.r.sensor.smoke" Resource Type.

11181 **Table 21 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.smoke".**

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

11182 **6.59.6 CRUDN behaviour**

11183 Table 22 defines the CRUDN operations that are supported on the "oic.r.sensor.smoke" Resource Type.

11185 **Table 22 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.smoke".**

Create	Read	Update	Delete	Notify
	get			observe

11186 6.60 Three Axis Sensor

11187 6.60.1 Introduction

11188 This Resource provides a representation of the measurement from a three-axis sensor.
11189 The Property "orientation" is an array of numbers representing x-plane, y-plane and z-plane values.
11190 The unit of measurement for each pane is 'g'.

11191 6.60.2 Example URI

11192 /ThreeAxisResURI

11193 6.60.3 Resource type

11194 The Resource Type is defined as: "oic.r.sensor.threeaxis".

11195 6.60.4 OpenAPI 2.0 definition

```
11196 {  
11197   "swagger": "2.0",  
11198   "info": {  
11199     "title": "Three Axis Sensor",  
11200     "version": "20190215",  
11201     "license": {  
11202       "name": "OCF Data Model License",  
11203       "url":  
11204         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
11205         CENSE.md",  
11206       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
11207       reserved."  
11208     },  
11209     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
11210   },  
11211   "schemes": ["http"],  
11212   "consumes": ["application/json"],  
11213   "produces": ["application/json"],  
11214   "paths": {  
11215     "/ThreeAxisResURI" : {  
11216       "get": {  
11217         "description": "This Resource provides a representation of the measurement from a three-axis  
11218         sensor.\n\nThe Property \"orientation\" is an array of numbers representing x-plane, y-plane and z-  
11219         plane values.\n\nThe unit of measurement for each pane is 'g'.",  
11220         "parameters": [  
11221           {"$ref": "#/parameters/interface"}  
11222         ],  
11223         "responses": {  
11224           "200": {  
11225             "description": "",  
11226             "x-example":  
11227               {  
11228                 "rt": ["oic.r.sensor.threeaxis"],  
11229                 "if": ["oic.if.s", "oic.if.baseline"],  
11230                 "orientation": [0.7, 1.1, -0.2]  
11231               },  
11232             "schema": { "$ref": "#/definitions/threeAxis" }  
11233           }  
11234         }  
11235       }  
11236     }  
11237   },  
11238   "parameters": {  
11239     "interface": {  
11240       "in": "query",  
11241       "name": "if",  
11242       "type": "string",  
11243       "enum": ["oic.if.s", "oic.if.baseline"]  
11244     }  
11245   },  
11246   "definitions": {  
11247     "threeAxis" : {  
11248       "properties": {  
11249         "rt": {
```

```

11250         "description": "The Resource Type.",
11251         "items": {
11252             "enum": ["oic.r.sensor.threeaxis"],
11253             "maxLength": 64,
11254             "type": "string"
11255         },
11256         "minItems": 1,
11257         "uniqueItems": true,
11258         "readOnly": true,
11259         "type": "array"
11260     },
11261     "orientation": {
11262         "description": "The array containing x-plane, y-plane and z-plane orientation in 'g'.",
11263         "items": {
11264             "type": "number"
11265         },
11266         "maxItems": 3,
11267         "minItems": 3,
11268         "readOnly": true,
11269         "type": "array"
11270     },
11271     "n": {
11272         "$ref":
11273         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11274         schema.json#/definitions/n"
11275     },
11276     "id": {
11277         "$ref":
11278         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11279         schema.json#/definitions/id"
11280     },
11281     "if": {
11282         "description": "The OCF Interface set supported by this Resource.",
11283         "items": {
11284             "enum": [
11285                 "oic.if.s",
11286                 "oic.if.baseline"
11287             ],
11288             "type": "string"
11289         },
11290         "minItems": 2,
11291         "uniqueItems": true,
11292         "readOnly": true,
11293         "type": "array"
11294     }
11295 },
11296 "type": "object",
11297 "required": ["orientation"]
11298 }
11299 }
11300 }
11301

```

11302 6.60.5 Property definition

11303 Table 123 defines the Properties that are part of the "oic.r.sensor.threeaxis" Resource Type.

11304 **Table 123 – The Property definitions of the Resource with type "rt" =**
11305 **"oic.r.sensor.threeaxis".**

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

if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
id	multiple types: see schema	No	Read Write	
orientation	array: see schema	Yes	Read Only	The array containing x- plane, y-plane and z-plane orientation in 'g'.

11306 **6.60.6 CRUDN behaviour**

11307 Table 124 defines the CRUDN operations that are supported on the "oic.r.sensor.threeaxis"
11308 Resource Type.

11309 **Table 124 – The CRUDN operations of the Resource with type "rt" =**
11310 **"oic.r.sensor.threeaxis".**

Create	Read	Update	Delete	Notify
	get			observe

11311 **6.61 Altimeter**

11312 **6.61.1 Introduction**

11313 This Resource describes the properties associated with altimeter.
11314 The Property "alt" is the distance (metres) above or below 'local' sea-level.

11315 **6.61.2 Example URI**

11316 /AltimeterResURI

11317 **6.61.3 Resource type**

11318 The Resource Type is defined as: "oic.r.altimeter".

11319 **6.61.4 OpenAPI 2.0 definition**

```

11320 {
11321   "swagger": "2.0",
11322   "info": {
11323     "title": "Altimeter",
11324     "version": "20190225",
11325     "license": {
11326       "name": "OCF Data Model License",
11327       "url":
11328 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
11329 CENSE.md",
11330       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
11331 reserved."
11332     },
11333     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
11334   },
11335   "schemes": ["http"],
11336   "consumes": ["application/json"],
11337   "produces": ["application/json"],
11338   "paths": {

```

```

11339     "/AltimeterResURI" : {
11340       "get": {
11341         "description": "This Resource describes the properties associated with altimeter.\nThe
11342 Property \"alt\" is the distance (metres) above or below 'local' sea-level.",
11343         "parameters": [
11344           {"$ref": "#/parameters/interface"}
11345         ],
11346         "responses": {
11347           "200": {
11348             "description": "RETRIEVES the current the distance (metres) above or below 'local'
11349 sea-level.",
11350             "x-example":
11351               {
11352                 "rt": ["oic.r.altimeter"],
11353                 "if": ["oic.if.s", "oic.if.baseline"],
11354                 "alt": 1500.0
11355               },
11356             "schema": { "$ref": "#/definitions/Altimeter" }
11357           }
11358         }
11359       }
11360     },
11361     "parameters": {
11362       "interface" : {
11363         "in": "query",
11364         "name": "if",
11365         "type": "string",
11366         "enum": ["oic.if.s", "oic.if.baseline"]
11367       }
11368     },
11369     "definitions": {
11370       "Altimeter" : {
11371         "properties": {
11372           "rt": {
11373             "description": "The Resource Type.",
11374             "items": {
11375               "enum": ["oic.r.altimeter"],
11376               "maxLength": 64,
11377               "type": "string"
11378             },
11379             "minItems": 1,
11380             "uniqueItems": true,
11381             "readOnly": true,
11382             "type": "array"
11383           },
11384           "alt" :
11385             {
11386               "description": "The current distance (metres) above or below 'local' sea-level.",
11387               "readOnly": true,
11388               "type": "number"
11389             },
11390           "n": {
11391             "$ref":
11392               "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11393 schema.json#/definitions/n"
11394             },
11395           "id": {
11396             "$ref":
11397               "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11398 schema.json#/definitions/id"
11399             },
11400           "precision": {
11401             "$ref":
11402               "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11403 schema.json#/definitions/precision"
11404             },
11405           "range": {
11406             "$ref":
11407               "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11408 schema.json#/definitions/range_number"
11409             },
11410         }

```

```

11411     "step": {
11412         "$ref":
11413         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11414         schema.json#/definitions/step_number"
11415     },
11416     "if": {
11417         "description": "The OCF Interface set supported by this Resource.",
11418         "items": {
11419             "enum": [
11420                 "oic.if.s",
11421                 "oic.if.baseline"
11422             ],
11423             "type": "string"
11424         },
11425         "minItems": 2,
11426         "uniqueItems": true,
11427         "readOnly": true,
11428         "type": "array"
11429     }
11430 },
11431 "type": "object",
11432 "required": ["alt"]
11433 }
11434 }
11435 }
11436

```

11437 6.61.5 Property definition

11438 Table 125 defines the Properties that are part of the "oic.r.altimeter" Resource Type.

11439 **Table 125 – The Property definitions of the Resource with type "rt" = "oic.r.altimeter".**

Property name	Value type	Mandatory	Access mode	Description
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	
alt	number	Yes	Read Only	The current distance (metres) above or below 'local' sea-level.
range	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

rt	array: schema	see	No	Read Only	The Resource Type.
----	------------------	-----	----	-----------	-----------------------

11440 **6.61.6 CRUDN behaviour**

11441 Table 126 defines the CRUDN operations that are supported on the "oic.r.altimeter" Resource Type.

11442 **Table 126 – The CRUDN operations of the Resource with type "rt" = "oic.r.altimeter".**

Create	Read	Update	Delete	Notify
	get			observe

11443 **6.62 Clock**

11444 **6.62.1 Introduction**

11445 This Resource describes the properties associated with clock and time.
11446 Clock is a time information.

11447 The Property "datetime" is using RFC3339 datetime format (e.g: "2007-04-05T14:30Z")
11448 (Time+Date+Timezone)

11449 The Property "countdown" is the desired total seconds for countdown.

11450 **6.62.2 Example URI**

11451 /ClockResURI

11452 **6.62.3 Resource type**

11453 The Resource Type is defined as: "oic.r.clock".

11454 **6.62.4 OpenAPI 2.0 definition**

```

11455 {
11456   "swagger": "2.0",
11457   "info": {
11458     "title": "Clock",
11459     "version": "20190215",
11460     "license": {
11461       "name": "OCF Data Model License",
11462       "url":
11463         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
11464         CENSE.md",
11465       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
11466       reserved."
11467     },
11468     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
11469   },
11470   "schemes": ["http"],
11471   "consumes": ["application/json"],
11472   "produces": ["application/json"],
11473   "paths": {
11474     "/ClockResURI" : {
11475       "get": {
11476         "description": "This Resource describes the properties associated with clock and
11477         time.\nClock is a time information.\nThe Property \"datetime\" is using RFC3339 datetime format
11478         (e.g: \"2007-04-05T14:30:00Z\") (Time+Date+Timezone)\nThe Property \"countdown\" is the desired
11479         total seconds for countdown.",
11480         "parameters": [
11481           {"$ref": "#/parameters/interface"}
11482         ],
11483         "responses": {
11484           "200": {
11485             "description": "",
11486             "x-example":
11487             {

```

```

11488         "rt": ["oic.r.clock"],
11489         "if": ["oic.if.a", "oic.if.baseline"],
11490         "datetime": "2015-11-05T14:30:00Z",
11491         "countdown": 0.0
11492     },
11493     "schema": { "$ref": "#/definitions/Clock" }
11494 }
11495 },
11496 },
11497 "post": {
11498     "description": "Sets the desired datetime.\n",
11499     "parameters": [
11500         { "$ref": "#/parameters/interface" },
11501         {
11502             "name": "body",
11503             "in": "body",
11504             "required": true,
11505             "schema": { "$ref": "#/definitions/Clock" },
11506             "x-example":
11507                 {
11508                     "datetime": "2015-11-05T14:30:00Z",
11509                     "countdown": 0.0
11510                 }
11511         },
11512     ],
11513     "responses": {
11514         "200": {
11515             "description": "Indicates that the datetime value was successfully changed.\nThe new
11516 datetime value is provided in the response.\n",
11517             "x-example":
11518                 {
11519                     "datetime": "2015-11-05T14:30:00Z",
11520                     "countdown": 0.0
11521                 },
11522             "schema": { "$ref": "#/definitions/Clock" }
11523         },
11524         "403": {
11525             "description": "Indicates that OIC client sent an invalid property value to the
11526 server.\nThe server responds with the required input representation.\n",
11527             "x-example":
11528                 {
11529                     "datetime": "2015-11-05T14:30:00Z",
11530                     "countdown": 0.0
11531                 },
11532             "schema": { "$ref": "#/definitions/Clock" }
11533         },
11534     }
11535 }
11536 },
11537 },
11538 },
11539 },
11540 "parameters": {
11541     "interface": {
11542         "in": "query",
11543         "name": "if",
11544         "type": "string",
11545         "enum": ["oic.if.a", "oic.if.baseline"]
11546     }
11547 },
11548 "definitions": {
11549     "Clock": {
11550         "properties": {
11551             "rt": {
11552                 "description": "The Resource Type.",
11553                 "items": {
11554                     "enum": ["oic.r.clock"],
11555                     "maxLength": 64,
11556                     "type": "string"
11557                 },
11558                 "minItems": 1,
11559                 "readOnly": true,

```

```

11560         "type": "array"
11561     },
11562     "countdown": {
11563         "description": "The desired total seconds for countdown.",
11564         "minimum": 0,
11565         "type": "number"
11566     },
11567     "datetime": {
11568         "description": "Rhe date time using RFC3339 datetime format (e.g: 2007-04-05T14:30:00Z,
11569 2007-04-05T14:30:00+09:00).",
11570         "type": "string",
11571         "format" : "date-time"
11572     },
11573     "n": {
11574         "$ref":
11575 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11576 schema.json#/definitions/n"
11577     },
11578     "id": {
11579         "$ref":
11580 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11581 schema.json#/definitions/id"
11582     },
11583     "if": {
11584         "description": "The OCF Interface set supported by this Resource.",
11585         "items": {
11586             "enum": [
11587                 "oic.if.a",
11588                 "oic.if.baseline"
11589             ],
11590             "type": "string"
11591         },
11592         "minItems": 2,
11593         "uniqueItems": true,
11594         "readOnly": true,
11595         "type": "array"
11596     }
11597 },
11598 "type": "object",
11599 "required": ["datetime"]
11600 }
11601 }
11602 }
11603

```

6.62.5 Property definition

Table 127 defines the Properties that are part of the "oic.r.clock" Resource Type.

Table 127 – The Property definitions of the Resource with type "rt" = "oic.r.clock".

Property name	Value type	Mandatory	Access mode	Description
datetime	string	Yes	Read Write	Rhe date time using RFC3339 datetime format (e.g: 2007-04-05T14:30Z, 2007-04-05T14:30+09:00).
rt	array: see schema	No	Read Only	The Resource Type.

n	multiple types: see schema	No	Read Write	
countdown	number	No	Read Write	The desired total seconds for countdown.
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

11607 **6.62.6 CRUDN behaviour**

11608 Table 128 defines the CRUDN operations that are supported on the "oic.r.clock" Resource Type.

11609 **Table 128 – The CRUDN operations of the Resource with type "rt" = "oic.r.clock".**

Create	Read	Update	Delete	Notify
	get	post		observe

11610 **6.63 Geolocation**

11611 **6.63.1 Introduction**

11612 This Resource describes the properties associated with the current geolocation coordinate.
 11613 Geolocation is a geolocation coordinate data.
 11614 The Property "latitude" is a device's current Latitude coordinate (degrees).
 11615 The Property "longitude" is a device's current Longitude coordinate (degrees).
 11616 The Property "alt" is a device's current distance (metres) above or below 'local' sea-level.
 11617 The Property "accuracy" is the accuracy level of the latitude and longitude coordinates (metres).
 11618 The Property "altitudeAccuracy" is the accuracy level of the altitude coordinates (metres).
 11619 The Property "heading" is a direction of travel of device (degree).
 11620 The Property "speed" is a device's current velocity (metres per second).

11621 **6.63.2 Example URI**

11622 /GeolocationResURI

11623 **6.63.3 Resource type**

11624 The Resource Type is defined as: "oic.r.sensor.geolocation".

11625 **6.63.4 OpenAPI 2.0 definition**

```

11626 {
11627   "swagger": "2.0",
11628   "info": {
11629     "title": "Geolocation",
11630     "version": "20190215",
11631     "license": {
11632       "name": "OCF Data Model License",
11633       "url":
11634         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
11635         CENSE.md",
11636       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
  
```

```

11637 reserved."
11638 },
11639 "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
11640 },
11641 "schemes": ["http"],
11642 "consumes": ["application/json"],
11643 "produces": ["application/json"],
11644 "paths": {
11645   "/GeolocationResURI" : {
11646     "get": {
11647       "description": "This Resource describes the properties associated with the current
11648 geolocation coordinate.\nGeolocation is a geolocation coordinate data.\nThe Property \"latitude\" is
11649 a device's current Latitude coordinate (degrees).\nThe Property \"longitude\" is a device's current
11650 Longitude coordinate (degrees).\nThe Property \"alt\" is a device's current distance (metres) above
11651 or below 'local' sea-level.\nThe Property \"accuracy\" is the accuracy level of the latitude and
11652 longitude coordinates (metres).\nThe Property \"altitudeAccuracy\" is the accuracy level of the
11653 altitude coordinates (metres).\nThe Property \"heading\" is a direction of travel of device
11654 (degree).\nThe Property \"speed\" is a device's current velocity (metres per second).",
11655       "parameters": [
11656         {"$ref": "#/parameters/interface"}
11657       ],
11658       "responses": {
11659         "200": {
11660           "description": "RETRIEVES the current geolocation coordinates.",
11661           "x-example":
11662             {
11663               "rt": ["oic.r.sensor.geolocation"],
11664               "if": ["oic.if.s", "oic.if.baseline"],
11665               "latitude": 55.070859,
11666               "longitude": -3.60512,
11667               "alt": 12.07,
11668               "accuracy": 65.0,
11669               "altitudeAccuracy": 0.0,
11670               "heading": 90.0,
11671               "speed": 0.0
11672             },
11673           "schema": { "$ref": "#/definitions/Geolocation" }
11674         }
11675       }
11676     }
11677   }
11678 },
11679 "parameters": {
11680   "interface": {
11681     "in": "query",
11682     "name": "if",
11683     "type": "string",
11684     "enum": ["oic.if.s", "oic.if.baseline"]
11685   }
11686 },
11687 "definitions": {
11688   "Geolocation" : {
11689     "properties": {
11690       "rt": {
11691         "description": "The Resource Type.",
11692         "items": {
11693           "enum": ["oic.r.sensor.geolocation"],
11694           "maxLength": 64,
11695           "type": "string"
11696         },
11697         "minItems": 1,
11698         "uniqueItems": true,
11699         "readOnly": true,
11700         "type": "array"
11701       },
11702       "longitude": {
11703         "description": "The Device's Current Longitude coordinate (degrees).",
11704         "readOnly": true,
11705         "type": "number"
11706       },
11707       "heading": {
11708         "description": "The direction of travel of the Device (degree).",

```

```

11709         "maximum": 360,
11710         "minimum": 0,
11711         "readOnly": true,
11712         "type": "number"
11713     },
11714     "latitude": {
11715         "description": "The Device's Current Latitude coordinate (degrees).",
11716         "readOnly": true,
11717         "type": "number"
11718     },
11719     "altitudeAccuracy": {
11720         "description": "The accuracy level of the altitude coordinates (metres).",
11721         "minimum": 0,
11722         "readOnly": true,
11723         "type": "number"
11724     },
11725     "alt": {
11726         "description": "The current distance (metres) above or below 'local' sea-level.",
11727         "readOnly": true,
11728         "type": "number"
11729     },
11730     "accuracy": {
11731         "description": "The accuracy level of the latitude and longitude coordinates (metres).",
11732         "minimum": 0,
11733         "readOnly": true,
11734         "type": "number"
11735     },
11736     "speed": {
11737         "description": "The Device's current velocity (metres per second).",
11738         "minimum": 0,
11739         "readOnly": true,
11740         "type": "number"
11741     },
11742     "n": {
11743         "$ref":
11744         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11745         schema.json#/definitions/n"
11746     },
11747     "id": {
11748         "$ref":
11749         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11750         schema.json#/definitions/id"
11751     },
11752     "if": {
11753         "description": "The OCF Interface set supported by this Resource.",
11754         "items": {
11755             "enum": [
11756                 "oic.if.s",
11757                 "oic.if.baseline"
11758             ],
11759             "type": "string"
11760         },
11761         "minItems": 2,
11762         "uniqueItems": true,
11763         "readOnly": true,
11764         "type": "array"
11765     }
11766 },
11767 "type": "object",
11768 "required": ["latitude", "longitude", "alt"]
11769 }
11770 }
11771 }
11772

```

11773 6.63.5 Property definition

11774 Table 129 defines the Properties that are part of the "oic.r.sensor.geolocation" Resource Type.

Table 129 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.geolocation".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
latitude	number	Yes	Read Only	The Device's Current Latitude coordinate (degrees).
longitude	number	Yes	Read Only	The Device's Current Longitude coordinate (degrees).
id	multiple types: see schema	No	Read Write	
speed	number	No	Read Only	The Device's current velocity (metres per second).
altitudeAccuracy	number	No	Read Only	The accuracy level of the altitude coordinates (metres).
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
alt	number	Yes	Read Only	The current distance (metres) above or below 'local' sea-level.
heading	number	No	Read Only	The direction of travel of the Device (degree).
n	multiple types: see schema	No	Read Write	
accuracy	number	No	Read Only	The accuracy level of the

				latitude and longitude coordinates (metres).
--	--	--	--	--

11777 **6.63.6 CRUDN behaviour**

11778 Table 130 defines the CRUDN operations that are supported on the "oic.r.sensor.geolocation"
11779 Resource Type.

Table 130 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.geolocation".

Create	Read	Update	Delete	Notify
	get			observe

11782 **6.64 Height**

11783 **6.64.1 Introduction**

11784 This Resource describes the Properties associated with height of an object's physical size.
11785 The unit is a single value that is one of m, cm, ft or in.
11786 If the unit Property is missing the default is meters [m].
11787 The unit Property is a read-only value that is provided by the server.
11788 When range is omitted the default is 0 to +MAXFLOAT.

11789 **6.64.2 Example URI**

11790 /HeightResURI

11791 **6.64.3 Resource type**

11792 The Resource Type is defined as: "oic.r.height".

11793 **6.64.4 OpenAPI 2.0 definition**

```

11794 {
11795   "swagger": "2.0",
11796   "info": {
11797     "title": "Height",
11798     "version": "2019-03-22",
11799     "license": {
11800       "name": "OCF Data Model License",
11801       "url":
11802         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
11803         CENSE.md",
11804       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
11805     },
11806     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
11807   },
11808   "schemes": [
11809     "http"
11810   ],
11811   "consumes": [
11812     "application/json"
11813   ],
11814   "produces": [
11815     "application/json"
11816   ],
11817   "paths": {
11818     "/HeightResURI": {
11819       "get": {
11820         "description": "This Resource describes the Properties associated with height of an object's
11821         physical size.\nThe unit is a single value that is one of m, cm, ft or in.\nIf the unit Property is

```

```

11822 missing the default is meters [m].\n\nThe unit Property is a read-only value that is provided by the
11823 server.\n\nWhen range is omitted the default is 0 to +MAXFLOAT.",
11824     "parameters": [
11825         {
11826             "$ref": "#/parameters/interface"
11827         }
11828     ],
11829     "responses": {
11830         "200": {
11831             "description": "",
11832             "x-example": {
11833                 "rt": [
11834                     "oic.r.height"
11835                 ],
11836                 "height": 1.8,
11837                 "units": "m"
11838             },
11839             "schema": {
11840                 "$ref": "#/definitions/Height"
11841             }
11842         }
11843     },
11844     "post": {
11845         "description": "Sets the height.",
11846         "parameters": [
11847             {
11848                 "$ref": "#/parameters/interface"
11849             },
11850             {
11851                 "name": "body",
11852                 "in": "body",
11853                 "required": true,
11854                 "schema": {
11855                     "$ref": "#/definitions/Height"
11856                 },
11857                 "x-example": {
11858                     "height": 1.75,
11859                     "units": "m"
11860                 }
11861             }
11862         ],
11863         "responses": {
11864             "200": {
11865                 "description": "Indicates that the height was successfully changed.\n\nThe new height is
11866 provided in the response.",
11867                 "x-example": {
11868                     "height": 1.75,
11869                     "units": "m"
11870                 },
11871                 "schema": {
11872                     "$ref": "#/definitions/Height"
11873                 }
11874             },
11875             "403": {
11876                 "description": "Indicates that OCF Client sent an invalid Property value to the
11877 Server.\n\nThe Server responds with the current Resource representation.",
11878                 "x-example": {
11879                     "height": 1.8,
11880                     "units": "m"
11881                 },
11882                 "schema": {
11883                     "$ref": "#/definitions/Height"
11884                 }
11885             }
11886         }
11887     }
11888 },
11889 "parameters": {
11890     "interface": {
11891         "in": "query",

```

```

11894     "name": "if",
11895     "type": "string",
11896     "enum": [
11897         "oic.if.a",
11898         "oic.if.s",
11899         "oic.if.baseline"
11900     ]
11901 }
11902 },
11903 "definitions": {
11904     "Height": {
11905         "properties": {
11906             "rt": {
11907                 "description": "Resource Type",
11908                 "items": {
11909                     "enum": [
11910                         "oic.r.height"
11911                     ],
11912                     "type": "string",
11913                     "maxLength": 64
11914                 },
11915                 "minItems": 1,
11916                 "uniqueItems": true,
11917                 "readOnly": true,
11918                 "type": "array"
11919             },
11920             "height": {
11921                 "description": "Height of an object",
11922                 "minimum": 0,
11923                 "type": "number"
11924             },
11925             "units": {
11926                 "description": "Height unit",
11927                 "enum": [
11928                     "m",
11929                     "cm",
11930                     "ft",
11931                     "in"
11932                 ],
11933                 "readOnly": true,
11934                 "type": "string",
11935                 "default": "m"
11936             },
11937             "range": {
11938                 "$ref":
11939                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11940                 schema.json#/definitions/range_number"
11941             },
11942             "step": {
11943                 "$ref":
11944                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11945                 schema.json#/definitions/step_number"
11946             },
11947             "precision": {
11948                 "$ref":
11949                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11950                 schema.json#/definitions/precision"
11951             },
11952             "n": {
11953                 "$ref":
11954                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11955                 schema.json#/definitions/n"
11956             },
11957             "id": {
11958                 "$ref":
11959                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11960                 schema.json#/definitions/id"
11961             },
11962             "if": {
11963                 "description": "The OCF Interface set supported by this Resource",
11964                 "items": {
11965                     "enum": [

```

```

11966         "oic.if.a",
11967         "oic.if.s",
11968         "oic.if.baseline"
11969     ],
11970     "type": "string",
11971     "maxLength": 64
11972 },
11973 "minItems": 1,
11974 "readOnly": true,
11975 "uniqueItems": true,
11976 "type": "array"
11977 }
11978 },
11979 "type": "object",
11980 "required": [
11981     "height"
11982 ]
11983 }
11984 }
11985 }
11986

```

11987 **6.64.5 Property definition**

11988 Table 131 defines the Properties that are part of the "oic.r.height" Resource Type.

11989 **Table 131 – The Property definitions of the Resource with type "rt" = "oic.r.height".**

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
height	number	Yes	Read Write	Height of an object
units	string	No	Read Only	Height unit
precision	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
rt	array: see schema	No	Read Only	Resource Type
id	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	

11990 **6.64.6 CRUDN behaviour**

11991 Table 132 defines the CRUDN operations that are supported on the "oic.r.height" Resource Type.

11992 **Table 132 – The CRUDN operations of the Resource with type "rt" = "oic.r.height".**

Create	Read	Update	Delete	Notify
	get	post		observe

11993 **6.65 Weight**

11994 **6.65.1 Introduction**

11995 This Resource describes the Properties associated with weight of an object.
11996 The unit is a single value that is one of kg, g, lb or oz.
11997 If the unit Property is missing the default is kilograms [kg].
11998 The unit Property is a read-only value that is provided by the server.
11999 When range is omitted the default is 0 to +MAXFLOAT.

12000 **6.65.2 Example URI**

12001 /WeightResURI

12002 **6.65.3 Resource type**

12003 The Resource Type is defined as: "oic.r.weight".

12004 **6.65.4 OpenAPI 2.0 definition**

```
12005 {  
12006   "swagger": "2.0",  
12007   "info": {  
12008     "title": "Weight",  
12009     "version": "2019-03-22",  
12010     "license": {  
12011       "name": "OCF Data Model License",  
12012       "url":  
12013 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
12014 CENSE.md",  
12015       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."  
12016     },  
12017     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
12018   },  
12019   "schemes": [  
12020     "http"  
12021   ],  
12022   "consumes": [  
12023     "application/json"  
12024   ],  
12025   "produces": [  
12026     "application/json"  
12027   ],  
12028   "paths": {  
12029     "/WeightResURI": {  
12030       "get": {  
12031         "description": "This Resource describes the Properties associated with weight of an  
12032 object.\n\nThe unit is a single value that is one of kg, g, lb or oz.\n\nIf the unit Property is missing  
12033 the default is kilograms [kg].\n\nThe unit Property is a read-only value that is provided by the  
12034 server.\n\nWhen range is omitted the default is 0 to +MAXFLOAT.",  
12035         "parameters": [  
12036           {  
12037             "$ref": "#/parameters/interface"  
12038           }  
12039         ],  
12040         "responses": {  
12041           "200": {  
12042             "description": "",
```

```

12043         "x-example": {
12044             "rt": [
12045                 "oic.r.weight"
12046             ],
12047             "weight": 80.0,
12048             "units": "kg"
12049         },
12050         "schema": {
12051             "$ref": "#/definitions/Weight"
12052         }
12053     }
12054 },
12055 },
12056 "post": {
12057     "description": "Sets the Weight.",
12058     "parameters": [
12059         {
12060             "$ref": "#/parameters/interface"
12061         },
12062         {
12063             "name": "body",
12064             "in": "body",
12065             "required": true,
12066             "schema": {
12067                 "$ref": "#/definitions/Weight"
12068             },
12069             "x-example": {
12070                 "weight": 75.0,
12071                 "units": "kg"
12072             }
12073         }
12074     ],
12075     "responses": {
12076         "200": {
12077             "description": "Indicates that the weight was successfully changed.\n\nThe new weight is
12078 provided in the response.",
12079             "x-example": {
12080                 "weight": 75.0,
12081                 "units": "kg"
12082             },
12083             "schema": {
12084                 "$ref": "#/definitions/Weight"
12085             }
12086         },
12087         "403": {
12088             "description": "Indicates that OCF client sent an invalid Property value to the
12089 Server.\n\nThe Server responds with the current resource representation.",
12090             "x-example": {
12091                 "weight": 80.0,
12092                 "units": "kg"
12093             },
12094             "schema": {
12095                 "$ref": "#/definitions/Weight"
12096             }
12097         }
12098     }
12099 },
12100 },
12101 },
12102 "parameters": {
12103     "interface": {
12104         "in": "query",
12105         "name": "if",
12106         "type": "string",
12107         "enum": [
12108             "oic.if.s",
12109             "oic.if.a",
12110             "oic.if.baseline"
12111         ]
12112     }
12113 },
12114 "definitions": {

```

```

12115     "Weight": {
12116       "properties": {
12117         "rt": {
12118           "description": "Resource Type",
12119           "items": {
12120             "enum": [
12121               "oic.r.weight"
12122             ],
12123             "type": "string",
12124             "maxLength": 64
12125           },
12126           "minItems": 1,
12127           "uniqueItems": true,
12128           "readOnly": true,
12129           "type": "array"
12130         },
12131         "weight": {
12132           "description": "Weight of an object",
12133           "minimum": 0.0,
12134           "type": "number"
12135         },
12136         "units": {
12137           "description": "Weight unit",
12138           "enum": [
12139             "kg",
12140             "g",
12141             "lb",
12142             "oz"
12143           ],
12144           "readOnly": true,
12145           "type": "string",
12146           "default": "kg"
12147         },
12148         "range": {
12149           "$ref":
12150           "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
12151           schema.json#/definitions/range_number"
12152         },
12153         "step": {
12154           "$ref":
12155           "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
12156           schema.json#/definitions/step_number"
12157         },
12158         "precision": {
12159           "$ref":
12160           "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
12161           schema.json#/definitions/precision"
12162         },
12163         "n": {
12164           "$ref":
12165           "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12166           schema.json#/definitions/n"
12167         },
12168         "id": {
12169           "$ref":
12170           "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12171           schema.json#/definitions/id"
12172         },
12173         "if": {
12174           "description": "The OCF Interface set supported by this Resource",
12175           "items": {
12176             "enum": [
12177               "oic.if.s",
12178               "oic.if.a",
12179               "oic.if.baseline"
12180             ],
12181             "type": "string",
12182             "maxLength": 64
12183           },
12184           "minItems": 1,
12185           "readOnly": true,
12186           "uniqueItems": true,

```

```

12187     "type": "array"
12188   }
12189 },
12190 "type": "object",
12191 "required": [
12192   "weight",
12193   "units"
12194 ]
12195 }
12196 }
12197 }
12198

```

12199 6.65.5 Property definition

12200 Table 133 defines the Properties that are part of the "oic.r.weight" Resource Type.

12201 **Table 133 – The Property definitions of the Resource with type "rt" = "oic.r.weight".**

Property name	Value type	Mandatory	Access mode	Description
range	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
units	string	Yes	Read Only	Weight unit
id	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
rt	array: see schema	No	Read Only	Resource Type
weight	number	Yes	Read Write	Weight of an object
n	multiple types: see schema	No	Read Write	

12202 6.65.6 CRUDN behaviour

12203 Table 134 defines the CRUDN operations that are supported on the "oic.r.weight" Resource Type.

12204 **Table 134 – The CRUDN operations of the Resource with type "rt" = "oic.r.weight".**

Create	Read	Update	Delete	Notify

	get	post		observe
--	-----	------	--	---------

12205 **6.66 Air Quality**

12206 **6.66.1 Introduction**

12207 This Resource describes a qualitative or measured contaminant that can be used to infer Air Quality.
 12208 The Property "valueType" indicates a qualitative or measured reading within the contaminantvalue
 12209 Property.

12210 The Property "contaminantvalue" can contain the actual sensed value with units per contaminant
 12211 type.

12212 Qualitative is a representative value within the range provided where the minimum value is
 12213 minimum contamination and maximum value is maximum contamination for the specific
 12214 contaminant.

12215 contaminantvalue contains the actual measured or qualitative level.
 12216 The Property Range contains the allowed range for the value that is being reported.

12217 If valueType is 'Measured' then the units for the contaminant types are as follows:

12218 Methanal (also known as Formaldehyde): CH₂O (ug/m³),
 12219 Carbon Dioxide: CO₂ (ppm),
 12220 Carbon Monoxide: CO (ppm),
 12221 Particulate Matter (less than 2.5 microns in diameter): PM_{2.5} (ug/m³),
 12222 Particulate Matter (less than 10 microns in diameter): PM₁₀ (ug/m³),
 12223 Volatile Organic Compounds: VOC (ug/m³).

12224 **6.66.2 Example URI**

12225 /AirQualityResURI

12226 **6.66.3 Resource type**

12227 The Resource Type is defined as: "oic.r.airquality".

12228 **6.66.4 OpenAPI 2.0 definition**

```

12229 {
12230   "swagger": "2.0",
12231   "info": {
12232     "title": "Air Quality",
12233     "version": "20190225",
12234     "license": {
12235       "name": "OCF Data Model License",
12236       "url":
12237         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
12238         CENSE.md",
12239       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
12240         reserved."
12241     },
12242     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
12243   },
12244   "schemes": ["http"],
12245   "consumes": ["application/json"],
12246   "produces": ["application/json"],
12247   "paths": {
12248     "/AirQualityResURI" : {
12249       "get": {
12250         "description": "This Resource describes a qualitative or measured contaminant that can be
12251         used to infer Air Quality.\nThe Property \"valueType\" indicates a qualitative or measured reading
12252         within the contaminantvalue Property.\nThe Property \"contaminantvalue\" can contain the actual
12253         sensed value with units per contaminant type.\nQualitative is a representative value within the
12254         range provided where the minium value is minimum contamination and maximum value is maximum
12255         contamination for the specific contaminant.\ncontaminantvalue contains the actual measured or
12256         qualitative level.\nThe Property Range contains the allowed range for the value that is being
12257         reported.\nIf valueType is 'Measured' then the units for the contaminant types are as follows:\n
12258         Methanal (also known as Formaldehyde): CH2O (ug/m^3),\n Carbon Dioxide: CO2 (ppm),\n Carbon
12259         Monoxide: CO (ppm),\n Particulate Matter (less than 2.5 microns in diameter): PM2.5 (ug/m^3),\n
12260         Particulate Matter (less than 10 microns in diameter): PM10 (ug/m^3),\n Volatile Organic Compounds:

```

```

12261 VOC (ug/m^3).",
12262     "parameters": [
12263         {"$ref": "#/parameters/interface"}
12264     ],
12265     "responses": {
12266         "200": {
12267             "description": "",
12268             "x-example":
12269                 {
12270                     "rt": ["oic.r.airquality"],
12271                     "if": ["oic.if.s", "oic.if.baseline"],
12272                     "contaminanttype": "CO",
12273                     "valuetype": "Measured",
12274                     "contaminantvalue": 10,
12275                     "range": [0,500]
12276                 },
12277             "schema": { "$ref": "#/definitions/AirQuality" }
12278         }
12279     }
12280 }
12281 }
12282 },
12283 "parameters": {
12284     "interface": {
12285         "in": "query",
12286         "name": "if",
12287         "type": "string",
12288         "enum": ["oic.if.s", "oic.if.baseline"]
12289     }
12290 },
12291 "definitions": {
12292     "AirQuality": {
12293         "properties": {
12294             "rt": {
12295                 "description": "The Resource Type.",
12296                 "items": {
12297                     "enum": ["oic.r.airquality"],
12298                     "maxLength": 64,
12299                     "type": "string"
12300                 },
12301                 "minItems": 1,
12302                 "uniqueItems": true,
12303                 "readOnly": true,
12304                 "type": "array"
12305             },
12306             "contaminanttype": {
12307                 "description": "The contaminant being measured.",
12308                 "enum": [
12309                     "CH20",
12310                     "CO2",
12311                     "CO",
12312                     "PM2.5",
12313                     "PM10",
12314                     "VOC",
12315                     "Smoke",
12316                     "Odor",
12317                     "AirPollution"
12318                 ],
12319                 "readOnly": true,
12320                 "type": "string"
12321             },
12322             "valuetype": {
12323                 "description": "The property that indicates whether the provided value is qualitative or
12324 measured.",
12325                 "enum": [
12326                     "Qualitative",
12327                     "Measured"
12328                 ],
12329                 "readOnly": true,
12330                 "type": "string"
12331             },
12332             "contaminantvalue": {

```

```

12333         "description": "The measured or qualitative value for the contaminant.",
12334         "readOnly": true,
12335         "type": "integer"
12336     },
12337     "n": {
12338         "$ref":
12339 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12340 schema.json#/definitions/n"
12341     },
12342     "id": {
12343         "$ref":
12344 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12345 schema.json#/definitions/id"
12346     },
12347     "range": {
12348         "$ref":
12349 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
12350 schema.json#/definitions/range_integer"
12351     },
12352     "if" : {
12353         "description": "The OCF Interface set supported by this Resource.",
12354         "items": {
12355             "enum": [
12356                 "oic.if.s",
12357                 "oic.if.baseline"
12358             ],
12359             "type": "string"
12360         },
12361         "minItems": 2,
12362         "uniqueItems": true,
12363         "readOnly": true,
12364         "type": "array"
12365     }
12366 },
12367 "type": "object",
12368 "required": ["contaminantvalue", "contaminanttype", "valuetype"]
12369 }
12370 }
12371 }
12372

```

6.66.5 Property definition

Table 135 defines the Properties that are part of the "oic.r.airquality" Resource Type.

Table 135 – The Property definitions of the Resource with type "rt" = "oic.r.airquality".

Property name	Value type	Mandatory	Access mode	Description
range	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
valuetype	string	Yes	Read Only	The property that indicates whether the provided value is qualitative or measured.
rt	array: see schema	No	Read Only	The Resource Type.

if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
contaminanttype	string	Yes	Read Only	The contaminant being measured.
contaminantvalue	integer	Yes	Read Only	The measured or qualitative value for the contaminant.
id	multiple types: see schema	No	Read Write	

12376 **6.66.6 CRUDN behaviour**

12377 Table 136 defines the CRUDN operations that are supported on the "oic.r.airquality" Resource
12378 Type.

12379 **Table 136 – The CRUDN operations of the Resource with type "rt" = "oic.r.airquality".**

Create	Read	Update	Delete	Notify
	get			observe

12380 **6.67 Air Quality Collection**

12381 **6.67.1 Introduction**

12382 This resource describes a sensor that provides the qualitative or measured Air Quality.
12383 The resource is a collection of instances of oic.r.airquality detailing the individual exposed
12384 contaminant measures
12385 There is one collection entry per contaminant type supported by the device. A device must expose
12386 at least one measured or qualitative value.
12387 Retrieves the current air quality.
12388

12389 **6.67.2 Example URI**

12390 /AirQualityResURI

12391 **6.67.3 Resource type**

12392 The Resource Type is defined as: "oic.r.airqualitycollection, oic.wk.col".

12393 **6.67.4 OpenAPI 2.0 definition**

```
12394 {
12395   "swagger": "2.0",
12396   "info": {
12397     "title": "Air Quality Collection",
12398     "version": "20190307",
12399     "license": {
12400       "name": "OCF Data Model License",
12401       "url":
12402         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
12403         CENSE.md",
12404       "x-copyright": "copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
12405     }
12406   }
12407 }
```



```

12405     },
12406     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
12407 },
12408 "schemes": ["http"],
12409 "consumes": ["application/json"],
12410 "produces": ["application/json"],
12411 "paths": {
12412   "/AirQualityCollectionResURI?if=oic.if.ll" : {
12413     "get": {
12414       "description": "This resource describes a sensor that provides the qualitative or measured
12415 Air Quality.\nThe resource is a collection of instances of oic.r.airquality detailing the individual
12416 exposed contaminant measures\nThere is one collection entry per contaminant type supported by the
12417 device. A device must expose at least one measured or qualitative value.\nRetrieves the current air
12418 quality.\n",
12419       "parameters": [
12420         {"$ref": "#/parameters/interface-all"}
12421       ],
12422       "responses": {
12423         "200": {
12424           "description" : "",
12425           "x-example": [
12426             [
12427               {"href": "/myCOMeasureResURI", "rt": ["oic.r.airquality"], "if":
12428 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::bld6]:1122"}]},
12429               {"href": "/myCO2ResURI", "rt": ["oic.r.airquality"], "if":
12430 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::bld6]:1122"}]}
12431             ],
12432           "schema": { "$ref": "#/definitions/AirQuality-ll" }
12433         }
12434       }
12435     }
12436   },
12437   "/AirQualityCollectionResURI?if=oic.if.b": {
12438     "get": {
12439       "description": "This resource describes a sensor that provides the qualitative or measured
12440 Air Quality.\nThe resource is a collection of instances of oic.r.airquality detailing the individual
12441 exposed contaminant measures\nThere is one collection entry per contaminant type supported by the
12442 device. A device must expose at least one measured or qualitative value.\nRetrieves the current air
12443 quality.\n",
12444       "parameters": [
12445         {"$ref": "#/parameters/interface-all"}
12446       ],
12447       "responses": {
12448         "200": {
12449           "description" : "",
12450           "x-example": [
12451             {
12452               "href": "/AirQualityCoresURI",
12453               "rep": {
12454                 "contaminanttype": "CO",
12455                 "valuetype": "Measured",
12456                 "contaminantvalue": 10,
12457                 "range": [0,500]
12458               }
12459             },
12460             {
12461               "href": "/AirQualitySmokeResURI",
12462               "rep": {
12463                 "contaminanttype": "Smoke",
12464                 "valuetype": "Measured",
12465                 "contaminantvalue": 100,
12466                 "range": [0,5000]
12467               }
12468             }
12469           ],
12470         "schema": { "$ref": "#/definitions/AirQualityCollectionBatch-Retrieve" }
12471       }
12472     }
12473   },
12474 },
12475 "/AirQualityCollectionResURI?if=oic.if.baseline" : {
12476   "get": {

```

```

12477     "description": "This resource describes a sensor that provides the qualitative or measured
12478 Air Quality.\nThe resource is a collection of instances of oic.r.airquality detailing the individual
12479 exposed contaminant measures\nThere is one collection entry per contaminant type supported by the
12480 device. A device must expose at least one measured or qualitative value.\nRetrieves the current air
12481 quality.\n",
12482     "parameters": [
12483       {"$ref": "#/parameters/interface-all"}
12484     ],
12485     "responses": {
12486       "200": {
12487         "description": "",
12488         "x-example":
12489           {
12490             "rt": ["oic.r.airqualitycollection","oic.wk.col"],
12491             "if": ["oic.if.baseline","oic.if.ll"],
12492             "links": [
12493               {"href": "/myCOMeasureResURI", "rt": ["oic.r.airquality"], "if":
12494 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
12495               {"href": "/myCO2ResURI", "rt": ["oic.r.airquality"], "if":
12496 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
12497             ]
12498           },
12499           "schema": { "$ref": "#/definitions/AirQuality" }
12500         }
12501       }
12502     }
12503   },
12504   "parameters": {
12505     "interface-all": {
12506       "in": "query",
12507       "name": "if",
12508       "type": "string",
12509       "enum": ["oic.if.ll", "oic.if.b","oic.if.baseline"]
12510     }
12511   },
12512   "definitions": {
12513     "AirQuality-ll": {
12514       "items": {
12515         "$ref": "#/definitions/oic.oic-link"
12516       },
12517       "type": "array"
12518     },
12519     "oic.oic-link": {
12520       "type": "object",
12521       "properties": {
12522         "anchor": {
12523           "$ref":
12524 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
12525 schema.json#/definitions/anchor"
12526         },
12527         "di": {
12528           "$ref":
12529 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
12530 schema.json#/definitions/di"
12531         },
12532         "eps": {
12533           "$ref":
12534 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
12535 schema.json#/definitions/eps"
12536         },
12537         "href": {
12538           "$ref":
12539 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
12540 schema.json#/definitions/href"
12541         },
12542         "ins": {
12543           "$ref":
12544 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
12545 schema.json#/definitions/ins"
12546         },
12547         "p": {
12548

```

```

12549         "$ref":
12550         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
12551         schema.json#/definitions/p"
12552     },
12553     "rel": {
12554         "$ref":
12555         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
12556         schema.json#/definitions/rel_array"
12557     },
12558     "title": {
12559         "$ref":
12560         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
12561         schema.json#/definitions/title"
12562     },
12563     "type": {
12564         "$ref":
12565         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
12566         schema.json#/definitions/type"
12567     },
12568     "if": {
12569         "description": "The OCF Interfaces supported by the target Resource",
12570         "items": {
12571             "enum": [
12572                 "oic.if.s",
12573                 "oic.if.baseline"
12574             ],
12575             "type": "string",
12576             "maxLength": 64
12577         },
12578         "minItems": 2,
12579         "uniqueItems": true,
12580         "type": "array",
12581         "readOnly": true
12582     },
12583     "rt": {
12584         "description": "Resource Type of the target Resource",
12585         "items": {
12586             "maxLength": 64,
12587             "type": "string",
12588             "enum": ["oic.r.airquality"]
12589         },
12590         "minItems": 1,
12591         "type": "array",
12592         "uniqueItems": true,
12593         "readOnly": true
12594     }
12595 },
12596 "required": [
12597     "href",
12598     "rt",
12599     "if"
12600 ]
12601 },
12602 "AirQuality": {
12603     "type": "object",
12604     "properties": {
12605         "rt": {
12606             "items": {
12607                 "enum": [
12608                     "oic.r.airqualitycollection",
12609                     "oic.wk.col"
12610                 ],
12611                 "type": "string",
12612                 "maxLength": 64
12613             },
12614             "minItems": 2,
12615             "type": "array",
12616             "uniqueItems": true
12617         },
12618         "links": {
12619             "description": "A set of simple or individual OCF Links.",
12620             "type": "array",

```

```

12621         "items": {
12622             "$ref": "#/definitions/oic.oic-link"
12623         },
12624     },
12625     "n": {
12626         "$ref":
12627     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12628     schema.json#/definitions/n"
12629     },
12630     "id": {
12631         "$ref":
12632     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12633     schema.json#/definitions/id"
12634     },
12635     "rts": {
12636         "items": {
12637             "anyOf": [
12638                 {
12639                     "enum": [
12640                         "oic.r.airquality",
12641                         "oic.r.value.conditional"
12642                     ],
12643                     "type": "string",
12644                     "maxLength": 64
12645                 },
12646                 {
12647                     "enum": [
12648                         "oic.r.airquality"
12649                     ],
12650                     "type": "string",
12651                     "maxLength": 64
12652                 }
12653             ]
12654         },
12655         "minItems": 1,
12656         "type": "array",
12657         "uniqueItems": true
12658     },
12659     "if": {
12660         "description": "The OCF Interfaces supported by this Resource",
12661         "items": {
12662             "enum": [
12663                 "oic.if.ll",
12664                 "oic.if.b",
12665                 "oic.if.baseline"
12666             ],
12667             "type": "string",
12668             "maxLength": 64
12669         },
12670         "minItems": 1,
12671         "readOnly": true,
12672         "uniqueItems": true,
12673         "type": "array"
12674     }
12675     },
12676     "AirQualityCollectionBatch-Retrieve" : {
12677         "type": "array",
12678         "minItems": 1,
12679         "uniqueItems": true,
12680         "items": {
12681             "type": "object",
12682             "additionalProperties": true,
12683             "properties": {
12684                 "href": {
12685                     "$ref":
12686     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
12687     schema.json#/definitions/href"
12688                 },
12689                 "rep": {
12690                     "$ref":
12691     "https://openconnectivityfoundation.github.io/IoTDataModels/AirQualityResURI.swagger.json#/definitio

```

```

12693 ns/AirQuality"
12694     }
12695   },
12696   "required": [
12697     "href",
12698     "rep"
12699   ]
12700 }
12701 }
12702 }
12703 }
12704

```

12705 **6.67.5 Property definition**

12706 Table 137 defines the Properties that are part of the "oic.r.airqualitycollection, oic.wk.col" Resource
 12707 Type.

12708 **Table 137 – The Property definitions of the Resource with type "rt" =**
 12709 **"oic.r.airqualitycollection, oic.wk.col".**

Property name	Value type	Mandatory	Access mode	Description
href	multiple types: see schema	Yes	Read Write	
type	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
rt	array: see schema	Yes	Read Only	Resource Type of the target Resource
di	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
anchor	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
ins	multiple types: see schema	No	Read Write	
if	array: see schema	Yes	Read Only	The OCF Interfaces

				supported by the target Resource
href	multiple types: see schema	Yes	Read Write	
rep	multiple types: see schema	Yes	Read Write	
n	multiple types: see schema		Read Write	
rt	array: see schema		Read Write	
if	array: see schema		Read Only	The OCF Interfaces supported by this Resource
rts	array: see schema		Read Write	
links	array: see schema		Read Write	A set of simple or individual OCF Links.
id	multiple types: see schema		Read Write	

12710 **6.67.6 CRUDN behaviour**

12711 Table 138 defines the CRUDN operations that are supported on the "oic.r.airqualitycollection,
12712 oic.wk.col" Resource Type.

12713 **Table 138 – The CRUDN operations of the Resource with type "rt" =**
12714 **"oic.r.airqualitycollection, oic.wk.col".**

Create	Read	Update	Delete	Notify
	get			observe

12715 **6.68 Consumable**

12716 **6.68.1 Introduction**

12717 This Resource specifies a thing that can be consumed such as filter material, printer toner etc
12718 The Property "typeofconsumable" is an enumeration defining the thing being consumed as defined
12719 by the Smart Home Device Specification
12720 The Property "remaining" is an integer capturing the percentage remaining life
12721 The Property "orderpercentage" is an integer capturing the percentage life at which replacement
12722 or replenishment is recommended by the manufacturer
12723 The Property "url" is a string containing a URL at which further information may be obtained with
12724 respect to the consumable.

12725 **6.68.2 Example URI**

12726 /ConsumableResURI

12727 **6.68.3 Resource type**

12728 The Resource Type is defined as: "oic.r.consumable".

12729 **6.68.4 OpenAPI 2.0 definition**

```
12730 {
12731   "swagger": "2.0",
12732   "info": {
12733     "title": "Consumable",
12734     "version": "20190215",
12735     "license": {
12736       "name": "OCF Data Model License",
12737       "url":
12738         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
12739         CENSE.md",
12740       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
12741         reserved."
12742     },
12743     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
12744   },
12745   "schemes": ["http"],
12746   "consumes": ["application/json"],
12747   "produces": ["application/json"],
12748   "paths": {
12749     "/ConsumableResURI" : {
12750       "get": {
12751         "description": "This Resource specifies a thing that can be consumed such as filter
12752         material, printer toner etc\nThe Property \"typeofconsumable\" is an enumeration defining the thing
12753         being consumed as defined by the Smart Home Device Specification\nThe Property \"remaining\" is an
12754         integer capturing the percentatge remaining life\nThe Property \"orderpercentage\" is an integer
12755         capturing the percentage life at which replacement or replenishment is recommended by the
12756         manufacturer\nThe Property \"url\" is a string containing a URL at which further information may be
12757         obtained with respect to the consumable.",
12758         "parameters": [
12759           { "$ref": "#/parameters/interface" }
12760         ],
12761         "responses": {
12762           "200": {
12763             "description": "",
12764             "x-example":
12765               {
12766                 "rt": ["oic.r.consumable"],
12767                 "if": ["oic.if.s", "oic.if.baseline"],
12768                 "typeofconsumable": "tonerBlack",
12769                 "remaining": 20,
12770                 "orderpercentage": 10,
12771                 "url": "http://myreorderURL"
12772               },
12773             "schema": { "$ref": "#/definitions/consumable" }
12774           }
12775         }
12776       }
12777     }
12778   },
12779   "parameters": {
12780     "interface": {
12781       "in": "query",
12782       "name": "if",
12783       "type": "string",
12784       "enum": ["oic.if.s", "oic.if.baseline"]
12785     }
12786   },
12787   "definitions": {
12788     "consumable" : {
12789       "properties": {
12790         "rt": {
12791           "description": "The Resource Type.",
```

```

12792         "items": {
12793             "enum": ["oic.r.consumable"],
12794             "maxLength": 64,
12795             "type": "string"
12796         },
12797         "minItems": 1,
12798         "uniqueItems": true,
12799         "readOnly": true,
12800         "type": "array"
12801     },
12802     "remaining": {
12803         "description": "The percentage remaining lifespan.",
12804         "maximum": 100,
12805         "minimum": 0,
12806         "readOnly": true,
12807         "type": "integer"
12808     },
12809     "typeofconsumable": {
12810         "description": "The thing that is being consumed.",
12811         "readOnly": true,
12812         "type": "string"
12813     },
12814     "url": {
12815         "description": "The URL at which additional ordering information may be found.",
12816         "format": "uri",
12817         "readOnly": true,
12818         "type": "string"
12819     },
12820     "orderpercentage": {
12821         "description": "The percentage at which re-ordering is recommended by the manufacturer.",
12822         "maximum": 100,
12823         "minimum": 0,
12824         "readOnly": true,
12825         "type": "integer"
12826     },
12827     "n": {
12828         "$ref":
12829         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12830         schema.json#/definitions/n"
12831     },
12832     "id": {
12833         "$ref":
12834         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12835         schema.json#/definitions/id"
12836     },
12837     "if": {
12838         "description": "The OCF Interface set supported by this Resource.",
12839         "items": {
12840             "enum": [
12841                 "oic.if.s",
12842                 "oic.if.baseline"
12843             ],
12844             "type": "string"
12845         },
12846         "minItems": 2,
12847         "uniqueItems": true,
12848         "readOnly": true,
12849         "type": "array"
12850     }
12851 },
12852 "type": "object",
12853 "required": ["typeofconsumable", "remaining"]
12854 }
12855 }
12856 }
12857

```

12858 6.68.5 Property definition

12859 Table 139 defines the Properties that are part of the "oic.r.consumable" Resource Type.

12860 **Table 139 – The Property definitions of the Resource with type "rt" = "oic.r.consumable".**

Property name	Value type	Mandatory	Access mode	Description
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.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
remaining	integer	Yes	Read Only	The percentage remaining lifespan.
n	multiple types: see schema	No	Read Write	
orderpercentage	integer	No	Read Only	The percentage at which re-ordering is recommended by the manufacturer.
rt	array: see schema	No	Read Only	The Resource Type.
id	multiple types: see schema	No	Read Write	

12861 **6.68.6 CRUDN behaviour**

12862 Table 140 defines the CRUDN operations that are supported on the "oic.r.consumable" Resource
 12863 Type.

12864 **Table 140 – The CRUDN operations of the Resource with type "rt" = "oic.r.consumable".**

Create	Read	Update	Delete	Notify
	get			observe

12865 **6.69 Consumables**

12866 **6.69.1 Introduction**

12867 This Resource specifies things that can be consumed such as filter material, printer toner etc
12868 The resource is a Collection of instances of oic.r.consumable detailing the individual consumed
12869 items
12870 supportedconsumables is the set of consumable types that this instance of the Resource supports
12871

12872 **6.69.2 Example URI**

12873 /ConsumablesResURI

12874 **6.69.3 Resource type**

12875 The Resource Type is defined as: "oic.r.consumablecollection, oic.wk.col".

12876 **6.69.4 OpenAPI 2.0 definition**

```
12877 {  
12878   "swagger": "2.0",  
12879   "info": {  
12880     "title": "Consumables",  
12881     "version": "20190307",  
12882     "license": {  
12883       "name": "OCF Data Model License",  
12884       "url":  
12885       "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
12886       CENSE.md",  
12887       "x-copyright": "copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."  
12888     },  
12889     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
12890   },  
12891   "schemes": ["http"],  
12892   "consumes": ["application/json"],  
12893   "produces": ["application/json"],  
12894   "paths": {  
12895     "/ConsumablesResURI?if=oic.if.ll" : {  
12896       "get": {  
12897         "description": "This Resource specifies things that can be consumed such as filter material,  
12898 printer toner etc\nThe resource is a Collection of instances of oic.r.consumable detailing the  
12899 individual consumed items\nsupportedconsumables is the set of consumable types that this instance of  
12900 the Resource supports\n",  
12901         "parameters": [  
12902           {"$ref": "#/parameters/interface-all"}  
12903         ],  
12904         "responses": {  
12905           "200": {  
12906             "description": "",  
12907             "x-example":  
12908               [  
12909                 {"href": "/myTonerBlackResURI", "rt": ["oic.r.consumable"], "if":  
12910 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},  
12911                 {"href": "/myTonerCyanResURI", "rt": ["oic.r.consumable"], "if":  
12912 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},  
12913                 {"href": "/myTonerMagentaResURI", "rt": ["oic.r.consumable"], "if":  
12914 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},  
12915                 {"href": "/myTonerYellowResURI", "rt": ["oic.r.consumable"], "if":  
12916 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}  
12917               ],  
12918             "schema": {"$ref": "#/definitions/consumables-11" }  
12919           }  
12920         }  
12921       }  
12922     },  
12923     "/ConsumablesResURI?if=oic.if.b" : {  
12924       "get": {  
12925         "description": "This Resource specifies things that can be consumed such as filter material,  
12926 printer toner etc\nThe resource is a Collection of instances of oic.r.consumable detailing the  
12927 individual consumed items\nsupportedconsumables is the set of consumable types that this instance of
```

```

12928 the Resource supports\n",
12929     "parameters": [
12930         {"$ref": "#/parameters/interface-all"}
12931     ],
12932     "responses": {
12933         "200": {
12934             "description": "",
12935             "x-example": [
12936                 {
12937                     "href": "/tonerCyanResURI",
12938                     "rep": {
12939                         "typeofconsumable": "tonerCyan",
12940                         "remaining": 70,
12941                         "orderpercentage": 10,
12942                         "url": "http://myreorderURL"
12943                     }
12944                 },
12945                 {
12946                     "href": "/tonerBlackResURI",
12947                     "rep": {
12948                         "typeofconsumable": "tonerBlack",
12949                         "remaining": 20,
12950                         "orderpercentage": 10,
12951                         "url": "http://myreorderURL"
12952                     }
12953                 }
12954             ],
12955             "schema": { "$ref": "#/definitions/ConsumableCollectionBatch-Retrieve" }
12956         }
12957     }
12958 },
12959 "/ConsumablesResURI?if=oic.if.baseline" : {
12960     "get": {
12961         "description": "This Resource specifies things that can be consumed such as filter material,
12962 printer toner etc\nThe resource is a Collection of instances of oic.r.consumable detailing the
12963 individual consumed items\nsupportedconsumables is the set of consumable types that this instance of
12964 the Resource supports\n",
12965         "parameters": [
12966             {"$ref": "#/parameters/interface-all"}
12967         ],
12968         "responses": {
12969             "200": {
12970                 "description": "",
12971                 "x-example": {
12972                     "rt": [ "oic.r.consumablecollection", "oic.wk.col" ],
12973                     "if": [ "oic.if.ll", "oic.if.b", "oic.if.baseline" ],
12974                     "rts": [ "oic.r.consumable", "oic.r.value.conditional" ],
12975                     "supportedconsumables": [ "tonerBlack", "tonerCyan", "tonerMagenta", "tonerYellow" ],
12976                     "links": [
12977                         { "href": "/myTonerBlackResURI", "rt": [ "oic.r.consumable" ], "if":
12978 ["oic.if.s", "oic.if.baseline"], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] },
12979                         { "href": "/myTonerCyanResURI", "rt": [ "oic.r.consumable" ], "if":
12980 ["oic.if.s", "oic.if.baseline"], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] },
12981                         { "href": "/myTonerMagentaResURI", "rt": [ "oic.r.consumable" ], "if":
12982 ["oic.if.s", "oic.if.baseline"], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] },
12983                         { "href": "/myTonerYellowResURI", "rt": [ "oic.r.consumable" ], "if":
12984 ["oic.if.s", "oic.if.baseline"], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] }
12985                     ]
12986                 },
12987                 "schema": { "$ref": "#/definitions/consumables" }
12988             }
12989         }
12990     }
12991 },
12992 },
12993 },
12994 "parameters": {
12995     "interface-all" : {
12996         "in" : "query",
12997         "name" : "if",
12998         "type" : "string",
12999         "enum" : [ "oic.if.ll", "oic.if.b", "oic.if.baseline" ]

```

```

13000     }
13001   },
13002   "definitions": {
13003     "consumables-ll" : {
13004       "items": {
13005         "$ref": "#/definitions/oic.oic-link"
13006       },
13007       "type": "array"
13008     },
13009     "consumables": {
13010       "properties": {
13011         "rt": {
13012           "items": {
13013             "enum": [
13014               "oic.r.consumablecollection",
13015               "oic.wk.col"
13016             ],
13017             "type": "string",
13018             "maxLength": 64
13019           },
13020           "minItems": 2,
13021           "type": "array",
13022           "readOnly": true,
13023           "uniqueItems": true
13024         },
13025         "supportedconsumables": {
13026           "description": "Array of possible consumables the device measures.",
13027           "items": {
13028             "type": "string"
13029           },
13030           "readOnly": true,
13031           "type": "array"
13032         },
13033         "links": {
13034           "description": "A set of simple or individual OCF Links.",
13035           "items": {
13036             "$ref": "#/definitions/oic.oic-link"
13037           },
13038           "type": "array"
13039         },
13040         "n": {
13041           "$ref":
13042             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13043             schema.json#/definitions/n"
13044         },
13045         "id": {
13046           "$ref":
13047             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13048             schema.json#/definitions/id"
13049         },
13050         "rts": {
13051           "items": {
13052             "anyOf": [
13053               {
13054                 "enum": [
13055                   "oic.r.consumable",
13056                   "oic.r.value.conditional"
13057                 ],
13058                 "type": "string",
13059                 "maxLength": 64
13060               },
13061               {
13062                 "enum": [
13063                   "oic.r.consumable"
13064                 ],
13065                 "type": "string",
13066                 "maxLength": 64
13067               }
13068             ]
13069           },
13070           "minItems": 1,
13071           "type": "array",

```

```

13072         "readOnly": true,
13073         "uniqueItems": true
13074     },
13075     "if": {
13076         "description": "The OCF Interfaces supported by this Resource",
13077         "items": {
13078             "enum": [
13079                 "oic.if.ll",
13080                 "oic.if.b",
13081                 "oic.if.baseline"
13082             ],
13083             "type": "string",
13084             "maxLength": 64
13085         },
13086         "minItems": 1,
13087         "readOnly": true,
13088         "uniqueItems": true,
13089         "type": "array"
13090     }
13091 },
13092 "type" : "object"
13093 },
13094 "ConsumableCollectionBatch-Retrieve" : {
13095     "type": "array",
13096     "minItems": 1,
13097     "uniqueItems": true,
13098     "items": {
13099         "type": "object",
13100         "additionalProperties": true,
13101         "properties": {
13102             "href": {
13103                 "$ref":
13104 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13105 schema.json#/definitions/href"
13106             },
13107             "rep": {
13108                 "$ref":
13109 "https://openconnectivityfoundation.github.io/IoTDataModels/ConsumableResURI.swagger.json#/definitio
13110 ns/consumable"
13111             }
13112         },
13113         "required": [
13114             "href",
13115             "rep"
13116         ]
13117     }
13118 },
13119 "oic.oic-link": {
13120     "type": "object",
13121     "properties": {
13122         "anchor": {
13123             "$ref":
13124 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13125 schema.json#/definitions/anchor"
13126         },
13127         "di": {
13128             "$ref":
13129 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13130 schema.json#/definitions/di"
13131         },
13132         "eps": {
13133             "$ref":
13134 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13135 schema.json#/definitions/eps"
13136         },
13137         "href": {
13138             "$ref":
13139 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13140 schema.json#/definitions/href"
13141         },
13142         "ins": {
13143             "$ref":

```

```

13144 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13145 schema.json#/definitions/ins"
13146   },
13147   "p": {
13148     "$ref":
13149     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13150     schema.json#/definitions/p"
13151   },
13152   "rel": {
13153     "$ref":
13154     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13155     schema.json#/definitions/rel_array"
13156   },
13157   "title": {
13158     "$ref":
13159     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13160     schema.json#/definitions/title"
13161   },
13162   "type": {
13163     "$ref":
13164     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13165     schema.json#/definitions/type"
13166   },
13167   "if": {
13168     "description": "The OCF Interfaces supported by the target Resource",
13169     "items": {
13170       "enum": [
13171         "oic.if.s",
13172         "oic.if.baseline"
13173       ],
13174       "type": "string",
13175       "maxLength": 64
13176     },
13177     "minItems": 2,
13178     "uniqueItems": true,
13179     "type": "array",
13180     "readOnly": true
13181   },
13182   "rt": {
13183     "description": "Resource Type of the target Resource",
13184     "items": {
13185       "maxLength": 64,
13186       "type": "string",
13187       "enum": ["oic.r.consumable"]
13188     },
13189     "minItems": 1,
13190     "type": "array",
13191     "uniqueItems": true,
13192     "readOnly": true
13193   }
13194 },
13195 "required": [
13196   "href",
13197   "rt",
13198   "if"
13199 ]
13200 }
13201 }
13202 }
13203

```

13204 6.69.5 Property definition

13205 Table 141 defines the Properties that are part of the "oic.r.consumablecollection, oic.wk.col"
 13206 Resource Type.

13207 **Table 141 – The Property definitions of the Resource with type "rt" =**
 13208 **"oic.r.consumablecollection, oic.wk.col".**

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

href	multiple types: see schema	Yes	Read Write	
rep	multiple types: see schema	Yes	Read Write	
title	multiple types: see schema	No	Read Write	
anchor	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
ins	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
rt	array: see schema	Yes	Read Only	Resource Type of the target Resource
rel	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
if	array: see schema	Yes	Read Only	The OCF Interfaces supported by the target Resource
n	multiple types: see schema		Read Write	
if	array: see schema		Read Only	The OCF Interfaces supported by this Resource

rt	array: see schema		Read Only	
supportedconsumables	array: see schema		Read Only	Array of possible consumables the device measures.
rts	array: see schema		Read Only	
id	multiple types: see schema		Read Write	
links	array: see schema		Read Write	A set of simple or individual OCF Links.

13209 **6.69.6 CRUDN behaviour**

13210 Table 142 defines the CRUDN operations that are supported on the "oic.r.consumablecollection,
13211 oic.wk.col" Resource Type.

13212 **Table 142 – The CRUDN operations of the Resource with type "rt" =**
13213 **"oic.r.consumablecollection, oic.wk.col".**

Create	Read	Update	Delete	Notify
	get			observe

13214 **6.70 Delay Defrost**

13215 **6.70.1 Introduction**

13216 This Resource describes the delay defrost function as defined by the US Energy Star Specifications.
13217 See Energy Star Refrigerator Requirements Version 5 Section 4).
13218 (<https://www.energystar.gov/sites/default/files/specs//private/ENERGY%20STAR%20Final%20Version%205.0%20Residential%20Refrigerators%20and%20Freezers%20Program%20Requirements.pdf>)

13221 The Property "status" is a boolean indicating whether the function is on, if off then defrost is
13222 scheduled as part of normal device operation.

13223 The Property "startTime" is an ISO8601 encoded start time for the interval in which defrost shall
13224 not occur.

13225 The Property "stopTime" is an ISO8601 encoded stop time for the interval in which defrost shall
13226 not occur.

13227 The Property "interval" with additional range restrictions is the time in minutes of the period that
13228 starts at starttime (if not present the default is 240).

13229 The Properties "stopTime" and "interval" are mutually exclusive; they cannot both be present in a
13230 Resource instance.

13231 **6.70.2 Example URI**

13232 /DelayDefrostResURI

13233 **6.70.3 Resource type**

13234 The Resource Type is defined as: "oic.r.delaydefrost".

13235 **6.70.4 OpenAPI 2.0 definition**

```
13236 {
13237   "swagger": "2.0",
13238   "info": {
13239     "title": "Delay Defrost",
13240     "version": "20190215",
13241     "license": {
13242       "name": "OCF Data Model License",
13243       "url":
13244         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
13245         CENSE.md",
13246       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
13247         reserved."
13248     },
13249     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
13250   },
13251   "schemes": ["http"],
13252   "consumes": ["application/json"],
13253   "produces": ["application/json"],
13254   "paths": {
13255     "/DelayDefrostResURI" : {
13256       "get": {
13257         "description": "This Resource describes the delay defrost function as defined by the US
13258         Energy Star Specifications.\nSee Energy Star Refrigerator Requirements Version 5 Section
13259         4).\n(https://www.energystar.gov/sites/default/files/specs//private/ENERGY%20STAR%20Final%20Version%
13260         205.0%20Residential%20Refrigerators%20and%20Freezers%20Program%20Requirements.pdf)\nThe Property
13261         \"status\" is a boolean indicating whether the function is on, if off then defrost is scheduled as
13262         part of normal device operation.\nThe Property \"startTime\" is an ISO8601 encoded start time for
13263         the interval in which defrost shall not occur.\nThe Property \"stopTime\" is an ISO8601 encoded stop
13264         time for the interval in which defrost shall not occur.\nThe Property \"interval\" with additional
13265         range restrictions is the time in minutes of the period that starts at starttime (if not present the
13266         default is 240).\nThe Properties \"stopTime\" and \"interval\" are mutually exclusive; they cannot
13267         both be present in a Resource instance.",
13268         "parameters": [
13269           {"$ref": "#/parameters/interface"}
13270         ],
13271         "responses": {
13272           "200": {
13273             "description": "",
13274             "x-example":
13275               {
13276                 "rt": ["oic.r.delaydefrost"],
13277                 "if": ["oic.if.a", "oic.if.baseline"],
13278                 "startTime": "T06:00:00Z",
13279                 "status": false
13280               },
13281             "schema": { "$ref": "#/definitions/DelayDefrost" }
13282           }
13283         }
13284       },
13285       "post": {
13286         "description": "Activates the desired Delay Defrost functions\n",
13287         "parameters": [
13288           {"$ref": "#/parameters/interface"},
13289           {
13290             "name": "body",
13291             "in": "body",
13292             "required": true,
13293             "schema": { "$ref": "#/definitions/DelayDefrost" },
13294             "x-example":
13295               {
13296                 "status": true,
13297                 "startTime": "T06:00:00Z",
13298                 "interval": 180
13299               }
13300           }
13301         ]
13302       }
13303     }
13304   }
13305 }
```

```

13302         "responses": {
13303             "200": {
13304                 "description": "Indicates that the DelayDefrost function was changed.\nThe new
13305 representation may be provided in the response.\n",
13306                 "x-example":
13307                     {
13308                         "status": true,
13309                         "startTime": "T06:00:00Z",
13310                         "interval": 180
13311                     }
13312             },
13313             "schema": { "$ref": "#/definitions/DelayDefrost" }
13314         },
13315         "403": {
13316             "description": "Indicates the update to the time properties was rejected.\nReasons
13317 for rejection:\n invalid time entry\nThe current unchanged representation may be provided in the
13318 response.\n",
13319             "x-example":
13320                 {
13321                     "status": true,
13322                     "startTime": "T06:00:00Z",
13323                     "interval": 180
13324                 },
13325             "schema": { "$ref": "#/definitions/DelayDefrost" }
13326         }
13327     }
13328 }
13329 },
13330 },
13331 "parameters": {
13332     "interface": {
13333         "in": "query",
13334         "name": "if",
13335         "type": "string",
13336         "enum": ["oic.if.a", "oic.if.baseline"]
13337     }
13338 },
13339 "definitions": {
13340     "DelayDefrost" : {
13341         "properties": {
13342             "rt": {
13343                 "description": "The Resource Type.",
13344                 "items": {
13345                     "enum": ["oic.r.delaydefrost"],
13346                     "maxLength": 64,
13347                     "type": "string"
13348                 },
13349                 "minItems": 1,
13350                 "uniqueItems": true,
13351                 "readOnly": true,
13352                 "type": "array"
13353             },
13354             "status": {
13355                 "description": "Indicates whether any supported delay defrost function is active.",
13356                 "type": "boolean"
13357             },
13358             "interval": {
13359                 "description": "Defrost interval as defined by Energy Star.",
13360                 "minimum": 1,
13361                 "maximum": 1440,
13362                 "default": 240,
13363                 "type": "integer"
13364             },
13365             "stopTime": {
13366                 "description": "Stop time for the time period, if present interval cannot be present.
13367 This is the time of day at which the delay interval stops.",
13368                 "type": "string",
13369                 "pattern": "^[T]([0-2][0-9]:[0-5][0-9]:[0-5][0-9])([zZ]|([\\+\\-])([01]\\d|2[0-3])?:?([0-
13370 5]\\d\\d))$"
13371             },
13372             "startTime": {
13373                 "description": "Start time for the time period. This is the time of day at which the delay

```

```

13374 interval starts.",
13375     "type": "string",
13376     "pattern": "^[T]([0-2][0-9]:[0-5][0-9]:[0-5][0-9])([zZ]|([\\+-])([01]\\d|2[0-3]):?([0-
13377 5]\\d))$"
13378   },
13379   "n": {
13380     "$ref":
13381     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13382     schema.json#/definitions/n"
13383   },
13384   "id": {
13385     "$ref":
13386     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13387     schema.json#/definitions/id"
13388   },
13389   "if": {
13390     "description": "The OCF Interface set supported by this Resource.",
13391     "items": {
13392       "enum": [
13393         "oic.if.a",
13394         "oic.if.baseline"
13395       ],
13396       "type": "string"
13397     },
13398     "minItems": 2,
13399     "uniqueItems": true,
13400     "readOnly": true,
13401     "type": "array"
13402   }
13403 },
13404 "type": "object"
13405 }
13406 }
13407 }
13408

```

13409 **6.70.5 Property definition**

13410 Table 143 defines the Properties that are part of the "oic.r.delaydefrost" Resource Type.

13411 **Table 143 – The Property definitions of the Resource with type "rt" = "oic.r.delaydefrost".**

Property name	Value type	Mandatory	Access mode	Description
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.
n	multiple types: see schema		Read Write	
startTime	string		Read Write	Start time for the time period. This is the time of day at which the

				delay interval starts.
status	boolean		Read Write	Indicates whether any supported delay defrost function is active.
if	array: see schema		Read Only	The OCF Interface set supported by this Resource.
rt	array: see schema		Read Only	The Resource Type.
id	multiple types: see schema		Read Write	

13412 **6.70.6 CRUDN behaviour**

13413 Table 144 defines the CRUDN operations that are supported on the "oic.r.delaydefrost" Resource
13414 Type.

13415 **Table 144 – The CRUDN operations of the Resource with type "rt" = "oic.r.delaydefrost".**

Create	Read	Update	Delete	Notify
	get	post		observe

13416 **6.71 Eco Mode**

13417 **6.71.1 Introduction**

13418 This Resource specifies the supported and currently active Eco Mode of a Device
13419 The Resource is a derivative of the Mode Resource (oic.r.mode) with a restriction that the
13420 population of supportedmodes and modes Properties is restricted to the set of values:
13421 "disabled","enabled","notsupported".

13422 The adminforced Property indicates that the value has been set by another party (e.g. via some
13423 offboard Smart Energy interaction)
13424

13425 **6.71.2 Example URI**

13426 /EcomodeResURI

13427 **6.71.3 Resource type**

13428 The Resource Type is defined as: "oic.r.ecomode".

13429 **6.71.4 OpenAPI 2.0 definition**

```
13430 {
13431   "swagger": "2.0",
13432   "info": {
13433     "title": "Eco Mode",
13434     "version": "20190215",
13435     "license": {
```

```

13436         "name": "OCF Data Model License",
13437         "url":
13438 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
13439 CENSE.md",
13440         "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
13441 reserved.",
13442     },
13443     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
13444 },
13445 "schemes": ["http"],
13446 "consumes": ["application/json"],
13447 "produces": ["application/json"],
13448 "paths": {
13449     "/EcomodeResURI" : {
13450         "get": {
13451             "description": "This Resource specifies the supported and currently active Eco Mode of a
13452 Device\nThe Resource is a deriviative of the Mode Resource (oic.r.mode) with a restriction that the
13453 population of supportedmodes and modes Properties is restricted to the set of
13454 values:\n\n\"disabled\", \"enabled\", \"notsupported\".\n\nThe adminforced Property indicates that the
13455 value has been set by another party (e.g. via some offboard Smart Energy interaction)\n",
13456             "parameters": [
13457                 { "$ref": "#/parameters/interface" }
13458             ],
13459             "responses": {
13460                 "200": {
13461                     "description": "",
13462                     "x-example":
13463                         {
13464                             "rt": ["oic.r.ecomode"],
13465                             "if": ["oic.if.a", "oic.if.baseline"],
13466                             "supportedModes": ["disabled", "enabled"],
13467                             "modes": ["disabled"],
13468                             "adminforced": false
13469                         },
13470                     "schema": { "$ref": "#/definitions/ecomode" }
13471                 }
13472             }
13473         },
13474         "post": {
13475             "description": "",
13476             "parameters": [
13477                 { "$ref": "#/parameters/interface" },
13478                 {
13479                     "name": "body",
13480                     "in": "body",
13481                     "required": true,
13482                     "schema": { "$ref": "#/definitions/ecomode-update" },
13483                     "x-example":
13484                         {
13485                             "modes": ["enabled"]
13486                         }
13487                 }
13488             ],
13489             "responses": {
13490                 "200": {
13491                     "description": "",
13492                     "x-example":
13493                         {
13494                             "modes": ["enabled"]
13495                         },
13496                     "schema": { "$ref": "#/definitions/ecomode-update" }
13497                 }
13498             }
13499         }
13500     }
13501 },
13502 "parameters": {
13503     "interface": {
13504         "in": "query",
13505         "name": "if",
13506         "type": "string",
13507         "enum": ["oic.if.a", "oic.if.baseline"]

```

```

13508     }
13509   },
13510   "definitions": {
13511     "ecomode": {
13512       "properties": {
13513         "rt": {
13514           "description": "The Resource Type.",
13515           "items": {
13516             "enum": ["oic.r.ecomode"],
13517             "maxLength": 64,
13518             "type": "string"
13519           },
13520           "minItems": 1,
13521           "uniqueItems": true,
13522           "readOnly": true,
13523           "type": "array"
13524         },
13525         "modes": {
13526           "description": "The array of the currently active mode(s).",
13527           "items": {
13528             "enum": ["disabled", "enabled", "notsupported"],
13529             "type": "string"
13530           },
13531           "uniqueItems": true,
13532           "type": "array"
13533         },
13534         "supportedModes": {
13535           "description": "The array of possible modes the device supports.",
13536           "items": {
13537             "enum": ["disabled", "enabled", "notsupported"],
13538             "type": "string"
13539           },
13540           "readOnly": true,
13541           "type": "array"
13542         },
13543         "adminforced": {
13544           "description": "The indicator that the current mode of operation has been forced by admin
13545 action.",
13546           "readOnly": true,
13547           "type": "boolean"
13548         },
13549         "n": {
13550           "$ref":
13551 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13552 schema.json#/definitions/n"
13553         },
13554         "id": {
13555           "$ref":
13556 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13557 schema.json#/definitions/id"
13558         },
13559         "if": {
13560           "description": "The OCF Interface set supported by this Resource.",
13561           "items": {
13562             "enum": [
13563               "oic.if.a",
13564               "oic.if.baseline"
13565             ],
13566             "type": "string"
13567           },
13568           "minItems": 2,
13569           "uniqueItems": true,
13570           "readOnly": true,
13571           "type": "array"
13572         }
13573       },
13574       "type": "object",
13575       "required": ["supportedModes", "modes"]
13576     },
13577     "ecomode-update": {
13578       "properties": {
13579         "modes": {

```

```

13580         "description": "The desired mode.",
13581         "items": {
13582             "enum": ["disabled", "enabled", "notsupported"],
13583             "type": "string"
13584         },
13585         "type": "array"
13586     },
13587 },
13588 "type": "object",
13589 "required": ["modes"]
13590 }
13591 }
13592 }
13593

```

13594 **6.71.5 Property definition**

13595 Table 145 defines the Properties that are part of the "oic.r.ecomode" Resource Type.

13596 **Table 145 – The Property definitions of the Resource with type "rt" = "oic.r.ecomode".**

Property name	Value type	Mandatory	Access mode	Description
modes	array: see schema	Yes	Read Write	The array of the currently active mode(s).
id	multiple types: see schema	No	Read Write	
supportedModes	array: see schema	Yes	Read Only	The array of possible modes the device supports.
rt	array: see schema	No	Read Only	The Resource Type.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
n	multiple types: see schema	No	Read Write	
adminforced	boolean	No	Read Only	The indicator that the current mode of operation has been forced by admin action.
modes	array: see schema	Yes	Read Write	The desired mode.

13597 **6.71.6 CRUDN behaviour**

13598 Table 146 defines the CRUDN operations that are supported on the "oic.r.ecomode" Resource
13599 Type.

13600 **Table 146 – The CRUDN operations of the Resource with type "rt" = "oic.r.ecomode".**

Create	Read	Update	Delete	Notify
	get	post		observe

13601 **6.72 Heating Zone**

13602 **6.72.1 Introduction**

13603 This Resource provides information about the status of a (single) heating zone of a Cook-Top.
13604 It describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the device
13605 implements pot recognition).
13606 The Property "maxheatinglevel" defines the max level for the heating zone
13607 The Property "heatinglevel" is the current heating level of the zone
13608 For each element, the value range is from 0 (indication that the zone is not heating) to
13609 "maxheatinglevel".

13610 **6.72.2 Example URI**

13611 /HeatingZoneResURI

13612 **6.72.3 Resource type**

13613 The Resource Type is defined as: "oic.r.heatingzone".

13614 **6.72.4 OpenAPI 2.0 definition**

```
13615 {  
13616   "swagger": "2.0",  
13617   "info": {  
13618     "title": "Heating Zone",  
13619     "version": "20190215",  
13620     "license": {  
13621       "name": "OCF Data Model License",  
13622       "url":  
13623       "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
13624       CENSE.md",  
13625       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
13626       reserved."  
13627     },  
13628     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
13629   },  
13630   "schemes": ["http"],  
13631   "consumes": ["application/json"],  
13632   "produces": ["application/json"],  
13633   "paths": {  
13634     "/HeatingZoneResURI" : {  
13635       "get": {  
13636         "description": "This Resource provides information about the status of a (single) heating  
13637         zone of a Cook-Top.\nIt describes the case of a Cook-Top whose zones can be activated dynamically  
13638         (i.e. the device implements pot recognition).\nThe Property \"maxheatinglevel\" defines the max  
13639         level for the heating zone\nThe Property \"heatinglevel\" is the current heating level of the zone\n  
13640         For each element, the value range is from 0 (indication that the zone is not heating) to  
13641         \"maxheatinglevel\".",  
13642         "parameters": [  
13643           {"$ref": "#/parameters/interface"}  
13644         ],  
13645         "responses": {  
13646           "200": {  
13647             "description": "RETRIEVES the current heating zone information.",  
13648             "x-example":
```



```

13649         {
13650             "rt": ["oic.r.heatingzone"],
13651             "if": ["oic.if.s", "oic.if.baseline"],
13652             "maxheatinglevel": 6,
13653             "heatinglevel": 0
13654         },
13655         "schema": { "$ref": "#/definitions/HeatingZone" }
13656     }
13657 }
13658 }
13659 }
13660 },
13661 "parameters": {
13662     "interface": {
13663         "in": "query",
13664         "name": "if",
13665         "type": "string",
13666         "enum": ["oic.if.s", "oic.if.baseline"]
13667     }
13668 },
13669 "definitions": {
13670     "HeatingZone": {
13671         "properties": {
13672             "rt": {
13673                 "description": "The Resource Type.",
13674                 "items": {
13675                     "enum": ["oic.r.heatingzone"],
13676                     "maxLength": 64,
13677                     "type": "string"
13678                 },
13679                 "minItems": 1,
13680                 "uniqueItems": true,
13681                 "readOnly": true,
13682                 "type": "array"
13683             },
13684             "heatinglevel": {
13685                 "description": "The current heating level for the zone.",
13686                 "readOnly": true,
13687                 "type": "integer"
13688             },
13689             "maxheatinglevel": {
13690                 "description": "The maximum heating level for the zone.",
13691                 "readOnly": true,
13692                 "type": "integer"
13693             },
13694             "n": {
13695                 "$ref":
13696 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13697 schema.json#/definitions/n"
13698             },
13699             "id": {
13700                 "$ref":
13701 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13702 schema.json#/definitions/id"
13703             },
13704             "if": {
13705                 "description": "The OCF Interface set supported by this Resource.",
13706                 "items": {
13707                     "enum": [
13708                         "oic.if.s",
13709                         "oic.if.baseline"
13710                     ],
13711                     "type": "string"
13712                 },
13713                 "minItems": 2,
13714                 "uniqueItems": true,
13715                 "readOnly": true,
13716                 "type": "array"
13717             }
13718         },
13719         "type": "object",
13720         "required": ["maxheatinglevel", "heatinglevel"]

```

13721 }
 13722 }
 13723 }
 13724 }

13725 **6.72.5 Property definition**

13726 Table 147 defines the Properties that are part of the "oic.r.heatingzone" Resource Type.

13727 **Table 147 – The Property definitions of the Resource with type "rt" = "oic.r.heatingzone".**

Property name	Value type	Mandatory	Access mode	Description
heatinglevel	integer	Yes	Read Only	The current heating level for the zone.
id	multiple types: see schema	No	Read Write	
maxheatinglevel	integer	Yes	Read Only	The maximum heating level for the zone.
rt	array: see schema	No	Read Only	The Resource Type.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
n	multiple types: see schema	No	Read Write	

13728 **6.72.6 CRUDN behaviour**

13729 Table 148 defines the CRUDN operations that are supported on the "oic.r.heatingzone" Resource
 13730 Type.

13731 **Table 148 – The CRUDN operations of the Resource with type "rt" = "oic.r.heatingzone".**

Create	Read	Update	Delete	Notify
	get			observe

13732 **6.73 Heating Zone Collection**

13733 **6.73.1 Introduction**

13734 This Resource provides information about the status of the heating zones of a Cook-Top.
 13735 It describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the device
 13736 implements pot recognition).
 13737 The resource is a Collection of instances of oic.r.heatingzone detailing the individual cooktop zones
 13738 Retrieves the current heating zone information.
 13739

13740 **6.73.2 Example URI**

13741 /HeatingZoneResURI

13742 **6.73.3 Resource type**

13743 The Resource Type is defined as: "oic.r.heatingzonecollection, oic.wk.col".

13744 **6.73.4 OpenAPI 2.0 definition**

```
13745 {
13746   "swagger": "2.0",
13747   "info": {
13748     "title": "Heating Zone Collection",
13749     "version": "20190307",
13750     "license": {
13751       "name": "OCF Data Model License",
13752       "url":
13753 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
13754 CENSE.md",
13755       "x-copyright": "copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
13756     },
13757     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
13758   },
13759   "schemes": ["http"],
13760   "consumes": ["application/json"],
13761   "produces": ["application/json"],
13762   "paths": {
13763     "/HeatingZoneResURI?if=oic.if.ll" : {
13764       "get": {
13765         "description": "This Resource provides information about the status of the heating zones of
13766 a Cook-Top.\nIt describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the
13767 device implements pot recognition).\nThe resource is a Collection of instances of oic.r.heatingzone
13768 detailing the individual cooktop zones\n",
13769         "parameters": [
13770           {"$ref": "#/parameters/interface-all"}
13771         ],
13772         "responses": {
13773           "200": {
13774             "description" : "",
13775             "x-example":
13776               [
13777                 {"href": "/myZone1ResURI", "rt": ["oic.r.heatingzone"], "if":
13778 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
13779                 {"href": "/myZone2ResURI", "rt": ["oic.r.heatingzone"], "if":
13780 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
13781                 {"href": "/myZone3ResURI", "rt": ["oic.r.heatingzone"], "if":
13782 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
13783                 {"href": "/myZone4ResURI", "rt": ["oic.r.heatingzone"], "if":
13784 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
13785               ],
13786             "schema": { "$ref": "#/definitions/HeatingZone-ll" }
13787           }
13788         }
13789       },
13790     },
13791     "/HeatingZoneResURI?if=oic.if.b": {
13792       "get": {
13793         "description": "This Resource provides information about the status of the heating zones of
13794 a Cook-Top.\nIt describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the
13795 device implements pot recognition).\nThe resource is a Collection of instances of oic.r.heatingzone
13796 detailing the individual cooktop zones\n",
13797         "parameters": [
13798           {"$ref": "#/parameters/interface-all"}
13799         ],
13800         "responses": {
13801           "200": {
13802             "description" : "",
13803             "x-example": [
13804               {
13805                 "href": "/heatingZoneLeftResURI",
13806                 "rep": {
```

```

13807         "maxheatinglevel": 6,
13808         "heatinglevel": 0
13809     }
13810 },
13811 {
13812     "href": "/heatingZoneRightResURI",
13813     "rep": {
13814         "maxheatinglevel": 6,
13815         "heatinglevel": 3
13816     }
13817 }
13818 ],
13819 "schema": { "$ref": "#/definitions/HeatingZoneCollectionBatch-Retrieve" }
13820 }
13821 }
13822 }
13823 },
13824 "/HeatingZoneResURI?if=oic.if.baseline" : {
13825     "get": {
13826         "description": "This Resource provides information about the status of the heating zones of
13827 a Cook-Top.\nIt describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the
13828 device implements pot recognition).\nThe resource is a Collection of instances of oic.r.heatingzone
13829 detailing the individual cooktop zones\nRetrieves the current heating zone information.\n",
13830         "parameters": [
13831             { "$ref": "#/parameters/interface-all" }
13832         ],
13833         "responses": {
13834             "200": {
13835                 "description" : "",
13836                 "x-example":
13837                 {
13838                     "rt": [ "oic.r.heatingzonecollection", "oic.wk.col" ],
13839                     "if": [ "oic.if.ll", "oic.if.b", "oic.if.baseline" ],
13840                     "rts": [ "oic.r.heatingzone" ],
13841                     "links": [
13842                         { "href": "/myZone1ResURI", "rt": [ "oic.r.heatingzone" ], "if":
13843 [ "oic.if.s", "oic.if.baseline" ], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] },
13844                         { "href": "/myZone2ResURI", "rt": [ "oic.r.heatingzone" ], "if":
13845 [ "oic.if.s", "oic.if.baseline" ], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] },
13846                         { "href": "/myZone3ResURI", "rt": [ "oic.r.heatingzone" ], "if":
13847 [ "oic.if.s", "oic.if.baseline" ], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] },
13848                         { "href": "/myZone4ResURI", "rt": [ "oic.r.heatingzone" ], "if":
13849 [ "oic.if.s", "oic.if.baseline" ], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] }
13850                     ]
13851                 },
13852                 "schema": { "$ref": "#/definitions/HeatingZone" }
13853             }
13854         }
13855     }
13856 },
13857 },
13858 "parameters": {
13859     "interface-all" : {
13860         "in" : "query",
13861         "name" : "if",
13862         "type" : "string",
13863         "enum" : [ "oic.if.ll", "oic.if.b", "oic.if.baseline" ]
13864     }
13865 },
13866 "definitions": {
13867     "HeatingZone-ll" : {
13868         "items": {
13869             "$ref": "#/definitions/oic.oic-link"
13870         },
13871         "type": "array",
13872         "minItems": 1,
13873         "uniqueItems": true,
13874         "readOnly": true
13875     },
13876     "oic.oic-link": {
13877         "type": "object",
13878         "properties": {

```

```

13879         "anchor": {
13880             "$ref":
13881 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13882 schema.json#/definitions/anchor"
13883         },
13884         "di": {
13885             "$ref":
13886 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13887 schema.json#/definitions/di"
13888         },
13889         "eps": {
13890             "$ref":
13891 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13892 schema.json#/definitions/eps"
13893         },
13894         "href": {
13895             "$ref":
13896 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13897 schema.json#/definitions/href"
13898         },
13899         "ins": {
13900             "$ref":
13901 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13902 schema.json#/definitions/ins"
13903         },
13904         "p": {
13905             "$ref":
13906 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13907 schema.json#/definitions/p"
13908         },
13909         "rel": {
13910             "$ref":
13911 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13912 schema.json#/definitions/rel_array"
13913         },
13914         "title": {
13915             "$ref":
13916 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13917 schema.json#/definitions/title"
13918         },
13919         "type": {
13920             "$ref":
13921 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13922 schema.json#/definitions/type"
13923         },
13924         "if": {
13925             "description": "The OCF Interfaces supported by the target Resource",
13926             "items": {
13927                 "enum": [
13928                     "oic.if.s",
13929                     "oic.if.baseline"
13930                 ],
13931                 "type": "string",
13932                 "maxLength": 64
13933             },
13934             "minItems": 2,
13935             "uniqueItems": true,
13936             "type": "array",
13937             "readOnly": true
13938         },
13939         "rt": {
13940             "description": "Resource Type of the target Resource",
13941             "items": {
13942                 "maxLength": 64,
13943                 "type": "string",
13944                 "enum": ["oic.r.heatingzone"]
13945             },
13946             "minItems": 1,
13947             "type": "array",
13948             "uniqueItems": true,
13949             "readOnly": true
13950         }

```

```

13951     },
13952     "required": [
13953         "href",
13954         "rt",
13955         "if"
13956     ]
13957 },
13958 "HeatingZone" : {
13959     "properties": {
13960         "rt": {
13961             "items": {
13962                 "enum": [
13963                     "oic.r.heatingzonecollection",
13964                     "oic.wk.col"
13965                 ],
13966                 "type": "string",
13967                 "maxLength": 64
13968             },
13969             "minItems": 2,
13970             "type": "array",
13971             "uniqueItems": true
13972         },
13973         "links": {
13974             "items": {
13975                 "$ref": "#/definitions/oic.oic-link"
13976             },
13977             "type": "array",
13978             "minItems": 1,
13979             "uniqueItems": true,
13980             "readOnly": true
13981         },
13982         "n": {
13983             "$ref" :
13984             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13985             schema.json#/definitions/n"
13986         },
13987         "id": {
13988             "$ref" :
13989             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13990             schema.json#/definitions/id"
13991         },
13992         "rts": {
13993             "items": {
13994                 "anyOf": [
13995                     {
13996                         "enum": [
13997                             "oic.r.heatingzone",
13998                             "oic.r.value.conditional"
13999                         ],
14000                         "type": "string",
14001                         "maxLength": 64
14002                     },
14003                     {
14004                         "enum": [
14005                             "oic.r.heatingzone"
14006                         ],
14007                         "type": "string",
14008                         "maxLength": 64
14009                     }
14010                 ]
14011             },
14012             "minItems": 1,
14013             "type": "array",
14014             "readOnly": true,
14015             "uniqueItems": true
14016         },
14017         "if": {
14018             "description": "The OCF Interfaces supported by this Resource",
14019             "items": {
14020                 "enum": [
14021                     "oic.if.ll",
14022                     "oic.if.b",

```

```

14023         "oic.if.baseline"
14024     ],
14025     "type": "string",
14026     "maxLength": 64
14027 },
14028 "minItems": 1,
14029 "readOnly": true,
14030 "uniqueItems": true,
14031 "type": "array"
14032 }
14033 },
14034 "type" : "object"
14035 },
14036 "HeatingZoneCollectionBatch-Retrieve" : {
14037     "type": "array",
14038     "minItems": 1,
14039     "uniqueItems": true,
14040     "items": {
14041         "type": "object",
14042         "additionalProperties": true,
14043         "properties": {
14044             "href": {
14045                 "$ref":
14046 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
14047 schema.json#/definitions/href"
14048             },
14049             "rep": {
14050                 "$ref":
14051 "https://openconnectivityfoundation.github.io/IoTDataModels/HeatingZoneResURI.swagger.json#/definiti
14052 ons/HeatingZone"
14053             }
14054         },
14055         "required": [
14056             "href",
14057             "rep"
14058         ]
14059     }
14060 }
14061 }
14062 }
14063

```

14064 6.73.5 Property definition

14065 Table 149 defines the Properties that are part of the "oic.r.heatingzonecollection, oic.wk.col"
14066 Resource Type.

14067 **Table 149 – The Property definitions of the Resource with type "rt" =**
14068 **"oic.r.heatingzonecollection, oic.wk.col".**

Property name	Value type	Mandatory	Access mode	Description
href	multiple types: see schema	Yes	Read Write	
rep	multiple types: see schema	Yes	Read Write	
n	multiple types: see schema		Read Write	
rts	array: see schema		Read Only	

id	multiple types: see schema		Read Write	
rt	array: see schema		Read Write	
if	array: see schema		Read Only	The OCF Interfaces supported by this Resource
links	array: see schema		Read Only	
anchor	multiple types: see schema	No	Read Write	
if	array: see schema	Yes	Read Only	The OCF Interfaces supported by the target Resource
rel	multiple types: see schema	No	Read Write	
ins	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
p	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
rt	array: see schema	Yes	Read Only	Resource Type of the target Resource

14069 **6.73.6 CRUDN behaviour**

14070 Table 150 defines the CRUDN operations that are supported on the "oic.r.heatingzonecollection,
14071 oic.wk.col" Resource Type.

14072 **Table 150 – The CRUDN operations of the Resource with type "rt" =**
14073 **"oic.r.heatingzonecollection, oic.wk.col".**

Create	Read	Update	Delete	Notify
	get			observe

14074 **6.74 Selectable Levels**

14075 **6.74.1 Introduction**

14076 This Resource provides a set of device defined levels that can be selected for an operation.
14077 For example where a humidifier has a discrete set that model different humidity levels that can be
14078 set.

14079 The Property "availablelevels" is an array of the levels that can be selected, these can be a number
14080 or an integer (as subset of integer).
14081 The Property "targetlevel" is the level that has currently been selected and is written to in order to
14082 select a new level.
14083 When retrieved the targetlevel provides the actual value that has been selected.

14084 **6.74.2 Example URI**

14085 /SelectableLevelsResURI

14086 **6.74.3 Resource type**

14087 The Resource Type is defined as: "oic.r.selectablelevels".

14088 **6.74.4 OpenAPI 2.0 definition**

```

14089 {
14090   "swagger": "2.0",
14091   "info": {
14092     "title": "Selectable Levels",
14093     "version": "20190215",
14094     "license": {
14095       "name": "OCF Data Model License",
14096       "url":
14097         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
14098         CENSE.md",
14099       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
14100       reserved."
14101     },
14102     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
14103   },
14104   "schemes": ["http"],
14105   "consumes": ["application/json"],
14106   "produces": ["application/json"],
14107   "paths": {
14108     "/SelectableLevelsResURI" : {
14109       "get": {
14110         "description": "This Resource provides a set of device defined levels that can be selected
14111         for an operation.\nFor example where a humidifier has a discrete set that model different humidity
14112         levels that can be set.\nThe Property \"availablelevels\" is an array of the levels that can be
14113         selected, these can be a number or an integer (as subset of integer).\nThe Property \"targetlevel\"
14114         is the level that has currently been selected and is written to in order to select a new
14115         level.\nWhen retrieved the targetlevel provides the actual value that has been selected.",
14116         "parameters": [
14117           {"$ref": "#/parameters/interface"}
14118         ],
14119         "responses": {

```

```

14120         "200": {
14121             "description": "Example is using integers for selection levels.",
14122             "x-example":
14123                 {
14124                     "rt": ["oic.r.selectablelevels"],
14125                     "if": ["oic.if.a", "oic.if.baseline"],
14126                     "availablelevels": [0, 2, 4, 6, 8],
14127                     "targetlevel": 2
14128                 },
14129             "schema": { "$ref": "#/definitions/SelectableLevels" }
14130         }
14131     },
14132 },
14133 "post": {
14134     "description": "Sets the current level from the set \"availablelevels\".",
14135     "parameters": [
14136         { "$ref": "#/parameters/interface" },
14137         {
14138             "name": "body",
14139             "in": "body",
14140             "required": true,
14141             "schema": { "$ref": "#/definitions/UpdateSchema" },
14142             "x-example":
14143                 {
14144                     "targetlevel": 4
14145                 }
14146         }
14147     ],
14148     "responses": {
14149         "200": {
14150             "description": "",
14151             "x-example":
14152                 {
14153                     "targetlevel": 4
14154                 },
14155             "schema": { "$ref": "#/definitions/UpdateSchema" }
14156         },
14157         "403": {
14158             "description": "Generated by a OCF Server when an attempt is made to update to a
14159 targetlevel that is not in the set of availablelevels",
14160             "x-example":
14161                 {
14162                     "availablelevels": [0, 2, 4, 6, 8],
14163                     "targetlevel": 2
14164                 },
14165             "schema": { "$ref": "#/definitions/SelectableLevels" }
14166         }
14167     }
14168 },
14169 },
14170 },
14171 "parameters": {
14172     "interface": {
14173         "in": "query",
14174         "name": "if",
14175         "type": "string",
14176         "enum": ["oic.if.a", "oic.if.baseline"]
14177     }
14178 },
14179 "definitions": {
14180     "SelectableLevels": {
14181         "properties": {
14182             "rt": {
14183                 "description": "The Resource Type.",
14184                 "items": {
14185                     "enum": ["oic.r.selectablelevels"],
14186                     "maxLength": 64,
14187                     "type": "string"
14188                 },
14189                 "minItems": 1,
14190                 "uniqueItems": true,
14191                 "readOnly": true,

```

```

14192         "type": "array"
14193     },
14194     "targetlevel": {
14195         "description": "The target level from the available selectable set.",
14196         "type": "number"
14197     },
14198     "availablelevels": {
14199         "description": "The set of levels to select from.",
14200         "items": {
14201             "type": "number"
14202         },
14203         "readOnly": true,
14204         "type": "array"
14205     },
14206     "if": {
14207         "description": "The OCF Interface set supported by this Resource.",
14208         "items": {
14209             "enum": [
14210                 "oic.if.a",
14211                 "oic.if.baseline"
14212             ],
14213             "type": "string"
14214         },
14215         "minItems": 2,
14216         "uniqueItems": true,
14217         "readOnly": true,
14218         "type": "array"
14219     }
14220 },
14221 "type" : "object",
14222 "required": ["availablelevels", "targetlevel"]
14223 },
14224 "UpdateSchema" : {
14225     "properties": {
14226         "targetlevel": {
14227             "description": "The target level from the available selectable set",
14228             "type": "number"
14229         }
14230     },
14231     "type": "object",
14232     "required": ["targetlevel"]
14233 }
14234 }
14235 }
14236

```

14237 6.74.5 Property definition

14238 Table 151 defines the Properties that are part of the "oic.r.selectablelevels" Resource Type.

14239 **Table 151 – The Property definitions of the Resource with type "rt" =**
14240 **"oic.r.selectablelevels".**

Property name	Value type	Mandatory	Access mode	Description
targetlevel	number	Yes	Read Write	The target level from the available selectable set
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

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.

14241 **6.74.6 CRUDN behaviour**

14242 Table 152 defines the CRUDN operations that are supported on the "oic.r.selectablelevels"
14243 Resource Type.

14244 **Table 152 – The CRUDN operations of the Resource with type "rt" =**
14245 **"oic.r.selectablelevels".**

Create	Read	Update	Delete	Notify
	get	post		observe

14246 **6.75 Value Conditional**

14247 **6.75.1 Introduction**

14248 This Resource specifies conditions that can be applied to an observed value in any Resource.
14249 These conditions are applied by the OCF Server exposing the Resource to any generated
14250 notifications because of subscriptions to the Resource.
14251 A unicast RETRIEVE to the Resource will receive the most recent value; which may not be the
14252 most recent notified value.
14253 An OCF Server exposes this Resource in association with the Resource conveying the observed
14254 value.
14255 This is done by means of a new Resource instance with an RT of ["oic.r.<thing being observed>",
14256 "oic.r.value.conditional"], e.g. ["oic.r.temperature", "oic.r.value.conditional"].
14257 The Property "threshold" is the amount by which the thing being observed must change before a
14258 notification is sent.
14259 The Property "minnotifyperiod" is the minimum time in ms (milliseconds) that must elapse before a
14260 notification is sent.
14261 If the maxnotifyperiod (time in ms (milliseconds)) elapses then a notification must be sent.
14262 The Property "maxnotifyperiod" is a timer that resets each time a notification is sent.
14263 A value of '0' for any of "threshold", "minnotifyperiod" or "maxnotifyperiod" means that the capability
14264 is supported but not active.

14265 **6.75.2 Example URI**

14266 /ValueConditionalResURI

14267 **6.75.3 Resource type**

14268 The Resource Type is defined as: "oic.r.value.conditional".

14269 **6.75.4 OpenAPI 2.0 definition**

```
14270 {
14271   "swagger": "2.0",
14272   "info": {
14273     "title": "Value Conditional",
```

```

14274     "version": "20190215",
14275     "license": {
14276         "name": "OCF Data Model License",
14277         "url":
14278         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
14279         CENSE.md",
14280         "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
14281         reserved.",
14282     },
14283     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
14284 },
14285     "schemes": ["http"],
14286     "consumes": ["application/json"],
14287     "produces": ["application/json"],
14288     "paths": {
14289         "/ValueConditionalResURI" : {
14290             "get": {
14291                 "description": "This Resource specifies conditions that can be applied to an observed value
14292                 in any Resource.\nThese conditions are applied by the OCF Server exposing the Resource to any
14293                 generated notifications because of subscriptions to the Resource.\nA unicast RETRIEVE to the
14294                 Resource will receive the most recent value; which may not be the most recent notified value.\nAn
14295                 OCF Server exposes this Resource in association with the Resource conveying the observed
14296                 value.\nThis is done by means of a new Resource instance with an RT of ["oic.r.<thing being
14297                 observed>"], ["oic.r.value.conditional"], e.g ["oic.r.temperature"],
14298                 ["oic.r.value.conditional"].\nThe Property "threshold" is the amount by which the thing being
14299                 observed must change before a notification is sent.\nThe Property "minnotifyperiod" is the minimum
14300                 time in ms (milliseconds) that must elapse before a notification is sent.\nIf the maxnotifyperiod
14301                 (time in ms (milliseconds)) elapses then a notification must be sent.\nThe Property
14302                 "maxnotifyperiod" is a timer that resets each time a notification is sent.\nA value of '0' for any
14303                 of "threshold"," minnotifyperiod" or "maxnotifyperiod" means that the capability is supported
14304                 but not active.",
14305                 "parameters": [
14306                     { "$ref": "#/parameters/interface" }
14307                 ],
14308                 "responses": {
14309                     "200": {
14310                         "description": "",
14311                         "x-example":
14312                         {
14313                             "rt": ["oic.r.value.conditional"],
14314                             "if": ["oic.if.rw", "oic.if.baseline"],
14315                             "threshold": 2,
14316                             "minnotifyperiod": 2000,
14317                             "maxnotifyperiod": 5000
14318                         },
14319                         "schema": { "$ref": "#/definitions/valueconditional" }
14320                     }
14321                 }
14322             },
14323             "post": {
14324                 "description": "",
14325                 "parameters": [
14326                     { "$ref": "#/parameters/interface" },
14327                     {
14328                         "name": "body",
14329                         "in": "body",
14330                         "required": true,
14331                         "schema": { "$ref": "#/definitions/valueconditional" },
14332                         "x-example":
14333                         {
14334                             "threshold": 2,
14335                             "minnotifyperiod": 1500
14336                         }
14337                     }
14338                 ],
14339                 "responses": {
14340                     "200": {
14341                         "description": "",
14342                         "x-example":
14343                         {
14344                             "threshold": 2,
14345                             "minnotifyperiod": 1500

```

```

14346         },
14347         "schema": { "$ref": "#/definitions/valueconditional" }
14348     }
14349 }
14350 }
14351 }
14352 },
14353 "parameters": {
14354     "interface": {
14355         "in": "query",
14356         "name": "if",
14357         "type": "string",
14358         "enum": ["oic.if.rw", "oic.if.baseline"]
14359     }
14360 },
14361 "definitions": {
14362     "valueconditional": {
14363         "properties": {
14364             "rt": {
14365                 "description": "The Resource Type.",
14366                 "items": {
14367                     "maxLength": 64,
14368                     "type": "string",
14369                     "enum": ["oic.r.value.conditional"]
14370                 },
14371                 "minItems": 1,
14372                 "uniqueItems": true,
14373                 "readOnly": true,
14374                 "type": "array"
14375             },
14376             "maxnotifyperiod": {
14377                 "description": "The maximum elapsed time in ms before a notification must be sent.",
14378                 "minimum": 0,
14379                 "type": "integer"
14380             },
14381             "minnotifyperiod": {
14382                 "description": "The minimum elapsed time in ms before a notification is sent.",
14383                 "minimum": 0,
14384                 "type": "integer"
14385             },
14386             "threshold": {
14387                 "description": "The amount by which the measured value must change before a notification
14388 is sent.",
14389                 "minimum": 0,
14390                 "type": "number"
14391             },
14392             "n": {
14393                 "$ref":
14394 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14395 schema.json#/definitions/n"
14396             },
14397             "id": {
14398                 "$ref":
14399 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14400 schema.json#/definitions/id"
14401             },
14402             "if": {
14403                 "description": "The OCF Interface set supported by this Resource.",
14404                 "items": {
14405                     "enum": [
14406                         "oic.if.rw",
14407                         "oic.if.baseline"
14408                     ],
14409                     "type": "string"
14410                 },
14411                 "minItems": 2,
14412                 "uniqueItems": true,
14413                 "readOnly": true,
14414                 "type": "array"
14415             }
14416         },
14417         "anyOf": [

```

```

14418     {
14419         "required": ["threshold"]
14420     },
14421     {
14422         "required": ["minnotifyperiod"]
14423     },
14424     {
14425         "required": ["maxnotifyperiod"]
14426     }
14427 ],
14428 "type": "object"
14429 }
14430 }
14431 }
14432

```

14433 **6.75.5 Property definition**

14434 Table 153 defines the Properties that are part of the "oic.r.value.conditional" Resource Type.

14435 **Table 153 – The Property definitions of the Resource with type "rt" =**
14436 **"oic.r.value.conditional".**

Property name	Value type	Mandatory	Access mode	Description
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	
minnotifyperiod	integer	No	Read Write	The minimum elapsed time in ms before a notification is sent.
maxnotifyperiod	integer	Yes	Read Write	The maximum elapsed time in ms before a notification must be sent.
rt	array: see schema	No	Read Only	The Resource Type.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
id	multiple types: see schema	No	Read Write	

14437 **6.75.6 CRUDN behaviour**

14438 Table 154 defines the CRUDN operations that are supported on the "oic.r.value.conditional"
 14439 Resource Type.

14440 **Table 154 – The CRUDN operations of the Resource with type "rt" =**
 14441 **"oic.r.value.conditional".**

Create	Read	Update	Delete	Notify
	get	post		observe

14442 **6.76 Colour Space Coordinates**

14443 **6.76.1 Introduction**

14444 This Resource describes the colour using colour space co-ordinates.
 14445 The Property "csc" is the colour space coordinates in CIE colour space.
 14446 The first item in the array is the X coordinate.
 14447 The second item in the array is the Y coordinate.
 14448 If the Property "precision" is provided it applies to both the X and Y coordinates.
 14449 The Resource provides the colour using colour space coordinates.
 14450

14451 **6.76.2 Example URI**

14452 /example/ColourSpaceCoordinatesResURI

14453 **6.76.3 Resource type**

14454 The Resource Type is defined as: "oic.r.colour.csc".

14455 **6.76.4 OpenAPI 2.0 definition**

```

14456 {
14457   "swagger": "2.0",
14458   "info": {
14459     "title": "Colour Space Coordinates",
14460     "version": "20190215",
14461     "license": {
14462       "name": "OCF Data Model License",
14463       "url":
14464         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
14465         CENSE.md",
14466       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
14467       reserved."
14468     },
14469     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
14470   },
14471   "schemes": ["http"],
14472   "consumes": ["application/json"],
14473   "produces": ["application/json"],
14474   "paths": {
14475     "/example/ColourSpaceCoordinatesResURI" : {
14476       "get": {
14477         "description": "This Resource describes the colour using colour space co-ordinates.\nThe
14478         Property \"csc\" is the colour space coordinates in CIE colour space.\n The first item in the array
14479         is the X coordinate.\n The second item in the array is the Y coordinate.\n If the Property
14480         \"precision\" is provided it applies to both the X and Y coordinates.\nThe Resource provides the
14481         colour using colour space coordinates.\n",
14482         "parameters": [
14483           { "$ref": "#/parameters/interface" }
14484         ],
14485         "responses": {
14486           "200": {
14487             "description": "",
14488             "x-example":
  
```



```

14489         {
14490             "rt": ["oic.r.colour.csc"],
14491             "if": ["oic.if.a", "oic.if.baseline"],
14492             "csc": [0.41, 0.51]
14493         },
14494         "schema": { "$ref": "#/definitions/ColourCSC" }
14495     }
14496 },
14497 },
14498 "post": {
14499     "description": "Sets current colour space coordinates\n",
14500     "parameters": [
14501         { "$ref": "#/parameters/interface" },
14502         {
14503             "name": "body",
14504             "in": "body",
14505             "required": true,
14506             "schema": { "$ref": "#/definitions/ColourCSC" },
14507             "x-example":
14508                 {
14509                     "csc": [0.40, 0.70]
14510                 }
14511         }
14512     ],
14513     "responses": {
14514         "200": {
14515             "description": "",
14516             "x-example":
14517                 {
14518                     "csc": [0.40, 0.70]
14519                 },
14520             "schema": { "$ref": "#/definitions/ColourCSC" }
14521         }
14522     }
14523 },
14524 },
14525 },
14526 "parameters": {
14527     "interface": {
14528         "in": "query",
14529         "name": "if",
14530         "type": "string",
14531         "enum": ["oic.if.a", "oic.if.baseline"]
14532     }
14533 },
14534 "definitions": {
14535     "ColourCSC": {
14536         "properties": {
14537             "rt": {
14538                 "description": "The Resource Type.",
14539                 "items": {
14540                     "enum": ["oic.r.colour.csc"],
14541                     "maxLength": 64,
14542                     "type": "string"
14543                 },
14544                 "minItems": 1,
14545                 "uniqueItems": true,
14546                 "readOnly": true,
14547                 "type": "array"
14548             },
14549             "csc": {
14550                 "description": "The X and Y coordinates of the colour in CIE colour space.",
14551                 "items": {
14552                     "maximum": 1,
14553                     "minimum": 0,
14554                     "type": "number"
14555                 },
14556                 "maxItems": 2,
14557                 "minItems": 2,
14558                 "type": "array"
14559             },
14560             "n": {

```

```

14561         "$ref":
14562         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14563         schema.json#/definitions/n"
14564     },
14565     "id": {
14566         "$ref":
14567         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14568         schema.json#/definitions/id"
14569     },
14570     "precision": {
14571         "$ref":
14572         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
14573         schema.json#/definitions/precision"
14574     },
14575     "if": {
14576         "description": "The OCF Interface set supported by this Resource.",
14577         "items": {
14578             "enum": [
14579                 "oic.if.a",
14580                 "oic.if.baseline"
14581             ],
14582             "type": "string"
14583         },
14584         "minItems": 2,
14585         "uniqueItems": true,
14586         "readOnly": true,
14587         "type": "array"
14588     }
14589 },
14590 "type": "object",
14591 "required": ["csc"]
14592 }
14593 }
14594 }
14595

```

14596 **6.76.5 Property definition**

14597 Table 155 defines the Properties that are part of the "oic.r.colour.csc" Resource Type.

14598 **Table 155 – The Property definitions of the Resource with type "rt" = "oic.r.colour.csc".**

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

precision	multiple types: see schema	No	Read Write	
-----------	-------------------------------	----	------------	--

14599 **6.76.6 CRUDN behaviour**

14600 Table 156 defines the CRUDN operations that are supported on the "oic.r.colour.csc" Resource
14601 Type.

14602 **Table 156 – The CRUDN operations of the Resource with type "rt" = "oic.r.colour.csc".**

Create	Read	Update	Delete	Notify
	get	post		observe

14603 **6.77 Colour Temperature**

14604 **6.77.1 Introduction**

14605 This Resource describes the colour using colour temperature conventions.
14606 The Property "ct" is the Mired colour temperature.
14607 The equivalent value in Kelvin is obtained by Colour Temp(K) = 1,000,000/Colour Temp(Mired)
14608 The Resource provides the colour using colour temperature conventions.

14609 **6.77.2 Example URI**

14610 /example/ColourTemperatureResURI

14611 **6.77.3 Resource type**

14612 The Resource Type is defined as: "oic.r.colour.colourtemperature".

14613 **6.77.4 OpenAPI 2.0 definition**

```

14614 {
14615   "swagger": "2.0",
14616   "info": {
14617     "title": "Colour Temperature",
14618     "version": "20190215",
14619     "license": {
14620       "name": "OCF Data Model License",
14621       "url":
14622         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
14623         CENSE.md",
14624       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
14625         reserved."
14626     },
14627     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
14628   },
14629   "schemes": ["http"],
14630   "consumes": ["application/json"],
14631   "produces": ["application/json"],
14632   "paths": {
14633     "/example/ColourTemperatureResURI" : {
14634       "get": {
14635         "description": "This Resource describes the colour using colour temperature
14636         conventions.\nThe Property \"ct\" is the Mired colour temperature.\nThe equivalent value in Kelvin
14637         is obtained by Colour Temp(K) = 1,000,000/Colour Temp(Mired)\n\nThe Resource provides the colour using
14638         colour temperature conventions.",
14639         "parameters": [
14640           { "$ref": "#/parameters/interface" }
14641         ],
14642         "responses": {
14643           "200": {
14644             "description": "",
14645             "x-example":
14646             {

```

```

14647         "rt": ["oic.r.colour.colourtemperature"],
14648         "if": ["oic.if.a", "oic.if.baseline"],
14649         "ct": 457
14650     },
14651     "schema": { "$ref": "#/definitions/ColourTemp" }
14652 }
14653 },
14654 },
14655 "post": {
14656     "description": "Sets current colour temperature value\n",
14657     "parameters": [
14658         {"$ref": "#/parameters/interface"},
14659         {
14660             "name": "body",
14661             "in": "body",
14662             "required": true,
14663             "schema": { "$ref": "#/definitions/ColourTemp" },
14664             "x-example":
14665                 {
14666                     "ct": 457
14667                 }
14668         }
14669     ],
14670     "responses": {
14671         "200": {
14672             "description": "",
14673             "x-example":
14674                 {
14675                     "ct": 467
14676                 },
14677             "schema": { "$ref": "#/definitions/ColourTemp" }
14678         }
14679     }
14680 }
14681 },
14682 },
14683 "parameters": {
14684     "interface": {
14685         "in": "query",
14686         "name": "if",
14687         "type": "string",
14688         "enum": ["oic.if.a", "oic.if.baseline"]
14689     }
14690 },
14691 "definitions": {
14692     "ColourTemp": {
14693         "properties": {
14694             "rt":
14695                 {
14696                     "description": "The Resource Type.",
14697                     "items": {
14698                         "maxLength": 64,
14699                         "type": "string",
14700                         "enum": ["oic.r.colour.colourtemperature"]
14701                     },
14702                     "minItems": 1,
14703                     "uniqueItems": true,
14704                     "readOnly": true,
14705                     "type": "array"
14706                 },
14707             "ct": {
14708                 "description": "The Mired colour temperature.",
14709                 "minimum": 0,
14710                 "type": "integer"
14711             },
14712             "n": {
14713                 "$ref":
14714                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14715                 schema.json#/definitions/n"
14716             },
14717             "id": {
14718                 "$ref":

```

```

14719 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14720 schema.json#/definitions/id"
14721   },
14722   "range": {
14723     "$ref":
14724     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
14725     schema.json#/definitions/range_integer"
14726   },
14727   "step": {
14728     "$ref":
14729     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
14730     schema.json#/definitions/step_integer"
14731   },
14732   "if": {
14733     "description": "The OCF Interface set supported by this Resource.",
14734     "items": {
14735       "enum": [
14736         "oic.if.a",
14737         "oic.if.baseline"
14738       ],
14739       "type": "string"
14740     },
14741     "minItems": 2,
14742     "uniqueItems": true,
14743     "readOnly": true,
14744     "type": "array"
14745   }
14746 },
14747 "type": "object",
14748 "required": ["ct"]
14749 }
14750 }
14751 }
14752

```

14753 6.77.5 Property definition

14754 Table 157 defines the Properties that are part of the "oic.r.colour.colourtemperature" Resource
 14755 Type.

14756 **Table 157 – The Property definitions of the Resource with type "rt" =**
 14757 **"oic.r.colour.colourtemperature".**

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

step	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	

14758 **6.77.6 CRUDN behaviour**

14759 Table 158 defines the CRUDN operations that are supported on the
14760 "oic.r.colour.colourtemperature" Resource Type.

14761 **Table 158 – The CRUDN operations of the Resource with type "rt" =**
14762 **"oic.r.colour.colourtemperature".**

Create	Read	Update	Delete	Notify
	get	post		observe

14763 **6.78 Colour Hue and Saturation**

14764 **6.78.1 Introduction**

14765 This Resource describes the colour using hue-saturation conventions.
14766 The Property "hue" is the hue angle, it is a number value as defined by the CIECAM02 model
14767 definition (see reference [CIE CIE159:2004]).
14768 A Device that does not support fractional hue angles can provide integer values.
14769 If Property "precision" is provided it applies to the hue angle.
14770 The Property "saturation" is an integer value as defined by the CIECAM02 model definition (see
14771 reference [CIE CIE159:2004]).
14772 The Property "saturation" can be converted to a percentage by saturation/maximumsaturation X
14773 100; where maximumsaturation is 32767 if the Property itself is not present.
14774 The Property "maximumsaturation" is the upper bound on the saturation supported by the Device.
14775 If not present the maximum value for saturation is 32767.
14776 The Resource provides the colour using hue and saturation conventions.
14777

14778 **6.78.2 Example URI**

14779 /example/ColourHueSaturationResURI

14780 **6.78.3 Resource type**

14781 The Resource Type is defined as: "oic.r.colour.hs".

14782 **6.78.4 OpenAPI 2.0 definition**

```
14783 {
14784   "swagger": "2.0",
14785   "info": {
14786     "title": "Colour Hue and Saturation",
14787     "version": "20190215",
14788     "license": {
14789       "name": "OCF Data Model License",
14790       "url":
14791         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
14792         CENSE.md",
14793       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
14794       reserved."
14795     },
14796     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
14797   },
14798   "schemes": ["http"],
```

```

14799     "consumes": ["application/json"],
14800     "produces": ["application/json"],
14801     "paths": {
14802         "/example/ColourHueSaturationResURI" : {
14803             "get": {
14804                 "description": "This Resource describes the colour using hue-saturation conventions.\nThe
14805 Property \"hue\" is the hue angle, it is a number value as defined by the CIECAM02 model definition
14806 (see reference [CIE CIE159:2004]).\nA Device that does not support fractional hue angles can provide
14807 integer values.\nIf Property \"precision\" is provided it applies to the hue angle.\nThe Property
14808 \"saturation\" is an integer value as defined by the CIECAM02 model definition (see reference [CIE
14809 CIE159:2004]).\n The Property \"saturation\" can be converted to a percentage by
14810 saturation/maximumsaturation X 100; where maximumsaturation is 32767 if the Property itself is not
14811 present.\nThe Property \"maximumsaturation\" is the upper bound on the saturation supported by the
14812 Device.\nIf not present the maximum value for saturation is 32767.\nThe Resource provides the colour
14813 using hue and saturation conventions.\n",
14814                 "parameters": [
14815                     { "$ref": "#/parameters/interface" }
14816                 ],
14817                 "responses": {
14818                     "200": {
14819                         "description": "",
14820                         "x-example":
14821                             {
14822                                 "rt": ["oic.r.colour.hs"],
14823                                 "if": ["oic.if.a", "oic.if.baseline"],
14824                                 "hue": 300.0,
14825                                 "saturation": 212,
14826                                 "maximumsaturation": 1000
14827                             },
14828                         "schema": { "$ref": "#/definitions/ColourHS" }
14829                     }
14830                 }
14831             },
14832             "post": {
14833                 "description": "Sets current colour hue and saturation values.\nAt least one of hue or
14834 saturation shall be provided in the payload.\n",
14835                 "parameters": [
14836                     { "$ref": "#/parameters/interface" },
14837                     {
14838                         "name": "body",
14839                         "in": "body",
14840                         "required": true,
14841                         "schema": { "$ref": "#/definitions/ColourHS" },
14842                         "x-example":
14843                             {
14844                                 "hue": 300.0,
14845                                 "saturation": 212
14846                             }
14847                     }
14848                 ],
14849                 "responses": {
14850                     "200": {
14851                         "description": "",
14852                         "x-example":
14853                             {
14854                                 "hue": 300.0,
14855                                 "saturation": 212
14856                             },
14857                         "schema": { "$ref": "#/definitions/ColourHS" }
14858                     }
14859                 }
14860             }
14861         },
14862     },
14863     "parameters": {
14864         "interface" : {
14865             "in": "query",
14866             "name": "if",
14867             "type": "string",
14868             "enum": ["oic.if.a", "oic.if.baseline"]
14869         }
14870     },

```

```

14871 "definitions": {
14872   "ColourHS" : {
14873     "properties": {
14874       "rt": {
14875         "description": "The Resource Type.",
14876         "items": {
14877           "enum": ["oic.r.colour.hs"],
14878           "maxLength": 64,
14879           "type": "string"
14880         },
14881         "minItems": 1,
14882         "uniqueItems": true,
14883         "readOnly": true,
14884         "type": "array"
14885       },
14886       "hue": {
14887         "description": "The hue angle as defined by the CIECAM02 model definition.",
14888         "maximum": 360.0,
14889         "minimum": 0.0,
14890         "type": "number"
14891       },
14892       "saturation": {
14893         "description": "The saturation as defined by the CIECAM02 model definition.",
14894         "maximum": 32767,
14895         "minimum": 0,
14896         "type": "integer"
14897       },
14898       "maximumsaturation": {
14899         "description": "The maximum supported value of \"saturation\" for this Device.",
14900         "maximum": 32767,
14901         "minimum": 0,
14902         "readOnly": true,
14903         "type": "integer"
14904       },
14905       "n": {
14906         "$ref":
14907         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14908         schema.json#/definitions/n"
14909       },
14910       "id": {
14911         "$ref":
14912         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14913         schema.json#/definitions/id"
14914       },
14915       "precision": {
14916         "$ref":
14917         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
14918         schema.json#/definitions/precision"
14919       },
14920       "if": {
14921         "description": "The OCF Interface set supported by this Resource.",
14922         "items": {
14923           "enum": [
14924             "oic.if.a",
14925             "oic.if.baseline"
14926           ],
14927           "type": "string"
14928         },
14929         "minItems": 2,
14930         "uniqueItems": true,
14931         "readOnly": true,
14932         "type": "array"
14933       }
14934     },
14935     "type": "object",
14936     "required": ["hue", "saturation"]
14937   }
14938 }
14939 }
14940

```


14941 **6.78.5 Property definition**

14942 Table 159 defines the Properties that are part of the "oic.r.colour.hs" Resource Type.

14943 **Table 159 – The Property definitions of the Resource with type "rt" = "oic.r.colour.hs".**

Property name	Value type	Mandatory	Access mode	Description
hue	number	Yes	Read Write	The hue angle as defined by the CIECAM02 model definition.
n	multiple types: see schema	No	Read Write	
saturation	integer	Yes	Read Write	The saturation as defined by the CIECAM02 model definition.
precision	multiple types: see schema	No	Read Write	
rt	array: see schema	No	Read Only	The Resource Type.
maximumsaturation	integer	No	Read Only	The maximum supported value of "saturation" for this Device.
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

14944 **6.78.6 CRUDN behaviour**

14945 Table 160 defines the CRUDN operations that are supported on the "oic.r.colour.hs" Resource
14946 Type.

14947 **Table 160 – The CRUDN operations of the Resource with type "rt" = "oic.r.colour.hs".**

Create	Read	Update	Delete	Notify
	get	post		observe

14948 **6.79 Battery Material**

14949 **6.79.1 Introduction**

14950 This Resource describes the battery material represented as an enumerated set of strings.

14951 **6.79.2 Example URI**

14952 /BatteryMaterialResURI

14953 **6.79.3 Resource type**

14954 The Resource Type is defined as: "oic.r.batterymaterial".

14955 **6.79.4 OpenAPI 2.0 definition**

```
14956 {
14957   "swagger": "2.0",
14958   "info": {
14959     "title": "Battery Material",
14960     "version": "20190222",
14961     "license": {
14962       "name": "OCF Data Model License",
14963       "url":
14964         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
14965         CENSE.md",
14966       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
14967     },
14968     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
14969   },
14970   "schemes": ["http"],
14971   "consumes": ["application/json"],
14972   "produces": ["application/json"],
14973   "paths": {
14974     "/BatteryMaterialResURI" : {
14975       "get": {
14976         "description": "This Resource describes the battery material represented as an enumerated
14977 set of strings.",
14978         "parameters": [
14979           {"$ref": "#/parameters/interface"}
14980         ],
14981         "responses": {
14982           "200": {
14983             "description": "",
14984             "x-example":
14985               {
14986                 "rt": ["oic.r.batterymaterial"],
14987                 "if": ["oic.if.s", "oic.if.baseline"],
14988                 "material": "Alkaline"
14989               },
14990             "schema": { "$ref": "#/definitions/BatteryMaterial" }
14991           }
14992         }
14993       }
14994     },
14995     "parameters": {
14996       "interface" : {
14997         "in": "query",
14998         "name": "if",
14999         "type": "string",
15000         "enum": ["oic.if.s", "oic.if.baseline"]
15001       }
15002     },
15003     "definitions": {
15004       "BatteryMaterial" : {
15005         "properties": {
15006           "rt": {
15007             "description": "The Resource Type.",
15008             "items": {
15009               "enum": ["oic.r.batterymaterial"],
15010               "maxLength": 64,
```

```

15012         "type": "string"
15013     },
15014     "minItems": 1,
15015     "uniqueItems": true,
15016     "readOnly": true,
15017     "type": "array"
15018 },
15019 "material": {
15020     "description": "The battery construction material (type).",
15021     "enum": [
15022         "Alkaline",
15023         "Aluminium Air",
15024         "Aluminium Ion",
15025         "Atomic Betavoltaics",
15026         "Atomic Optoelectric Nuclear",
15027         "Atomic Nuclear",
15028         "Bunsen Cell",
15029         "Chromic Acid Cell",
15030         "Poggendorff Cell",
15031         "Clark Cell",
15032         "Daniell Cell",
15033         "Dry Cell",
15034         "Earth",
15035         "Flow",
15036         "Flow Vanadium Redox",
15037         "Flow Zinc Bromine",
15038         "Flow Zinc Cerium",
15039         "Frog",
15040         "Fuel",
15041         "Galvanic Cell",
15042         "Glass",
15043         "Grove Cell",
15044         "Lead Acid",
15045         "Lead Acid Deep Cycle",
15046         "Lead Acid VRLA",
15047         "Lead Acid AGM",
15048         "Lead Acid Gel",
15049         "Leclanche Cell",
15050         "Lemon Potato",
15051         "Lithium",
15052         "Lithium Air",
15053         "Lithium Ion",
15054         "Lithium Ion Cobalt Oxide (ICR)",
15055         "Lithium Ion Manganese Oxide (IMR)",
15056         "Lithium Ion Polymer",
15057         "Lithium Iron Phosphate",
15058         "Lithium Sulfur",
15059         "Lithium Titanate",
15060         "Lithium Ion Thin Film",
15061         "Magnesium",
15062         "Magnesium Ion",
15063         "Mercury",
15064         "Molten Salt",
15065         "Nickel Cadmium",
15066         "Nickel Cadmium Vented Cell",
15067         "Nickel Hydrogen",
15068         "Nickel Iron ",
15069         "Nickel Metal Hydride",
15070         "Nickel Metal Hydride Low Self-Discharge",
15071         "Nickel Oxyhydroxide",
15072         "Nickel Oxyride",
15073         "Nickel Zinc",
15074         "Organic Radical",
15075         "Paper",
15076         "Polymer Based",
15077         "Polysulfide Bromide",
15078         "Potassium Ion",
15079         "Pulvermachers Chain",
15080         "Silicon Air",
15081         "Silver Calcium",
15082         "Silver Oxide",
15083         "Silver Zinc",

```

```

15084         "Sodium Ion",
15085         "Sodium Sulfur",
15086         "Solid State",
15087         "Sugar",
15088         "Super Iron",
15089         "UltraBattery",
15090         "Voltaic Pile",
15091         "Voltaic Pile Penny",
15092         "Voltaic Pile Trough",
15093         "Water Activated",
15094         "Weston Cell",
15095         "Zinc Air",
15096         "Zinc Carbon",
15097         "Zinc Chloride",
15098         "Zinc Ion",
15099         "Unknown"
15100     ],
15101     "readOnly": true,
15102     "type": "string"
15103 },
15104 "n": {
15105     "$ref":
15106     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15107     schema.json#/definitions/n"
15108 },
15109 "id": {
15110     "$ref":
15111     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15112     schema.json#/definitions/id"
15113 },
15114 "if": {
15115     "description": "The OCF Interface set supported by this Resource.",
15116     "items": {
15117         "enum": [
15118             "oic.if.s",
15119             "oic.if.baseline"
15120         ],
15121         "type": "string"
15122     },
15123     "minItems": 2,
15124     "uniqueItems": true,
15125     "readOnly": true,
15126     "type": "array"
15127 },
15128 },
15129 "type": "object",
15130 "required": ["material"]
15131 }
15132 }
15133 }
15134

```

15135 6.79.5 Property definition

15136 Table 161 defines the Properties that are part of the "oic.r.batterymaterial" Resource Type.

15137 **Table 161 – The Property definitions of the Resource with type "rt" =**
15138 **"oic.r.batterymaterial".**

Property name	Value type	Mandatory	Access mode	Description
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set

				supported by this Resource.
id	multiple types: see schema	No	Read Write	
rt	array: see schema	No	Read Only	The Resource Type.
material	string	Yes	Read Only	The battery construction material (type).

15139 **6.79.6 CRUDN behaviour**

15140 Table 162 defines the CRUDN operations that are supported on the "oic.r.batterymaterial"
15141 Resource Type.

15142 **Table 162 – The CRUDN operations of the Resource with type "rt" = "oic.r.batterymaterial".**

Create	Read	Update	Delete	Notify
	get			observe

15143 **6.80 Brewing**

15144 **6.80.1 Introduction**

15145 This Resource describes the attributes associated with brewing. This resource is used for
15146 configuration only. The Operation of the Device is handled independently of this Resource. The
15147 amount requested is in ml. The strength of a brewed drink is an integer, the range of which may be
15148 enforced by the presence of a strengthrange Property.

15149 **6.80.2 Example URI**

15150 /BrewingResURI

15151 **6.80.3 Resource type**

15152 The Resource Type is defined as: "oic.r.brewing".

15153 **6.80.4 OpenAPI 2.0 definition**

```

15154 {
15155   "swagger": "2.0",
15156   "info": {
15157     "title": "Brewing",
15158     "version": "20190222",
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 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
15165     },
15166     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
15167   },
15168   "schemes": ["http"],
15169   "consumes": ["application/json"],
15170   "produces": ["application/json"],
15171   "paths": {
15172     "/BrewingResURI" : {
15173       "get": {

```

```

15174         "description": "This Resource describes the attributes associated with brewing. This
15175 resource is used for configuration only. The Operation of the Device is handled independently of
15176 this Resource. The amount requested is in ml. The strength of a brewed drink is an integer, the
15177 range of which may be enforced by the presence of a strengthrange Property.",
15178         "parameters": [
15179             { "$ref": "#/parameters/interface" }
15180         ],
15181         "responses": {
15182             "200": {
15183                 "description": "",
15184                 "x-example":
15185                     {
15186                         "rt": ["oic.r.brewing"],
15187                         "if": ["oic.if.rw", "oic.if.baseline"],
15188                         "amountrequested": 120,
15189                         "strength": 8,
15190                         "strengthrange": [1, 10]
15191                     },
15192                 "schema": { "$ref": "#/definitions/Brewing" }
15193             }
15194         },
15195     },
15196     "post": {
15197         "description": "Sets the brewing values\n",
15198         "parameters": [
15199             { "$ref": "#/parameters/interface" },
15200             {
15201                 "name": "body",
15202                 "in": "body",
15203                 "required": true,
15204                 "schema": { "$ref": "#/definitions/Brewing" },
15205                 "x-example":
15206                     {
15207                         "amountrequested": 120,
15208                         "strength": 8
15209                     }
15210             }
15211         ],
15212         "responses": {
15213             "200": {
15214                 "description": "",
15215                 "x-example":
15216                     {
15217                         "amountrequested": 120,
15218                         "strength": 8
15219                     }
15220             }
15221         }
15222     },
15223 },
15224 },
15225 "parameters": {
15226     "interface" : {
15227         "in": "query",
15228         "name": "if",
15229         "type": "string",
15230         "enum": ["oic.if.rw", "oic.if.baseline"]
15231     }
15232 },
15233 "definitions": {
15234     "Brewing" : {
15235         "properties": {
15236             "rt": {
15237                 "description": "The Resource Type.",
15238                 "items": {
15239                     "enum": ["oic.r.brewing"],
15240                     "maxLength": 64,
15241                     "type": "string"
15242                 },
15243                 "minItems": 1,
15244                 "uniqueItems": true,
15245                 "readOnly": true,

```

```

15246         "type": "array"
15247     },
15248     "strength": {
15249         "description": "The strength of a brewed drink.",
15250         "type": "integer"
15251     },
15252     "amountrequested": {
15253         "description": "The amount requested in ml.",
15254         "type": "integer"
15255     },
15256     "strengthrange": {
15257         "items": {
15258             "type": "integer"
15259         },
15260         "maxItems": 2,
15261         "minItems": 2,
15262         "readOnly": true,
15263         "type": "array"
15264     },
15265     "n": {
15266         "$ref":
15267         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15268         schema.json#/definitions/n"
15269     },
15270     "id": {
15271         "$ref":
15272         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15273         schema.json#/definitions/id"
15274     },
15275     "if": {
15276         "description": "The OCF Interface set supported by this Resource.",
15277         "items": {
15278             "enum": [
15279                 "oic.if.rw",
15280                 "oic.if.baseline"
15281             ],
15282             "type": "string"
15283         },
15284         "minItems": 2,
15285         "uniqueItems": true,
15286         "readOnly": true,
15287         "type": "array"
15288     }
15289 },
15290 "type": "object",
15291 "required": ["amountrequested"]
15292 }
15293 }
15294 }
15295

```

15296 6.80.5 Property definition

15297 Table 163 defines the Properties that are part of the "oic.r.brewing" Resource Type.

15298 **Table 163 – The Property definitions of the Resource with type "rt" = "oic.r.brewing".**

Property name	Value type	Mandatory	Access mode	Description
amountrequested	integer	Yes	Read Write	The amount requested in ml.
strength	integer	No	Read Write	The strength of a brewed drink.

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

15299 **6.80.6 CRUDN behaviour**

15300 Table 164 defines the CRUDN operations that are supported on the "oic.r.brewing" Resource Type.

15301 **Table 164 – The CRUDN operations of the Resource with type "rt" = "oic.r.brewing".**

Create	Read	Update	Delete	Notify
	get	post		observe

15302 **6.81 Energy**

15303 **6.81.1 Introduction**

15304 This Resource describes the attributes associated with electrical energy. This Resource can be
 15305 used for either rated (read-only), desired (read-write) or measured (read-only) energy. The Property
 15306 "voltage" is in Volts (V), The Property "current" in Amps (A), and The Property "frequency" is in
 15307 Hertz (Hz).

15308 **6.81.2 Example URI**

15309 /EnergyResURI

15310 **6.81.3 Resource type**

15311 The Resource Type is defined as: "oic.r.energy.electrical".

15312 **6.81.4 OpenAPI 2.0 definition**

```

15313 {
15314   "swagger": "2.0",
15315   "info": {
15316     "title": "Energy",
15317     "version": "20190215",
15318     "license": {
15319       "name": "OCF Data Model License",
15320       "url":
15321         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
15322         CENSE.md",
15323       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
15324         reserved."
15325     },
15326     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
15327   },

```



```

15328     "schemes": ["http"],
15329     "consumes": ["application/json"],
15330     "produces": ["application/json"],
15331     "paths": {
15332         "/EnergyResURI" : {
15333             "get": {
15334                 "description": "This Resource describes the attributes associated with electrical energy.
15335 This Resource can be used for either rated (read-only), desired (read-write) or measured (read-only)
15336 energy. The Property \"voltage\" is in Volts (V), The Property \"current\" in Amps (A), and The
15337 Property \"frequency\" is in Hertz (Hz).",
15338                 "parameters": [
15339                     { "$ref": "#/parameters/interface" }
15340                 ],
15341                 "responses": {
15342                     "200": {
15343                         "description": "Retrieves the current energy.",
15344                         "x-example":
15345                             {
15346                                 "rt": ["oic.r.energy.electrical"],
15347                                 "if": ["oic.if.rw", "oic.if.baseline"],
15348                                 "voltage": 120.0,
15349                                 "current": 5.0,
15350                                 "frequency": 60.0
15351                             },
15352                         "schema": { "$ref": "#/definitions/Energy" }
15353                     }
15354                 },
15355             },
15356             "post": {
15357                 "description": "Sets the desired energy values\n",
15358                 "parameters": [
15359                     { "$ref": "#/parameters/interface" },
15360                     {
15361                         "name": "body",
15362                         "in": "body",
15363                         "required": true,
15364                         "schema": { "$ref": "#/definitions/EnergyUpdate" },
15365                         "x-example":
15366                             {
15367                                 "desiredvoltage": 130.0,
15368                                 "desiredcurrent": 6.0
15369                             }
15370                     }
15371                 ],
15372                 "responses": {
15373                     "200": {
15374                         "description": "",
15375                         "x-example":
15376                             {
15377                                 "desiredvoltage": 130.0,
15378                                 "desiredcurrent": 6.0
15379                             }
15380                     }
15381                 }
15382             }
15383         },
15384     },
15385     "parameters": {
15386         "interface" : {
15387             "in" : "query",
15388             "name" : "if",
15389             "type" : "string",
15390             "enum" : ["oic.if.rw", "oic.if.baseline"]
15391         }
15392     },
15393     "definitions": {
15394         "Energy" : {
15395             "properties": {
15396                 "rt": {
15397                     "description": "The Resource Type.",
15398                     "items": {
15399                         "enum": ["oic.r.energy.electrical"],

```

```

15400         "maxLength": 64,
15401         "type": "string"
15402     },
15403     "minItems": 1,
15404     "uniqueItems": true,
15405     "readOnly": true,
15406     "type": "array"
15407 },
15408 "desiredcurrent": {
15409     "description": "The desired electric current in Amps (A).",
15410     "type": "number"
15411 },
15412 "current": {
15413     "description": "The electric current in Amps (A).",
15414     "readOnly": true,
15415     "type": "number"
15416 },
15417 "frequency": {
15418     "description": "The electric frequency in Hertz (Hz).",
15419     "readOnly": true,
15420     "type": "number"
15421 },
15422 "voltage": {
15423     "description": "The electric voltage in Volts (V).",
15424     "readOnly": true,
15425     "type": "number"
15426 },
15427 "desiredfrequency": {
15428     "description": "The desired electric frequency in Hertz (Hz).",
15429     "type": "number"
15430 },
15431 "desiredvoltage": {
15432     "description": "The desired electric voltage in Volts (V).",
15433     "type": "number"
15434 },
15435 "n": {
15436     "$ref":
15437 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15438 schema.json#/definitions/n"
15439 },
15440 "id": {
15441     "$ref":
15442 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15443 schema.json#/definitions/id"
15444 },
15445 "if": {
15446     "description": "The OCF Interface set supported by this Resource.",
15447     "items": {
15448         "enum": [
15449             "oic.if.rw",
15450             "oic.if.baseline"
15451         ],
15452         "type": "string"
15453     },
15454     "minItems": 2,
15455     "uniqueItems": true,
15456     "readOnly": true,
15457     "type": "array"
15458 }
15459 },
15460 "type": "object",
15461 "required": ["voltage", "current", "frequency"]
15462 }
15463 ,
15464 "EnergyUpdate": {
15465     "properties": {
15466         "desiredcurrent": {
15467             "description": "The desired electric current in Amps (A).",
15468             "type": "number"
15469         },
15470         "desiredfrequency": {
15471             "description": "The desired electric frequency in Hertz (Hz).",

```

```

15472         "type": "number"
15473     },
15474     "desiredvoltage": {
15475         "description": "The desired electric voltage in Volts (V).",
15476         "type": "number"
15477     }
15478 },
15479 "anyOf": [
15480     {
15481         "required": ["desiredvoltage"]
15482     },
15483     {
15484         "required": ["desiredcurrent"]
15485     },
15486     {
15487         "required": ["desiredfrequency"]
15488     }
15489 ],
15490 "type": "object"
15491 }
15492 }
15493 }
15494

```

6.81.5 Property definition

Table 165 defines the Properties that are part of the "oic.r.energy.electrical" Resource Type.

Table 165 – The Property definitions of the Resource with type "rt" = "oic.r.energy.electrical".

Property name	Value type	Mandatory	Access mode	Description
desiredcurrent	number	No	Read Write	The desired electric current in Amps (A).
desiredvoltage	number	No	Read Write	The desired electric voltage in Volts (V).
desiredfrequency	number	Yes	Read Write	The desired electric frequency in Hertz (Hz).
desiredcurrent	number	No	Read Write	The desired electric current in Amps (A).
id	multiple types: see schema	No	Read Write	
desiredvoltage	number	No	Read Write	The desired electric voltage in Volts (V).
rt	array: see schema	No	Read Only	The Resource Type.

if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
frequency	number	Yes	Read Only	The electric frequency in Hertz (Hz).
current	number	Yes	Read Only	The electric current in Amps (A).
n	multiple types: see schema	No	Read Write	
voltage	number	Yes	Read Only	The electric voltage in Volts (V).
desiredfrequency	number	No	Read Write	The desired electric frequency in Hertz (Hz).

15499 **6.81.6 CRUDN behaviour**

15500 Table 166 defines the CRUDN operations that are supported on the "oic.r.energy.electrical"
15501 Resource Type.

15502 **Table 166 – The CRUDN operations of the Resource with type "rt" =**
15503 **"oic.r.energy.electrical".**

Create	Read	Update	Delete	Notify
	get	post		observe

15504 **6.82 Energy Generation**

15505 **6.82.1 Introduction**

15506 This Resource describes the attributes associated with energy generation
15507 The Property "energygenerated" is a number that provides the energy generated in Watt-hour(Wh).

15508 **6.82.2 Example URI**

15509 /EnergyGenerationResURI

15510 **6.82.3 Resource type**

15511 The Resource Type is defined as: "oic.r.energy.generation".

15512 **6.82.4 OpenAPI 2.0 definition**

15513 {
15514 "swagger": "2.0",
15515 "info": {
15516 "title": "Energy Generation",

```

15517     "version": "20190215",
15518     "license": {
15519         "name": "OCF Data Model License",
15520         "url":
15521 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
15522 CENSE.md",
15523         "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
15524 reserved."
15525     },
15526     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
15527 },
15528     "schemes": ["http"],
15529     "consumes": ["application/json"],
15530     "produces": ["application/json"],
15531     "paths": {
15532         "/EnergyGenerationResURI" : {
15533             "get": {
15534                 "description": "This Resource describes the attributes associated with energy
15535 generation\nThe Property \"energygenerated\" is a number that provides the energy generated in Watt-
15536 hour(Wh).",
15537                 "parameters": [
15538                     { "$ref": "#/parameters/interface" }
15539                 ],
15540                 "responses": {
15541                     "200": {
15542                         "description": "",
15543                         "x-example":
15544                             {
15545                                 "rt": ["oic.r.energy.generation"],
15546                                 "if": ["oic.if.s", "oic.if.baseline"],
15547                                 "energygenerated": 3000.00
15548                             },
15549                         "schema": { "$ref": "#/definitions/EnergyGeneration" }
15550                     }
15551                 }
15552             }
15553         }
15554     },
15555     "parameters": {
15556         "interface" : {
15557             "in" : "query",
15558             "name" : "if",
15559             "type" : "string",
15560             "enum" : ["oic.if.s", "oic.if.baseline"]
15561         }
15562     },
15563     "definitions": {
15564         "EnergyGeneration" : {
15565             "properties": {
15566                 "rt": {
15567                     "description": "The Resource Type.",
15568                     "items": {
15569                         "enum": ["oic.r.energy.generation"],
15570                         "maxLength": 64,
15571                         "type": "string"
15572                     },
15573                     "minItems": 1,
15574                     "uniqueItems": true,
15575                     "readOnly": true,
15576                     "type": "array"
15577                 },
15578                 "energygenerated": {
15579                     "description": "The energy generated in Watt-hour(Wh).",
15580                     "readOnly": true,
15581                     "type": "number"
15582                 },
15583                 "n": {
15584                     "$ref":
15585 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15586 schema.json#/definitions/n"
15587                 },
15588                 "id": {

```

```

15589         "$ref":
15590         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15591         schema.json#/definitions/id"
15592     },
15593     "if": {
15594         "description": "The OCF Interface set supported by this Resource.",
15595         "items": {
15596             "enum": [
15597                 "oic.if.s",
15598                 "oic.if.baseline"
15599             ],
15600             "type": "string"
15601         },
15602         "minItems": 2,
15603         "uniqueItems": true,
15604         "readOnly": true,
15605         "type": "array"
15606     }
15607 },
15608 "type": "object",
15609 "required": ["energygenerated"]
15610 }
15611 }
15612 }
15613

```

15614 6.82.5 Property definition

15615 Table 167 defines the Properties that are part of the "oic.r.energy.generation" Resource Type.

15616 **Table 167 – The Property definitions of the Resource with type "rt" =**
15617 **"oic.r.energy.generation".**

Property name	Value type	Mandatory	Access mode	Description
energygenerated	number	Yes	Read Only	The energy generated in Watt-hour(Wh).
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
n	multiple types: see schema	No	Read Write	
rt	array: see schema	No	Read Only	The Resource Type.
id	multiple types: see schema	No	Read Write	

15618 6.82.6 CRUDN behaviour

15619 Table 168 defines the CRUDN operations that are supported on the "oic.r.energy.generation"
15620 Resource Type.

15621
15622

Table 168 – The CRUDN operations of the Resource with type "rt" = "oic.r.energy.generation".

Create	Read	Update	Delete	Notify
	get			observe

15623 **6.83 Foaming**

15624 **6.83.1 Introduction**

15625 This Resource describes the attributes associated with foaming. The Property "foamstrength" of
15626 the liquid is represented as an integer.
15627 The foam strength is an integer, the range of which may be enforced by the presence of the
15628 Property "range".

15629 **6.83.2 Example URI**

15630 /FoamingResURI

15631 **6.83.3 Resource type**

15632 The Resource Type is defined as: "oic.r.foaming".

15633 **6.83.4 OpenAPI 2.0 definition**

```
15634 {  
15635   "swagger": "2.0",  
15636   "info": {  
15637     "title": "Foaming",  
15638     "version": "20190215",  
15639     "license": {  
15640       "name": "OCF Data Model License",  
15641       "url":  
15642         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
15643         CENSE.md",  
15644       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
15645       reserved."  
15646     },  
15647     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
15648   },  
15649   "schemes": ["http"],  
15650   "consumes": ["application/json"],  
15651   "produces": ["application/json"],  
15652   "paths": {  
15653     "/FoamingResURI" : {  
15654       "get": {  
15655         "description": "This Resource describes the attributes associated with foaming. The Property  
15656         \"foamstrength\" of the liquid is represented as an integer.\n\nThe foam strength is an integer, the  
15657         range of which may be enforced by the presence of the Property \"range\".",  
15658         "parameters": [  
15659           { "$ref": "#/parameters/interface" }  
15660         ],  
15661         "responses": {  
15662           "200": {  
15663             "description": "RETRIEVES the state of foaming.",  
15664             "x-example":  
15665               {  
15666                 "rt": ["oic.r.foaming"],  
15667                 "if": ["oic.if.rw", "oic.if.baseline"],  
15668                 "foamstrength": 50,  
15669                 "range": [0, 100]  
15670               },  
15671             "schema": { "$ref": "#/definitions/Foaming" }  
15672           }  
15673         }  
15674       },  
15675       "post": {
```

```

15676     "description": "Sets foaming value\n",
15677     "parameters": [
15678       { "$ref": "#/parameters/interface" },
15679       {
15680         "name": "body",
15681         "in": "body",
15682         "required": true,
15683         "schema": { "$ref": "#/definitions/Foaming" },
15684         "x-example":
15685           {
15686             "foamstrength": 50
15687           }
15688       }
15689     ],
15690     "responses": {
15691       "200": {
15692         "description": "",
15693         "x-example":
15694           {
15695             "foamstrength": 50
15696           },
15697         "schema": { "$ref": "#/definitions/Foaming" }
15698       }
15699     }
15700   }
15701 },
15702 "parameters": {
15703   "interface": {
15704     "in": "query",
15705     "name": "if",
15706     "type": "string",
15707     "enum": ["oic.if.rw", "oic.if.baseline"]
15708   }
15709 },
15710 "definitions": {
15711   "Foaming": {
15712     "properties": {
15713       "rt": {
15714         "description": "Resource Type",
15715         "items": {
15716           "enum": ["oic.r.foaming"],
15717           "maxLength": 64,
15718           "type": "string"
15719         },
15720         "minItems": 1,
15721         "uniqueItems": true,
15722         "readOnly": true,
15723         "type": "array"
15724       },
15725       "foamstrength": {
15726         "description": "The desired foaminess of the liquid.",
15727         "type": "integer"
15728       },
15729     },
15730     "n": {
15731       "$ref":
15732       "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15733       schema.json#/definitions/n"
15734     },
15735     "id": {
15736       "$ref":
15737       "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15738       schema.json#/definitions/id"
15739     },
15740     "range": {
15741       "$ref":
15742       "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
15743       schema.json#/definitions/range_integer"
15744     },
15745     "step": {
15746       "$ref":
15747       "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-

```



```

15748 schema.json#/definitions/step_integer"
15749     },
15750     "if": {
15751         "description": "The interface set supported by this resource",
15752         "items": {
15753             "enum": [
15754                 "oic.if.rw",
15755                 "oic.if.baseline"
15756             ],
15757             "type": "string"
15758         },
15759         "minItems": 2,
15760         "uniqueItems": true,
15761         "readOnly": true,
15762         "type": "array"
15763     }
15764 },
15765 "type": "object",
15766 "required": ["foamstrength"]
15767 }
15768 }
15769 }
15770

```

15771 6.83.5 Property definition

15772 Table 169 defines the Properties that are part of the "oic.r.foaming" Resource Type.

15773 **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.
if	array: see schema	No	Read Only	The interface set supported by this resource
id	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	

15774 6.83.6 CRUDN behaviour

15775 Table 170 defines the CRUDN operations that are supported on the "oic.r.foaming" Resource Type.

15776

Table 170 – The CRUDN operations of the Resource with type "rt" = "oic.r.foaming".

Create	Read	Update	Delete	Notify
	get	post		observe

15777 **6.84 Grinder**15778 **6.84.1 Introduction**

15779 This Resource describes the attributes associated with a grinder. The Property "coarseness" of the
 15780 grounds is an integer. The higher the value, the less coarse. The Property "remaining" is a
 15781 percentage that represents the unground material left.

15782 **6.84.2 Example URI**

15783 /GrinderResURI

15784 **6.84.3 Resource type**

15785 The Resource Type is defined as: "oic.r.grinder".

15786 **6.84.4 OpenAPI 2.0 definition**

```

15787 {
15788   "swagger": "2.0",
15789   "info": {
15790     "title": "Grinder",
15791     "version": "20190215",
15792     "license": {
15793       "name": "OCF Data Model License",
15794       "url":
15795         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
15796         CENSE.md",
15797       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
15798       reserved."
15799     },
15800     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
15801   },
15802   "schemes": ["http"],
15803   "consumes": ["application/json"],
15804   "produces": ["application/json"],
15805   "paths": {
15806     "/GrinderResURI" : {
15807       "get": {
15808         "description": "This Resource describes the attributes associated with a grinder. The
15809         Property \"coarseness\" of the grounds is an integer. The higher the value, the less coarse. The
15810         Property \"remaining\" is a percentage that represents the unground material left.",
15811         "parameters": [
15812           {"$ref": "#/parameters/interface"}
15813         ],
15814         "responses": {
15815           "200": {
15816             "description": "RETRIEVES the state of a grinder.",
15817             "x-example":
15818               {
15819                 "rt": ["oic.r.grinder"],
15820                 "if": ["oic.if.rw", "oic.if.baseline"],
15821                 "coarseness": 10,
15822                 "remaining": 50
15823               },
15824             "schema": { "$ref": "#/definitions/Grinder" }
15825           }
15826         }
15827       },
15828       "post": {
15829         "description": "Sets grinding values.",
15830         "parameters": [
15831           {"$ref": "#/parameters/interface"},

```

```

15832     {
15833         "name": "body",
15834         "in": "body",
15835         "required": true,
15836         "schema": { "$ref": "#/definitions/GrinderUpdate" },
15837         "x-example":
15838             {
15839                 "coarseness": 10
15840             }
15841     },
15842 ],
15843 "responses": {
15844     "200": {
15845         "description": "",
15846         "x-example":
15847             {
15848                 "coarseness": 10
15849             },
15850         "schema": { "$ref": "#/definitions/GrinderUpdate" }
15851     }
15852 },
15853 },
15854 },
15855 },
15856 "parameters": {
15857     "interface": {
15858         "in": "query",
15859         "name": "if",
15860         "type": "string",
15861         "enum": ["oic.if.rw", "oic.if.baseline"]
15862     }
15863 },
15864 "definitions": {
15865     "Grinder": {
15866         "properties": {
15867             "rt": {
15868                 "description": "Resource Type",
15869                 "items": {
15870                     "enum": ["oic.r.grinder"],
15871                     "maxLength": 64,
15872                     "type": "string"
15873                 },
15874                 "minItems": 1,
15875                 "uniqueItems": true,
15876                 "readOnly": true,
15877                 "type": "array"
15878             },
15879             "coarseness": {
15880                 "description": "The desired coarseness when grinding.",
15881                 "type": "integer"
15882             },
15883             "remaining": {
15884                 "description": "The percentage of unground material left.",
15885                 "maximum": 100,
15886                 "minimum": 0,
15887                 "readOnly": true,
15888                 "type": "integer"
15889             },
15890             "n": {
15891                 "$ref":
15892 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15893 schema.json#/definitions/n"
15894             },
15895             "id": {
15896                 "$ref":
15897 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15898 schema.json#/definitions/id"
15899             },
15900             "range": {
15901                 "$ref":
15902 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
15903 schema.json#/definitions/range_integer"

```

```

15904     },
15905     "step": {
15906         "$ref":
15907         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
15908         schema.json#/definitions/step_integer"
15909     },
15910     "if": {
15911         "description": "The OCF Interface set supported by this Resource.",
15912         "items": {
15913             "enum": [
15914                 "oic.if.rw",
15915                 "oic.if.baseline"
15916             ],
15917             "type": "string"
15918         },
15919         "minItems": 2,
15920         "uniqueItems": true,
15921         "readOnly": true,
15922         "type": "array"
15923     }
15924 },
15925 "type": "object",
15926 "required": ["coarseness"]
15927 },
15928 "GrinderUpdate" : {
15929     "properties": {
15930         "coarseness": {
15931             "description": "The desired coarseness when grinding.",
15932             "type": "integer"
15933         }
15934     },
15935     "type": "object",
15936     "required": ["coarseness"]
15937 }
15938 }
15939 }
15940

```

15941 6.84.5 Property definition

15942 Table 171 defines the Properties that are part of the "oic.r.grinder" Resource Type.

15943 **Table 171 – The Property definitions of the Resource with type "rt" = "oic.r.grinder".**

Property name	Value type	Mandatory	Access mode	Description
remaining	integer	No	Read Only	The percentage of unground material left.
step	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
rt	array: see schema	No	Read Only	Resource Type

coarseness	integer	Yes	Read Write	The desired coarseness when grinding.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
n	multiple types: see schema	No	Read Write	
coarseness	integer	Yes	Read Write	The desired coarseness when grinding.

15944 **6.84.6 CRUDN behaviour**

15945 Table 172 defines the CRUDN operations that are supported on the "oic.r.grinder" Resource Type.

15946 **Table 172 – The CRUDN operations of the Resource with type "rt" = "oic.r.grinder".**

Create	Read	Update	Delete	Notify
	get	post		observe

15947 **6.85 Liquid Level**

15948 **6.85.1 Introduction**

15949 This Resource describes the attributes associated with liquid level. The Property "currentlevel" and
 15950 "desiredlevel" are defined in terms of a percentage. The behaviour of when the currentlevel and
 15951 desiredlevel are not equal is determined by the device manufacturer.

15952 **6.85.2 Example URI**

15953 /LiquidLevelResURI

15954 **6.85.3 Resource type**

15955 The Resource Type is defined as: "oic.r.liquid.level".

15956 **6.85.4 OpenAPI 2.0 definition**

```

15957 {
15958   "swagger": "2.0",
15959   "info": {
15960     "title": "Liquid Level",
15961     "version": "20190215",
15962     "license": {
15963       "name": "OCF Data Model License",
15964       "url":
15965         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
15966         CENSE.md",
15967       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
15968         reserved."
15969     },
15970     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
15971   },
15972   "schemes": ["http"],
15973   "consumes": ["application/json"],
15974   "produces": ["application/json"],

```

```

15975 "paths": {
15976   "/LiquidLevelResURI" : {
15977     "get": {
15978       "description": "This Resource describes the attributes associated with liquid level. The
15979 Property \"currentlevel\" and \"desiredlevel\" are defined in terms of a percentage. The behaviour
15980 of when the currentlevel and desiredlevel are not equal is determined by the device manufacturer.",
15981       "parameters": [
15982         {"$ref": "#/parameters/interface"}
15983       ],
15984       "responses": {
15985         "200": {
15986           "description": "RETRIEVES the state of liquid level.",
15987           "x-example":
15988             {
15989               "rt": ["oic.r.liquid.level"],
15990               "if": ["oic.if.rw", "oic.if.r", "oic.if.baseline"],
15991               "currentlevel": 60,
15992               "desiredlevel": 80
15993             },
15994           "schema": { "$ref": "#/definitions/LiquidLevel" }
15995         }
15996       },
15997     },
15998     "post": {
15999       "description": "Sets liquid level value.",
16000       "parameters": [
16001         {"$ref": "#/parameters/interface-rw"},
16002         {
16003           "name": "body",
16004           "in": "body",
16005           "required": true,
16006           "schema": { "$ref": "#/definitions/LiquidLevelUpdate" },
16007           "x-example":
16008             {
16009               "desiredlevel": 80
16010             }
16011         }
16012       ],
16013       "responses": {
16014         "200": {
16015           "description": "",
16016           "x-example":
16017             {
16018               "desiredlevel": 80
16019             },
16020         "schema": { "$ref": "#/definitions/LiquidLevelUpdate" }
16021       }
16022     }
16023   }
16024 },
16025 },
16026 "parameters": {
16027   "interface" : {
16028     "in" : "query",
16029     "name" : "if",
16030     "type" : "string",
16031     "enum" : ["oic.if.rw", "oic.if.r", "oic.if.baseline"]
16032   },
16033   "interface-rw" : {
16034     "in" : "query",
16035     "name" : "if",
16036     "type" : "string",
16037     "enum" : ["oic.if.rw", "oic.if.baseline"]
16038   }
16039 },
16040 "definitions": {
16041   "LiquidLevel" : {
16042     "properties": {
16043       "rt": {
16044         "description": "The Resource Type.",
16045         "items": {
16046           "enum": ["oic.r.liquid.level"],

```

```

16047         "maxLength": 64,
16048         "type": "string"
16049     },
16050     "minItems": 1,
16051     "uniqueItems": true,
16052     "readOnly": true,
16053     "type": "array"
16054 },
16055 "currentlevel": {
16056     "description": "The current level of the liquid in percentage.",
16057     "maximum": 100,
16058     "minimum": 0,
16059     "readOnly": true,
16060     "type": "integer"
16061 },
16062 "desiredlevel": {
16063     "description": "The desired level of the liquid in percentage.",
16064     "maximum": 100,
16065     "minimum": 0,
16066     "type": "integer"
16067 },
16068 "n": {
16069     "$ref":
16070 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16071 schema.json#/definitions/n"
16072 },
16073 "id": {
16074     "$ref":
16075 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16076 schema.json#/definitions/id"
16077 },
16078 "step": {
16079     "$ref":
16080 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
16081 schema.json#/definitions/step_integer"
16082 },
16083 "if": {
16084     "description": "The OCF Interface set supported by this Resource.",
16085     "items": {
16086         "enum": [
16087             "oic.if.rw",
16088             "oic.if.r",
16089             "oic.if.baseline"
16090         ],
16091         "type": "string"
16092     },
16093     "minItems": 2,
16094     "uniqueItems": true,
16095     "readOnly": true,
16096     "type": "array"
16097 }
16098 },
16099 "type": "object",
16100 "required": ["currentlevel"]
16101 },
16102 "LiquidLevelUpdate" : {
16103     "properties": {
16104         "desiredlevel": {
16105             "description": "The desired level of the liquid in percentage.",
16106             "maximum": 100,
16107             "minimum": 0,
16108             "type": "integer"
16109         }
16110     },
16111     "type": "object",
16112     "required": ["desiredlevel"]
16113 }
16114 }
16115 }
16116

```

16117 **6.85.5 Property definition**

16118 Table 173 defines the Properties that are part of the "oic.r.liquid.level" Resource Type.

16119 **Table 173 – The Property definitions of the Resource with type "rt" = "oic.r.liquid.level".**

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
n	multiple types: see schema	No	Read Write	
currentlevel	integer	Yes	Read Only	The current level of the liquid in percentage.
rt	array: see schema	No	Read Only	The Resource Type.
desiredlevel	integer	No	Read Write	The desired level of the liquid in percentage.
id	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
desiredlevel	integer	Yes	Read Write	The desired level of the liquid in percentage.

16120 **6.85.6 CRUDN behaviour**

16121 Table 174 defines the CRUDN operations that are supported on the "oic.r.liquid.level" Resource
16122 Type.

16123 **Table 174 – The CRUDN operations of the Resource with type "rt" = "oic.r.liquid.level".**

Create	Read	Update	Delete	Notify
	get	post		observe

16124 **6.86 Vehicle Connector**

16125 **6.86.1 Introduction**

16126 This Resource describes the attributes associated with an electric vehicle charging connector. The
16127 Property "connected" is a boolean indicating the status of the connector (False = disconnected,

16128 True = connected). The Property "ratedchargingcapacity" and "rateddischargingcapacity" are in
16129 Amps (A).

16130 6.86.2 Example URI

16131 /VehicleConnectorResURI

16132 6.86.3 Resource type

16133 The Resource Type is defined as: "oic.r.vehicle.connector".

16134 6.86.4 OpenAPI 2.0 definition

```
16135 {  
16136   "swagger": "2.0",  
16137   "info": {  
16138     "title": "Vehicle Connector",  
16139     "version": "20190215",  
16140     "license": {  
16141       "name": "OCF Data Model License",  
16142       "url":  
16143         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
16144         CENSE.md",  
16145       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
16146       reserved."  
16147     },  
16148     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
16149   },  
16150   "schemes": ["http"],  
16151   "consumes": ["application/json"],  
16152   "produces": ["application/json"],  
16153   "paths": {  
16154     "/VehicleConnectorResURI" : {  
16155       "get": {  
16156         "description": "This Resource describes the attributes associated with an electric vehicle  
16157         charging connector. The Property \"connected\" is a boolean indicating the status of the connector  
16158         (False = disconnected, True = connected). The Property \"ratedchargingcapacity\" and  
16159         \"rateddischargingcapacity\" are in Amps (A).",  
16160         "parameters": [  
16161           { "$ref": "#/parameters/interface" }  
16162         ],  
16163         "responses": {  
16164           "200": {  
16165             "description": "",  
16166             "x-example":  
16167               {  
16168                 "rt": ["oic.r.vehicle.connector"],  
16169                 "if": ["oic.if.s", "oic.if.baseline"],  
16170                 "connected": true,  
16171                 "ratedchargingcapacity": 20.0,  
16172                 "rateddischargingcapacity": 5.0  
16173               },  
16174             "schema": { "$ref": "#/definitions/VehicleConnector" }  
16175           }  
16176         }  
16177       }  
16178     }  
16179   },  
16180   "parameters": {  
16181     "interface": {  
16182       "in": "query",  
16183       "name": "if",  
16184       "type": "string",  
16185       "enum": ["oic.if.s", "oic.if.baseline"]  
16186     }  
16187   },  
16188   "definitions": {  
16189     "VehicleConnector" : {  
16190       "properties": {  
16191         "rt": {  
16192           "description": "The Resource Type.",
```

```

16193         "items": {
16194             "enum": ["oic.r.vehicle.connector"],
16195             "maxLength": 64,
16196             "type": "string"
16197         },
16198         "minItems": 1,
16199         "uniqueItems": true,
16200         "readOnly": true,
16201         "type": "array"
16202     },
16203     "connected": {
16204         "description": "The connection state.",
16205         "readOnly": true,
16206         "type": "boolean"
16207     },
16208     "ratedchargingcapacity": {
16209         "description": "The rated charging capacity in Amps (A).",
16210         "readOnly": true,
16211         "type": "number"
16212     },
16213     "rateddischargingcapacity": {
16214         "description": "The rated discharging capacity in Amps (A).",
16215         "readOnly": true,
16216         "type": "number"
16217     },
16218     "n": {
16219         "$ref":
16220         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16221         schema.json#/definitions/n"
16222     },
16223     "id": {
16224         "$ref":
16225         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16226         schema.json#/definitions/id"
16227     },
16228     "if": {
16229         "description": "The OCF Interface set supported by this Resource.",
16230         "items": {
16231             "enum": [
16232                 "oic.if.s",
16233                 "oic.if.baseline"
16234             ],
16235             "type": "string"
16236         },
16237         "minItems": 2,
16238         "uniqueItems": true,
16239         "readOnly": true,
16240         "type": "array"
16241     }
16242 },
16243 "type": "object",
16244 "required": ["connected"]
16245 }
16246 }
16247 }
16248

```

6.86.5 Property definition

Table 175 defines the Properties that are part of the "oic.r.vehicle.connector" Resource Type.

Table 175 – The Property definitions of the Resource with type "rt" = "oic.r.vehicle.connector".

Property name	Value type	Mandatory	Access mode	Description
id	multiple types: see schema	No	Read Write	

ratedchargingcapacity	number	No	Read Only	The rated charging capacity in Amps (A).
connected	boolean	Yes	Read Only	The connection state.
n	multiple types: see schema	No	Read Write	
rt	array: see schema	No	Read Only	The Resource Type.
rateddischargingcapacity	number	No	Read Only	The rated discharging capacity in Amps (A).
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

16253 **6.86.6 CRUDN behaviour**

16254 Table 176 defines the CRUDN operations that are supported on the "oic.r.vehicle.connector"
16255 Resource Type.

16256 **Table 176 – The CRUDN operations of the Resource with type "rt" =**
16257 **"oic.r.vehicle.connector".**

Create	Read	Update	Delete	Notify
	get			observe

16258 **6.87 Time Stamp**

16259 **6.87.1 Introduction**

16260 This Resource describes Properties associated with a timestamp.
16261 The "timestamp" Property is a string that captures a timestamp using the RFC3339 datetime format
16262 (e.g: 2007-04-05T14:30Z) (Time+Date+Timezone).

16263 **6.87.2 Example URI**

16264 /TimeStampResURI

16265 **6.87.3 Resource type**

16266 The Resource Type is defined as: "oic.r.time.stamp".

16267 **6.87.4 OpenAPI 2.0 definition**

16268 {
16269 "swagger": "2.0",
16270 "info": {
16271 "title": "Time Stamp",

```

16272     "version": "20190215",
16273     "license": {
16274         "name": "OCF Data Model License",
16275         "url":
16276         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
16277         CENSE.md",
16278         "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
16279         reserved."
16280     },
16281     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
16282 },
16283     "schemes": ["http"],
16284     "consumes": ["application/json"],
16285     "produces": ["application/json"],
16286     "paths": {
16287         "/TimeStampResURI" : {
16288             "get": {
16289                 "description": "This Resource describes Properties associated with a timestamp.\nThe
16290                 \\"timestamp\\" Property is a string that captures a timestamp using the RFC3339 datetime format (e.g:
16291                 2007-04-05T14:30Z) (Time+Date+Timezone).",
16292                 "parameters": [
16293                     { "$ref": "#/parameters/interface" }
16294                 ],
16295                 "responses": {
16296                     "200": {
16297                         "description": "",
16298                         "x-example":
16299                         {
16300                             "rt": ["oic.r.time.stamp"],
16301                             "if": ["oic.if.s", "oic.if.r", "oic.if.baseline"],
16302                             "timestamp": "2015-11-05T14:30:00Z"
16303                         },
16304                         "schema": { "$ref": "#/definitions/TimeStamp" }
16305                     }
16306                 }
16307             }
16308         },
16309     },
16310     "parameters": {
16311         "interface": {
16312             "in": "query",
16313             "name": "if",
16314             "type": "string",
16315             "enum": ["oic.if.s", "oic.if.r", "oic.if.baseline"]
16316         }
16317     },
16318     "definitions": {
16319         "TimeStamp" : {
16320             "properties": {
16321                 "rt": {
16322                     "description": "The Resource Type.",
16323                     "items": {
16324                         "enum": ["oic.r.time.stamp"],
16325                         "maxLength": 64,
16326                         "type": "string"
16327                     },
16328                     "minItems": 1,
16329                     "uniqueItems": true,
16330                     "readOnly": true,
16331                     "type": "array"
16332                 },
16333                 "timestamp": {
16334                     "description": "An RFC3339 formatted time indicating when the data was observed (e.g.:
16335                     2016-02-15T09:19Z, 1996-12-19T16:39:57-08:00).",
16336                     "format": "date-time",
16337                     "readOnly": true,
16338                     "type": "string"
16339                 },
16340                 "n": {
16341                     "$ref":
16342                     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16343                     schema.json#/definitions/n"

```

```

16344     },
16345     "id": {
16346         "$ref":
16347         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16348         schema.json#/definitions/id"
16349     },
16350     "if": {
16351         "description": "The OCF Interface set supported by this Resource.",
16352         "items": {
16353             "enum": [
16354                 "oic.if.s",
16355                 "oic.if.r",
16356                 "oic.if.baseline"
16357             ],
16358             "type": "string"
16359         },
16360         "minItems": 2,
16361         "uniqueItems": true,
16362         "readOnly": true,
16363         "type": "array"
16364     }
16365 },
16366 "type": "object",
16367 "required": ["timestamp"]
16368 }
16369 }
16370 }
16371

```

6.87.5 Property definition

Table 177 defines the Properties that are part of the "oic.r.time.stamp" Resource Type.

Table 177 – The Property definitions of the Resource with type "rt" = "oic.r.time.stamp".

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
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	

16375 **6.87.6 CRUDN behaviour**

16376 Table 178 defines the CRUDN operations that are supported on the "oic.r.time.stamp" Resource
 16377 Type.

16378 **Table 178 – The CRUDN operations of the Resource with type "rt" = "oic.r.time.stamp".**

Create	Read	Update	Delete	Notify
	get			observe

16379 **6.88 3D Printer**

16380 **6.88.1 Introduction**

16381 This Resource describes the attributes associated with 3D Printer. The type of 3D printing
 16382 technology is specified by an enumerated string value. The maximum sizes in mm are included for
 16383 the x, y, and z dimensions. A designation of whether the device is capable of WAN connectivity is
 16384 represented in a boolean. The memory capacity is captured in MB.

16385 **6.88.2 Example URI**

16386 /3DPrinterResURI

16387 **6.88.3 Resource type**

16388 The Resource Type is defined as: "oic.r.printer.3d".

16389 **6.88.4 OpenAPI 2.0 definition**

```

16390 {
16391   "swagger": "2.0",
16392   "info": {
16393     "title": "3D Printer",
16394     "version": "20190222",
16395     "license": {
16396       "name": "OCF Data Model License",
16397       "url":
16398         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
16399         CENSE.md",
16400       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
16401     },
16402     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
16403   },
16404   "schemes": ["http"],
16405   "consumes": ["application/json"],
16406   "produces": ["application/json"],
16407   "paths": {
16408     "/3DPrinterResURI" : {
16409       "get": {
16410         "description": "This Resource describes the attributes associated with 3D Printer. The type
16411         of 3D printing technology is specified by an enumerated string value. The maximum sizes in mm are
16412         included for the x, y, and z dimensions. A designation of whether the device is capable of WAN
16413         connectivity is represented in a boolean. The memory capacity is captured in MB.",
16414         "parameters": [
16415           {"$ref": "#/parameters/interface"}
16416         ],
16417         "responses": {
16418           "200": {
16419             "description": "",
16420             "x-example":
16421               {
16422                 "rt" : ["oic.r.printer.3d"],
16423                 "if" : ["oic.if.r", "oic.if.baseline"],
16424                 "3dprinttype" : "Digital Light Processing",
16425                 "printsizex" : 300.00,
16426                 "printsizex" : 200.50,
16427                 "printsizex" : 250.75,

```

```

16428         "wanconnected" : false,
16429         "memorysize" : 120.5
16430     },
16431     "schema": { "$ref": "#/definitions/3DPrinter" }
16432 }
16433 }
16434 }
16435 }
16436 },
16437 "parameters": {
16438     "interface" : {
16439         "in": "query",
16440         "name": "if",
16441         "type": "string",
16442         "enum": ["oic.if.r", "oic.if.baseline"]
16443     }
16444 },
16445 "definitions": {
16446     "3DPrinter": {
16447         "properties": {
16448             "rt": {
16449                 "description": "The Resource Type",
16450                 "items": {
16451                     "maxLength": 64,
16452                     "type": "string",
16453                     "enum": ["oic.r.printer.3d"]
16454                 },
16455                 "minItems": 1,
16456                 "uniqueItems" : true,
16457                 "readOnly": true,
16458                 "type": "array"
16459             },
16460             "printsizex": {
16461                 "description": "This Property represents the maximum size of printing object in the
16462 direction of Y-axis. The unit is mm.",
16463                 "readOnly": true,
16464                 "type": "number"
16465             },
16466             "memorysize": {
16467                 "description": "This Property represents the total memory size of the printer. The unit is
16468 MB(Mega Bytes)",
16469                 "readOnly": true,
16470                 "type": "number"
16471             },
16472             "3dprinttype": {
16473                 "description": "The type of 3D printing technology.",
16474                 "enum": [
16475                     "Fused Filament Fabrication",
16476                     "Fused Deposition Modeling",
16477                     "Digital Light Processing",
16478                     "Powder Bed & inkjet head 3D Printing",
16479                     "Photopolymer Jetting Technology",
16480                     "Laminated Object Manufacturing",
16481                     "Stereolithography Apparatus",
16482                     "Selective Laser Sintering",
16483                     "Unknown"
16484                 ],
16485                 "readOnly": true,
16486                 "type": "string"
16487             },
16488             "wanconnected": {
16489                 "description": "This Property indicates the connectivity capability of the 3D printer. If
16490 the value is false, the printer does not have network facility to Wide Area Network such as internet
16491 and GSM. If the value is true, the printer has network connectivity",
16492                 "readOnly": true,
16493                 "type": "boolean"
16494             },
16495             "printsizex": {
16496                 "description": "This Property represents the maximum size of printing object in the
16497 direction of X-axis. The unit is mm.",
16498                 "readOnly": true,
16499                 "type": "number"

```

```

16500     },
16501     "printsizez": {
16502       "description": "This Property represents the maximum size of printing object in the
16503 direction of Z-axis. The unit is mm.",
16504       "readOnly": true,
16505       "type": "number"
16506     },
16507     "n": {
16508       "$ref":
16509 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16510 schema.json#/definitions/n"
16511     },
16512     "id": {
16513       "$ref":
16514 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16515 schema.json#/definitions/id"
16516     },
16517     "if": {
16518       "description": "The OCF Interface set supported by this Resource.",
16519       "items": {
16520         "enum": [
16521           "oic.if.r",
16522           "oic.if.baseline"
16523         ],
16524         "type": "string"
16525       },
16526       "minItems": 2,
16527       "readOnly": true,
16528       "uniqueItems": true,
16529       "type": "array"
16530     }
16531   },
16532   "type": "object",
16533   "required": ["3dprinttype", "printsize", "printsizez", "printsizez", "wanconnected",
16534 "memorysize"]
16535 }
16536 }
16537 }
16538

```

16539 6.88.5 Property definition

16540 Table 179 defines the Properties that are part of the "oic.r.printer.3d" Resource Type.

16541 **Table 179 – The Property definitions of the Resource with type "rt" = "oic.r.printer.3d".**

Property name	Value type	Mandatory	Access mode	Description
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	
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 X-axis. The unit is mm.
printsizy	number	Yes	Read Only	This Property represents the maximum size of printing object in the direction of Y-axis. The unit is mm.
3dprinttype	string	Yes	Read Only	The type of 3D printing technology.
memorysize	number	Yes	Read Only	This Property represents the total memory size of the printer. The unit is MB(Mega Bytes)
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
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

16542 **6.88.6 CRUDN behaviour**

16543 Table 180 defines the CRUDN operations that are supported on the "oic.r.printer.3d" Resource
16544 Type.

16545 **Table 180 – The CRUDN operations of the Resource with type "rt" = "oic.r.printer.3d".**

Create	Read	Update	Delete	Notify
	get			observe

16546 **6.89 Blood Pressure**

16547 **6.89.1 Introduction**

16548 This Resource describes the Properties associated with a person's blood pressure.
 16549 The unit is a single value that is one of mmHg or kPa.
 16550 If the unit Property is missing the default is a millimeter of mercury [mmHg].
 16551 The bloodpressure and unit Properties are read-only values that are provided by the Server.
 16552 When range is omitted the default is 0 to +MAXFLOAT.

16553 **6.89.2 Example URI**

16554 /BloodPressureResURI

16555 **6.89.3 Resource type**

16556 The Resource Type is defined as: "oic.r.blood.pressure".

16557 **6.89.4 OpenAPI 2.0 definition**

```

16558 {
16559   "swagger": "2.0",
16560   "info": {
16561     "title": "Blood Pressure",
16562     "version": "2019-03-22",
16563     "license": {
16564       "name": "OCF Data Model License",
16565       "url":
16566         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
16567         CENSE.md",
16568       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
16569     },
16570     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
16571   },
16572   "schemes": [
16573     "http"
16574   ],
16575   "consumes": [
16576     "application/json"
16577   ],
16578   "produces": [
16579     "application/json"
16580   ],
16581   "paths": {
16582     "/BloodPressureResURI": {
16583       "get": {
16584         "description": "This Resource describes the Properties associated with a person's blood
16585         pressure.\nThe unit is a single value that is one of mmHg or kPa.\nIf the unit Property is missing
16586         the default is a millimeter of mercury [mmHg].\nThe bloodpressure and unit Properties are read-only
16587         values that are provided by the Server.\nWhen range is omitted the default is 0 to +MAXFLOAT.",
16588         "parameters": [
16589           {
16590             "$ref": "#/parameters/interface"
16591           }
16592         ],
16593         "responses": {
16594           "200": {
16595             "description": "",
16596             "x-example": {
16597               "rt": [
16598                 "oic.r.blood.pressure"
16599               ]
16600             }
16601           }
16602         }
16603       }
16604     }
16605   }
16606 }
    
```

```

16600         "systolic": 110.0,
16601         "diastolic": 85.0,
16602         "map": 93.0,
16603         "range": [20.0, 300.0],
16604         "step": 1.0,
16605         "units": "mmHg"
16606     },
16607     "schema": {
16608         "$ref": "#/definitions/BloodPressure"
16609     }
16610 }
16611 }
16612 }
16613 }
16614 },
16615 "parameters": {
16616     "interface": {
16617         "in": "query",
16618         "name": "if",
16619         "type": "string",
16620         "enum": [
16621             "oic.if.s",
16622             "oic.if.baseline"
16623         ]
16624     }
16625 },
16626 "definitions": {
16627     "BloodPressure": {
16628         "properties": {
16629             "rt": {
16630                 "description": "Resource Type",
16631                 "items": {
16632                     "enum": [
16633                         "oic.r.blood.pressure"
16634                     ],
16635                     "type": "string",
16636                     "maxLength": 64
16637                 },
16638                 "minItems": 1,
16639                 "uniqueItems": true,
16640                 "readOnly": true,
16641                 "type": "array"
16642             },
16643             "map": {
16644                 "description": "Mean arterial pressure (MAP)",
16645                 "minimum": 0.0,
16646                 "readOnly": true,
16647                 "type": "number"
16648             },
16649             "units": {
16650                 "description": "Blood pressure unit",
16651                 "enum": [
16652                     "mmHg",
16653                     "kPa"
16654                 ],
16655                 "readOnly": true,
16656                 "type": "string",
16657                 "default": "mmHg"
16658             },
16659             "systolic": {
16660                 "description": "Systolic blood pressure",
16661                 "minimum": 0.0,
16662                 "readOnly": true,
16663                 "type": "number"
16664             },
16665             "diastolic": {
16666                 "description": "Diastolic blood pressure",
16667                 "minimum": 0.0,
16668                 "readOnly": true,
16669                 "type": "number"
16670             },
16671             "if": {

```

```

16672         "description": "The OCF Interface set supported by this Resource",
16673         "items": {
16674             "enum": [
16675                 "oic.if.s",
16676                 "oic.if.baseline"
16677             ],
16678             "type": "string",
16679             "maxLength": 64
16680         },
16681         "minItems": 1,
16682         "readOnly": true,
16683         "uniqueItems": true,
16684         "type": "array"
16685     },
16686     "range": {
16687         "$ref":
16688         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
16689         schema.json#/definitions/range_number"
16690     },
16691     "step": {
16692         "$ref":
16693         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
16694         schema.json#/definitions/step_number"
16695     },
16696     "precision": {
16697         "$ref":
16698         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
16699         schema.json#/definitions/precision"
16700     },
16701     "n": {
16702         "$ref":
16703         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16704         schema.json#/definitions/n"
16705     }
16706 },
16707 "type": "object",
16708 "required": [
16709     "systolic",
16710     "diastolic"
16711 ]
16712 }
16713 }
16714 }
16715

```

6.89.5 Property definition

Table 181 defines the Properties that are part of the "oic.r.blood.pressure" Resource Type.

Table 181 – The Property definitions of the Resource with type "rt" = "oic.r.blood.pressure".

Property name	Value type	Mandatory	Access mode	Description
precision	multiple types: see schema	No	Read Write	
diastolic	number	Yes	Read Only	Diastolic blood pressure
units	string	No	Read Only	Blood pressure unit
rt	array: see schema	No	Read Only	Resource Type

if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
n	multiple types: see schema	No	Read Write	
systolic	number	Yes	Read Only	Systolic blood pressure
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
map	number	No	Read Only	Mean arterial pressure (MAP)

16720 **6.89.6 CRUDN behaviour**

16721 Table 182 defines the CRUDN operations that are supported on the "oic.r.blood.pressure"
16722 Resource Type.

16723 **Table 182 – The CRUDN operations of the Resource with type "rt" = "oic.r.blood.pressure".**

Create	Read	Update	Delete	Notify
	get			observe

16724 **6.90 Blood Pressure Monitor Atomic Measurement**

16725 **6.90.1 Introduction**

16726 This Resource describes the Properties associated with a blood pressure monitor.
16727 The Resource is an Atomic Measurement of blood pressure (oic.r.blood.pressure), pulse rate
16728 (oic.r.pulserate), observed time (oic.r.time.stamp), and user id (oic.r.userid).

16729 **6.90.2 Example URI**

16730 /BloodPressureMonitorAMResURI

16731 **6.90.3 Resource type**

16732 The Resource Type is defined as: "oic.r.bloodpressuremonitor-am, oic.wk.atomicmeasurement".

16733 **6.90.4 OpenAPI 2.0 definition**

```
16734 {
16735   "swagger": "2.0",
16736   "info": {
16737     "title": "Blood Pressure Monitor Atomic Measurement",
16738     "version": "2019-03-22",
16739     "license": {
16740       "name": "OCF Data Model License",
16741       "url":
16742         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
16743         CENSE.md",
```

```

16744     "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
16745   },
16746   "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
16747 },
16748 "schemes": [
16749   "http"
16750 ],
16751 "consumes": [
16752   "application/json"
16753 ],
16754 "produces": [
16755   "application/json"
16756 ],
16757 "paths": {
16758   "/BloodPressureMonitorAMResURI?if=oic.if.b": {
16759     "get": {
16760       "description": "This Resource describes the Properties associated with a blood pressure
16761 monitor.\nThe Resource is an Atomic Measurement of blood pressure (oic.r.blood.pressure), pulse
16762 rate (oic.r.pulserate), observed time (oic.r.time.stamp), and user id (oic.r.userid).",
16763       "parameters": [
16764         {
16765           "$ref": "#/parameters/interface-all"
16766         }
16767       ],
16768       "responses": {
16769         "200": {
16770           "description": "",
16771           "x-example": [
16772             {
16773               "href": "/myBloodPressureResURI",
16774               "rep": {
16775                 "systolic": 120.0,
16776                 "diastolic": 80.0,
16777                 "map": 93.0,
16778                 "range": [20.0, 300.0],
16779                 "step": 1,
16780                 "units": "mmHg"
16781               }
16782             },
16783             {
16784               "href": "/myPulseRateResURI",
16785               "rep": {
16786                 "pulserate": 70,
16787                 "range": [20, 220],
16788                 "step": 1
16789               }
16790             },
16791             {
16792               "href": "/myUserId",
16793               "rep": {
16794                 "userid": "USER1"
16795               }
16796             },
16797             {
16798               "href": "/myTimeStamp",
16799               "rep": {
16800                 "timestamp": "2018-11-08T21:00+08:00"
16801               }
16802             }
16803           ],
16804           "schema": {
16805             "$ref": "#/definitions/batch-retrieve"
16806           }
16807         }
16808       }
16809     },
16810   },
16811   "/BloodPressureMonitorAMResURI?if=oic.if.ll": {
16812     "get": {
16813       "description": "This Resource describes the Properties associated with a blood pressure
16814 monitor.\nThe Resource is an Atomic Measurement of blood pressure (oic.r.blood.pressure), pulse
16815 rate (oic.r.pulserate), observed time (oic.r.time.stamp), and user id (oic.r.userid).",

```

```

16816     "parameters": [
16817         {
16818             "$ref": "#/parameters/interface-all"
16819         }
16820     ],
16821     "responses": {
16822         "200": {
16823             "description": "",
16824             "x-example": [
16825                 {
16826                     "href": "/myBloodPressureResURI",
16827                     "rt": [
16828                         "oic.r.blood.pressure"
16829                     ],
16830                     "if": [
16831                         "oic.if.s",
16832                         "oic.if.baseline"
16833                     ]
16834                 },
16835                 {
16836                     "href": "/myPulseRateResURI",
16837                     "rt": [
16838                         "oic.r.pulserate"
16839                     ],
16840                     "if": [
16841                         "oic.if.s",
16842                         "oic.if.baseline"
16843                     ]
16844                 },
16845                 {
16846                     "href": "/myUserId",
16847                     "rt": [
16848                         "oic.r.userid"
16849                     ],
16850                     "if": [
16851                         "oic.if.r",
16852                         "oic.if.baseline"
16853                     ]
16854                 },
16855                 {
16856                     "href": "/myTimeStamp",
16857                     "rt": [
16858                         "oic.r.time.stamp"
16859                     ],
16860                     "if": [
16861                         "oic.if.r",
16862                         "oic.if.baseline"
16863                     ]
16864                 }
16865             ],
16866             "schema": {
16867                 "$ref": "#/definitions/links"
16868             }
16869         }
16870     }
16871 },
16872 "/BloodPressureMonitorAMResURI?if=oic.if.baseline": {
16873     "get": {
16874         "description": "This Resource describes the Properties associated with a blood pressure
16875 monitor.\n\nThe Resource is an Atomic Measurement of blood pressure (oic.r.blood.pressure), pulse
16876 rate (oic.r.pulserate), observed time (oic.r.time.stamp), and user id (oic.r.userid).",
16877         "parameters": [
16878             {
16879                 "$ref": "#/parameters/interface-all"
16880             }
16881         ],
16882         "responses": {
16883             "200": {
16884                 "description": "",
16885                 "x-example": {
16886                     "rt": [

```

```

16888         "oic.r.bloodpressuremonitor-am",
16889         "oic.wk.atomicmeasurement"
16890     ],
16891     "if": [
16892         "oic.if.b",
16893         "oic.if.ll",
16894         "oic.if.baseline"
16895     ],
16896     "rts-m": [
16897         "oic.r.blood.pressure"
16898     ],
16899     "rts": [
16900         "oic.r.blood.pressure",
16901         "oic.r.pulserate",
16902         "oic.r.userid",
16903         "oic.r.time.stamp"
16904     ],
16905     "links": [
16906         {
16907             "href": "/myBloodPressureResURI",
16908             "rt": [
16909                 "oic.r.blood.pressure"
16910             ],
16911             "if": [
16912                 "oic.if.s",
16913                 "oic.if.baseline"
16914             ]
16915         },
16916         {
16917             "href": "/myPulseRateResURI",
16918             "rt": [
16919                 "oic.r.pulserate"
16920             ],
16921             "if": [
16922                 "oic.if.s",
16923                 "oic.if.baseline"
16924             ]
16925         },
16926         {
16927             "href": "/myUserId",
16928             "rt": [
16929                 "oic.r.userid"
16930             ],
16931             "if": [
16932                 "oic.if.r",
16933                 "oic.if.baseline"
16934             ]
16935         },
16936         {
16937             "href": "/myTimeStamp",
16938             "rt": [
16939                 "oic.r.time.stamp"
16940             ],
16941             "if": [
16942                 "oic.if.r",
16943                 "oic.if.baseline"
16944             ]
16945         }
16946     ],
16947     "schema": {
16948         "$ref": "#/definitions/baseline"
16949     }
16950 }
16951 }
16952 }
16953 }
16954 }
16955 },
16956 "parameters": {
16957     "interface-all": {
16958         "in": "query",
16959         "name": "if",

```



```

16960         "type": "string",
16961         "enum": [
16962             "oic.if.b",
16963             "oic.if.ll",
16964             "oic.if.baseline"
16965         ]
16966     },
16967 },
16968 "definitions": {
16969     "batch-retrieve": {
16970         "minItems": 1,
16971         "items": {
16972             "properties": {
16973                 "href": {
16974                     "$ref":
16975 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
16976 schema.json#/definitions/href"
16977                 },
16978                 "rep": {
16979                     "type": "object",
16980                     "anyOf": [
16981                         {
16982                             "$ref":
16983 "https://openconnectivityfoundation.github.io/IoTDataModels/BloodPressureResURI.swagger.json#/defini-
16984 tions/BloodPressure"
16985                         },
16986                         {
16987                             "$ref":
16988 "https://openconnectivityfoundation.github.io/IoTDataModels/PulseRateResURI.swagger.json#/definition-
16989 s/PulseRate"
16990                         },
16991                         {
16992                             "$ref":
16993 "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/U-
16994 serID"
16995                         },
16996                         {
16997                             "$ref":
16998 "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definition-
16999 s/TimeStamp"
17000                         }
17001                     ]
17002                 }
17003             },
17004             "required": [
17005                 "href",
17006                 "rep"
17007             ],
17008             "type": "object"
17009         },
17010         "type": "array"
17011     },
17012     "links": {
17013         "type": "array",
17014         "items": {
17015             "$ref": "#/definitions/oic.oic-link"
17016         }
17017     },
17018     "baseline": {
17019         "properties": {
17020             "rt": {
17021                 "items": {
17022                     "enum": [
17023                         "oic.r.bloodpressuremonitor-am",
17024                         "oic.wk.atomicmeasurement"
17025                     ],
17026                     "type": "string",
17027                     "maxLength": 64
17028                 },
17029                 "minItems": 2,
17030                 "uniqueItems": true,
17031                 "readOnly": true,

```

```

17032     "type": "array"
17033   },
17034   "rts": {
17035     "description": "This contains all possible Resource Types for this Atomic Measurement.",
17036     "items": {
17037       "enum": [
17038         "oic.r.blood.pressure",
17039         "oic.r.pulserate",
17040         "oic.r.userid",
17041         "oic.r.time.stamp"
17042       ],
17043       "type": "string",
17044       "maxLength": 64
17045     },
17046     "minItems": 1,
17047     "uniqueItems": true,
17048     "readOnly": true,
17049     "type": "array"
17050   },
17051   "rts-m": {
17052     "description": "This contains all mandatory Resource Types for this Atomic Measurement.",
17053     "items": {
17054       "enum": [
17055         "oic.r.blood.pressure"
17056       ],
17057       "type": "string",
17058       "maxLength": 64
17059     },
17060     "maxItems": 1,
17061     "minItems": 1,
17062     "uniqueItems": true,
17063     "readOnly": true,
17064     "type": "array"
17065   },
17066   "if": {
17067     "description": "The OCF Interface set supported by this Resource",
17068     "items": {
17069       "enum": [
17070         "oic.if.b",
17071         "oic.if.ll",
17072         "oic.if.baseline"
17073       ],
17074       "type": "string"
17075     },
17076     "minItems": 3,
17077     "uniqueItems": true,
17078     "readOnly": true,
17079     "type": "array"
17080   },
17081   "n": {
17082     "$ref":
17083     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17084     schema.json#/definitions/n"
17085   },
17086   "id": {
17087     "$ref":
17088     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17089     schema.json#/definitions/id"
17090   },
17091   "links": {
17092     "$ref": "#/definitions/links"
17093   }
17094 },
17095 "type": "object",
17096 "required": [
17097   "rt", "if", "rts", "rts-m", "links"
17098 ]
17099 },
17100 "oic.oic-link": {
17101   "properties": {
17102     "if": {
17103       "type": "array",

```

```

17104         "readOnly": true,
17105         "uniqueItems": true,
17106         "minItems": 1,
17107         "items": {
17108             "type": "string",
17109             "maxLength": 64,
17110             "enum": [
17111                 "oic.if.s",
17112                 "oic.if.r",
17113                 "oic.if.baseline"
17114             ]
17115         }
17116     },
17117     "rt": {
17118         "type": "array",
17119         "readOnly": true,
17120         "uniqueItems": true,
17121         "minItems": 1,
17122         "items": {
17123             "type": "string",
17124             "maxLength": 64,
17125             "enum": [
17126                 "oic.r.blood.pressure",
17127                 "oic.r.pulserate",
17128                 "oic.r.userid",
17129                 "oic.r.time.stamp"
17130             ]
17131         }
17132     },
17133     "anchor": {
17134         "$ref":
17135         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17136         schema.json#/definitions/anchor"
17137     },
17138     "di": {
17139         "$ref":
17140         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17141         schema.json#/definitions/di"
17142     },
17143     "eps": {
17144         "$ref":
17145         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17146         schema.json#/definitions/eps"
17147     },
17148     "href": {
17149         "$ref":
17150         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17151         schema.json#/definitions/href"
17152     },
17153     "ins": {
17154         "$ref":
17155         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17156         schema.json#/definitions/ins"
17157     },
17158     "p": {
17159         "$ref":
17160         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17161         schema.json#/definitions/p"
17162     },
17163     "rel": {
17164         "$ref":
17165         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17166         schema.json#/definitions/rel_array"
17167     },
17168     "title": {
17169         "$ref":
17170         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17171         schema.json#/definitions/title"
17172     },
17173     "type": {
17174         "$ref":
17175         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-

```

```

17176 schema.json#/definitions/type"
17177     }
17178   },
17179   "required": [
17180     "href",
17181     "rt",
17182     "if"
17183   ],
17184   "type": "object"
17185 }
17186 }
17187 }
17188

```

17189 **6.90.5 Property definition**

17190 Table 183 defines the Properties that are part of the "oic.r.bloodpressuremonitor-am,
17191 oic.wk.atomicmeasurement" Resource Type.

17192 **Table 183 – The Property definitions of the Resource with type "rt" =**
17193 **"oic.r.bloodpressuremonitor-am, oic.wk.atomicmeasurement".**

Property name	Value type	Mandatory	Access mode	Description
rep	object: see schema	Yes	Read Write	
href	multiple types: see schema	Yes	Read Write	
rts	array: see schema	Yes	Read Only	This contains all possible Resource Types for this Atomic Measurement.
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 Interface set supported by this Resource
rts-m	array: see schema	Yes	Read Only	This contains all mandatory Resource Types for this Atomic Measurement.
rt	array: see schema	Yes	Read Only	

links	multiple types: see schema	Yes	Read Write	
rel	multiple types: see schema	No	Read Write	
ins	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
eps	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
if	array: see schema	Yes	Read Only	
p	multiple types: see schema	No	Read Write	
anchor	multiple types: see schema	No	Read Write	
rt	array: see schema	Yes	Read Only	
di	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	

17194 **6.90.6 CRUDN behaviour**

17195 Table 184 defines the CRUDN operations that are supported on the "oic.r.bloodpressuremonitor-
17196 am, oic.wk.atomicmeasurement" Resource Type.

17197 **Table 184 – The CRUDN operations of the Resource with type "rt" =**
17198 **"oic.r.bloodpressuremonitor-am, oic.wk.atomicmeasurement".**

Create	Read	Update	Delete	Notify
	get			observe

17199 **6.91 Body Mass Index(BMI)**

17200 **6.91.1 Introduction**

17201 This Resource describes the Properties associated with a person's Body Mass Index (BMI).
17202 The unit, which is the default unit, is kg/m².
17203 The bmi and unit Properties are read-only values that are provided by the server.
17204 When range is omitted the default is 0 to +MAXFLOAT.

17205 **6.91.2 Example URI**

17206 /BMIResURI

17207 **6.91.3 Resource type**

17208 The Resource Type is defined as: "oic.r.bmi".

17209 **6.91.4 OpenAPI 2.0 definition**

```
17210 {  
17211   "swagger": "2.0",  
17212   "info": {  
17213     "title": "Body Mass Index(BMI)",  
17214     "version": "2019-03-22",  
17215     "license": {  
17216       "name": "OCF Data Model License",  
17217       "url":  
17218       "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbcce8bdc4ba/LI  
17219       CENSE.md",  
17220       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."  
17221     },  
17222     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
17223   },  
17224   "schemes": [  
17225     "http"  
17226   ],  
17227   "consumes": [  
17228     "application/json"  
17229   ],  
17230   "produces": [  
17231     "application/json"  
17232   ],  
17233   "paths": {  
17234     "/BMIResURI": {  
17235       "get": {  
17236         "description": "This Resource describes the Properties associated with a person's Body Mass  
17237         Index (BMI).\n\nThe unit, which is the default unit, is kg/m^2.\n\nThe bmi and unit Properties are read-  
17238         only values that are provided by the server.\n\nWhen range is omitted the default is 0 to +MAXFLOAT.",  
17239         "parameters": [  
17240           {  
17241             "$ref": "#/parameters/interface"  
17242           }  
17243         ],  
17244         "responses": {  
17245           "200": {  
17246             "description": "",  
17247             "x-example": {  
17248               "rt": [  
17249                 "oic.r.bmi"  
17250               ],  
17251               "bmi": 20.0  
17252             },  
17253             "schema": {  
17254               "$ref": "#/definitions/BMI"  
17255             }  
17256           }  
17257         }  
17258       }  
17259     }  
17260   },  
17261   "parameters": {
```

```

17262     "interface": {
17263         "in": "query",
17264         "name": "if",
17265         "type": "string",
17266         "enum": [
17267             "oic.if.s",
17268             "oic.if.baseline"
17269         ]
17270     },
17271 },
17272 "definitions": {
17273     "BMI": {
17274         "properties": {
17275             "rt": {
17276                 "description": "Resource Type",
17277                 "items": {
17278                     "enum": [
17279                         "oic.r.bmi"
17280                     ],
17281                     "type": "string",
17282                     "maxLength": 64
17283                 },
17284                 "minItems": 1,
17285                 "uniqueItems": true,
17286                 "readOnly": true,
17287                 "type": "array"
17288             },
17289             "bmi": {
17290                 "description": "Body Mass Index (BMI) in kg/m^2",
17291                 "minimum": 0.0,
17292                 "readOnly": true,
17293                 "type": "number"
17294             },
17295             "range": {
17296                 "$ref":
17297 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
17298 schema.json#/definitions/range_number"
17299             },
17300             "step": {
17301                 "$ref":
17302 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
17303 schema.json#/definitions/step_number"
17304             },
17305             "precision": {
17306                 "$ref":
17307 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
17308 schema.json#/definitions/precision"
17309             },
17310             "n": {
17311                 "$ref":
17312 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17313 schema.json#/definitions/n"
17314             },
17315             "id": {
17316                 "$ref":
17317 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17318 schema.json#/definitions/id"
17319             },
17320             "if": {
17321                 "description": "The OCF Interface set supported by this Resource",
17322                 "items": {
17323                     "enum": [
17324                         "oic.if.s",
17325                         "oic.if.baseline"
17326                     ],
17327                     "type": "string",
17328                     "maxLength": 64
17329                 },
17330                 "minItems": 1,
17331                 "readOnly": true,
17332                 "uniqueItems": true,
17333                 "type": "array"

```

```

17334     }
17335     },
17336     "type": "object",
17337     "required": [
17338         "bmi"
17339     ]
17340 }
17341 }
17342 }
17343

```

17344 **6.91.5 Property definition**

17345 Table 185 defines the Properties that are part of the "oic.r.bmi" Resource Type.

17346 **Table 185 – The Property definitions of the Resource with type "rt" = "oic.r.bmi".**

Property name	Value type	Mandatory	Access mode	Description
precision	multiple types: see schema	No	Read Write	
rt	array: see schema	No	Read Only	Resource Type
step	multiple types: see schema	No	Read Write	
range	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
bmi	number	Yes	Read Only	Body Mass Index (BMI) in kg/m ²

17347 **6.91.6 CRUDN behaviour**

17348 Table 186 defines the CRUDN operations that are supported on the "oic.r.bmi" Resource Type.

17349 **Table 186 – The CRUDN operations of the Resource with type "rt" = "oic.r.bmi".**

Create	Read	Update	Delete	Notify
	get			observe

17350 **6.92 Body Fat**

17351 **6.92.1 Introduction**

17352 This Resource describes the Properties associated with a person's body fat.
17353 The unit is a single value that is one of kg, lb or percent.
17354 If the unit Property is missing the default is kilograms [kg].
17355 The bodyfat and unit Properties are read-only values that are provided by the Server.
17356 When range is omitted the default is 0 to +MAXFLOAT.

17357 **6.92.2 Example URI**

17358 /BodyFatResURI

17359 **6.92.3 Resource type**

17360 The Resource Type is defined as: "oic.r.body.fat".

17361 **6.92.4 OpenAPI 2.0 definition**

```
17362 {  
17363   "swagger": "2.0",  
17364   "info": {  
17365     "title": "Body Fat",  
17366     "version": "2019-03-22",  
17367     "license": {  
17368       "name": "OCF Data Model License",  
17369       "url":  
17370 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
17371 CENSE.md",  
17372       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."  
17373     },  
17374     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
17375   },  
17376   "schemes": [  
17377     "http"  
17378   ],  
17379   "consumes": [  
17380     "application/json"  
17381   ],  
17382   "produces": [  
17383     "application/json"  
17384   ],  
17385   "paths": {  
17386     "/BodyFatResURI": {  
17387       "get": {  
17388         "description": "This Resource describes the Properties associated with a person's body  
17389 fat.\n\nThe unit is a single value that is one of kg, lb or percent.\n\nIf the unit Property is missing  
17390 the default is kilograms [kg].\n\nThe bodyfat and unit Properties are read-only values that are  
17391 provided by the Server.\n\nWhen range is omitted the default is 0 to +MAXFLOAT.",  
17392         "parameters": [  
17393           {  
17394             "$ref": "#/parameters/interface"  
17395           }  
17396         ],  
17397         "responses": {  
17398           "200": {  
17399             "description": "",  
17400             "x-example": {  
17401               "rt": [  
17402                 "oic.r.body.fat"  
17403               ],  
17404               "bodyfat": 20.0,  
17405               "units": "kg"  
17406             },  
17407             "schema": {  
17408               "$ref": "#/definitions/BodyFat"  
17409             }  
17410           }  
17411         }  
17412       }  
17413     }  
17414   }  
17415 }
```

```

17413     }
17414   },
17415   "parameters": {
17416     "interface": {
17417       "in": "query",
17418       "name": "if",
17419       "type": "string",
17420       "enum": [
17421         "oic.if.s",
17422         "oic.if.baseline"
17423       ]
17424     }
17425   },
17426   "definitions": {
17427     "BodyFat": {
17428       "properties": {
17429         "rt": {
17430           "description": "Resource Type",
17431           "items": {
17432             "enum": [
17433               "oic.r.body.fat"
17434             ],
17435             "type": "string",
17436             "maxLength": 64
17437           },
17438           "minItems": 1,
17439           "uniqueItems": true,
17440           "readOnly": true,
17441           "type": "array"
17442         },
17443         "bodyfat": {
17444           "description": "Body fat.",
17445           "minimum": 0.0,
17446           "readOnly": true,
17447           "type": "number"
17448         },
17449         "units": {
17450           "description": "Body fat units",
17451           "enum": [
17452             "kg",
17453             "lb",
17454             "percent"
17455           ],
17456           "readOnly": true,
17457           "type": "string",
17458           "default": "kg"
17459         },
17460         "range": {
17461           "$ref":
17462             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
17463             schema.json#/definitions/range_number"
17464         },
17465         "step": {
17466           "$ref":
17467             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
17468             schema.json#/definitions/step_number"
17469         },
17470         "precision": {
17471           "$ref":
17472             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
17473             schema.json#/definitions/precision"
17474         },
17475         "n": {
17476           "$ref":
17477             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17478             schema.json#/definitions/n"
17479         },
17480         "id": {
17481           "$ref":
17482             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17483             schema.json#/definitions/id"
17484         },

```

```

17485     "if": {
17486         "description": "The OCF Interface set supported by this Resource",
17487         "items": {
17488             "enum": [
17489                 "oic.if.s",
17490                 "oic.if.baseline"
17491             ],
17492             "type": "string",
17493             "maxLength": 64
17494         },
17495         "minItems": 1,
17496         "readOnly": true,
17497         "type": "array"
17498     }
17499 },
17500 "type": "object",
17501 "required": [
17502     "bodyfat"
17503 ]
17504 }
17505 }
17506 }
17507

```

17508 **6.92.5 Property definition**

17509 Table 187 defines the Properties that are part of the "oic.r.body.fat" Resource Type.

17510 **Table 187 – The Property definitions of the Resource with type "rt" = "oic.r.body.fat".**

Property name	Value type	Mandatory	Access mode	Description
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
step	multiple types: see schema	No	Read Write	
units	string	No	Read Only	Body fat units
range	multiple types: see schema	No	Read Write	
bodyfat	number	Yes	Read Only	Body fat.
precision	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
rt	array: see schema	No	Read Only	Resource Type

17511 **6.92.6 CRUDN behaviour**

17512 Table 188 defines the CRUDN operations that are supported on the "oic.r.body.fat" Resource Type.

17513 **Table 188 – The CRUDN operations of the Resource with type "rt" = "oic.r.body.fat".**

Create	Read	Update	Delete	Notify
	get			observe

17514 **6.93 Body Fat Free Mass**

17515 **6.93.1 Introduction**

17516 This Resource describes the Properties associated with a person's body fat free mass.
17517 The unit is a single value that is one of kg, lb or percent.
17518 If the unit Property is missing the default is kilograms [kg].
17519 The ffm and unit Properties are read-only values that are provided by the Server.
17520 When range is omitted the default is 0 to +MAXFLOAT.

17521 **6.93.2 Example URI**

17522 /BodyFatFreeMassResURI

17523 **6.93.3 Resource type**

17524 The Resource Type is defined as: "oic.r.body.ffm".

17525 **6.93.4 OpenAPI 2.0 definition**

```
17526 {  
17527   "swagger": "2.0",  
17528   "info": {  
17529     "title": "Body Fat Free Mass",  
17530     "version": "2019-03-22",  
17531     "license": {  
17532       "name": "OCF Data Model License",  
17533       "url":  
17534       "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
17535       CENSE.md",  
17536       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."  
17537     },  
17538     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
17539   },  
17540   "schemes": [  
17541     "http"  
17542   ],  
17543   "consumes": [  
17544     "application/json"  
17545   ],  
17546   "produces": [  
17547     "application/json"  
17548   ],  
17549   "paths": {  
17550     "/BodyFatFreeMassResURI": {  
17551       "get": {  
17552         "description": "This Resource describes the Properties associated with a person's body fat  
17553         free mass.\n\nThe unit is a single value that is one of kg, lb or percent.\n\nIf the unit Property is  
17554         missing the default is kilograms [kg].\n\nThe ffm and unit Properties are read-only values that are  
17555         provided by the Server.\n\nWhen range is omitted the default is 0 to +MAXFLOAT.",  
17556         "parameters": [  
17557           {  
17558             "$ref": "#/parameters/interface"  
17559           }  
17560         ],  
17561         "responses": {  
17562           "200": {  
17563             "description": "",
```

```

17564         "x-example": {
17565             "rt": [
17566                 "oic.r.body.ffm"
17567             ],
17568             "ffm": 40.0,
17569             "units": "kg"
17570         },
17571         "schema": {
17572             "$ref": "#/definitions/BodyFatFreeMass"
17573         }
17574     }
17575 }
17576 }
17577 },
17578 },
17579 "parameters": {
17580     "interface": {
17581         "in": "query",
17582         "name": "if",
17583         "type": "string",
17584         "enum": [
17585             "oic.if.s",
17586             "oic.if.baseline"
17587         ]
17588     }
17589 },
17590 "definitions": {
17591     "BodyFatFreeMass": {
17592         "properties": {
17593             "rt": {
17594                 "description": "Resource Type",
17595                 "items": {
17596                     "enum": [
17597                         "oic.r.body.ffm"
17598                     ],
17599                     "type": "string",
17600                     "maxLength": 64
17601                 },
17602                 "minItems": 1,
17603                 "uniqueItems": true,
17604                 "readOnly": true,
17605                 "type": "array"
17606             },
17607             "ffm": {
17608                 "description": "Body fat free mass.",
17609                 "minimum": 0.0,
17610                 "readOnly": true,
17611                 "type": "number"
17612             },
17613             "units": {
17614                 "description": "Body fat free mass units",
17615                 "enum": [
17616                     "kg",
17617                     "lb",
17618                     "percent"
17619                 ],
17620                 "readOnly": true,
17621                 "type": "string",
17622                 "default": "kg"
17623             },
17624             "range": {
17625                 "$ref":
17626                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
17627                 schema.json#/definitions/range_number"
17628             },
17629             "step": {
17630                 "$ref":
17631                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
17632                 schema.json#/definitions/step_number"
17633             },
17634             "precision": {
17635                 "$ref":

```

```

17636 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
17637 schema.json#/definitions/precision"
17638   },
17639   "n": {
17640     "$ref":
17641     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17642     schema.json#/definitions/n"
17643   },
17644   "id": {
17645     "$ref":
17646     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17647     schema.json#/definitions/id"
17648   },
17649   "if": {
17650     "description": "The OCF Interface set supported by this Resource",
17651     "items": {
17652       "enum": [
17653         "oic.if.s",
17654         "oic.if.baseline"
17655       ],
17656       "type": "string",
17657       "maxLength": 64
17658     },
17659     "minItems": 1,
17660     "readOnly": true,
17661     "uniqueItems": true,
17662     "type": "array"
17663   }
17664 },
17665 "type": "object",
17666 "required": [
17667   "ffm"
17668 ]
17669 }
17670 }
17671 }
17672

```

17673 **6.93.5 Property definition**

17674 Table 189 defines the Properties that are part of the "oic.r.body.ffm" Resource Type.

17675 **Table 189 – The Property definitions of the Resource with type "rt" = "oic.r.body.ffm".**

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
units	string	No	Read Only	Body fat free mass units
id	multiple types: see schema	No	Read Write	
rt	array: see schema	No	Read Only	Resource Type
if	array: see schema	No	Read Only	The OCF Interface set

				supported by this Resource
range	multiple types: see schema	No	Read Write	
ffm	number	Yes	Read Only	Body fat free mass.
precision	multiple types: see schema	No	Read Write	

17676 **6.93.6 CRUDN behaviour**

17677 Table 190 defines the CRUDN operations that are supported on the "oic.r.body.ffm" Resource Type.

17678 **Table 190 – The CRUDN operations of the Resource with type "rt" = "oic.r.body.ffm".**

Create	Read	Update	Delete	Notify
	get			observe

17679 **6.94 Body Location Temperature**

17680 **6.94.1 Introduction**

17681 This Resource describes the Properties associated with body location for temperature
 17682 measurement of a person.
 17683 The bloc Property is a read-only value that is provided by the Server.

17684 **6.94.2 Example URI**

17685 /BodyLocationTemperatureResURI

17686 **6.94.3 Resource type**

17687 The Resource Type is defined as: "oic.r.body.location.temperature".

17688 **6.94.4 OpenAPI 2.0 definition**

```

17689 {
17690   "swagger": "2.0",
17691   "info": {
17692     "title": "Body Location Temperature",
17693     "version": "2019-03-22",
17694     "license": {
17695       "name": "OCF Data Model License",
17696       "url":
17697         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
17698         CENSE.md",
17699       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
17700     },
17701     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
17702   },
17703   "schemes": [
17704     "http"
17705   ],
17706   "consumes": [
17707     "application/json"
17708   ],
17709   "produces": [
17710     "application/json"
17711   ],

```

```

17712     "paths": {
17713         "/BodyLocationTemperatureResURI": {
17714             "get": {
17715                 "description": "This Resource describes the Properties associated with body location for
17716 temperature measurement of a person.\nThe bloc Property is a read-only value that is provided by the
17717 Server.",
17718                 "parameters": [
17719                     {
17720                         "$ref": "#/parameters/interface"
17721                     }
17722                 ],
17723                 "responses": {
17724                     "200": {
17725                         "description": "",
17726                         "x-example": {
17727                             "rt": [
17728                                 "oic.r.body.location.temperature"
17729                             ],
17730                             "bloc": "ear"
17731                         },
17732                         "schema": {
17733                             "$ref": "#/definitions/BodyLocationTemperature"
17734                         }
17735                     }
17736                 }
17737             }
17738         },
17739     },
17740     "parameters": {
17741         "interface": {
17742             "in": "query",
17743             "name": "if",
17744             "type": "string",
17745             "enum": [
17746                 "oic.if.s",
17747                 "oic.if.baseline"
17748             ]
17749         }
17750     },
17751     "definitions": {
17752         "BodyLocationTemperature": {
17753             "properties": {
17754                 "rt": {
17755                     "description": "Resource Type",
17756                     "items": {
17757                         "enum": [
17758                             "oic.r.body.location.temperature"
17759                         ],
17760                         "type": "string",
17761                         "maxLength": 64
17762                     },
17763                     "minItems": 1,
17764                     "uniqueItems": true,
17765                     "readOnly": true,
17766                     "type": "array"
17767                 },
17768                 "bloc": {
17769                     "description": "A list specific to temperature site",
17770                     "enum": [
17771                         "axillary",
17772                         "body",
17773                         "ear",
17774                         "finger",
17775                         "gitract",
17776                         "mouth",
17777                         "rectum",
17778                         "toe",
17779                         "tympanum"
17780                     ],
17781                     "readOnly": true,
17782                     "type": "string"
17783                 }
17784             }
17785         }
17786     }

```



```

17784     "n": {
17785         "$ref":
17786         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17787         schema.json#/definitions/n"
17788     },
17789     "id": {
17790         "$ref":
17791         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17792         schema.json#/definitions/id"
17793     },
17794     "if": {
17795         "description": "The OCF Interface set supported by this Resource",
17796         "items": {
17797             "enum": [
17798                 "oic.if.s",
17799                 "oic.if.baseline"
17800             ],
17801             "type": "string",
17802             "maxLength": 64
17803         },
17804         "minItems": 1,
17805         "readOnly": true,
17806         "uniqueItems": true,
17807         "type": "array"
17808     }
17809 },
17810 "type": "object",
17811 "required": [
17812     "bloc"
17813 ]
17814 }
17815 }
17816 }
17817

```

17818 **6.94.5 Property definition**

17819 Table 191 defines the Properties that are part of the "oic.r.body.location.temperature" Resource
17820 Type.

17821 **Table 191 – The Property definitions of the Resource with type "rt" =**
17822 **"oic.r.body.location.temperature".**

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
rt	array: see schema	No	Read Only	Resource Type
bloc	string	Yes	Read Only	A list specific to temperature site
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	

17823 **6.94.6 CRUDN behaviour**

17824 Table 192 defines the CRUDN operations that are supported on the
17825 "oic.r.body.location.temperature" Resource Type.

17826 **Table 192 – The CRUDN operations of the Resource with type "rt" =**
17827 **"oic.r.body.location.temperature".**

Create	Read	Update	Delete	Notify
	get			observe

17828 **6.95 Body Scale Atomic Measurement**

17829 **6.95.1 Introduction**

17830 This Resource describes the Properties associated with body scale.
17831 The Resource is an Atomic Measurement of weight (oic.r.weight), body mass index (BMI)
17832 (oic.r.bmi), height (oic.r.height), body fat (oic.r.body.fat), body water (oic.r.body.water), body soft
17833 lean mass (oic.r.body.slm), body fat free mass (oic.r.body.ffmpeg), observed time (oic.r.time.stamp),
17834 and user id (oic.r.userid).

17835 **6.95.2 Example URI**

17836 /BodyScaleAMResURI

17837 **6.95.3 Resource type**

17838 The Resource Type is defined as: "oic.r.bodyscale-am, oic.wk.atomicmeasurement".

17839 **6.95.4 OpenAPI 2.0 definition**

```
17840 {
17841   "swagger": "2.0",
17842   "info": {
17843     "title": "Body Scale Atomic Measurement",
17844     "version": "2019-03-22",
17845     "license": {
17846       "name": "OCF Data Model License",
17847       "url":
17848         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
17849         CENSE.md",
17850       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
17851     },
17852     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
17853   },
17854   "schemes": [
17855     "http"
17856   ],
17857   "consumes": [
17858     "application/json"
17859   ],
17860   "produces": [
17861     "application/json"
17862   ],
17863   "paths": {
17864     "/BodyScaleAMResURI?if=oic.if.b": {
17865       "get": {
17866         "description": "This Resource describes the Properties associated with body scale.\nThe
17867         Resource is an Atomic Measurement of weight (oic.r.weight), body mass index (BMI) (oic.r.bmi),
17868         height (oic.r.height), body fat (oic.r.body.fat), body water (oic.r.body.water), body soft lean mass
17869         (oic.r.body.slm), body fat free mass (oic.r.body.ffmpeg), observed time (oic.r.time.stamp), and user id
17870         (oic.r.userid).",
17871         "parameters": [
17872           {
17873             "$ref": "#/parameters/interface-all"
17874           }
17875         ]
17876       }
17877     }
17878   }
17879 }
```

```

17875 ],
17876 "responses": {
17877   "200": {
17878     "description": "",
17879     "x-example": [
17880       {
17881         "href": "/myWeight",
17882         "rep": {
17883           "weight": 80.0,
17884           "units": "kg"
17885         }
17886       },
17887       {
17888         "href": "/myBMI",
17889         "rep": {
17890           "bmi": 20.0
17891         }
17892       },
17893       {
17894         "href": "/myHeight",
17895         "rep": {
17896           "height": 1.8,
17897           "units": "m"
17898         }
17899       },
17900       {
17901         "href": "/myBodyFat",
17902         "rep": {
17903           "bodyfat": 20.0,
17904           "units": "kg"
17905         }
17906       },
17907       {
17908         "href": "/myBodyWater",
17909         "rep": {
17910           "bwater": 20.0,
17911           "units": "kg"
17912         }
17913       },
17914       {
17915         "href": "/myBodySoftLeanMass",
17916         "rep": {
17917           "slm": 20.0,
17918           "units": "kg"
17919         }
17920       },
17921       {
17922         "href": "/myBodyFatFreeMass",
17923         "rep": {
17924           "ffm": 40.0,
17925           "units": "kg"
17926         }
17927       },
17928       {
17929         "href": "/myUserId",
17930         "rep": {
17931           "userid": "USER1"
17932         }
17933       },
17934       {
17935         "href": "/myTimeStamp",
17936         "rep": {
17937           "timestamp": "2018-11-09T12:15+08:00"
17938         }
17939     }
17940   ],
17941   "schema": {
17942     "$ref": "#/definitions/batch-retrieve"
17943   }
17944 }
17945 }
17946 }

```

```

17947     },
17948     "/BodyScaleAMResURI?if=oic.if.ll": {
17949         "get": {
17950             "description": "This Resource describes the Properties associated with body scale.\nThe
17951 Resource is an Atomic Measurement of weight (oic.r.weight), body mass index (BMI) (oic.r.bmi),
17952 height (oic.r.height), body fat (oic.r.body.fat), body water (oic.r.body.water), body soft lean mass
17953 (oic.r.body.slm), body fat free mass (oic.r.body.ffm), observed time (oic.r.time.stamp), and user id
17954 (oic.r.userid).",
17955             "parameters": [
17956                 {
17957                     "$ref": "#/parameters/interface-all"
17958                 }
17959             ],
17960             "responses": {
17961                 "200": {
17962                     "description": "",
17963                     "x-example": [
17964                         {
17965                             "href": "/myWeight",
17966                             "rt": [
17967                                 "oic.r.weight"
17968                             ],
17969                             "if": [
17970                                 "oic.if.s",
17971                                 "oic.if.baseline"
17972                             ]
17973                         },
17974                         {
17975                             "href": "/myBMI",
17976                             "rt": [
17977                                 "oic.r.bmi"
17978                             ],
17979                             "if": [
17980                                 "oic.if.s",
17981                                 "oic.if.baseline"
17982                             ]
17983                         },
17984                         {
17985                             "href": "/myHeight",
17986                             "rt": [
17987                                 "oic.r.height"
17988                             ],
17989                             "if": [
17990                                 "oic.if.s",
17991                                 "oic.if.baseline"
17992                             ]
17993                         },
17994                         {
17995                             "href": "/myBodyFat",
17996                             "rt": [
17997                                 "oic.r.body.fat"
17998                             ],
17999                             "if": [
18000                                 "oic.if.s",
18001                                 "oic.if.baseline"
18002                             ]
18003                         },
18004                         {
18005                             "href": "/myBodyWater",
18006                             "rt": [
18007                                 "oic.r.body.water"
18008                             ],
18009                             "if": [
18010                                 "oic.if.s",
18011                                 "oic.if.baseline"
18012                             ]
18013                         },
18014                         {
18015                             "href": "/myBodySoftLeanMass",
18016                             "rt": [
18017                                 "oic.r.body.slm"
18018

```

```

18019         "if": [
18020             "oic.if.s",
18021             "oic.if.baseline"
18022         ]
18023     },
18024     {
18025         "href": "/myBodyFatFreeMass",
18026         "rt": [
18027             "oic.r.body.ffm"
18028         ],
18029         "if": [
18030             "oic.if.s",
18031             "oic.if.baseline"
18032         ]
18033     },
18034     {
18035         "href": "/myUserId",
18036         "rt": [
18037             "oic.r.userid"
18038         ],
18039         "if": [
18040             "oic.if.r",
18041             "oic.if.baseline"
18042         ]
18043     },
18044     {
18045         "href": "/myTimeStamp",
18046         "rt": [
18047             "oic.r.time.stamp"
18048         ],
18049         "if": [
18050             "oic.if.r",
18051             "oic.if.baseline"
18052         ]
18053     }
18054 ],
18055 "schema": {
18056     "$ref": "#/definitions/links"
18057 }
18058 }
18059 }
18060 },
18061 },
18062 "/BodyScaleAMResURI?if=oic.if.baseline": {
18063     "get": {
18064         "description": "This Resource describes the Properties associated with body scale.\nThe
18065 Resource is an Atomic Measurement of weight (oic.r.weight), body mass index (BMI) (oic.r.bmi),
18066 height (oic.r.height), body fat (oic.r.body.fat), body water (oic.r.body.water), body soft lean mass
18067 (oic.r.body.slm), body fat free mass (oic.r.body.ffm), observed time (oic.r.time.stamp), and user id
18068 (oic.r.userid).",
18069         "parameters": [
18070             {
18071                 "$ref": "#/parameters/interface-all"
18072             }
18073         ],
18074         "responses": {
18075             "200": {
18076                 "description": "",
18077                 "x-example": {
18078                     "rt": [
18079                         "oic.r.bodyscale-am",
18080                         "oic.wk.atomicmeasurement"
18081                     ],
18082                     "if": [
18083                         "oic.if.b",
18084                         "oic.if.ll",
18085                         "oic.if.baseline"
18086                     ],
18087                     "rts": [
18088                         "oic.r.weight",
18089                         "oic.r.bmi",
18090                         "oic.r.height",

```

```

18091         "oic.r.body.fat",
18092         "oic.r.body.water",
18093         "oic.r.body.slm",
18094         "oic.r.body.ffmpeg",
18095         "oic.r.userid",
18096         "oic.r.time.stamp"
18097     ],
18098     "rts-m": [
18099         "oic.r.weight"
18100     ],
18101     "links": [
18102         {
18103             "href": "/myWeight",
18104             "rt": [
18105                 "oic.r.weight"
18106             ],
18107             "if": [
18108                 "oic.if.s",
18109                 "oic.if.baseline"
18110             ]
18111         },
18112         {
18113             "href": "/myBMI",
18114             "rt": [
18115                 "oic.r.bmi"
18116             ],
18117             "if": [
18118                 "oic.if.s",
18119                 "oic.if.baseline"
18120             ]
18121         },
18122         {
18123             "href": "/myHeight",
18124             "rt": [
18125                 "oic.r.height"
18126             ],
18127             "if": [
18128                 "oic.if.s",
18129                 "oic.if.baseline"
18130             ]
18131         },
18132         {
18133             "href": "/myBodyFat",
18134             "rt": [
18135                 "oic.r.body.fat"
18136             ],
18137             "if": [
18138                 "oic.if.s",
18139                 "oic.if.baseline"
18140             ]
18141         },
18142         {
18143             "href": "/myBodyWater",
18144             "rt": [
18145                 "oic.r.body.water"
18146             ],
18147             "if": [
18148                 "oic.if.s",
18149                 "oic.if.baseline"
18150             ]
18151         },
18152         {
18153             "href": "/myBodySoftLeanMass",
18154             "rt": [
18155                 "oic.r.body.slm"
18156             ],
18157             "if": [
18158                 "oic.if.s",
18159                 "oic.if.baseline"
18160             ]
18161         },
18162     ]

```

```

18163         "href": "/myBodyFatFreeMass",
18164         "rt": [
18165             "oic.r.body.ffm"
18166         ],
18167         "if": [
18168             "oic.if.s",
18169             "oic.if.baseline"
18170         ]
18171     },
18172     {
18173         "href": "/myUserId",
18174         "rt": [
18175             "oic.r.userid"
18176         ],
18177         "if": [
18178             "oic.if.r",
18179             "oic.if.baseline"
18180         ]
18181     },
18182     {
18183         "href": "/myTimeStamp",
18184         "rt": [
18185             "oic.r.time.stamp"
18186         ],
18187         "if": [
18188             "oic.if.r",
18189             "oic.if.baseline"
18190         ]
18191     }
18192 ]
18193 },
18194 "schema": {
18195     "$ref": "#/definitions/baseline"
18196 }
18197 }
18198 }
18199 }
18200 },
18201 },
18202 "parameters": {
18203     "interface-all": {
18204         "in": "query",
18205         "name": "if",
18206         "type": "string",
18207         "enum": [
18208             "oic.if.b",
18209             "oic.if.ll",
18210             "oic.if.baseline"
18211         ]
18212     }
18213 },
18214 "definitions": {
18215     "links": {
18216         "type": "array",
18217         "items": {
18218             "$ref": "#/definitions/oic.oic-link"
18219         }
18220     },
18221     "baseline": {
18222         "properties": {
18223             "rt": {
18224                 "items": {
18225                     "enum": [
18226                         "oic.r.bodyscale-am",
18227                         "oic.wk.atomicmeasurement"
18228                     ],
18229                     "type": "string",
18230                     "maxLength": 64
18231                 },
18232                 "minItems": 2,
18233                 "uniqueItems": true,
18234                 "readOnly": true,

```

```

18235     "type": "array"
18236   },
18237   "rts": {
18238     "description": "This contains all possible Resource Types for this Atomic Measurement.",
18239     "items": {
18240       "enum": [
18241         "oic.r.weight",
18242         "oic.r.bmi",
18243         "oic.r.height",
18244         "oic.r.body.fat",
18245         "oic.r.body.water",
18246         "oic.r.body.slm",
18247         "oic.r.body.ffm",
18248         "oic.r.time.stamp",
18249         "oic.r.userid"
18250       ],
18251       "type": "string",
18252       "maxLength": 64
18253     },
18254     "minItems": 1,
18255     "uniqueItems": true,
18256     "readOnly": true,
18257     "type": "array"
18258   },
18259   "rts-m": {
18260     "description": "This contains all mandatory Resource Types for this Atomic Measurement.",
18261     "items": {
18262       "enum": [
18263         "oic.r.weight"
18264       ],
18265       "type": "string",
18266       "maxLength": 64
18267     },
18268     "maxItems": 1,
18269     "minItems": 1,
18270     "uniqueItems": true,
18271     "readOnly": true,
18272     "type": "array"
18273   },
18274   "if": {
18275     "description": "The OCF Interface set supported by this Resource",
18276     "items": {
18277       "enum": [
18278         "oic.if.b",
18279         "oic.if.ll",
18280         "oic.if.baseline"
18281       ],
18282       "type": "string",
18283       "maxLength": 64
18284     },
18285     "minItems": 3,
18286     "uniqueItems": true,
18287     "readOnly": true,
18288     "type": "array"
18289   },
18290   "n": {
18291     "$ref":
18292     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
18293     schema.json#/definitions/n"
18294   },
18295   "id": {
18296     "$ref":
18297     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
18298     schema.json#/definitions/id"
18299   },
18300   "links": {
18301     "$ref": "#/definitions/links"
18302   }
18303 },
18304 "type": "object",
18305 "required": [
18306   "rt", "if", "links", "rts", "rts-m"

```



```

18307     ]
18308   },
18309   "batch-retrieve": {
18310     "minItems": 1,
18311     "items": {
18312       "properties": {
18313         "href": {
18314           "$ref":
18315 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
18316 schema.json#/definitions/href"
18317         },
18318         "rep": {
18319           "type": "object",
18320           "anyOf": [
18321             {
18322               "$ref":
18323 "https://openconnectivityfoundation.github.io/IoTDataModels/WeightResURI.swagger.json#/definitions/W
18324 eight"
18325             },
18326             {
18327               "$ref":
18328 "https://openconnectivityfoundation.github.io/IoTDataModels/BMIResURI.swagger.json#/definitions/BMI"
18329             },
18330             {
18331               "$ref":
18332 "https://openconnectivityfoundation.github.io/IoTDataModels/HeightResURI.swagger.json#/definitions/H
18333 eight"
18334             },
18335             {
18336               "$ref":
18337 "https://openconnectivityfoundation.github.io/IoTDataModels/BodyFatResURI.swagger.json#/definitions/
18338 BodyFat"
18339             },
18340             {
18341               "$ref":
18342 "https://openconnectivityfoundation.github.io/IoTDataModels/BodyWaterResURI.swagger.json#/definition
18343 s/BodyWater"
18344             },
18345             {
18346               "$ref":
18347 "https://openconnectivityfoundation.github.io/IoTDataModels/BodySoftLeanMassResURI.swagger.json#/def
18348 initions/BodySoftLeanMass"
18349             },
18350             {
18351               "$ref":
18352 "https://openconnectivityfoundation.github.io/IoTDataModels/BodyFatFreeMassResURI.swagger.json#/defi
18353 nitions/BodyFatFreeMass"
18354             },
18355             {
18356               "$ref":
18357 "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/U
18358 serID"
18359             },
18360             {
18361               "$ref":
18362 "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definition
18363 s/TimeStamp"
18364             }
18365           ]
18366         }
18367       },
18368       "required": [
18369         "href",
18370         "rep"
18371       ],
18372       "type": "object"
18373     },
18374     "type": "array"
18375   },
18376   "oic.oic-link": {
18377     "properties": {
18378       "rt": {

```

```

18379         "description": "Resource Type of the target Resource",
18380         "items": {
18381             "enum": [
18382                 "oic.r.weight",
18383                 "oic.r.bmi",
18384                 "oic.r.height",
18385                 "oic.r.body.fat",
18386                 "oic.r.body.water",
18387                 "oic.r.body.slm",
18388                 "oic.r.body.ffmpeg",
18389                 "oic.r.time.stamp",
18390                 "oic.r.userid"
18391             ],
18392             "type": "string",
18393             "maxLength": 64
18394         },
18395         "minItems": 1,
18396         "uniqueItems": true,
18397         "readOnly": true,
18398         "type": "array"
18399     },
18400     "if": {
18401         "description": "The OCF Interface set supported by the target Resource",
18402         "items": {
18403             "enum": [
18404                 "oic.if.s",
18405                 "oic.if.r",
18406                 "oic.if.baseline"
18407             ],
18408             "type": "string",
18409             "maxLength": 64
18410         },
18411         "minItems": 1,
18412         "uniqueItems": true,
18413         "readOnly": true,
18414         "type": "array"
18415     },
18416     "anchor": {
18417         "$ref":
18418         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
18419         schema.json#/definitions/anchor"
18420     },
18421     "di": {
18422         "$ref":
18423         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
18424         schema.json#/definitions/di"
18425     },
18426     "eps": {
18427         "$ref":
18428         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
18429         schema.json#/definitions/eps"
18430     },
18431     "href": {
18432         "$ref":
18433         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
18434         schema.json#/definitions/href"
18435     },
18436     "ins": {
18437         "$ref":
18438         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
18439         schema.json#/definitions/ins"
18440     },
18441     "p": {
18442         "$ref":
18443         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
18444         schema.json#/definitions/p"
18445     },
18446     "rel": {
18447         "$ref":
18448         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
18449         schema.json#/definitions/rel_array"
18450     },

```

```

18451         "title": {
18452             "$ref":
18453             "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
18454             schema.json#/definitions/title"
18455         },
18456         "type": {
18457             "$ref":
18458             "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
18459             schema.json#/definitions/type"
18460         }
18461     },
18462     "required": [
18463         "href",
18464         "rt",
18465         "if"
18466     ],
18467     "type": "object"
18468 }
18469 }
18470 }
18471

```

18472 **6.95.5 Property definition**

18473 Table 193 defines the Properties that are part of the "oic.r.bodyscale-am,
18474 oic.wk.atomicmeasurement" Resource Type.

18475 **Table 193 – The Property definitions of the Resource with type "rt" = "oic.r.bodyscale-am,
18476 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	Resource Type of the target Resource
rel	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	
ins	multiple types: see schema	No	Read Write	
if	array: see schema	Yes	Read Only	The OCF Interface set supported by the target Resource

href	multiple types: see schema	Yes	Read Write	
p	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
rt	array: see schema	Yes	Read Only	
id	multiple types: see schema	No	Read Write	
if	array: see schema	Yes	Read Only	The OCF Interface set supported by this Resource
rts	array: see schema	Yes	Read Only	This contains all possible Resource Types for this Atomic Measurement.
links	multiple types: see schema	Yes	Read Write	
rts-m	array: see schema	Yes	Read Only	This contains all mandatory Resource Types for this Atomic Measurement.

18477 **6.95.6 CRUDN behaviour**

18478 Table 194 defines the CRUDN operations that are supported on the "oic.r.bodyscale-am,
18479 oic.wk.atomicmeasurement" Resource Type.

18480 **Table 194 – The CRUDN operations of the Resource with type "rt" = "oic.r.bodyscale-am,**
 18481 **oic.wk.atomicmeasurement".**

Create	Read	Update	Delete	Notify
	get			observe

18482 **6.96 Body Soft Lean Mass**

18483 **6.96.1 Introduction**

18484 This Resource describes the Properties associated with a person's body soft lean mass.
 18485 The unit is a single value that is one of kg, lb or percent.
 18486 If the unit Property is missing the default is kilograms [kg].
 18487 The slm and unit Properties are read-only values that are provided by the Server.
 18488 When range is omitted the default is 0 to +MAXFLOAT.

18489 **6.96.2 Example URI**

18490 /BodySoftLeanMassResURI

18491 **6.96.3 Resource type**

18492 The Resource Type is defined as: "oic.r.body.slm".

18493 **6.96.4 OpenAPI 2.0 definition**

```

18494 {
18495   "swagger": "2.0",
18496   "info": {
18497     "title": "Body Soft Lean Mass",
18498     "version": "2019-03-22",
18499     "license": {
18500       "name": "OCF Data Model License",
18501       "url":
18502         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
18503         CENSE.md",
18504       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
18505     },
18506     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
18507   },
18508   "schemes": [
18509     "http"
18510   ],
18511   "consumes": [
18512     "application/json"
18513   ],
18514   "produces": [
18515     "application/json"
18516   ],
18517   "paths": {
18518     "/BodySoftLeanMassResURI": {
18519       "get": {
18520         "description": "This Resource describes the Properties associated with a person's body soft
18521         lean mass.\n\nThe unit is a single value that is one of kg, lb or percent.\n\nIf the unit Property is
18522         missing the default is kilograms [kg].\n\nThe slm and unit Properties are read-only values that are
18523         provided by the Server.\n\nWhen range is omitted the default is 0 to +MAXFLOAT.",
18524         "parameters": [
18525           {
18526             "$ref": "#/parameters/interface"
18527           }
18528         ],
18529         "responses": {
18530           "200": {
18531             "description": "",
18532             "x-example": {
18533               "rt": [
18534                 "oic.r.body.slm"

```

```

18535         ],
18536         "slm": 20.0,
18537         "units": "kg"
18538     },
18539     "schema": {
18540         "$ref": "#/definitions/BodySoftLeanMass"
18541     }
18542 }
18543 }
18544 }
18545 },
18546 },
18547 "parameters": {
18548     "interface": {
18549         "in": "query",
18550         "name": "if",
18551         "type": "string",
18552         "enum": [
18553             "oic.if.s",
18554             "oic.if.baseline"
18555         ]
18556     }
18557 },
18558 "definitions": {
18559     "BodySoftLeanMass": {
18560         "properties": {
18561             "rt": {
18562                 "description": "Resource Type",
18563                 "items": {
18564                     "enum": [
18565                         "oic.r.body.slm"
18566                     ],
18567                     "type": "string",
18568                     "maxLength": 64
18569                 },
18570                 "minItems": 1,
18571                 "uniqueItems": true,
18572                 "readOnly": true,
18573                 "type": "array"
18574             },
18575             "slm": {
18576                 "description": "Body soft lean mass.",
18577                 "minimum": 0.0,
18578                 "readOnly": true,
18579                 "type": "number"
18580             },
18581             "units": {
18582                 "description": "Body soft lean mass units",
18583                 "enum": [
18584                     "kg",
18585                     "lb",
18586                     "percent"
18587                 ],
18588                 "readOnly": true,
18589                 "type": "string",
18590                 "default": "kg"
18591             },
18592             "range": {
18593                 "$ref":
18594 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
18595 schema.json#/definitions/range_number"
18596             },
18597             "step": {
18598                 "$ref":
18599 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
18600 schema.json#/definitions/step_number"
18601             },
18602             "precision": {
18603                 "$ref":
18604 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
18605 schema.json#/definitions/precision"
18606             },

```

```

18607     "n": {
18608         "$ref":
18609         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
18610         schema.json#/definitions/n"
18611     },
18612     "id": {
18613         "$ref":
18614         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
18615         schema.json#/definitions/id"
18616     },
18617     "if": {
18618         "description": "The OCF Interface set supported by this Resource",
18619         "items": {
18620             "enum": [
18621                 "oic.if.s",
18622                 "oic.if.baseline"
18623             ],
18624             "type": "string",
18625             "maxLength": 64
18626         },
18627         "minItems": 1,
18628         "readOnly": true,
18629         "uniqueItems": true,
18630         "type": "array"
18631     }
18632 },
18633 "type": "object",
18634 "required": [
18635     "slm"
18636 ]
18637 }
18638 }
18639 }
18640

```

18641 6.96.5 Property definition

18642 Table 195 defines the Properties that are part of the "oic.r.body.slm" Resource Type.

18643 **Table 195 – The Property definitions of the Resource with type "rt" = "oic.r.body.slm".**

Property name	Value type	Mandatory	Access mode	Description
n	multiple types: see schema	No	Read Write	
slm	number	Yes	Read Only	Body soft lean mass.
id	multiple types: see schema	No	Read Write	
units	string	No	Read Only	Body soft lean mass units
range	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

rt	array: see schema	No	Read Only	Resource Type
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	

18644 **6.96.6 CRUDN behaviour**

18645 Table 196 defines the CRUDN operations that are supported on the "oic.r.body.slm" Resource Type.

18646 **Table 196 – The CRUDN operations of the Resource with type "rt" = "oic.r.body.slm".**

Create	Read	Update	Delete	Notify
	get			observe

18647 **6.97 Body Thermometer Atomic Measurement**

18648 **6.97.1 Introduction**

18649 This Resource describes the Properties associated with body thermometer.
 18650 The Resource is an Atomic Measurement of temperature (oic.r.temperature), body location for
 18651 temperature (oic.r.body.location.temperature), observed time (oic.r.time.stamp), and user id
 18652 (oic.r.userid).

18653 **6.97.2 Example URI**

18654 /BodyThermometerAMResURI

18655 **6.97.3 Resource type**

18656 The Resource Type is defined as: "oic.r.bodythermometer-am, oic.wk.atomicmeasurement".

18657 **6.97.4 OpenAPI 2.0 definition**

```

18658 {
18659   "swagger": "2.0",
18660   "info": {
18661     "title": "Body Thermometer Atomic Measurement",
18662     "version": "2019-03-22",
18663     "license": {
18664       "name": "OCF Data Model License",
18665       "url":
18666         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
18667         CENSE.md",
18668       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
18669     },
18670     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
18671   },
18672   "schemes": [
18673     "http"
18674   ],
18675   "consumes": [
18676     "application/json"
18677   ],
18678   "produces": [
18679     "application/json"
18680   ],
18681   "paths": {
18682     "/BodyThermometerAMResURI?if=oic.if.b": {
18683     "get": {

```



```

18684     "description": "This Resource describes the Properties associated with body
18685 thermometer.\n\nThe Resource is an Atomic Measurement of temperature (oic.r.temperature), body
18686 location for temperature (oic.r.body.location.temperature), observed time (oic.r.time.stamp), and
18687 user id (oic.r.userid).",
18688     "parameters": [
18689         {
18690             "$ref": "#/parameters/interface-all"
18691         }
18692     ],
18693     "responses": {
18694         "200": {
18695             "description": "",
18696             "x-example": [
18697                 {
18698                     "href": "/myTemperature",
18699                     "rep": {
18700                         "temperature": 38.0,
18701                         "units": "C"
18702                     }
18703                 },
18704                 {
18705                     "href": "/myBodyLocationForTemperature",
18706                     "rep": {
18707                         "bloc": "mouth"
18708                     }
18709                 },
18710                 {
18711                     "href": "/myUserId",
18712                     "rep": {
18713                         "userid": "USER1"
18714                     }
18715                 },
18716                 {
18717                     "href": "/myTimeStamp",
18718                     "rep": {
18719                         "timestamp": "2018-11-09T12:15+08:00"
18720                     }
18721                 }
18722             ],
18723             "schema": {
18724                 "$ref": "#/definitions/batch-retrieve"
18725             }
18726         }
18727     }
18728 },
18729 "/BodyThermometerAMResURI?if=oic.if.ll": {
18730     "get": {
18731         "description": "This Resource describes the Properties associated with body
18732 thermometer.\n\nThe Resource is an Atomic Measurement of temperature (oic.r.temperature), body
18733 location for temperature (oic.r.body.location.temperature), observed time (oic.r.time.stamp), and
18734 user id (oic.r.userid).",
18735         "parameters": [
18736             {
18737                 "$ref": "#/parameters/interface-all"
18738             }
18739         ],
18740         "responses": {
18741             "200": {
18742                 "description": "",
18743                 "x-example": [
18744                     {
18745                         "href": "/myTemperature",
18746                         "rt": [
18747                             "oic.r.temperature"
18748                         ],
18749                         "if": [
18750                             "oic.if.s",
18751                             "oic.if.baseline"
18752                         ]
18753                     }
18754                 ],
18755             }

```

```

18756         "href": "/myBodyLocationForTemperature",
18757         "rt": [
18758             "oic.r.body.location.temperature"
18759         ],
18760         "if": [
18761             "oic.if.s",
18762             "oic.if.baseline"
18763         ]
18764     },
18765     {
18766         "href": "/myUserId",
18767         "rt": [
18768             "oic.r.userid"
18769         ],
18770         "if": [
18771             "oic.if.r",
18772             "oic.if.baseline"
18773         ]
18774     },
18775     {
18776         "href": "/myTimeStamp",
18777         "rt": [
18778             "oic.r.time.stamp"
18779         ],
18780         "if": [
18781             "oic.if.r",
18782             "oic.if.baseline"
18783         ]
18784     }
18785 ],
18786 "schema": {
18787     "$ref": "#/definitions/links"
18788 }
18789 }
18790 }
18791 },
18792 },
18793 "/BodyThermometerAMResURI?if=oic.if.baseline": {
18794     "get": {
18795         "description": "This Resource describes the Properties associated with body
18796 thermometer.\n\nThe Resource is an Atomic Measurement of temperature (oic.r.temperature), body
18797 location for temperature (oic.r.body.location.temperature), observed time (oic.r.time.stamp), and
18798 user id (oic.r.userid).",
18799         "parameters": [
18800             {
18801                 "$ref": "#/parameters/interface-all"
18802             }
18803         ],
18804         "responses": {
18805             "200": {
18806                 "description": "",
18807                 "x-example": {
18808                     "rt": [
18809                         "oic.r.bodythermometer-am",
18810                         "oic.wk.atomicmeasurement"
18811                     ],
18812                     "if": [
18813                         "oic.if.b",
18814                         "oic.if.ll",
18815                         "oic.if.baseline"
18816                     ],
18817                     "rts": [
18818                         "oic.r.temperature",
18819                         "oic.r.body.location.temperature",
18820                         "oic.r.userid",
18821                         "oic.r.time.stamp"
18822                     ],
18823                     "rts-m": [
18824                         "oic.r.temperature"
18825                     ],
18826                     "links": [
18827                 {

```

```

18828         "href": "/myTemperature",
18829         "rt": [
18830             "oic.r.temperature"
18831         ],
18832         "if": [
18833             "oic.if.s",
18834             "oic.if.baseline"
18835         ]
18836     },
18837     {
18838         "href": "/myBodyLocationForTemperature",
18839         "rt": [
18840             "oic.r.body.location.temperature"
18841         ],
18842         "if": [
18843             "oic.if.s",
18844             "oic.if.baseline"
18845         ]
18846     },
18847     {
18848         "href": "/myUserId",
18849         "rt": [
18850             "oic.r.userid"
18851         ],
18852         "if": [
18853             "oic.if.r",
18854             "oic.if.baseline"
18855         ]
18856     },
18857     {
18858         "href": "/myTimeStamp",
18859         "rt": [
18860             "oic.r.time.stamp"
18861         ],
18862         "if": [
18863             "oic.if.r",
18864             "oic.if.baseline"
18865         ]
18866     }
18867 ]
18868 },
18869 "schema": {
18870     "$ref": "#/definitions/baseline"
18871 }
18872 }
18873 }
18874 }
18875 }
18876 },
18877 "parameters": {
18878     "interface-all": {
18879         "in": "query",
18880         "name": "if",
18881         "type": "string",
18882         "enum": [
18883             "oic.if.b",
18884             "oic.if.ll",
18885             "oic.if.baseline"
18886         ]
18887     }
18888 },
18889 "definitions": {
18890     "batch-retrieve": {
18891         "minItems": 1,
18892         "items": {
18893             "additionalProperties": true,
18894             "properties": {
18895                 "href": {
18896                     "$ref":
18897 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
18898 schema.json#/definitions/href"
18899                 },

```

```

18900         "rep": {
18901             "type": "object",
18902             "anyOf": [
18903                 {
18904                     "$ref":
18905 "https://openconnectivityfoundation.github.io/IoTDataModels/TemperatureResURI.swagger.json#/definiti
18906 ons/Temperature"
18907                 },
18908                 {
18909                     "$ref":
18910 "https://openconnectivityfoundation.github.io/IoTDataModels/BodyLocationTemperatureResURI.swagger.js
18911 on#/definitions/BodyLocationTemperature"
18912                 },
18913                 {
18914                     "$ref":
18915 "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/U
18916 serID"
18917                 },
18918                 {
18919                     "$ref":
18920 "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definition
18921 s/TimeStamp"
18922                 }
18923             ]
18924         },
18925     },
18926     "required": [
18927         "href",
18928         "rep"
18929     ],
18930     "type": "object"
18931 },
18932 "type": "array"
18933 },
18934 "links": {
18935     "type": "array",
18936     "items": {
18937         "$ref": "#/definitions/oic.oic-link"
18938     }
18939 },
18940 "baseline": {
18941     "properties": {
18942         "rt": {
18943             "items": {
18944                 "enum": [
18945                     "oic.r.bodythermometer-am",
18946                     "oic.wk.atomicmeasurement"
18947                 ],
18948                 "type": "string",
18949                 "maxLength": 64
18950             },
18951             "minItems": 2,
18952             "uniqueItems": true,
18953             "readOnly": true,
18954             "type": "array"
18955         },
18956         "rts": {
18957             "description": "This contains all possible Resource Types for this Atomic Measurement.",
18958             "items": {
18959                 "enum": [
18960                     "oic.r.temperature",
18961                     "oic.r.body.location.temperature",
18962                     "oic.r.time.stamp",
18963                     "oic.r.userid"
18964                 ],
18965                 "type": "string",
18966                 "maxLength": 64
18967             },
18968             "minItems": 1,
18969             "uniqueItems": true,
18970             "readOnly": true,
18971             "type": "array"

```

```

18972     },
18973     "rts-m": {
18974         "description": "This contains all mandatory Resource Types for this Atomic Measurement.",
18975         "items": {
18976             "enum": [
18977                 "oic.r.temperature"
18978             ],
18979             "type": "string",
18980             "maxLength": 64
18981         },
18982         "maxItems": 1,
18983         "minItems": 1,
18984         "uniqueItems": true,
18985         "readOnly": true,
18986         "type": "array"
18987     },
18988     "if": {
18989         "description": "The OC Interface set supported by this Resource",
18990         "items": {
18991             "enum": [
18992                 "oic.if.b",
18993                 "oic.if.ll",
18994                 "oic.if.baseline"
18995             ],
18996             "type": "string",
18997             "maxLength": 64
18998         },
18999         "minItems": 3,
19000         "uniqueItems": true,
19001         "readOnly": true,
19002         "type": "array"
19003     },
19004     "n": {
19005         "$ref":
19006         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19007         schema.json#/definitions/n"
19008     },
19009     "id": {
19010         "$ref":
19011         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19012         schema.json#/definitions/id"
19013     },
19014     "links": {
19015         "$ref": "#/definitions/links"
19016     }
19017 },
19018 "type": "object",
19019 "required": [
19020     "rt", "if", "links", "rts", "rts-m"
19021 ]
19022 },
19023 "oic.oic-link": {
19024     "properties": {
19025         "if": {
19026             "description": "The OCF Interface set supported by target Resource",
19027             "items": {
19028                 "enum": [
19029                     "oic.if.baseline",
19030                     "oic.if.s",
19031                     "oic.if.r"
19032                 ],
19033                 "type": "string",
19034                 "maxLength": 64
19035             },
19036             "minItems": 1,
19037             "uniqueItems": true,
19038             "readOnly": true,
19039             "type": "array"
19040         },
19041         "rt": {
19042             "description": "Resource Type of the target Resource",
19043             "items": {

```

```

19044         "enum": [
19045             "oic.r.temperature",
19046             "oic.r.body.location.temperature",
19047             "oic.r.time.stamp",
19048             "oic.r.userid"
19049         ],
19050         "type": "string",
19051         "maxLength": 64
19052     },
19053     "minItems": 1,
19054     "uniqueItems": true,
19055     "readOnly": true,
19056     "type": "array"
19057 },
19058 "anchor": {
19059     "$ref":
19060 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19061 schema.json#/definitions/anchor"
19062 },
19063 "di": {
19064     "$ref":
19065 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19066 schema.json#/definitions/di"
19067 },
19068 "eps": {
19069     "$ref":
19070 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19071 schema.json#/definitions/eps"
19072 },
19073 "href": {
19074     "$ref":
19075 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19076 schema.json#/definitions/href"
19077 },
19078 "ins": {
19079     "$ref":
19080 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19081 schema.json#/definitions/ins"
19082 },
19083 "p": {
19084     "$ref":
19085 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19086 schema.json#/definitions/p"
19087 },
19088 "rel": {
19089     "$ref":
19090 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19091 schema.json#/definitions/rel_array"
19092 },
19093 "title": {
19094     "$ref":
19095 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19096 schema.json#/definitions/title"
19097 },
19098 "type": {
19099     "$ref":
19100 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19101 schema.json#/definitions/type"
19102 }
19103 },
19104 "required": [
19105     "href",
19106     "rt",
19107     "if"
19108 ],
19109 "type": "object"
19110 }
19111 }
19112 }
19113

```

19114 **6.97.5 Property definition**

19115 Table 197 defines the Properties that are part of the "oic.r.bodythermometer-am,
19116 oic.wk.atomicmeasurement" Resource Type.

19117 **Table 197 – The Property definitions of the Resource with type "rt" =**
19118 **"oic.r.bodythermometer-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	
links	multiple types: see schema	Yes	Read Write	
rts	array: see schema	Yes	Read Only	This contains all possible Resource Types for this Atomic Measurement.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	Yes	Read Only	The OC Interface set supported by this Resource
rts-m	array: see schema	Yes	Read Only	This contains all mandatory Resource Types for this Atomic Measurement.
rt	array: see schema	Yes	Read Only	
di	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	

anchor	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
ins	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 target Resource
rel	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
rt	array: see schema	Yes	Read Only	Resource Type of the target Resource

19119 **6.97.6 CRUDN behaviour**

19120 Table 198 defines the CRUDN operations that are supported on the "oic.r.bodythermometer-am,
19121 oic.wk.atomicmeasurement" Resource Type.

19122 **Table 198 – The CRUDN operations of the Resource with type "rt" =**
19123 **"oic.r.bodythermometer-am, oic.wk.atomicmeasurement".**

Create	Read	Update	Delete	Notify
	get			observe

19124 **6.98 Body Water**

19125 **6.98.1 Introduction**

19126 This Resource describes the Properties associated with a person's body water.
19127 The unit is a single value that is one of kg or lb.
19128 If the unit Property is missing the default is kilograms [kg].
19129 The bwater and unit Properties are read-only values that are provided by the Server.
19130 When range is omitted the default is 0 to +MAXFLOAT.

19131 **6.98.2 Example URI**

19132 /BodyWaterResURI

19133 **6.98.3 Resource type**

19134 The Resource Type is defined as: "oic.r.body.water".

19135 **6.98.4 OpenAPI 2.0 definition**

```
19136 {
19137   "swagger": "2.0",
19138   "info": {
19139     "title": "Body Water",
19140     "version": "2019-03-22",
19141     "license": {
19142       "name": "OCF Data Model License",
19143       "url":
19144         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
19145         CENSE.md",
19146       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
19147     },
19148     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
19149   },
19150   "schemes": [
19151     "http"
19152   ],
19153   "consumes": [
19154     "application/json"
19155   ],
19156   "produces": [
19157     "application/json"
19158   ],
19159   "paths": {
19160     "/BodyWaterResURI": {
19161       "get": {
19162         "description": "This Resource describes the Properties associated with a person's body
19163         water.\n\nThe unit is a single value that is one of kg or lb.\n\nIf the unit Property is missing the
19164         default is kilograms [kg].\n\nThe bwater and unit Properties are read-only values that are provided by
19165         the Server.\n\nWhen range is omitted the default is 0 to +MAXFLOAT.",
19166         "parameters": [
19167           {
19168             "$ref": "#/parameters/interface"
19169           }
19170         ],
19171         "responses": {
19172           "200": {
19173             "description": "",
19174             "x-example": {
19175               "rt": [
19176                 "oic.r.body.water"
19177               ],
19178               "bwater": 20.0,
19179               "units": "kg"
19180             },
19181             "schema": {
19182               "$ref": "#/definitions/BodyWater"
19183             }
19184           }
19185         }
19186       }
19187     }
19188   },
19189   "parameters": {
19190     "interface": {
19191       "in": "query",
19192       "name": "if",
19193       "type": "string",
19194       "enum": [
19195         "oic.if.s",
19196         "oic.if.baseline"
19197       ]
19198     }
19199   },
19200   "definitions": {
19201     "BodyWater": {
19202       "properties": {
19203         "rt": {
19204           "description": "Resource Type",
19205           "items": {
```

```

19206         "enum": [
19207             "oic.r.body.water"
19208         ],
19209         "type": "string",
19210         "maxLength": 64
19211     },
19212     "minItems": 1,
19213     "uniqueItems": true,
19214     "readOnly": true,
19215     "type": "array"
19216 },
19217 "bwater": {
19218     "description": "Body water.",
19219     "minimum": 0.0,
19220     "readOnly": true,
19221     "type": "number"
19222 },
19223 "units": {
19224     "description": "Body water unit",
19225     "enum": [
19226         "kg",
19227         "lb"
19228     ],
19229     "readOnly": true,
19230     "type": "string",
19231     "default": "kg"
19232 },
19233 "range": {
19234     "$ref":
19235     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19236     schema.json#/definitions/range_number"
19237 },
19238 "step": {
19239     "$ref":
19240     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19241     schema.json#/definitions/step_number"
19242 },
19243 "precision": {
19244     "$ref":
19245     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19246     schema.json#/definitions/precision"
19247 },
19248 "n": {
19249     "$ref":
19250     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19251     schema.json#/definitions/n"
19252 },
19253 "id": {
19254     "$ref":
19255     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19256     schema.json#/definitions/id"
19257 },
19258 "if": {
19259     "description": "The OCF Interface set supported by this Resource",
19260     "items": {
19261         "enum": [
19262             "oic.if.s",
19263             "oic.if.baseline"
19264         ],
19265         "type": "string",
19266         "maxLength": 64
19267     },
19268     "minItems": 1,
19269     "readOnly": true,
19270     "uniqueItems": true,
19271     "type": "array"
19272 }
19273 },
19274 "type": "object",
19275 "required": [
19276     "bwater"
19277 ]

```

19278 }
 19279 }
 19280 }
 19281 }

19282 **6.98.5 Property definition**

19283 Table 199 defines the Properties that are part of the "oic.r.body.water" Resource Type.

19284 **Table 199 – The Property definitions of the Resource with type "rt" = "oic.r.body.water".**

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema	No	Read Write	
bwater	number	Yes	Read Only	Body water.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
range	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
rt	array: see schema	No	Read Only	Resource Type
units	string	No	Read Only	Body water unit
id	multiple types: see schema	No	Read Write	

19285 **6.98.6 CRUDN behaviour**

19286 Table 200 defines the CRUDN operations that are supported on the "oic.r.body.water" Resource
 19287 Type.

19288 **Table 200 – The CRUDN operations of the Resource with type "rt" = "oic.r.body.water".**

Create	Read	Update	Delete	Notify
	get			observe

19289 **6.99 Glucose**

19290 **6.99.1 Introduction**

19291 This Resource describes the Properties associated with a person's glucose level.
19292 The unit is a single value that is one of mg/dL, mmol/L.
19293 If the unit Property is missing the default is milligrams per decilitre [mg/dL].
19294 The glucose and unit Properties are read-only values that are provided by the Server.
19295 When range is omitted the default is 0 to +MAXFLOAT.

19296 **6.99.2 Example URI**

19297 /GlucoseResURI

19298 **6.99.3 Resource type**

19299 The Resource Type is defined as: "oic.r.glucose".

19300 **6.99.4 OpenAPI 2.0 definition**

```
19301 {
19302   "swagger": "2.0",
19303   "info": {
19304     "title": "Glucose",
19305     "version": "2019-03-22",
19306     "license": {
19307       "name": "OCF Data Model License",
19308       "url":
19309 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
19310 CENSE.md",
19311       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
19312     },
19313     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
19314   },
19315   "schemes": [
19316     "http"
19317   ],
19318   "consumes": [
19319     "application/json"
19320   ],
19321   "produces": [
19322     "application/json"
19323   ],
19324   "paths": {
19325     "/GlucoseResURI": {
19326       "get": {
19327         "description": "This Resource describes the Properties associated with a person's glucose
19328 level.\n\nThe unit is a single value that is one of mg/dL, mmol/L.\n\nIf the unit Property is missing
19329 the default is milligrams per decilitre [mg/dL].\n\nThe glucose and unit Properties are read-only
19330 values that are provided by the Server.\n\nWhen range is omitted the default is 0 to +MAXFLOAT.",
19331         "parameters": [
19332           {
19333             "$ref": "#/parameters/interface"
19334           }
19335         ],
19336         "responses": {
19337           "200": {
19338             "description": "",
19339             "x-example": {
19340               "rt": [
19341                 "oic.r.glucose"
19342               ],
19343               "glucose": 90.0,
19344               "units": "mg/dL",
19345               "range": [
19346                 20.0,
19347                 600.0
19348               ],
19349               "step": 1
19350             },
19351           "schema": {
```

```

19352         "$ref": "#/definitions/Glucose"
19353     }
19354 }
19355 }
19356 }
19357 },
19358 },
19359 "parameters": {
19360     "interface": {
19361         "in": "query",
19362         "name": "if",
19363         "type": "string",
19364         "enum": [
19365             "oic.if.s",
19366             "oic.if.baseline"
19367         ]
19368     }
19369 },
19370 "definitions": {
19371     "Glucose": {
19372         "properties": {
19373             "rt": {
19374                 "description": "Resource Type",
19375                 "items": {
19376                     "enum": [
19377                         "oic.r.glucose"
19378                     ],
19379                     "type": "string",
19380                     "maxLength": 64
19381                 },
19382                 "minItems": 1,
19383                 "uniqueItems": true,
19384                 "readOnly": true,
19385                 "type": "array"
19386             },
19387             "glucose": {
19388                 "description": "A measurement of glucose concentration in the blood",
19389                 "minimum": 0.0,
19390                 "readOnly": true,
19391                 "type": "number"
19392             },
19393             "units": {
19394                 "description": "Glucose unit",
19395                 "enum": [
19396                     "mg/dL",
19397                     "mmol/L"
19398                 ],
19399                 "readOnly": true,
19400                 "type": "string",
19401                 "default": "mg/dL"
19402             },
19403             "range": {
19404                 "$ref":
19405                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19406                 schema.json#/definitions/range_number"
19407             },
19408             "step": {
19409                 "$ref":
19410                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19411                 schema.json#/definitions/step_number"
19412             },
19413             "precision": {
19414                 "$ref":
19415                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19416                 schema.json#/definitions/precision"
19417             },
19418             "n": {
19419                 "$ref":
19420                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19421                 schema.json#/definitions/n"
19422             },
19423             "id": {

```

```

19424     "$ref":
19425     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19426     schema.json#/definitions/id"
19427     },
19428     "if": {
19429         "description": "The OCF Interface set supported by this Resource",
19430         "items": {
19431             "enum": [
19432                 "oic.if.s",
19433                 "oic.if.baseline"
19434             ],
19435             "type": "string",
19436             "maxLength": 64
19437         },
19438         "minItems": 1,
19439         "readOnly": true,
19440         "uniqueItems": true,
19441         "type": "array"
19442     }
19443 },
19444 "type": "object",
19445 "required": [
19446     "glucose"
19447 ]
19448 }
19449 }
19450 }
19451

```

6.99.5 Property definition

Table 201 defines the Properties that are part of the "oic.r.glucose" Resource Type.

Table 201 – The Property definitions of the Resource with type "rt" = "oic.r.glucose".

Property name	Value type	Mandatory	Access mode	Description
n	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
units	string	No	Read Only	Glucose unit
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
id	multiple types: see schema	No	Read Write	
glucose	number	Yes	Read Only	A measurement of glucose concentration in the blood
step	multiple types: see schema	No	Read Write	

rt	array: see schema	No	Read Only	Resource Type
range	multiple types: see schema	No	Read Write	

19455 **6.99.6 CRUDN behaviour**

19456 Table 202 defines the CRUDN operations that are supported on the "oic.r.glucose" Resource Type.

19457 **Table 202 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose".**

Create	Read	Update	Delete	Notify
	get			observe

19458 **6.100 Context Carbohydrates for Glucose Meter**

19459 **6.100.1 Introduction**

19460 This Resource describes the Properties associated with a context carbohydrates.
 19461 The carb Property has a default unit of grams[g].
 19462 The carb and meal Properties are read-only values that are provided by the Server.
 19463 When range is omitted the default is 0 to +MAXFLOAT.

19464 **6.100.2 Example URI**

19465 /GlucoseCarbResURI

19466 **6.100.3 Resource type**

19467 The Resource Type is defined as: "oic.r.glucose.carb".

19468 **6.100.4 OpenAPI 2.0 definition**

```

19469 {
19470   "swagger": "2.0",
19471   "info": {
19472     "title": "Context Carbohydrates for Glucose Meter",
19473     "version": "2019-03-22",
19474     "license": {
19475       "name": "OCF Data Model License",
19476       "url":
19477         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
19478         CENSE.md",
19479       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
19480     },
19481     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
19482   },
19483   "schemes": [
19484     "http"
19485   ],
19486   "consumes": [
19487     "application/json"
19488   ],
19489   "produces": [
19490     "application/json"
19491   ],
19492   "paths": {
19493     "/GlucoseCarbResURI": {
19494       "get": {
19495         "description": "This Resource describes the Properties associated with a context
19496         carbohydrates.\nThe carb Property has a default unit of grams[g].\nThe carb and meal Properties are
19497         read-only values that are provided by the Server.\nWhen range is omitted the default is 0 to
19498         +MAXFLOAT."

```

```

19499     "parameters": [
19500         {
19501             "$ref": "#/parameters/interface"
19502         }
19503     ],
19504     "responses": {
19505         "200": {
19506             "description": "",
19507             "x-example": {
19508                 "rt": [
19509                     "oic.r.glucose.carb"
19510                 ],
19511                 "carb": 100.0,
19512                 "meal": "breakfast"
19513             },
19514             "schema": {
19515                 "$ref": "#/definitions/GlucoseCarb"
19516             }
19517         }
19518     }
19519 },
19520 },
19521 },
19522 "parameters": {
19523     "interface": {
19524         "in": "query",
19525         "name": "if",
19526         "type": "string",
19527         "enum": [
19528             "oic.if.s",
19529             "oic.if.baseline"
19530         ]
19531     }
19532 },
19533 "definitions": {
19534     "GlucoseCarb": {
19535         "properties": {
19536             "rt": {
19537                 "description": "Resource Type",
19538                 "items": {
19539                     "enum": [
19540                         "oic.r.glucose.carb"
19541                     ],
19542                     "type": "string",
19543                     "maxLength": 64
19544                 },
19545                 "minItems": 1,
19546                 "uniqueItems": true,
19547                 "readOnly": true,
19548                 "type": "array"
19549             },
19550             "carb": {
19551                 "description": "The amount of carbohydrates undertaken in grams",
19552                 "readOnly": true,
19553                 "type": "number",
19554                 "minimum": 0.0
19555             },
19556             "meal": {
19557                 "description": "Recorded time of carbohydrates intake",
19558                 "enum": [
19559                     "breakfast",
19560                     "lunch",
19561                     "dinner",
19562                     "snack",
19563                     "drink",
19564                     "supper",
19565                     "brunch",
19566                     "undetermined",
19567                     "other",
19568                     "no_entry",
19569                     "no_ingestion"
19570                 ]

```



```

19571         "readOnly": true,
19572         "type": "string"
19573     },
19574     "range": {
19575         "description": "The range applies to the carb property only",
19576         "$ref":
19577 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19578 schema.json#/definitions/range_number"
19579     },
19580     "step": {
19581         "description": "The step applies to the carb property only",
19582         "$ref":
19583 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19584 schema.json#/definitions/step_number"
19585     },
19586     "precision": {
19587         "description": "The precision applies to the carb property only",
19588         "$ref":
19589 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19590 schema.json#/definitions/precision"
19591     },
19592     "n": {
19593         "$ref":
19594 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19595 schema.json#/definitions/n"
19596     },
19597     "id": {
19598         "$ref":
19599 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19600 schema.json#/definitions/id"
19601     },
19602     "if": {
19603         "description": "The OCF Interface set supported by this Resource",
19604         "items": {
19605             "enum": [
19606                 "oic.if.s",
19607                 "oic.if.baseline"
19608             ],
19609             "type": "string",
19610             "maxLength": 64
19611         },
19612         "minItems": 1,
19613         "readOnly": true,
19614         "uniqueItems": true,
19615         "type": "array"
19616     }
19617 },
19618 "type": "object",
19619 "required": [
19620     "carb",
19621     "meal"
19622 ]
19623 }
19624 }
19625 }
19626

```

19627 6.100.5 Property definition

19628 Table 203 defines the Properties that are part of the "oic.r.glucose.carb" Resource Type.

19629 **Table 203 – The Property definitions of the Resource with type "rt" = "oic.r.glucose.carb".**

Property name	Value type	Mandatory	Access mode	Description
n	multiple types: see schema	No	Read Write	

meal	string	Yes	Read Only	Recorded time of carbohydrates intake
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
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
rt	array: see schema	No	Read Only	Resource Type
id	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	The precision applies to the carb property only
carb	number	Yes	Read Only	The amount of carbohydrates undertaken in grams

19630 **6.100.6 CRUDN behaviour**

19631 Table 204 defines the CRUDN operations that are supported on the "oic.r.glucose.carb" Resource
19632 Type.

19633 **Table 204 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose.carb".**

Create	Read	Update	Delete	Notify
	get			observe

19634 **6.101 Exercise for Glucose Meter**

19635 **6.101.1 Introduction**

19636 This Resource describes the Properties associated with glucose exercise.
19637 The exercise Property has a default unit of percentage.
19638 The exercise Property is a read-only value that is provided by the Server.

19639 **6.101.2 Example URI**

19640 /ExerciseResURI

19641 **6.101.3 Resource type**

19642 The Resource Type is defined as: "oic.r.glucose.exercise".

19643 **6.101.4 OpenAPI 2.0 definition**

```
19644 {
19645   "swagger": "2.0",
19646   "info": {
19647     "title": "Exercise for Glucose Meter",
19648     "version": "2019-03-22",
19649     "license": {
19650       "name": "OCF Data Model License",
19651       "url":
19652         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
19653         CENSE.md",
19654       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
19655     },
19656     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
19657   },
19658   "schemes": [
19659     "http"
19660   ],
19661   "consumes": [
19662     "application/json"
19663   ],
19664   "produces": [
19665     "application/json"
19666   ],
19667   "paths": {
19668     "/ExerciseResURI": {
19669       "get": {
19670         "description": "This Resource describes the Properties associated with glucose
19671 exercise.\n\nThe exercise Property has a default unit of percentage.\n\nThe exercise Property is a read-
19672 only value that is provided by the Server.",
19673         "parameters": [
19674           {
19675             "$ref": "#/parameters/interface"
19676           }
19677         ],
19678         "responses": {
19679           "200": {
19680             "description": "",
19681             "x-example": {
19682               "rt": [
19683                 "oic.r.glucose.exercise"
19684               ],
19685               "exercise": 30.0
19686             },
19687             "schema": {
19688               "$ref": "#/definitions/Exercise"
19689             }
19690           }
19691         }
19692       }
19693     }
19694   },
19695   "parameters": {
19696     "interface": {
19697       "in": "query",
19698       "name": "if",
19699       "type": "string",
19700       "enum": [
19701         "oic.if.s",
19702         "oic.if.baseline"
19703       ]
19704     }
19705   },

```

```

19706 "definitions": {
19707   "Exercise": {
19708     "properties": {
19709       "rt": {
19710         "description": "Resource Type",
19711         "items": {
19712           "enum": [
19713             "oic.r.glucose.exercise"
19714           ],
19715           "type": "string",
19716           "maxLength": 64
19717         },
19718         "minItems": 1,
19719         "uniqueItems": true,
19720         "readOnly": true,
19721         "type": "array"
19722       },
19723       "exercise": {
19724         "description": "The level of exercise undertaken in percentage",
19725         "maximum": 100.0,
19726         "minimum": 0.0,
19727         "readOnly": true,
19728         "type": "number"
19729       },
19730       "range": {
19731         "$ref":
19732         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19733         schema.json#/definitions/range_number"
19734       },
19735       "step": {
19736         "$ref":
19737         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19738         schema.json#/definitions/step_number"
19739       },
19740       "precision": {
19741         "$ref":
19742         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19743         schema.json#/definitions/precision"
19744       },
19745       "n": {
19746         "$ref":
19747         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19748         schema.json#/definitions/n"
19749       },
19750       "id": {
19751         "$ref":
19752         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19753         schema.json#/definitions/id"
19754       },
19755       "if": {
19756         "description": "The OCF Interface set supported by this Resource",
19757         "items": {
19758           "enum": [
19759             "oic.if.s",
19760             "oic.if.baseline"
19761           ],
19762           "type": "string",
19763           "maxLength": 64
19764         },
19765         "minItems": 1,
19766         "readOnly": true,
19767         "uniqueItems": true,
19768         "type": "array"
19769       }
19770     },
19771     "type": "object",
19772     "required": [
19773       "exercise"
19774     ]
19775   }
19776 }

```

19777 }
19778

19779 **6.101.5 Property definition**

19780 Table 205 defines the Properties that are part of the "oic.r.glucose.exercise" Resource Type.

19781 **Table 205 – The Property definitions of the Resource with type "rt" =**
19782 **"oic.r.glucose.exercise".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
exercise	number	Yes	Read Only	The level of exercise undertaken in percentage
id	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	

19783 **6.101.6 CRUDN behaviour**

19784 Table 206 defines the CRUDN operations that are supported on the "oic.r.glucose.exercise"
19785 Resource Type.

19786 **Table 206 – The CRUDN operations of the Resource with type "rt" =**
19787 **"oic.r.glucose.exercise".**

Create	Read	Update	Delete	Notify
	get			observe

19788 **6.102 Hemoglobin Bound to Glucose A1c Form (HbA1c) for Glucose Meter**

19789 **6.102.1 Introduction**

19790 This Resource describes the Properties associated with a person's hba1c level.
19791 The unit is a single value that is percentage.
19792 The hba1c Property is a read-only value that is provided by the Server.

19793 **6.102.2 Example URI**

19794 /GlucoseHbA1cResURI

19795 **6.102.3 Resource type**

19796 The Resource Type is defined as: "oic.r.glucose.hba1c".

19797 **6.102.4 OpenAPI 2.0 definition**

```
19798 {  
19799   "swagger": "2.0",  
19800   "info": {  
19801     "title": "Hemoglobin Bound to Glucose Alc Form (HbAlc) for Glucose Meter",  
19802     "version": "2019-03-22",  
19803     "license": {  
19804       "name": "OCF Data Model License",  
19805       "url":  
19806       "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
19807       CENSE.md",  
19808       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."  
19809     },  
19810     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
19811   },  
19812   "schemes": [  
19813     "http"  
19814   ],  
19815   "consumes": [  
19816     "application/json"  
19817   ],  
19818   "produces": [  
19819     "application/json"  
19820   ],  
19821   "paths": {  
19822     "/GlucoseHbAlcResURI": {  
19823       "get": {  
19824         "description": "This Resource describes the Properties associated with a person's hbalc  
19825         level.\n\nThe unit is a single value that is percentage.\n\nThe hbalc Property is a read-only value that  
19826         is provided by the Server.",  
19827         "parameters": [  
19828           {  
19829             "$ref": "#/parameters/interface"  
19830           }  
19831         ],  
19832         "responses": {  
19833           "200": {  
19834             "description": "",  
19835             "x-example": {  
19836               "rt": [  
19837                 "oic.r.glucose.hbalc"  
19838               ],  
19839               "hbalc": 5.0  
19840             },  
19841             "schema": {  
19842               "$ref": "#/definitions/HbAlc"  
19843             }  
19844           }  
19845         }  
19846       }  
19847     }  
19848   },  
19849   "parameters": {  
19850     "interface": {  
19851       "in": "query",
```

```

19852     "name": "if",
19853     "type": "string",
19854     "enum": [
19855         "oic.if.s",
19856         "oic.if.baseline"
19857     ]
19858 }
19859 },
19860 "definitions": {
19861     "HbA1c": {
19862         "properties": {
19863             "rt": {
19864                 "description": "Resource Type",
19865                 "items": {
19866                     "enum": [
19867                         "oic.r.glucose.hbA1c"
19868                     ],
19869                     "type": "string",
19870                     "maxLength": 64
19871                 },
19872                 "minItems": 1,
19873                 "uniqueItems": true,
19874                 "readOnly": true,
19875                 "type": "array"
19876             },
19877             "hbA1c": {
19878                 "description": "Current HbA1c measurement in percentage",
19879                 "maximum": 100.0,
19880                 "minimum": 0.0,
19881                 "readOnly": true,
19882                 "type": "number"
19883             },
19884             "range": {
19885                 "$ref":
19886 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19887 schema.json#/definitions/range_number"
19888             },
19889             "step": {
19890                 "$ref":
19891 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19892 schema.json#/definitions/step_number"
19893             },
19894             "precision": {
19895                 "$ref":
19896 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19897 schema.json#/definitions/precision"
19898             },
19899             "n": {
19900                 "$ref":
19901 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19902 schema.json#/definitions/n"
19903             },
19904             "id": {
19905                 "$ref":
19906 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19907 schema.json#/definitions/id"
19908             },
19909             "if": {
19910                 "description": "The OCF Interface set supported by this Resource",
19911                 "items": {
19912                     "enum": [
19913                         "oic.if.s",
19914                         "oic.if.baseline"
19915                     ],
19916                     "type": "string",
19917                     "maxLength": 64
19918                 },
19919                 "minItems": 1,
19920                 "readOnly": true,
19921                 "uniqueItems": true,
19922                 "type": "array"
19923             }

```

```

19924     },
19925     "type": "object",
19926     "required": [
19927         "hba1c"
19928     ]
19929 }
19930 }
19931 }
19932

```

19933 **6.102.5 Property definition**

19934 Table 207 defines the Properties that are part of the "oic.r.glucose.hba1c" Resource Type.

19935 **Table 207 – The Property definitions of the Resource with type "rt" = "oic.r.glucose.hba1c".**

Property name	Value type	Mandatory	Access mode	Description
precision	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
hba1c	number	Yes	Read Only	Current HbA1c measurement in percentage
id	multiple types: see schema	No	Read Write	
rt	array: see schema	No	Read Only	Resource Type
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

19936 **6.102.6 CRUDN behaviour**

19937 Table 208 defines the CRUDN operations that are supported on the "oic.r.glucose.hba1c" Resource Type.
19938

19939 **Table 208 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose.hba1c".**

Create	Read	Update	Delete	Notify
	get			observe

19940 **6.103 Context Health for Glucose Meter**

19941 **6.103.1 Introduction**

19942 This Resource describes the Properties associated with context health.
19943 The health Property is a read-only value that is provided by the Server where
19944 minor and major are related to the general health or the level of illness of the person;
19945 menses refers to the female menstrual cycle;
19946 stress refers to physiological or psychological stress.

19947 **6.103.2 Example URI**

19948 /GlucoseHealthResURI

19949 **6.103.3 Resource type**

19950 The Resource Type is defined as: "oic.r.glucose.health".

19951 **6.103.4 OpenAPI 2.0 definition**

```
19952 {  
19953   "swagger": "2.0",  
19954   "info": {  
19955     "title": "Context Health for Glucose Meter",  
19956     "version": "2019-03-22",  
19957     "license": {  
19958       "name": "OCF Data Model License",  
19959       "url":  
19960 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
19961 CENSE.md",  
19962       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."  
19963     },  
19964     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
19965   },  
19966   "schemes": [  
19967     "http"  
19968   ],  
19969   "consumes": [  
19970     "application/json"  
19971   ],  
19972   "produces": [  
19973     "application/json"  
19974   ],  
19975   "paths": {  
19976     "/GlucoseHealthResURI": {  
19977       "get": {  
19978         "description": "This Resource describes the Properties associated with context health.\n\nThe  
19979 health Property is a read-only value that is provided by the Server where\n\nminor and major are  
19980 related to the general health or the level of illness of the person;\n\nmenses refers to the female  
19981 menstrual cycle;\n\nstress refers to physiological or psychological stress.",  
19982         "parameters": [  
19983           {  
19984             "$ref": "#/parameters/interface"  
19985           }  
19986         ],  
19987         "responses": {  
19988           "200": {  
19989             "description": "",  
19990             "x-example": {  
19991               "rt": [  
19992                 "oic.r.glucose.health"  
19993               ],  
19994               "health": "major"  
19995             },  
19996             "schema": {  
19997               "$ref": "#/definitions/GlucoseHealth"  
19998             }  
19999           }  
20000         }  
20001       }  
20002     }  
  }
```

```

20003     },
20004     "parameters": {
20005         "interface": {
20006             "in": "query",
20007             "name": "if",
20008             "type": "string",
20009             "enum": [
20010                 "oic.if.s",
20011                 "oic.if.baseline"
20012             ]
20013         }
20014     },
20015     "definitions": {
20016         "GlucoseHealth": {
20017             "properties": {
20018                 "rt": {
20019                     "description": "Resource Type",
20020                     "items": {
20021                         "enum": [
20022                             "oic.r.glucose.health"
20023                         ],
20024                         "type": "string",
20025                         "maxLength": 64
20026                     },
20027                     "minItems": 1,
20028                     "readOnly": true,
20029                     "type": "array"
20030                 },
20031                 "health": {
20032                     "description": "The various levels of health a person feels when taking a glucose.",
20033                     "enum": [
20034                         "minor",
20035                         "major",
20036                         "menses",
20037                         "stress",
20038                         "none"
20039                     ],
20040                     "readOnly": true,
20041                     "type": "string"
20042                 },
20043                 "n": {
20044                     "$ref":
20045                     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20046                     schema.json#/definitions/n"
20047                 },
20048                 "id": {
20049                     "$ref":
20050                     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20051                     schema.json#/definitions/id"
20052                 },
20053                 "if": {
20054                     "description": "The OCF Interface set supported by this Resource",
20055                     "items": {
20056                         "enum": [
20057                             "oic.if.s",
20058                             "oic.if.baseline"
20059                         ],
20060                         "type": "string",
20061                         "maxLength": 64
20062                     },
20063                     "minItems": 1,
20064                     "readOnly": true,
20065                     "uniqueItems": true,
20066                     "type": "array"
20067                 }
20068             },
20069             "type": "object",
20070             "required": [
20071                 "health"
20072             ]
20073         }
20074     }

```

20075 }
20076

20077 **6.103.5 Property definition**

20078 Table 209 defines the Properties that are part of the "oic.r.glucose.health" Resource Type.

20079 **Table 209 – The Property definitions of the Resource with type "rt" =**
20080 **"oic.r.glucose.health".**

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

20081 **6.103.6 CRUDN behaviour**

20082 Table 210 defines the CRUDN operations that are supported on the "oic.r.glucose.health" Resource
20083 Type.

20084 **Table 210 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose.health".**

Create	Read	Update	Delete	Notify
	get			observe

20085 **6.104 Context Meal for Glucose Meter**

20086 **6.104.1 Introduction**

20087 This Resource describes the Properties associated with context meal.
20088 Preprandial means pre-meal.
20089 Postprandial means post-meal.
20090 Fasting means the effect of long-term absence of food intake (overnight).
20091 The meal Property is a read-only value that is provided by the Server.

20092 **6.104.2 Example URI**

20093 /GlucoseMealResURI

20094 **6.104.3 Resource type**

20095 The Resource Type is defined as: "oic.r.glucose.meal".

20096 **6.104.4 OpenAPI 2.0 definition**

```
20097 {
20098   "swagger": "2.0",
20099   "info": {
20100     "title": "Context Meal for Glucose Meter",
20101     "version": "2019-03-22",
20102     "license": {
20103       "name": "OCF Data Model License",
20104       "url":
20105         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
20106         CENSE.md",
20107       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
20108     },
20109     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
20110   },
20111   "schemes": [
20112     "http"
20113   ],
20114   "consumes": [
20115     "application/json"
20116   ],
20117   "produces": [
20118     "application/json"
20119   ],
20120   "paths": {
20121     "/GlucoseMealResURI": {
20122       "get": {
20123         "description": "This Resource describes the Properties associated with context
20124 meal.\nPreprandial means pre-meal.\nPostprandial means post-meal.\nFasting means the effect of long-
20125 term absence of food intake (overnight).\nThe meal Property is a read-only value that is provided by
20126 the Server.",
20127         "parameters": [
20128           {
20129             "$ref": "#/parameters/interface"
20130           }
20131         ],
20132         "responses": {
20133           "200": {
20134             "description": "",
20135             "x-example": {
20136               "rt": [
20137                 "oic.r.glucose.meal"
20138               ],
20139               "meal": "preprandial"
20140             },
20141             "schema": {
20142               "$ref": "#/definitions/GlucoseMeal"
20143             }
20144           }
20145         }
20146       }
20147     }
20148   },
20149   "parameters": {
20150     "interface": {
20151       "in": "query",
20152       "name": "if",
20153       "type": "string",
20154       "enum": [
20155         "oic.if.s",
20156         "oic.if.baseline"
20157       ]
20158     }
20159   },
20160   "definitions": {
20161     "GlucoseMeal": {
20162       "properties": {
```

```

20163     "rt": {
20164         "description": "Resource Type",
20165         "items": {
20166             "enum": [
20167                 "oic.r.glucose.meal"
20168             ],
20169             "type": "string",
20170             "maxLength": 64
20171         },
20172         "minItems": 1,
20173         "uniqueItems": true,
20174         "readOnly": true,
20175         "type": "array"
20176     },
20177     "meal": {
20178         "description": "Time of day when the measurement is taken.",
20179         "enum": [
20180             "preprandial",
20181             "postprandial",
20182             "fasting",
20183             "bedtime",
20184             "casual"
20185         ],
20186         "readOnly": true,
20187         "type": "string"
20188     },
20189     "n": {
20190         "$ref":
20191         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20192         schema.json#/definitions/n"
20193     },
20194     "id": {
20195         "$ref":
20196         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20197         schema.json#/definitions/id"
20198     },
20199     "if": {
20200         "description": "The OCF Interface set supported by this Resource",
20201         "items": {
20202             "enum": [
20203                 "oic.if.s",
20204                 "oic.if.baseline"
20205             ],
20206             "type": "string",
20207             "maxLength": 64
20208         },
20209         "minItems": 1,
20210         "readOnly": true,
20211         "uniqueItems": true,
20212         "type": "array"
20213     }
20214 },
20215 "type": "object",
20216 "required": [
20217     "meal"
20218 ]
20219 }
20220 }
20221 }
20222

```

20223 **6.104.5 Property definition**

20224 Table 211 defines the Properties that are part of the "oic.r.glucose.meal" Resource Type.

20225 **Table 211 – The Property definitions of the Resource with type "rt" = "oic.r.glucose.meal".**

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

meal	string	Yes	Read Only	Time of day when the measurement is taken.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
id	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
rt	array: see schema	No	Read Only	Resource Type

20226 **6.104.6 CRUDN behaviour**

20227 Table 212 defines the CRUDN operations that are supported on the "oic.r.glucose.meal" Resource
20228 Type.

20229 **Table 212 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose.meal".**

Create	Read	Update	Delete	Notify
	get			observe

20230 **6.105 Context Medication for Glucose Meter**

20231 **6.105.1 Introduction**

20232 This Resource describes the Properties associated with context medication.
20233 The unit is a single value that is one of mg and mL.
20234 The medication Property has a default unit of milligrams[mg].
20235 The medication, unit and regimen Properties are read-only values that are provided by the Server.
20236 When range is omitted the default is 0 to +MAXFLOAT.

20237 **6.105.2 Example URI**

20238 /GlucoseMedicationResURI

20239 **6.105.3 Resource type**

20240 The Resource Type is defined as: "oic.r.glucose.medication".

20241 **6.105.4 OpenAPI 2.0 definition**

20242 {
20243 "swagger": "2.0",
20244 "info": {
20245 "title": "Context Medication for Glucose Meter",
20246 "version": "2019-03-22",
20247 "license": {
20248 "name": "OCF Data Model License",
20249 "url":
20250 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
20251 CENSE.md",

```

20252         "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
20253     },
20254     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
20255 },
20256 "schemes": [
20257     "http"
20258 ],
20259 "consumes": [
20260     "application/json"
20261 ],
20262 "produces": [
20263     "application/json"
20264 ],
20265 "paths": {
20266     "/GlucoseMedicationResURI": {
20267         "get": {
20268             "description": "This Resource describes the Properties associated with context
20269 medication.\nThe unit is a single value that is one of mg and mL.\nThe medication Property has a
20270 default unit of milligrams[mg].\nThe medication, unit and regimen Properties are read-only values
20271 that are provided by the Server.\nWhen range is omitted the default is 0 to +MAXFLOAT.",
20272             "parameters": [
20273                 {
20274                     "$ref": "#/parameters/interface"
20275                 }
20276             ],
20277             "responses": {
20278                 "200": {
20279                     "description": "",
20280                     "x-example": {
20281                         "rt": [
20282                             "oic.r.glucose.medication"
20283                         ],
20284                         "medication": 100.0,
20285                         "units": "mg",
20286                         "regimen": "rapidacting"
20287                     },
20288                     "schema": {
20289                         "$ref": "#/definitions/GlucoseMedication"
20290                     }
20291                 }
20292             }
20293         }
20294     }
20295 },
20296 "parameters": {
20297     "interface": {
20298         "in": "query",
20299         "name": "if",
20300         "type": "string",
20301         "enum": [
20302             "oic.if.s",
20303             "oic.if.baseline"
20304         ]
20305     }
20306 },
20307 "definitions": {
20308     "GlucoseMedication": {
20309         "properties": {
20310             "rt": {
20311                 "description": "Resource Type",
20312                 "items": {
20313                     "enum": [
20314                         "oic.r.glucose.medication"
20315                     ],
20316                     "type": "string",
20317                     "maxLength": 64
20318                 },
20319                 "minItems": 1,
20320                 "uniqueItems": true,
20321                 "readOnly": true,
20322                 "type": "array"
20323             }

```

```

20324     "regimen": {
20325         "description": "Medication regimen",
20326         "enum": [
20327             "rapidacting",
20328             "shortacting",
20329             "intermediateacting",
20330             "longacting",
20331             "premix"
20332         ],
20333         "readOnly": true,
20334         "type": "string"
20335     },
20336     "medication": {
20337         "description": "The amount of medication taken",
20338         "readOnly": true,
20339         "type": "number",
20340         "minimum": 0.0
20341     },
20342     "units": {
20343         "description": "Unit for the amount of medication taken",
20344         "enum": [
20345             "mg",
20346             "mL"
20347         ],
20348         "readOnly": true,
20349         "type": "string",
20350         "default": "mg"
20351     },
20352     "range": {
20353         "$ref":
20354         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20355         schema.json#/definitions/range_number"
20356     },
20357     "step": {
20358         "$ref":
20359         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20360         schema.json#/definitions/step_number"
20361     },
20362     "precision": {
20363         "$ref":
20364         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20365         schema.json#/definitions/precision"
20366     },
20367     "n": {
20368         "$ref":
20369         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20370         schema.json#/definitions/n"
20371     },
20372     "id": {
20373         "$ref":
20374         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20375         schema.json#/definitions/id"
20376     },
20377     "if": {
20378         "description": "The OCF Interface set supported by this Resource",
20379         "items": {
20380             "enum": [
20381                 "oic.if.s",
20382                 "oic.if.baseline"
20383             ],
20384             "type": "string",
20385             "maxLength": 64
20386         },
20387         "minItems": 1,
20388         "readOnly": true,
20389         "uniqueItems": true,
20390         "type": "array"
20391     }
20392 },
20393 "type": "object",
20394 "required": [
20395     "medication"

```


20396]
 20397 }
 20398 }
 20399 }
 20400 }

20401 **6.105.5 Property definition**

20402 Table 213 defines the Properties that are part of the "oic.r.glucose.medication" Resource Type.

20403 **Table 213 – The Property definitions of the Resource with type "rt" =**
 20404 **"oic.r.glucose.medication".**

Property name	Value type	Mandatory	Access mode	Description
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
medication	number	Yes	Read Only	The amount of medication taken
n	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
regimen	string	No	Read Only	Medication regimen
rt	array: see schema	No	Read Only	Resource Type
units	string	No	Read Only	Unit for the amount of medication taken
step	multiple types: see schema	No	Read Write	

20405 **6.105.6 CRUDN behaviour**

20406 Table 214 defines the CRUDN operations that are supported on the "oic.r.glucose.medication"
 20407 Resource Type.

20408
20409

Table 214 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose.medication".

Create	Read	Update	Delete	Notify
	get			observe

20410 **6.106 Glucose Meter Atomic Measurement**

20411 **6.106.1 Introduction**

20412 This Resource describes the Properties associated with glucose meter.
20413 The Resource is an Atomic Measurement of glucose (oic.r.glucose), context carbohydrates
20414 (oic.r.glucose.carb), context exercise (oic.r.glucose.exercise), Hemoglobin Bound to glucose a1c
20415 Form (HbA1c) (oic.r.glucose.hba1c), context health (oic.r.glucose.health), context meal
20416 (oic.r.glucose.meal), context medication (oic.r.glucose.medication), context sample location
20417 (oic.r.glucose.samplelocation), context tester (oic.r.glucose.tester), observed time
20418 (oic.r.time.stamp), and user id (oic.r.userid).

20419 **6.106.2 Example URI**

20420 /GlucoseMeterAMResURI

20421 **6.106.3 Resource type**

20422 The Resource Type is defined as: "oic.r.glucosemeter-am, oic.wk.atomicmeasurement".

20423 **6.106.4 OpenAPI 2.0 definition**

```
20424 {  
20425   "swagger": "2.0",  
20426   "info": {  
20427     "title": "Glucose Meter Atomic Measurement",  
20428     "version": "2019-03-22",  
20429     "license": {  
20430       "name": "OCF Data Model License",  
20431       "url":  
20432       "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
20433       CENSE.md",  
20434       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."  
20435     },  
20436     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
20437   },  
20438   "schemes": [  
20439     "http"  
20440   ],  
20441   "consumes": [  
20442     "application/json"  
20443   ],  
20444   "produces": [  
20445     "application/json"  
20446   ],  
20447   "paths": {  
20448     "/GlucoseMeterAMResURI?if=oic.if.b": {  
20449       "get": {  
20450         "description": "This Resource describes the Properties associated with glucose meter.\nThe  
20451 Resource is an Atomic Measurement of glucose (oic.r.glucose), context carbohydrates  
20452 (oic.r.glucose.carb), context exercise (oic.r.glucose.exercise), hemoglobin bound to glucose a1c  
20453 Form (HbA1c) (oic.r.glucose.hbalc), context health (oic.r.glucose.health), context meal  
20454 (oic.r.glucose.meal), context medication (oic.r.glucose.medication), context sample location  
20455 (oic.r.glucose.samplelocation), context tester (oic.r.glucose.tester), observed time  
20456 (oic.r.time.stamp), and user id (oic.r.userid).",  
20457         "parameters": [  
20458           {  
20459             "$ref": "#/parameters/interface-all"  
20460           }  
20461         ],
```

```

20462 "responses": {
20463   "200": {
20464     "description": "",
20465     "x-example": [
20466       {
20467         "href": "/myGlucose",
20468         "rep": {
20469           "glucose": 100.0,
20470           "units": "mg/dL",
20471           "range": [
20472             20.0,
20473             600.0
20474           ],
20475           "step": 1
20476         }
20477       },
20478       {
20479         "href": "/myGlucoseCarb",
20480         "rep": {
20481           "carb": 100.0,
20482           "meal": "breakfast"
20483         }
20484       },
20485       {
20486         "href": "/myGlucoseExercise",
20487         "rep": {
20488           "exercise": 30.0
20489         }
20490       },
20491       {
20492         "href": "/myGlucoseHbA1c",
20493         "rep": {
20494           "hba1c": 5.0
20495         }
20496       },
20497       {
20498         "href": "/myGlucoseHealth",
20499         "rep": {
20500           "health": "major"
20501         }
20502       },
20503       {
20504         "href": "/myGlucoseMeal",
20505         "rep": {
20506           "meal": "preprandial"
20507         }
20508       },
20509       {
20510         "href": "/myGlucoseMeditation",
20511         "rep": {
20512           "medication": 100.0,
20513           "units": "mg",
20514           "regimen": "rapidacting"
20515         }
20516       },
20517       {
20518         "href": "/myGlucoseSampleLocation",
20519         "rep": {
20520           "samplelocation": "finger"
20521         }
20522       },
20523       {
20524         "href": "/myGlucoseTester",
20525         "rep": {
20526           "tester": "self"
20527         }
20528       },
20529       {
20530         "href": "/myUserId",
20531         "rep": {
20532           "userid": "USER1"
20533         }

```

```

20534     },
20535     {
20536         "href": "/myTimeStamp",
20537         "rep": {
20538             "timestamp": "2018-11-09T12:15+08:00"
20539         }
20540     }
20541 ],
20542 "schema": {
20543     "$ref": "#/definitions/batch-retrieve"
20544 }
20545 }
20546 }
20547 }
20548 },
20549 "/GlucoseMeterAMResURI?if=oic.if.ll": {
20550     "get": {
20551         "description": "This Resource describes the Properties associated with glucose meter.\n\nThe
20552 Resource is an Atomic Measurement of glucose (oic.r.glucose), context carbohydrates
20553 (oic.r.glucose.carb), context exercise (oic.r.glucose.exercise), hemoglobin bound to glucose alc
20554 Form (HbA1c) (oic.r.glucose.hbalc), context health (oic.r.glucose.health), context meal
20555 (oic.r.glucose.meal), context medication (oic.r.glucose.medication), context sample location
20556 (oic.r.glucose.samplelocation), context tester (oic.r.glucose.tester), observed time
20557 (oic.r.time.stamp), and user id (oic.r.userid).",
20558         "parameters": [
20559             {
20560                 "$ref": "#/parameters/interface-all"
20561             }
20562         ],
20563         "responses": {
20564             "200": {
20565                 "description": "",
20566                 "x-example": [
20567                     {
20568                         "href": "/myGlucose",
20569                         "rt": [
20570                             "oic.r.glucose"
20571                         ],
20572                         "if": [
20573                             "oic.if.s",
20574                             "oic.if.baseline"
20575                         ]
20576                     },
20577                     {
20578                         "href": "/myGlucoseCarb",
20579                         "rt": [
20580                             "oic.r.glucose.carb"
20581                         ],
20582                         "if": [
20583                             "oic.if.s",
20584                             "oic.if.baseline"
20585                         ]
20586                     },
20587                     {
20588                         "href": "/myGlucoseExercise",
20589                         "rt": [
20590                             "oic.r.glucose.exercise"
20591                         ],
20592                         "if": [
20593                             "oic.if.s",
20594                             "oic.if.baseline"
20595                         ]
20596                     },
20597                     {
20598                         "href": "/myGlucoseHbA1c",
20599                         "rt": [
20600                             "oic.r.glucose.hbalc"
20601                         ],
20602                         "if": [
20603                             "oic.if.s",
20604                             "oic.if.baseline"
20605 ]

```

```

20606     },
20607     {
20608         "href": "/myGlucoseHealth",
20609         "rt": [
20610             "oic.r.glucose.health"
20611         ],
20612         "if": [
20613             "oic.if.s",
20614             "oic.if.baseline"
20615         ]
20616     },
20617     {
20618         "href": "/myGlucoseMeal",
20619         "rt": [
20620             "oic.r.glucose.meal"
20621         ],
20622         "if": [
20623             "oic.if.s",
20624             "oic.if.baseline"
20625         ]
20626     },
20627     {
20628         "href": "/myGlucoseMedication",
20629         "rt": [
20630             "oic.r.glucose.medication"
20631         ],
20632         "if": [
20633             "oic.if.s",
20634             "oic.if.baseline"
20635         ]
20636     },
20637     {
20638         "href": "/myGlucoseSampleLocation",
20639         "rt": [
20640             "oic.r.glucose.samplelocation"
20641         ],
20642         "if": [
20643             "oic.if.r",
20644             "oic.if.baseline"
20645         ]
20646     },
20647     {
20648         "href": "/myGlucoseTester",
20649         "rt": [
20650             "oic.r.glucose.testers"
20651         ],
20652         "if": [
20653             "oic.if.r",
20654             "oic.if.baseline"
20655         ]
20656     },
20657     {
20658         "href": "/myUserId",
20659         "rt": [
20660             "oic.r.userid"
20661         ],
20662         "if": [
20663             "oic.if.r",
20664             "oic.if.baseline"
20665         ]
20666     },
20667     {
20668         "href": "/myTimeStamp",
20669         "rt": [
20670             "oic.r.time.stamp"
20671         ],
20672         "if": [
20673             "oic.if.r",
20674             "oic.if.baseline"
20675         ]
20676     }
20677 ],

```

```

20678         "schema": {
20679             "$ref": "#/definitions/links"
20680         }
20681     }
20682 }
20683 },
20684 "/GlucoseMeterAMResURI?if=oic.if.baseline": {
20685     "get": {
20686         "description": "This Resource describes the Properties associated with glucose meter.\nThe
20687 Resource is an Atomic Measurement of glucose (oic.r.glucose), context carbohydrates
20688 (oic.r.glucose.carb), context exercise (oic.r.glucose.exercise), Hemoglobin Bound to glucose alc
20689 Form (HbA1c) (oic.r.glucose.hbalc), context health (oic.r.glucose.health), context meal
20690 (oic.r.glucose.meal), context medication (oic.r.glucose.medication), context sample location
20691 (oic.r.glucose.samplelocation), context tester (oic.r.glucose.tester), observed time
20692 (oic.r.time.stamp), and user id (oic.r.userid).",
20693         "parameters": [
20694             {
20695                 "$ref": "#/parameters/interface-all"
20696             }
20697         ],
20698         "responses": {
20699             "200": {
20700                 "description": "",
20701                 "x-example": {
20702                     "rt": [
20703                         "oic.r.glucosemeter-am",
20704                         "oic.wk.atomicmeasurement"
20705                     ],
20706                     "if": [
20707                         "oic.if.b",
20708                         "oic.if.ll",
20709                         "oic.if.baseline"
20710                     ],
20711                     "rts": [
20712                         "oic.r.glucose",
20713                         "oic.r.glucose.carb",
20714                         "oic.r.glucose.exercise",
20715                         "oic.r.glucose.hbalc",
20716                         "oic.r.glucose.health",
20717                         "oic.r.glucose.meal",
20718                         "oic.r.glucose.medication",
20719                         "oic.r.glucose.samplelocation",
20720                         "oic.r.glucose.tester",
20721                         "oic.r.userid",
20722                         "oic.r.time.stamp"
20723                     ],
20724                     "rts-m": [
20725                         "oic.r.glucose"
20726                     ],
20727                     "links": [
20728                         {
20729                             "href": "/myGlucose",
20730                             "rt": [
20731                                 "oic.r.glucose"
20732                             ],
20733                             "if": [
20734                                 "oic.if.s",
20735                                 "oic.if.baseline"
20736                             ]
20737                         },
20738                         {
20739                             "href": "/myGlucoseCarb",
20740                             "rt": [
20741                                 "oic.r.glucose.carb"
20742                             ],
20743                             "if": [
20744                                 "oic.if.s",
20745                                 "oic.if.baseline"
20746                             ]
20747                         }
20748                     ],
20749                 }

```

```

20750     "href": "/myGlucoseExercise",
20751     "rt": [
20752         "oic.r.glucose.exercise"
20753     ],
20754     "if": [
20755         "oic.if.s",
20756         "oic.if.baseline"
20757     ]
20758 },
20759 {
20760     "href": "/myGlucoseHbA1c",
20761     "rt": [
20762         "oic.r.glucose.hbA1c"
20763     ],
20764     "if": [
20765         "oic.if.s",
20766         "oic.if.baseline"
20767     ]
20768 },
20769 {
20770     "href": "/myGlucoseHealth",
20771     "rt": [
20772         "oic.r.glucose.health"
20773     ],
20774     "if": [
20775         "oic.if.s",
20776         "oic.if.baseline"
20777     ]
20778 },
20779 {
20780     "href": "/myGlucoseMeal",
20781     "rt": [
20782         "oic.r.glucose.meal"
20783     ],
20784     "if": [
20785         "oic.if.s",
20786         "oic.if.baseline"
20787     ]
20788 },
20789 {
20790     "href": "/myGlucoseMedication",
20791     "rt": [
20792         "oic.r.glucose.medication"
20793     ],
20794     "if": [
20795         "oic.if.s",
20796         "oic.if.baseline"
20797     ]
20798 },
20799 {
20800     "href": "/myGlucoseSampleLocation",
20801     "rt": [
20802         "oic.r.glucose.samplelocation"
20803     ],
20804     "if": [
20805         "oic.if.r",
20806         "oic.if.baseline"
20807     ]
20808 },
20809 {
20810     "href": "/myGlucoseTester",
20811     "rt": [
20812         "oic.r.glucose.testers"
20813     ],
20814     "if": [
20815         "oic.if.r",
20816         "oic.if.baseline"
20817     ]
20818 },
20819 {
20820     "href": "/myUserId",
20821     "rt": [

```

```

20822         "oic.r.userid"
20823     ],
20824     "if": [
20825         "oic.if.r",
20826         "oic.if.baseline"
20827     ]
20828 },
20829 {
20830     "href": "/myTimeStamp",
20831     "rt": [
20832         "oic.r.time.stamp"
20833     ],
20834     "if": [
20835         "oic.if.r",
20836         "oic.if.baseline"
20837     ]
20838 }
20839 ]
20840 },
20841 "schema": {
20842     "$ref": "#/definitions/baseline"
20843 }
20844 }
20845 }
20846 }
20847 }
20848 },
20849 "parameters": {
20850     "interface-all": {
20851         "in": "query",
20852         "name": "if",
20853         "type": "string",
20854         "enum": [
20855             "oic.if.b",
20856             "oic.if.ll",
20857             "oic.if.baseline"
20858         ]
20859     }
20860 },
20861 "definitions": {
20862     "links": {
20863         "type": "array",
20864         "items": {
20865             "$ref": "#/definitions/oic.oic-link"
20866         }
20867     },
20868     "batch-retrieve": {
20869         "minItems": 1,
20870         "items": {
20871             "properties": {
20872                 "href": {
20873                     "$ref":
20874 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
20875 schema.json#/definitions/href"
20876                 },
20877                 "rep": {
20878                     "type": "object",
20879                     "anyOf": [
20880                         {
20881                             "$ref":
20882 "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseResURI.swagger.json#/definitions/
20883 Glucose"
20884                         },
20885                         {
20886                             "$ref":
20887 "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseCarbResURI.swagger.json#/definiti
20888 ons/GlucoseCarb"
20889                         },
20890                         {
20891                             "$ref":
20892 "https://openconnectivityfoundation.github.io/IoTDataModels/ExerciseResURI.swagger.json#/definitions
20893 /Exercise"

```



```

20894         },
20895         {
20896             "$ref":
20897             "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseHbA1cResURI.swagger.json#/definitions/HbA1c"
20898         },
20899         {
20900             "$ref":
20901             "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseHealthResURI.swagger.json#/definitions/GlucoseHealth"
20902         },
20903         {
20904             "$ref":
20905             "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseMealResURI.swagger.json#/definitions/GlucoseMeal"
20906         },
20907         {
20908             "$ref":
20909             "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseMedicationResURI.swagger.json#/definitions/GlucoseMedication"
20910         },
20911         {
20912             "$ref":
20913             "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseMedicationResURI.swagger.json#/definitions/GlucoseMedication"
20914         },
20915         {
20916             "$ref":
20917             "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseSampleLocationResURI.swagger.json#/definitions/GlucoseSampleLocation"
20918         },
20919         {
20920             "$ref":
20921             "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseTesterResURI.swagger.json#/definitions/GlucoseTester"
20922         },
20923         {
20924             "$ref":
20925             "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/UserID"
20926         },
20927         {
20928             "$ref":
20929             "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definitions/TimeStamp"
20930         },
20931         {
20932             "$ref":
20933             "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definitions/TimeStamp"
20934         }
20935     ]
20936 }
20937 },
20938 "required": [
20939     "href",
20940     "rep"
20941 ],
20942 "type": "object"
20943 },
20944 "type": "array"
20945 },
20946 "baseline": {
20947     "properties": {
20948         "rt": {
20949             "items": {
20950                 "enum": [
20951                     "oic.r.glucosemeter-am",
20952                     "oic.wk.atomicmeasurement"
20953                 ],
20954                 "type": "string",
20955                 "maxLength": 64
20956             },
20957             "minItems": 2,
20958             "uniqueItems": true,
20959             "readOnly": true,
20960             "type": "array"
20961         },
20962         "rts": {
20963             "description": "This contains all possible Resource Types for this Atomic Measurement.",
20964             "items": {
20965                 "enum": [

```

```

20966         "oic.r.glucose",
20967         "oic.r.glucose.carb",
20968         "oic.r.glucose.exercise",
20969         "oic.r.glucose.hb1ac",
20970         "oic.r.glucose.health",
20971         "oic.r.glucose.meal",
20972         "oic.r.glucose.medication",
20973         "oic.r.glucose.samplelocation",
20974         "oic.r.glucose.tester",
20975         "oic.r.time.stamp",
20976         "oic.r.userid"
20977     ],
20978     "type": "string",
20979     "maxLength": 64
20980 },
20981     "minItems": 1,
20982     "uniqueItems": true,
20983     "readOnly": true,
20984     "type": "array"
20985 },
20986 "rts-m": {
20987     "description": "This contains all mandatory Resource Types for this Atomic Measurement.",
20988     "items": {
20989         "enum": [
20990             "oic.r.glucose"
20991         ],
20992         "type": "string",
20993         "maxLength": 64
20994     },
20995     "maxItems": 1,
20996     "minItems": 1,
20997     "uniqueItems": true,
20998     "readOnly": true,
20999     "type": "array"
21000 },
21001 "if": {
21002     "description": "The OCF Interface set supported by this Resource",
21003     "items": {
21004         "enum": [
21005             "oic.if.b",
21006             "oic.if.ll",
21007             "oic.if.baseline"
21008         ],
21009         "type": "string",
21010         "maxLength": 64
21011     },
21012     "minItems": 3,
21013     "uniqueItems": true,
21014     "readOnly": true,
21015     "type": "array"
21016 },
21017 "n": {
21018     "$ref":
21019     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21020     schema.json#/definitions/n"
21021 },
21022 "id": {
21023     "$ref":
21024     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21025     schema.json#/definitions/id"
21026 },
21027 "links": {
21028     "$ref": "#/definitions/links"
21029 }
21030 },
21031 "type": "object",
21032 "required": [
21033     "rt", "if", "links", "rts", "rts-m"
21034 ]
21035 },
21036 "oic.oic-link": {
21037     "properties": {

```

```

21038     "if": {
21039         "description": "The OCF Interface set supported by the target Resource",
21040         "items": {
21041             "enum": [
21042                 "oic.if.s",
21043                 "oic.if.r",
21044                 "oic.if.baseline"
21045             ],
21046             "type": "string",
21047             "maxLength": 64
21048         },
21049         "minItems": 1,
21050         "uniqueItems": true,
21051         "readOnly": true,
21052         "type": "array"
21053     },
21054     "rt": {
21055         "description": "Resource Type of the target Resource",
21056         "items": {
21057             "enum": [
21058                 "oic.r.glucose",
21059                 "oic.r.glucose.carb",
21060                 "oic.r.glucose.exercise",
21061                 "oic.r.glucose.hb1ac",
21062                 "oic.r.glucose.health",
21063                 "oic.r.glucose.meal",
21064                 "oic.r.glucose.medication",
21065                 "oic.r.glucose.samplelocation",
21066                 "oic.r.glucose.tester",
21067                 "oic.r.time.stamp",
21068                 "oic.r.userid"
21069             ],
21070             "type": "string",
21071             "maxLength": 64
21072         },
21073         "minItems": 1,
21074         "uniqueItems": true,
21075         "readOnly": true,
21076         "type": "array"
21077     },
21078     "anchor": {
21079         "$ref":
21080         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21081         schema.json#/definitions/anchor"
21082     },
21083     "di": {
21084         "$ref":
21085         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21086         schema.json#/definitions/di"
21087     },
21088     "eps": {
21089         "$ref":
21090         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21091         schema.json#/definitions/eps"
21092     },
21093     "href": {
21094         "$ref":
21095         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21096         schema.json#/definitions/href"
21097     },
21098     "ins": {
21099         "$ref":
21100         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21101         schema.json#/definitions/ins"
21102     },
21103     "p": {
21104         "$ref":
21105         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21106         schema.json#/definitions/p"
21107     },
21108     "rel": {
21109         "$ref":

```

```

21110 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21111 schema.json#/definitions/rel_array"
21112 },
21113 "title": {
21114 "$ref":
21115 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21116 schema.json#/definitions/title"
21117 },
21118 "type": {
21119 "$ref":
21120 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21121 schema.json#/definitions/type"
21122 }
21123 },
21124 "required": [
21125 "href",
21126 "rt",
21127 "if"
21128 ],
21129 "type": "object"
21130 }
21131 }
21132 }
21133

```

21134 **6.106.5 Property definition**

21135 Table 215 defines the Properties that are part of the "oic.r.glucosemeter-am,
21136 oic.wk.atomicmeasurement" Resource Type.

21137 **Table 215 – The Property definitions of the Resource with type "rt" = "oic.r.glucosemeter-**
21138 **am, oic.wk.atomicmeasurement".**

Property name	Value type	Mandatory	Access mode	Description
rep	object: see schema	Yes	Read Write	
href	multiple types: see schema	Yes	Read Write	
anchor	multiple types: see schema	No	Read Write	
ins	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
type	multiple types: see schema	No	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
eps	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
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
rt	array: see schema	Yes	Read Only	
rts	array: see schema	Yes	Read Only	This contains all possible Resource Types for this Atomic Measurement.
n	multiple types: see schema	No	Read Write	
links	multiple types: see schema	Yes	Read Write	

21139 **6.106.6 CRUDN behaviour**

21140 Table 216 defines the CRUDN operations that are supported on the "oic.r.glucosemeter-am,
21141 oic.wk.atomicmeasurement" Resource Type.

21142 **Table 216 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucosemeter-**
 21143 **am, oic.wk.atomicmeasurement".**

Create	Read	Update	Delete	Notify
	get			observe

21144 **6.107 Context Sample Location for Glucose Meter**

21145 **6.107.1 Introduction**

21146 This Resource describes the Properties associated with context sample Location.
 21147 AST means Alternative Site Test specifying that the location of test performed was from an
 21148 alternative site on the body.
 21149 The samplelocation Property is a read-only value that is provided by the Server.

21150 **6.107.2 Example URI**

21151 /GlucoseSampleLocationResURI

21152 **6.107.3 Resource type**

21153 The Resource Type is defined as: "oic.r.glucose.samplelocation".

21154 **6.107.4 OpenAPI 2.0 definition**

```

21155 {
21156   "swagger": "2.0",
21157   "info": {
21158     "title": "Context Sample Location for Glucose Meter",
21159     "version": "2019-03-22",
21160     "license": {
21161       "name": "OCF Data Model License",
21162       "url":
21163         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
21164         CENSE.md",
21165       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
21166     },
21167     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
21168   },
21169   "schemes": [
21170     "http"
21171   ],
21172   "consumes": [
21173     "application/json"
21174   ],
21175   "produces": [
21176     "application/json"
21177   ],
21178   "paths": {
21179     "/GlucoseSampleLocationResURI": {
21180       "get": {
21181         "description": "This Resource describes the Properties associated with context sample
21182         Location.\nAST means Alternative Site Test specifying that the location of test performed was from
21183         an alternative site on the body.\nThe samplelocation Property is a read-only value that is provided
21184         by the Server.",
21185         "parameters": [
21186           {
21187             "$ref": "#/parameters/interface"
21188           }
21189         ],
21190         "responses": {
21191           "200": {
21192             "description": "",
21193             "x-example": {
21194               "rt": [
21195                 "oic.r.glucose.samplelocation"
21196               ],

```

```

21197         "samplelocation": "finger"
21198     },
21199     "schema": {
21200         "$ref": "#/definitions/GlucoseSampleLocation"
21201     }
21202 }
21203 }
21204 }
21205 }
21206 },
21207 "parameters": {
21208     "interface": {
21209         "in": "query",
21210         "name": "if",
21211         "type": "string",
21212         "enum": [
21213             "oic.if.r",
21214             "oic.if.baseline"
21215         ]
21216     }
21217 },
21218 "definitions": {
21219     "GlucoseSampleLocation": {
21220         "properties": {
21221             "rt": {
21222                 "description": "Resource Type",
21223                 "items": {
21224                     "enum": [
21225                         "oic.r.glucose.samplelocation"
21226                     ],
21227                     "type": "string",
21228                     "maxLength": 64
21229                 },
21230                 "minItems": 1,
21231                 "uniqueItems": true,
21232                 "readOnly": true,
21233                 "type": "array"
21234             },
21235             "samplelocation": {
21236                 "description": "The possible blood locations where the blood sample may be taken.",
21237                 "enum": [
21238                     "finger",
21239                     "ast",
21240                     "earlobe",
21241                     "ctrlsolution"
21242                 ],
21243                 "readOnly": true,
21244                 "type": "string"
21245             },
21246             "n": {
21247                 "$ref":
21248 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21249 schema.json#/definitions/n"
21250             },
21251             "id": {
21252                 "$ref":
21253 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21254 schema.json#/definitions/id"
21255             },
21256             "if": {
21257                 "description": "The OCF Interface set supported by this Resource",
21258                 "items": {
21259                     "enum": [
21260                         "oic.if.r",
21261                         "oic.if.baseline"
21262                     ],
21263                     "type": "string",
21264                     "maxLength": 64
21265                 },
21266                 "minItems": 1,
21267                 "readOnly": true,
21268                 "uniqueItems": true,

```

```

21269         "type": "array"
21270     },
21271 },
21272 "type": "object",
21273 "required": [
21274     "samplelocation"
21275 ]
21276 }
21277 }
21278 }
21279

```

21280 **6.107.5 Property definition**

21281 Table 217 defines the Properties that are part of the "oic.r.glucose.samplelocation" Resource Type.

21282 **Table 217 – The Property definitions of the Resource with type "rt" =**
21283 **"oic.r.glucose.samplelocation".**

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
id	multiple types: see schema	No	Read Write	
rt	array: see schema	No	Read Only	Resource Type
n	multiple types: see schema	No	Read Write	
samplelocation	string	Yes	Read Only	The possible blood locations where the blood sample may be taken.

21284 **6.107.6 CRUDN behaviour**

21285 Table 218 defines the CRUDN operations that are supported on the "oic.r.glucose.samplelocation"
21286 Resource Type.

21287 **Table 218 – The CRUDN operations of the Resource with type "rt" =**
21288 **"oic.r.glucose.samplelocation".**

Create	Read	Update	Delete	Notify
	get			observe

21289 6.108 Context Tester for Glucose Meter

21290 6.108.1 Introduction

21291 This Resource describes the Properties associated with context tester.
21292 The tester Property is a read-only value that is provided by the Server where especially
21293 hcp stands for HealthCare Professional.

21294 6.108.2 Example URI

21295 /GlucoseTesterResURI

21296 6.108.3 Resource type

21297 The Resource Type is defined as: "oic.r.glucose.tester".

21298 6.108.4 OpenAPI 2.0 definition

```
21299 {  
21300   "swagger": "2.0",  
21301   "info": {  
21302     "title": "Context Tester for Glucose Meter",  
21303     "version": "2019-03-22",  
21304     "license": {  
21305       "name": "OCF Data Model License",  
21306       "url":  
21307 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
21308 CENSE.md",  
21309       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."  
21310     },  
21311     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
21312   },  
21313   "schemes": [  
21314     "http"  
21315   ],  
21316   "consumes": [  
21317     "application/json"  
21318   ],  
21319   "produces": [  
21320     "application/json"  
21321   ],  
21322   "paths": {  
21323     "/GlucoseTesterResURI": {  
21324       "get": {  
21325         "description": "This Resource describes the Properties associated with context tester.\nThe  
21326 tester Property is a read-only value that is provided by the Server where especially\nnhcp stands for  
21327 HealthCare Professional.",  
21328         "parameters": [  
21329           {  
21330             "$ref": "#/parameters/interface"  
21331           }  
21332         ],  
21333         "responses": {  
21334           "200": {  
21335             "description": "",  
21336             "x-example": {  
21337               "rt": [  
21338                 "oic.r.glucose.tester"  
21339               ],  
21340               "tester": "self"  
21341             },  
21342             "schema": {  
21343               "$ref": "#/definitions/GlucoseTester"  
21344             }  
21345           }  
21346         }  
21347       }  
21348     }  
21349   },  
21350   "parameters": {  
21351     "interface": {  
21352       "in": "query",
```

```

21353     "name": "if",
21354     "type": "string",
21355     "enum": [
21356         "oic.if.r",
21357         "oic.if.baseline"
21358     ]
21359 }
21360 },
21361 "definitions": {
21362     "GlucoseTester": {
21363         "properties": {
21364             "rt": {
21365                 "description": "Resource Type",
21366                 "items": {
21367                     "enum": [
21368                         "oic.r.glucose.tester"
21369                     ],
21370                     "type": "string",
21371                     "maxLength": 64
21372                 },
21373                 "minItems": 1,
21374                 "uniqueItems": true,
21375                 "readOnly": true,
21376                 "type": "array"
21377             },
21378             "tester": {
21379                 "description": "The possible cases of testers who may perform the blood sugar
21380 measurement.",
21381                 "enum": [
21382                     "self",
21383                     "hcp",
21384                     "lab"
21385                 ],
21386                 "readOnly": true,
21387                 "type": "string"
21388             },
21389             "n": {
21390                 "$ref":
21391 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21392 schema.json#/definitions/n"
21393             },
21394             "id": {
21395                 "$ref":
21396 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21397 schema.json#/definitions/id"
21398             },
21399             "if": {
21400                 "description": "The OCF Interface set supported by this Resource",
21401                 "items": {
21402                     "enum": [
21403                         "oic.if.r",
21404                         "oic.if.baseline"
21405                     ],
21406                     "type": "string",
21407                     "maxLength": 64
21408                 },
21409                 "minItems": 1,
21410                 "readOnly": true,
21411                 "uniqueItems": true,
21412                 "type": "array"
21413             }
21414         },
21415         "type": "object",
21416         "required": [
21417             "tester"
21418         ]
21419     }
21420 }
21421 }
21422

```

21423 **6.108.5 Property definition**

21424 Table 219 defines the Properties that are part of the "oic.r.glucose.tester" Resource Type.

21425 **Table 219 – The Property definitions of the Resource with type "rt" = "oic.r.glucose.tester".**

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

21426 **6.108.6 CRUDN behaviour**

21427 Table 220 defines the CRUDN operations that are supported on the "oic.r.glucose.tester" Resource Type.
21428

21429 **Table 220 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose.tester".**

Create	Read	Update	Delete	Notify
	get			observe

21430 **6.109 Optical RFID Station**

21431 **6.109.1 Introduction**

21432 The Property "process" represents the stage of the product in the product line which has an optical
21433 RFID tag on its body.
21434 The Property "event" is represented by a Boolean value set to "true" and "false" alarming the issue
21435 when additional action is requested for the tagged product.
21436 The Property "actionrequest" represent necessary actions like the isolation of the product, to send
21437 the product back to other specific line to modify or fix the issue.

21438 **6.109.2 Example URI**

21439 /ORFIDStationResURI

21440 **6.109.3 Resource type**

21441 The Resource Type is defined as: "oic.r.orfid.station".

21442 6.109.4 OpenAPI 2.0 definition

```
21443 {
21444   "swagger": "2.0",
21445   "info": {
21446     "title": "Optical RFID Station",
21447     "version": "20190215",
21448     "license": {
21449       "name": "OCF Data Model License",
21450       "url":
21451         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
21452         CENSE.md",
21453       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
21454       reserved."
21455     },
21456     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
21457   },
21458   "schemes": ["http"],
21459   "consumes": ["application/json"],
21460   "produces": ["application/json"],
21461   "paths": {
21462     "/ORFIDStationResURI" : {
21463       "get": {
21464         "description": "The Property \"process\" represents the stage of the product in the product
21465         line which has an optical RFID tag on its body.\n\nThe Property \"event\" is represented by a Boolean
21466         value set to \"true\" and \"false\" alarming the issue when additional action is requested for the
21467         tagged product.\n\nThe Property \"actionrequest\" represent necessary actions like the isolation of
21468         the product, to send the product back to other specific line to modify or fix the issue.",
21469         "parameters": [
21470           { "$ref": "#/parameters/interface" }
21471         ],
21472         "responses": {
21473           "200": {
21474             "description": "RETRIEVES the station information from optical augmented RFID reader
21475             in smart factory environment.",
21476             "x-example":
21477               {
21478                 "rt": ["oic.r.orfid.station"],
21479                 "if": ["oic.if.rw", "oic.if.baseline"],
21480                 "process": 17,
21481                 "event": true,
21482                 "actionrequest": 2
21483               },
21484             "schema": { "$ref": "#/definitions/ORFID" }
21485           }
21486         }
21487       },
21488       "post": {
21489         "description": "Sets necessary action in accordance with Tag Information.",
21490         "parameters": [
21491           { "$ref": "#/parameters/interface" },
21492           {
21493             "name": "body",
21494             "in": "body",
21495             "required": true,
21496             "schema": { "$ref": "#/definitions/ORFID" },
21497             "x-example":
21498               {
21499                 "event": false,
21500                 "actionrequest": 0
21501               }
21502           }
21503         ],
21504         "responses": {
21505           "200": {
21506             "description": "",
21507             "x-example":
21508               {
21509                 "event": false,
21510                 "actionrequest": 0
21511               },
21512             "schema": { "$ref": "#/definitions/ORFID" }
21513           }
21514         }
21515       }
21516     }
21517   }
21518 }
```

```

21513     }
21514   }
21515 }
21516 }
21517 },
21518 "parameters": {
21519   "interface": {
21520     "in": "query",
21521     "name": "if",
21522     "type": "string",
21523     "enum": ["oic.if.rw", "oic.if.baseline"]
21524   }
21525 },
21526 "definitions": {
21527   "ORFID": {
21528     "properties": {
21529       "rt": {
21530         "description": "The Resource Type.",
21531         "items": {
21532           "enum": ["oic.r.orfid.station"],
21533           "maxLength": 64,
21534           "type": "string"
21535         },
21536         "minItems": 1,
21537         "uniqueItems": true,
21538         "readOnly": true,
21539         "type": "array"
21540       },
21541       "process": {
21542         "description": "The process step that is being performed at this station.",
21543         "readOnly": true,
21544         "type": "integer"
21545       },
21546       "actionrequest": {
21547         "description": "The action request identifier.",
21548         "type": "integer"
21549       },
21550       "event": {
21551         "description": "The Event indicator, when True, the action request should be applied to
21552 the product identified by the tagid.",
21553         "type": "boolean"
21554       },
21555       "n": {
21556         "$ref":
21557 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21558 schema.json#/definitions/n"
21559       },
21560       "id": {
21561         "$ref":
21562 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21563 schema.json#/definitions/id"
21564       },
21565       "if": {
21566         "description": "The OCF Interface set supported by this Resource.",
21567         "items": {
21568           "enum": [
21569             "oic.if.rw",
21570             "oic.if.baseline"
21571           ],
21572           "type": "string"
21573         },
21574         "minItems": 2,
21575         "uniqueItems": true,
21576         "readOnly": true,
21577         "type": "array"
21578       }
21579     },
21580     "type": "object",
21581     "required": ["event", "actionrequest"]
21582   }
21583 }

```

21584 }
21585

21586 6.109.5 Property definition

21587 Table 221 defines the Properties that are part of the "oic.r.orfid.station" Resource Type.

21588 **Table 221 – The Property definitions of the Resource with type "rt" = "oic.r.orfid.station".**

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
rt	array: see schema	No	Read Only	The Resource Type.
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	
process	integer	No	Read Only	The process step that is being performed at this station.
actionrequest	integer	Yes	Read Write	The action request identifier.

21589 6.109.6 CRUDN behaviour

21590 Table 222 defines the CRUDN operations that are supported on the "oic.r.orfid.station" Resource
21591 Type.

21592 **Table 222 – The CRUDN operations of the Resource with type "rt" = "oic.r.orfid.station".**

Create	Read	Update	Delete	Notify
	get	post		observe

21593 **6.110 Optical RFID Tag**

21594 **6.110.1 Introduction**

21595 The Property "tagid" is an integer showing the currently read optical augmented RFID tag's identity
21596 information.

21597 **6.110.2 Example URI**

21598 /ORFIDTagResURI

21599 **6.110.3 Resource type**

21600 The Resource Type is defined as: "oic.r.orfid.tag".

21601 **6.110.4 OpenAPI 2.0 definition**

```
21602 {  
21603   "swagger": "2.0",  
21604   "info": {  
21605     "title": "Optical RFID Tag",  
21606     "version": "20190215",  
21607     "license": {  
21608       "name": "OCF Data Model License",  
21609       "url":  
21610 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
21611 CENSE.md",  
21612       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
21613 reserved."  
21614     },  
21615     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
21616   },  
21617   "schemes": ["http"],  
21618   "consumes": ["application/json"],  
21619   "produces": ["application/json"],  
21620   "paths": {  
21621     "/ORFIDTagResURI" : {  
21622       "get": {  
21623         "description": "The Property \"tagid\" is an integer showing the currently read optical  
21624 augmented RFID tag's identity information.",  
21625         "parameters": [  
21626           { "$ref": "#/parameters/interface" }  
21627         ],  
21628         "responses": {  
21629           "200": {  
21630             "description": "RETRIEVES the tag information from optical augmented RFID reader in  
21631 smart factory environment.",  
21632             "x-example":  
21633               {  
21634                 "rt": ["oic.r.orfid.tag"],  
21635                 "if": ["oic.if.r", "oic.if.baseline"],  
21636                 "tagid": 10965742,  
21637                 "reading": true  
21638               },  
21639             "schema": { "$ref": "#/definitions/ORFID" }  
21640           }  
21641         }  
21642       }  
21643     }  
21644   },  
21645   "parameters": {  
21646     "interface": {  
21647       "in": "query",  
21648       "name": "if",  
21649       "type": "string",  
21650       "enum": ["oic.if.r", "oic.if.baseline"]  
21651     }  
21652   },  
21653   "definitions": {  
21654     "ORFID" : {  
21655       "properties": {  
21656         "rt": {
```

```

21657         "description": "The Resource Type.",
21658         "items": {
21659             "enum": ["oic.r.orfid.tag"],
21660             "maxLength": 64,
21661             "type": "string"
21662         },
21663         "minItems": 1,
21664         "uniqueItems": true,
21665         "readOnly": true,
21666         "type": "array"
21667     },
21668     "tagid": {
21669         "description": "The tag read by the RFID reader.",
21670         "readOnly": true,
21671         "type": "integer"
21672     },
21673     "reading": {
21674         "description": "The reading indication. true: the tagid is read e.g. being valid. false:
21675 the tagid is invalid.",
21676         "readOnly": true,
21677         "type": "boolean"
21678     },
21679     "n": {
21680         "$ref":
21681 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21682 schema.json#/definitions/n"
21683     },
21684     "id": {
21685         "$ref":
21686 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21687 schema.json#/definitions/id"
21688     },
21689     "if": {
21690         "description": "The OCF Interface set supported by this Resource.",
21691         "items": {
21692             "enum": [
21693                 "oic.if.r",
21694                 "oic.if.baseline"
21695             ],
21696             "type": "string"
21697         },
21698         "minItems": 2,
21699         "uniqueItems": true,
21700         "readOnly": true,
21701         "type": "array"
21702     }
21703 },
21704 "type": "object",
21705 "required": ["tagid", "reading"]
21706 }
21707 }
21708 }
21709

```

21710 **6.110.5 Property definition**

21711 Table 223 defines the Properties that are part of the "oic.r.orfid.tag" Resource Type.

21712 **Table 223 – The Property definitions of the Resource with type "rt" = "oic.r.orfid.tag".**

Property name	Value type	Mandatory	Access mode	Description
if	array: schema see	No	Read Only	The OCF Interface set supported by this Resource.

id	multiple types: see schema	No	Read Write	
tagid	integer	Yes	Read Only	The tag read by the RFID reader.
rt	array: schema see	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
reading	boolean	Yes	Read Only	The reading indication. true: the tagid is read e.g. being valid. false: the tagid is invalid.

21713 **6.110.6 CRUDN behaviour**

21714 Table 224 defines the CRUDN operations that are supported on the "oic.r.orfid.tag" Resource Type.

21715 **Table 224 – The CRUDN operations of the Resource with type "rt" = "oic.r.orfid.tag".**

Create	Read	Update	Delete	Notify
	get			observe

21716 **6.111 Power Source**

21717 **6.111.1 Introduction**

21718 This Resource list the available power sources for the Device. The Property "powersources" is a list that is read only and is informative only.

21720 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".

21722 **6.111.2 Example URI**

21723 /PowerSourceResURI

21724 **6.111.3 Resource type**

21725 The Resource Type is defined as: "oic.r.powersource".

21726 **6.111.4 OpenAPI 2.0 definition**

```

21727 {
21728   "swagger": "2.0",
21729   "info": {
21730     "title": "PowerSource",
21731     "version": "20190513",
21732     "license": {
21733       "name": "OCF Data Model License",
21734       "url":
21735         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
21736         CENSE.md",
21737       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
21738       reserved."

```

```

21739     },
21740     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
21741 },
21742 "schemes": ["http"],
21743 "consumes": ["application/json"],
21744 "produces": ["application/json"],
21745 "paths": {
21746   "/PowerSourceResURI" : {
21747     "get": {
21748       "description": "This Resource list the available power sources for the Device. The Property
21749 \powersources\" is a list that is read only and is informative only.\nIf there is more than 1 power
21750 source active, use multiple Resources to indicate the active power sources. If the power source is
21751 unknown use the value \"unknown\".",
21752       "parameters": [
21753         { "$ref": "#/parameters/interface" }
21754       ],
21755       "responses": {
21756         "200": {
21757           "description": "Retrieves the list of available power sources.",
21758           "x-example":
21759             {
21760               "rt": ["oic.r.powersource"],
21761               "if": ["oic.if.r", "oic.if.baseline"],
21762               "powersources": [
21763                 "DC power",
21764                 "Internal Battery",
21765                 "External Battery",
21766                 "Power over Ethernet",
21767                 "USB",
21768                 "AC (Mains) Power",
21769                 "Solar"
21770               ],
21771               "sourcefault": false
21772             },
21773           "schema": { "$ref": "#/definitions/powerSourceSchema" }
21774         }
21775       }
21776     }
21777   }
21778 },
21779 "parameters": {
21780   "interface": {
21781     "in": "query",
21782     "name": "if",
21783     "type": "string",
21784     "enum": ["oic.if.r", "oic.if.baseline"]
21785   }
21786 },
21787 "definitions": {
21788   "powerSourceSchema" : {
21789     "properties": {
21790       "rt": {
21791         "description": "The Resource Type.",
21792         "items": {
21793           "enum": ["oic.r.powersource"],
21794           "maxLength": 64,
21795           "type": "string"
21796         },
21797         "minItems": 1,
21798         "uniqueItems": true,
21799         "readOnly": true,
21800         "type": "array"
21801       },
21802       "powersources": {
21803         "items": {
21804           "enum": [
21805             "unknown",
21806             "DC power",
21807             "Internal Battery",
21808             "External Battery",
21809             "Power over Ethernet",
21810             "USB",

```

```

21811         "AC (Mains) Power",
21812         "Solar"
21813     ],
21814     "minItems": 1,
21815     "type": "string",
21816     "uniqueItems": true
21817 },
21818 "type": "array"
21819 },
21820 "sourcefault": {
21821     "description": "Fault detected in currently active power source. True = fault detected",
21822     "readOnly": true,
21823     "type": "boolean"
21824 },
21825 "n": {
21826     "$ref":
21827 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21828 schema.json#/definitions/n"
21829 },
21830 "id": {
21831     "$ref":
21832 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21833 schema.json#/definitions/id"
21834 },
21835 "if": {
21836     "description": "The OCF Interface set supported by this Resource.",
21837     "items": {
21838         "enum": [
21839             "oic.if.r",
21840             "oic.if.baseline"
21841         ],
21842         "type": "string"
21843     },
21844     "minItems": 2,
21845     "uniqueItems": true,
21846     "readOnly": true,
21847     "type": "array"
21848 },
21849 },
21850 "type": "object",
21851 "required": ["powersources"]
21852 }
21853 }
21854 }
21855

```

21856 6.111.5 Property definition

21857 Table 225 defines the Properties that are part of the "oic.r.powersource" Resource Type.

21858 **Table 225 – The Property definitions of the Resource with type "rt" = "oic.r.powersource".**

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
powersources	array: see schema	Yes	Read Write	
n	multiple types: see schema	No	Read Write	
sourcefault	boolean	No	Read Only	Fault detected in currently active power source. True = fault detected

rt	array: see schema	No	Read Only	The Resource Type.
id	multiple types: see schema	No	Read Write	

21859 **6.111.6 CRUDN behaviour**

21860 Table 226 defines the CRUDN operations that are supported on the "oic.r.powersource" Resource
21861 Type.

21862 **Table 226 – The CRUDN operations of the Resource with type "rt" = "oic.r.powersource".**

Create	Read	Update	Delete	Notify
	get			observe

21863 **6.112 Print Queue**

21864 **6.112.1 Introduction**

21865 This Resource describes the items in a Printer Queue. The Properties "uri" and "status" are read
21866 only items that cannot be changed through this resource.

21867 **6.112.2 Example URI**

21868 /PrintQueueResURI

21869 **6.112.3 Resource type**

21870 The Resource Type is defined as: "oic.r.printer.queue".

21871 **6.112.4 OpenAPI 2.0 definition**

```

21872 {
21873   "swagger": "2.0",
21874   "info": {
21875     "title": "Print Queue",
21876     "version": "20190215",
21877     "license": {
21878       "name": "OCF Data Model License",
21879       "url":
21880       "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
21881       CENSE.md",
21882       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
21883       reserved."
21884     },
21885     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
21886   },
21887   "schemes": ["http"],
21888   "consumes": ["application/json"],
21889   "produces": ["application/json"],
21890   "paths": {
21891     "/PrintQueueResURI" : {
21892       "get": {
21893         "description": "This Resource describes the items in a Printer Queue. The Properties \"uri\"
21894         and \"status\" are read only items that cannot be changed through this resource.",
21895         "parameters": [
21896           {"$ref": "#/parameters/interface"}
21897         ],
21898         "responses": {
21899           "200": {
21900             "description": "Retrieves the current Print Queue.",
21901             "x-example": {
21902               "rt": ["oic.r.printer.queue"],
21903               "if": ["oic.if.r", "oic.if.baseline"],
21904               "queue": [
21905                 {
21906                   "uri": "file://10.10.10.10/3dprinter/queueitem/1",
21907                   "status": "Printing"
21908                 }
21909               ]
21910             }
21911           }
21912         }
21913       }
21914     }
21915   }

```

```

21910         "uri": "file://10.10.10.10/3dprinter/queueitem/2",
21911         "status": "Pending"
21912     }
21913 ]
21914 },
21915     "schema": { "$ref": "#/definitions/PrintQueue" }
21916 }
21917 }
21918 }
21919 },
21920 },
21921 "parameters": {
21922     "interface": {
21923         "in": "query",
21924         "name": "if",
21925         "type": "string",
21926         "enum": ["oic.if.r", "oic.if.baseline"]
21927     }
21928 },
21929 "definitions": {
21930     "PrintQueue": {
21931         "properties": {
21932             "rt": {
21933                 "description": "The Resource Type.",
21934                 "items": {
21935                     "enum": ["oic.r.printer.queue"],
21936                     "maxLength": 64,
21937                     "type": "string"
21938                 },
21939                 "minItems": 1,
21940                 "uniqueItems": true,
21941                 "readOnly": true,
21942                 "type": "array"
21943             },
21944             "queue": {
21945                 "description": "The array of queue items for the printer.",
21946                 "items": {
21947                     "properties": {
21948                         "status": {
21949                             "description": "The status of the queue item.",
21950                             "enum": [
21951                                 "Printing",
21952                                 "Pending",
21953                                 "Paused",
21954                                 "Error",
21955                                 "Unknown"
21956                             ],
21957                             "readOnly": true,
21958                             "type": "string"
21959                         },
21960                         "uri": {
21961                             "description": "The uri of the queue item (i.e. the actual file).",
21962                             "format": "uri",
21963                             "maxLength": 256,
21964                             "readOnly": true,
21965                             "type": "string"
21966                         }
21967                     },
21968                     "required": [
21969                         "uri",
21970                         "status"
21971                     ],
21972                     "type": "object"
21973                 },
21974                 "readOnly": true,
21975                 "type": "array"
21976             },
21977             "n": {
21978                 "$ref":
21979                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21980                 schema.json#/definitions/n"
21981             },

```

```

21982         "id": {
21983             "$ref":
21984             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21985             schema.json#/definitions/id"
21986         },
21987         "if": {
21988             "description": "The OCF Interface set supported by this Resource.",
21989             "items": {
21990                 "enum": [
21991                     "oic.if.r",
21992                     "oic.if.baseline"
21993                 ],
21994                 "type": "string"
21995             },
21996             "minItems": 2,
21997             "uniqueItems": true,
21998             "readOnly": true,
21999             "type": "array"
22000         }
22001     },
22002     "type": "object",
22003     "required": ["queue"]
22004 }
22005 }
22006 }
22007

```

22008 6.112.5 Property definition

22009 Table 227 defines the Properties that are part of the "oic.r.printer.queue" Resource Type.

22010 **Table 227 – The Property definitions of the Resource with type "rt" = "oic.r.printer.queue".**

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

22011 6.112.6 CRUDN behaviour

22012 Table 228 defines the CRUDN operations that are supported on the "oic.r.printer.queue" Resource
22013 Type.

22014 **Table 228 – The CRUDN operations of the Resource with type "rt" = "oic.r.printer.queue".**

Create	Read	Update	Delete	Notify

	get			observe
--	-----	--	--	---------

22015 **6.113 Pulse Rate**

22016 **6.113.1 Introduction**

22017 This Resource describes the Properties associated with a person's pulse rate.
 22018 The unit, which is the default unit, is bpm.
 22019 The pulserate and unit Properties are read-only values that are provided by the Server.
 22020 When range is omitted the default is 0 to +MAXFLOAT.

22021 **6.113.2 Example URI**

22022 /PulseRateResURI

22023 **6.113.3 Resource type**

22024 The Resource Type is defined as: "oic.r.pulserate".

22025 **6.113.4 OpenAPI 2.0 definition**

```

22026 {
22027   "swagger": "2.0",
22028   "info": {
22029     "title": "Pulse Rate",
22030     "version": "2019-03-22",
22031     "license": {
22032       "name": "OCF Data Model License",
22033       "url":
22034         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
22035         CENSE.md",
22036       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
22037     },
22038     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
22039   },
22040   "schemes": [
22041     "http"
22042   ],
22043   "consumes": [
22044     "application/json"
22045   ],
22046   "produces": [
22047     "application/json"
22048   ],
22049   "paths": {
22050     "/PulseRateResURI": {
22051       "get": {
22052         "description": "This Resource describes the Properties associated with a person's pulse
22053         rate.\n\nThe unit, which is the default unit, is bpm.\n\nThe pulserate and unit Properties are read-only
22054         values that are provided by the Server.\n\nWhen range is omitted the default is 0 to +MAXFLOAT.",
22055         "parameters": [
22056           {
22057             "$ref": "#/parameters/interface"
22058           }
22059         ],
22060         "responses": {
22061           "200": {
22062             "description": "",
22063             "x-example": {
22064               "rt": [
22065                 "oic.r.pulserate"
22066               ],
22067               "pulserate": 80,
22068               "range": [20, 220],
22069               "step": 1
22070             },
22071             "schema": {
22072               "$ref": "#/definitions/PulseRate"
22073             }
22074           }
22075         }
22076       }
22077     }
  
```

```

22075     }
22076   }
22077 }
22078 },
22079 "parameters": {
22080   "interface": {
22081     "in": "query",
22082     "name": "if",
22083     "type": "string",
22084     "enum": [
22085       "oic.if.s",
22086       "oic.if.baseline"
22087     ]
22088   }
22089 },
22090 "definitions": {
22091   "PulseRate": {
22092     "properties": {
22093       "rt": {
22094         "description": "Resource Type",
22095         "items": {
22096           "enum": [
22097             "oic.r.pulserate"
22098           ],
22099           "type": "string",
22100           "maxLength": 64
22101         },
22102         "minItems": 1,
22103         "uniqueItems": true,
22104         "readOnly": true,
22105         "type": "array"
22106       },
22107       "pulserate": {
22108         "description": "Pulse rate in bpm.",
22109         "minimum": 0,
22110         "readOnly": true,
22111         "type": "integer"
22112       },
22113       "if": {
22114         "description": "The OCF Interface set supported by this Resource",
22115         "items": {
22116           "enum": [
22117             "oic.if.s",
22118             "oic.if.baseline"
22119           ],
22120           "type": "string",
22121           "maxLength": 64
22122         },
22123         "minItems": 1,
22124         "readOnly": true,
22125         "uniqueItems": true,
22126         "type": "array"
22127       },
22128       "range": {
22129         "$ref":
22130 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
22131 schema.json#/definitions/range_integer"
22132       },
22133       "step": {
22134         "$ref":
22135 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
22136 schema.json#/definitions/step_integer"
22137       },
22138       "n": {
22139         "$ref":
22140 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22141 schema.json#/definitions/n"
22142       }
22143     },
22144     "type": "object",
22145     "required": [
22146       "pulserate"

```


22147]
 22148 }
 22149 }
 22150 }
 22151 }

22152 **6.113.5 Property definition**

22153 Table 229 defines the Properties that are part of the "oic.r.pulserate" Resource Type.

22154 **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
step	multiple types: see schema	No	Read Write	
pulserate	integer	Yes	Read Only	Pulse rate in bpm.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
n	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	

22155 **6.113.6 CRUDN behaviour**

22156 Table 230 defines the CRUDN operations that are supported on the "oic.r.pulserate" Resource
 22157 Type.

22158 **Table 230 – The CRUDN operations of the Resource with type "rt" = "oic.r.pulserate".**

Create	Read	Update	Delete	Notify
	get			observe

22159 **6.114 Sensor Properties**

22160 **6.114.1 Introduction**

22161 This Resource describes the properties which guide the reporting of a state change of a Sensor.
 22162 The Property "silenttime" represents the period after which a state change report was sent where
 22163 the Sensor state change is not reported.
 22164 The Property "sensitivity" represents the level at which the sensor detects a state change.
 22165 These values are completely dependent on the type of Sensor and the manufacturer capability, so
 22166 no range restrictions are used.
 22167 The Properties "range", "step" and "precision" are only applied to the "sensitivity" Property.

22168 **6.114.2 Example URI**

22169 /SensorPropsResURI

22170 **6.114.3 Resource type**

22171 The Resource Type is defined as: "oic.r.sensor.props".

22172 **6.114.4 OpenAPI 2.0 definition**

```
22173 {
22174   "swagger": "2.0",
22175   "info": {
22176     "title": "Sensor Properties",
22177     "version": "20190215",
22178     "license": {
22179       "name": "OCF Data Model License",
22180       "url":
22181         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
22182         CENSE.md",
22183       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
22184         reserved."
22185     },
22186     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
22187   },
22188   "schemes": ["http"],
22189   "consumes": ["application/json"],
22190   "produces": ["application/json"],
22191   "paths": {
22192     "/SensorPropsResURI" : {
22193       "get": {
22194         "description": "This Ressource describes the properties which guide the reporting of a state
22195         change of a Sensor.\nThe Property \"silenttime\" represents the period after which a state change
22196         report was sent where the Sensor state change is not reported.\nThe Property \"sensitivity\"
22197         represents the level at which the sensor detects a state change.\nThese values are completely
22198         dependent on the type of Sensor and the manufacturer capability, so no range restrictions are
22199         used.\nThe Properties \"range\", \"step\" and \"precision\" are only applied to the \"sensitivity\"
22200         Property.",
22201         "parameters": [
22202           {"$ref": "#/parameters/interface"}
22203         ],
22204         "responses": {
22205           "200": {
22206             "description": "Gets current Sensor Property values.",
22207             "x-example":
22208               {
22209                 "rt": ["oic.r.sensor.props"],
22210                 "if": ["oic.if.rw", "oic.if.baseline"],
22211                 "silenttime": 10,
22212                 "sensitivity": 20.5
22213               },
22214             "schema": { "$ref": "#/definitions/SensorProps" }
22215           }
22216         },
22217       },
22218       "post": {
22219         "description": "Sets Sensor Property values\n",
22220         "parameters": [
22221           {"$ref": "#/parameters/interface"},
22222           {
22223             "name": "body",
22224             "in": "body",
22225             "required": true,
22226             "schema": { "$ref": "#/definitions/SensorProps" },
22227             "x-example":
22228               {
22229                 "silenttime": 20,
22230                 "sensitivity": 10.75
22231               }
22232           }
22233         ],
22234         "responses": {
```

```

22235         "200": {
22236             "description": "",
22237             "x-example":
22238                 {
22239                     "silenttime": 20,
22240                     "sensitivity": 10.75
22241                 },
22242             "schema": { "$ref": "#/definitions/SensorProps" }
22243         }
22244     }
22245 }
22246 }
22247 },
22248 "parameters": {
22249     "interface": {
22250         "in": "query",
22251         "name": "if",
22252         "type": "string",
22253         "enum": ["oic.if.rw", "oic.if.baseline"]
22254     }
22255 },
22256 "definitions": {
22257     "SensorProps": {
22258         "properties": {
22259             "rt": {
22260                 "description": "The Resource Type.",
22261                 "items": {
22262                     "enum": ["oic.r.sensor.props"],
22263                     "maxLength": 64,
22264                     "type": "string"
22265                 },
22266                 "minItems": 1,
22267                 "uniqueItems": true,
22268                 "readOnly": true,
22269                 "type": "array"
22270             },
22271             "silenttime": {
22272                 "description": "The time in seconds from the previous report that the Sensor restrains
22273 from sending a state change. This is used to avoid repeated state change reports.",
22274                 "type": "integer"
22275             },
22276             "sensitivity": {
22277                 "description": "The level of the detection accuracy of the Sensor. This is used to control
22278 the level at which the Sensor detects a state change. The \"range\" Property should be specified per
22279 manufacturer device capabilities.",
22280                 "type": "number"
22281             },
22282             "n": {
22283                 "$ref":
22284 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22285 schema.json#/definitions/n"
22286             },
22287             "id": {
22288                 "$ref":
22289 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22290 schema.json#/definitions/id"
22291             },
22292             "range": {
22293                 "$ref":
22294 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
22295 schema.json#/definitions/range_number"
22296             },
22297             "step": {
22298                 "$ref":
22299 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
22300 schema.json#/definitions/step_number"
22301             },
22302             "precision": {
22303                 "$ref":
22304 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
22305 schema.json#/definitions/precision"
22306             },

```

```

22307     "if": {
22308         "description": "The OCF Interface set supported by this Resource.",
22309         "items": {
22310             "enum": [
22311                 "oic.if.rw",
22312                 "oic.if.baseline"
22313             ],
22314             "type": "string"
22315         },
22316         "minItems": 2,
22317         "uniqueItems": true,
22318         "readOnly": true,
22319         "type": "array"
22320     }
22321 },
22322 "type": "object",
22323 "required": ["silenttime", "sensitivity"]
22324 }
22325 }
22326 }
22327

```

22328 **6.114.5 Property definition**

22329 Table 231 defines the Properties that are part of the "oic.r.sensor.props" Resource Type.

22330 **Table 231 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.props".**

Property name	Value type	Mandatory	Access mode	Description
n	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
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.
id	multiple types: see schema	No	Read Write	

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

22331 **6.114.6 CRUDN behaviour**

22332 Table 232 defines the CRUDN operations that are supported on the "oic.r.sensor.props" Resource
22333 Type.

22334 **Table 232 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.props".**

Create	Read	Update	Delete	Notify
	get	post		observe

22335 **6.115 User ID**

22336 **6.115.1 Introduction**

22337 This Resource describes the Properties associated with user id of an OCF Client.
22338 The userid Property is a single value of type string.
22339 The userid Property is a read-only value that is provided by the Server.

22340 **6.115.2 Example URI**

22341 /UserIDResURI

22342 **6.115.3 Resource type**

22343 The Resource Type is defined as: "oic.r.userid".

22344 **6.115.4 OpenAPI 2.0 definition**

22345 {
22346 "swagger": "2.0",
22347 "info": {
22348 "title": "User ID",
22349 "version": "2019-03-22",
22350 "license": {
22351 "name": "OCF Data Model License",
22352 "url":
22353 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI

```

22354 CENSE.md",
22355     "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
22356   },
22357   "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
22358 },
22359 "schemes": [
22360   "http"
22361 ],
22362 "consumes": [
22363   "application/json"
22364 ],
22365 "produces": [
22366   "application/json"
22367 ],
22368 "paths": {
22369   "/UserIDResURI": {
22370     "get": {
22371       "description": "This Resource describes the Properties associated with user id of an OCF
22372 Client.\nThe userid Property is a single value of type string.\nThe userid Property is a read-only
22373 value that is provided by the Server.",
22374       "parameters": [
22375         {
22376           "$ref": "#/parameters/interface"
22377         }
22378       ],
22379       "responses": {
22380         "200": {
22381           "description": "",
22382           "x-example": {
22383             "rt": [
22384               "oic.r.userid"
22385             ],
22386             "userid": "USER1"
22387           },
22388           "schema": {
22389             "$ref": "#/definitions/UserID"
22390           }
22391         }
22392       }
22393     }
22394   }
22395 },
22396 "parameters": {
22397   "interface": {
22398     "in": "query",
22399     "name": "if",
22400     "type": "string",
22401     "enum": [
22402       "oic.if.r",
22403       "oic.if.baseline"
22404     ]
22405   }
22406 },
22407 "definitions": {
22408   "UserID": {
22409     "properties": {
22410       "rt": {
22411         "description": "Resource Type",
22412         "items": {
22413           "enum": [
22414             "oic.r.userid"
22415           ],
22416           "type": "string",
22417           "maxLength": 64
22418         },
22419         "minItems": 1,
22420         "uniqueItems": true,
22421         "readOnly": true,
22422         "type": "array"
22423       },
22424       "userid": {
22425         "description": "Id of a patient/user of healthcare devices",

```

```

22426         "readOnly": true,
22427         "type": "string"
22428     },
22429     "n": {
22430         "$ref":
22431         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22432         schema.json#/definitions/n"
22433     },
22434     "if": {
22435         "description": "The OCF Interface set supported by this Resource",
22436         "items": {
22437             "enum": [
22438                 "oic.if.r",
22439                 "oic.if.baseline"
22440             ],
22441             "type": "string",
22442             "maxLength": 64
22443         },
22444         "minItems": 1,
22445         "readOnly": true,
22446         "uniqueItems": true,
22447         "type": "array"
22448     }
22449 },
22450 "type": "object",
22451 "required": [
22452     "userid"
22453 ]
22454 }
22455 }
22456 }
22457

```

6.115.5 Property definition

Table 233 defines the Properties that are part of the "oic.r.userid" Resource Type.

Table 233 – The Property definitions of the Resource with type "rt" = "oic.r.userid".

Property name	Value type	Mandatory	Access mode	Description
n	multiple types: see schema	No	Read Write	
userid	string	Yes	Read Only	Id of a patient/user of healthcare devices
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
rt	array: see schema	No	Read Only	Resource Type

6.115.6 CRUDN behaviour

Table 234 defines the CRUDN operations that are supported on the "oic.r.userid" Resource Type.

22463

Table 234 – The CRUDN operations of the Resource with type "rt" = "oic.r.userid".

Create	Read	Update	Delete	Notify
	get			observe

22464

6.116 Calorific Value

22465

6.116.1 Introduction

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This Resource describes Properties associated with the energy associated with the consumption of different fuels (including natural gas). The calorific value is a number the calorific value is a measure of the available heat energy, used as part of the calculation to convert a volume of a fuel (e.g. m3) to an energy value (e.g. KWh).

22472

6.116.2 Example URI

22473

/CalorificValueResURI

22474

6.116.3 Resource type

22475

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

22476

6.116.4 OpenAPI 2.0 definition

22477

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22516

22517

```

{
  "swagger": "2.0",
  "info": {
    "title": "Calorific Value",
    "version": "2019-03-18",
    "license": {
      "name": "OCF Data Model License",
      "url": "https://openconnectivityfoundation.github.io/core/LICENSE.md",
      "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/CalorificValueResURI" : {
      "get": {
        "description": "This Resource describes Properties associated with the energy associated
with the consumption of different fuels (including natural gas)\n\nThe calorific value is a
number\n\nthe calorific value is a measure of the available heat energy, used as part of the
calculation to convert a volume of a fuel (e.g. m3) to an energy value (e.g. KWh).\n\n",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
            "description" : "Success path response for the Resource",
            "x-example": {
              "rt": ["oic.r.calorificvalue"],
              "calorific": 39.2
            },
            "schema": { "$ref": "#/definitions/Calorific" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface" : {
      "in" : "query",

```



```

22518     "name" : "if",
22519     "type" : "string",
22520     "enum" : ["oic.if.r", "oic.if.baseline"]
22521   }
22522 },
22523 "definitions": {
22524   "Calorific" : {
22525     "properties": {
22526       "rt" : {
22527         "description": "Resource Type",
22528         "items": {
22529           "maxLength": 64,
22530           "type": "string",
22531           "enum": ["oic.r.calorificvalue"]
22532         },
22533         "minItems": 1,
22534         "readOnly": true,
22535         "uniqueItems": true,
22536         "type": "array"
22537       },
22538       "if" : {
22539         "description": "The OCF Interfaces supported by this Resource",
22540         "items": {
22541           "enum": ["oic.if.baseline", "oic.if.r"],
22542           "type": "string",
22543           "maxLength": 64
22544         },
22545         "minItems": 2,
22546         "readOnly": true,
22547         "uniqueItems": true,
22548         "type": "array"
22549       },
22550       "n" : {
22551         "$ref" :
22552         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22553         schema.json#/definitions/n"
22554       },
22555       "id" : {
22556         "$ref" :
22557         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22558         schema.json#/definitions/id"
22559       },
22560       "precision" : {
22561         "description": "Accuracy granularity of the exposed value",
22562         "readOnly": true,
22563         "type": "number"
22564       },
22565       "calorific" : {
22566         "description": "Calorific value of fuel",
22567         "readOnly": true,
22568         "type": "number",
22569         "minimum": 0,
22570         "exclusiveMinimum": true
22571       }
22572     },
22573     "type" : "object",
22574     "required": ["calorific"]
22575   }
22576 }
22577 }
22578

```

22579 **6.116.5 Property definition**

22580 Table 235 defines the Properties that are part of the "oic.r.calorificvalue" Resource Type.

22581 **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
calorific	number	Yes	Read Only	Calorific value of fuel
precision	number	No	Read Only	Accuracy granularity of the exposed value
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interfaces supported by this Resource
id	multiple types: see schema	No	Read Write	

22582 **6.116.6 CRUDN behaviour**

22583 Table 236 defines the CRUDN operations that are supported on the "oic.r.calorificvalue" Resource
22584 Type.

22585 **Table 236 – The CRUDN operations of the Resource with type "rt" = "oic.r.calorificvalue".**

Create	Read	Update	Delete	Notify
	get			observe

22586 **6.117 Conversion Factor**

22587 **6.117.1 Introduction**

22588 This Resource describes Properties associated with the energy associated with the consumption
22589 of different fuels (including natural gas)
22590 The conversion factor is a number used as part of the calculation to convert gas volume to gas
22591 energy. The value used for this calculation is generally defined by local regulations and the
22592 conversion factor resource is therefore configurable.
22593 Provides the conversion factor used/required as part of the calculation to convert from fuel volume
22594 (m3) to fuel energy (kWh).
22595

22596 **6.117.2 Example URI**

22597 /ConversionFactorResURI

22598 **6.117.3 Resource type**

22599 The Resource Type is defined as: "oic.r.conversionfactor".

22600 **6.117.4 OpenAPI 2.0 definition**

22601 {
22602 "swagger": "2.0",
22603 "info": {

```

22604     "title": "Conversion Factor",
22605     "version": "2019-03-18",
22606     "license": {
22607         "name": "OCF Data Model License",
22608         "url": "https://openconnectivityfoundation.github.io/core/LICENSE.md",
22609         "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
22610     },
22611     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
22612 },
22613 "schemes": ["http"],
22614 "consumes": ["application/json"],
22615 "produces": ["application/json"],
22616 "paths": {
22617     "/ConversionFactorResURI" : {
22618         "get": {
22619             "description": "This Resource describes Properties associated with the energy associated
22620 with the consumption of different fuels (including natural gas)\nThe conversion factor is a number
22621 used as part of the calculation to convert gas volume to gas energy. The value used for this
22622 calculation is generally defined by local regulations and the conversion factor resource is
22623 therefore configurable.\nProvides the conversion factor used/required as part of the calculation to
22624 convert from fuel volume (m3) to fuel energy (kWh).\n",
22625             "parameters": [
22626                 {"$ref": "#/parameters/interface"}
22627             ],
22628             "responses": {
22629                 "200": {
22630                     "description": "Success path response for the Resource",
22631                     "x-example": {
22632                         "rt": ["oic.r.conversionfactor"],
22633                         "conversion": 1.02264
22634                     },
22635                     "schema": {"$ref": "#/definitions/Conversion"}
22636                 }
22637             }
22638         }
22639     }
22640 },
22641 "parameters": {
22642     "interface" : {
22643         "in": "query",
22644         "name": "if",
22645         "type": "string",
22646         "enum": ["oic.if.r", "oic.if.baseline"]
22647     }
22648 },
22649 "definitions": {
22650     "Conversion" : {
22651         "properties": {
22652             "rt" : {
22653                 "description": "Resource Type",
22654                 "items": {
22655                     "maxLength": 64,
22656                     "type": "string",
22657                     "enum": ["oic.r.conversionfactor"]
22658                 },
22659                 "minItems": 1,
22660                 "readOnly": true,
22661                 "uniqueItems": true,
22662                 "type": "array"
22663             },
22664             "if" : {
22665                 "description": "The OCF Interfaces supported by this Resource",
22666                 "items": {
22667                     "enum": [
22668                         "oic.if.r",
22669                         "oic.if.baseline"
22670                     ],
22671                     "type": "string",
22672                     "maxLength": 64
22673                 },
22674                 "minItems": 2,
22675                 "readOnly": true,

```

```

22676         "uniqueItems": true,
22677         "type": "array"
22678     },
22679     "n": {
22680         "$ref" :
22681         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22682         schema.json#/definitions/n"
22683     },
22684     "id": {
22685         "$ref" :
22686         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22687         schema.json#/definitions/id"
22688     },
22689     "conversion" : {
22690         "description": "Conversion factor to convert a volume of a fuel to energy consumption",
22691         "readOnly": true,
22692         "type": "number",
22693         "minimum": 0,
22694         "exclusiveMinimum": true
22695     },
22696     "precision" : {
22697         "description": "Accuracy granularity of the exposed value",
22698         "readOnly": true,
22699         "type": "number"
22700     }
22701 },
22702 "type" : "object",
22703 "required": ["conversion"]
22704 }
22705 }
22706 }
22707

```

6.117.5 Property definition

Table 237 defines the Properties that are part of the "oic.r.conversionfactor" Resource Type.

Table 237 – The Property definitions of the Resource with type "rt" = "oic.r.conversionfactor".

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema	No	Read Only	The OCF Interfaces supported by this Resource
conversion	number	Yes	Read Only	Conversion factor to convert a volume of a fuel to energy consumption
id	multiple types: see schema	No	Read Write	
rt	array: see schema	No	Read Only	Resource Type
n	multiple types: see schema	No	Read Write	

precision	number	No	Read Only	Accuracy granularity of the exposed value
-----------	--------	----	-----------	---

22712 **6.117.6 CRUDN behaviour**

22713 Table 238 defines the CRUDN operations that are supported on the "oic.r.conversionfactor"
22714 Resource Type.

22715 **Table 238 – The CRUDN operations of the Resource with type "rt" =**
22716 **"oic.r.conversionfactor".**

Create	Read	Update	Delete	Notify
	get			observe

22717 **6.118 Gas Consumption**

22718 **6.118.1 Introduction**

22719 This Resource describes Properties associated with the energy associated with the consumption
22720 of natural gas

22721 The gas value is in kilowatt hours [kWh].
22722 The volume value is in metres cubed [m3].

22723 Provides the cumulative gas energy, the cumulative gas volume and the calorific value and
22724 conversion factor used/required to convert from gas volume (m3[TB1]) to gas energy (KWh).

22725

22726 **6.118.2 Example URI**

22727 /GasConsumptionResURI

22728 **6.118.3 Resource type**

22729 The Resource Type is defined as: "oic.r.gas.consumption".

22730 **6.118.4 OpenAPI 2.0 definition**

```
22731 {
22732   "swagger": "2.0",
22733   "info": {
22734     "title": "Gas Consumption",
22735     "version": "2019-03-18",
22736     "license": {
22737       "name": "OCF Data Model License",
22738       "url": "https://openconnectivityfoundation.github.io/core/LICENSE.md",
22739       "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
22740     },
22741     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
22742   },
22743   "schemes": ["http"],
22744   "consumes": ["application/json"],
22745   "produces": ["application/json"],
22746   "paths": {
22747     "/GasConsumptionResURI" : {
22748       "get": {
22749         "description": "This Resource describes Properties associated with the energy associated
22750 with the consumption of natural gas\nThe gas value is in kilowatt hours [kWh].\n\nThe volume value is
22751 in metres cubed [m3].\n\nProvides the cumulative gas energy, the cumulative gas volume and the
22752 calorific value and conversion factor used/required to convert from gas volume (m3[TB1]) to gas
22753 energy (KWh).\n",
22754         "parameters": [
22755           {"$ref": "#/parameters/interface"}
22756         ],
22757         "responses": {
```

```

22758         "200": {
22759             "description" : "Success path response for the Resource",
22760             "x-example": {
22761                 "rt": ["oic.r.gas.consumption"],
22762                 "gas": 11135.41,
22763                 "volume": 1000.0
22764             },
22765             "schema": { "$ref": "#/definitions/Consumption" }
22766         }
22767     }
22768 }
22769 }
22770 },
22771 "parameters": {
22772     "interface" : {
22773         "in" : "query",
22774         "name" : "if",
22775         "type" : "string",
22776         "enum" : ["oic.if.s", "oic.if.baseline"]
22777     }
22778 },
22779 "definitions": {
22780     "Consumption" : {
22781         "properties": {
22782             "rt": {
22783                 "description": "Resource Type",
22784                 "items": {
22785                     "maxLength": 64,
22786                     "type": "string",
22787                     "enum": ["oic.r.gas.consumption"]
22788                 },
22789                 "minItems": 1,
22790                 "uniqueItems": true,
22791                 "readOnly": true,
22792                 "type": "array"
22793             },
22794             "if": {
22795                 "description": "The OCF Interfaces supported by this Resource",
22796                 "items": {
22797                     "enum": ["oic.if.r", "oic.if.baseline"],
22798                     "type": "string"
22799                 },
22800                 "minItems": 1,
22801                 "readOnly": true,
22802                 "uniqueItems": true,
22803                 "type": "array"
22804             },
22805             "n": {
22806                 "$ref" :
22807                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22808                 schema.json#/definitions/n"
22809             },
22810             "id": {
22811                 "$ref" :
22812                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22813                 schema.json#/definitions/id"
22814             },
22815             "gas" : {
22816                 "description": "gas energy consumed in kWh",
22817                 "readOnly": true,
22818                 "type": "number",
22819                 "minimum": 0
22820             },
22821             "precision" : {
22822                 "description": "Accuracy granularity of the exposed value",
22823                 "readOnly": true,
22824                 "type": "number"
22825             },
22826             "volume" : {
22827                 "description": "gas volume consumed in m3 (metres cubed)",
22828                 "readOnly": true,
22829                 "type": "number",

```

```

22830         "minimum": 0
22831     },
22832 },
22833     "type" : "object",
22834     "required": ["gas"]
22835 }
22836 }
22837 }
22838

```

22839 **6.118.5 Property definition**

22840 Table 239 defines the Properties that are part of the "oic.r.gas.consumption" Resource Type.

22841 **Table 239 – The Property definitions of the Resource with type "rt" =**
 22842 **"oic.r.gas.consumption".**

Property name	Value type	Mandatory	Access mode	Description
id	multiple types: see schema	No	Read Write	
rt	array: see schema	No	Read Only	Resource Type
if	array: see schema	No	Read Only	The OCF Interfaces supported by this Resource
volume	number	No	Read Only	gas volume consumed in m3 (metres cubed)
n	multiple types: see schema	No	Read Write	
precision	number	No	Read Only	Accuracy granularity of the exposed value
gas	number	Yes	Read Only	gas energy consumed in kWh

22843 **6.118.6 CRUDN behaviour**

22844 Table 240 defines the CRUDN operations that are supported on the "oic.r.gas.consumption"
 22845 Resource Type.

22846 **Table 240 – The CRUDN operations of the Resource with type "rt" =**
 22847 **"oic.r.gas.consumption".**

Create	Read	Update	Delete	Notify
	get			observe

22848 **6.119 Gas Usage**

22849 **6.119.1 Introduction**

22850 This Resource describes a cumulative time-based gas usage query.
22851 The Resource is a Collection of:
22852 TimePeriod Resource
22853 Gas Consumption Resource
22854

22855 **6.119.2 Example URI**

22856 /GasUsageResURI

22857 **6.119.3 Resource type**

22858 The Resource Type is defined as: "oic.r.gas.usage".

22859 **6.119.4 OpenAPI 2.0 definition**

```
22860 {  
22861   "swagger": "2.0",  
22862   "info": {  
22863     "title": "Gas Usage",  
22864     "version": "2019-03-18",  
22865     "license": {  
22866       "name": "OCF Data Model License",  
22867       "url": "https://openconnectivityfoundation.github.io/core/LICENSE.md",  
22868       "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."  
22869     },  
22870     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
22871   },  
22872   "schemes": ["http"],  
22873   "consumes": ["application/json"],  
22874   "produces": ["application/json"],  
22875   "paths": {  
22876     "/GasUsageResURI?if=oic.if.ll" : {  
22877       "get": {  
22878         "description": "This Resource describes a cumulative time-based gas usage query.\n\nThe  
22879 Resource is a Collection of:\n\n TimePeriod Resource\n\n Gas Consumption Resource\n\nThe Collection has  
22880 a single instance of a Link per Resource Type.\n\n",  
22881         "parameters": [  
22882           { "$ref": "#/parameters/interface-all" }  
22883         ],  
22884         "responses": {  
22885           "200": {  
22886             "description": "Success path response for the Resource",  
22887             "x-example":  
22888               [  
22889                 {  
22890                   "href": "/TimeIntervalResURI",  
22891                   "rt": ["oic.r.time.period"],  
22892                   "if": ["oic.if.a", "oic.if.baseline"],  
22893                   "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]  
22894                 },  
22895                 {  
22896                   "href": "/GasConsumptionResURI",  
22897                   "rt": ["oic.r.gas.consumption"],  
22898                   "if": ["oic.if.s", "oic.if.baseline"],  
22899                   "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]  
22900                 }  
22901               ],  
22902             "schema": { "$ref": "#/definitions/links" }  
22903           }  
22904         }  
22905       }  
22906     },  
22907     "/GasUsageResURI?if=oic.if.baseline" : {  
22908       "get": {  
22909         "description": "This Resource describes a cumulative time-based gas usage query.\n\nThe  
22910 Resource is a Collection of:\n\n TimePeriod Resource\n\n Gas Consumption Resource\n\n",
```



```

22911     "parameters": [
22912         { "$ref": "#/parameters/interface-all" }
22913     ],
22914     "responses": {
22915         "200": {
22916             "description": "Success path response for the Resource",
22917             "x-example":
22918                 {
22919                     "rt": ["oic.r.gas.usage"],
22920                     "if": ["oic.if.ll", "oic.if.b", "oic.if.baseline"],
22921                     "resources": [
22922                         {
22923                             "href": "/TimeIntervalResURI",
22924                             "rt": ["oic.r.time.period"],
22925                             "if": ["oic.if.a", "oic.if.baseline"],
22926                             "eps": [{"ep": "coaps://[fe80:bld6]:1122"}]
22927                         },
22928                         {
22929                             "href": "/GasConsumptionResURI",
22930                             "rt": ["oic.r.gas.consumption"],
22931                             "if": ["oic.if.s", "oic.if.baseline"],
22932                             "eps": [{"ep": "coaps://[fe80:bld6]:1122"}]
22933                         }
22934                     ]
22935                 },
22936             "schema": { "$ref": "#/definitions/Usage" }
22937         }
22938     }
22939 },
22940 ],
22941 "/GasUsageResURI?if=oic.if.b" : {
22942     "get": {
22943         "description": "This Resource describes a cumulative time-based gas usage query.\nThe
22944 Resource is a Collection of:\n TimePeriod Resource\n Gas Consumption Resource\n",
22945         "parameters": [
22946             { "$ref": "#/parameters/interface-all" }
22947         ],
22948         "responses": {
22949             "200": {
22950                 "description": "Success path response for the Resource",
22951                 "x-example":
22952                     [
22953                         {
22954                             "href": "/TimeIntervalResURI",
22955                             "rep": {
22956                                 "startTime": "2018-01-09T14:30Z",
22957                                 "stopTime": "2018-01-09T14:45Z"
22958                             }
22959                         },
22960                         {
22961                             "href": "/GasConsumptionResURI",
22962                             "rep": {
22963                                 "gas": 11135.41,
22964                                 "volume": 1000.0
22965                             }
22966                         }
22967                     ],
22968                 "schema": { "$ref": "#/definitions/batch" }
22969             }
22970         }
22971     },
22972     "post": {
22973         "description": "Sets the current time period. A Client may also post directly to the exposed
22974 URL for the Time Period Resource.\n",
22975         "x-method": ["optional"],
22976         "parameters": [
22977             { "$ref": "#/parameters/interface-b" },
22978             {
22979                 "name": "body",
22980                 "in": "body",
22981                 "required": true,
22982                 "schema": { "$ref": "#/definitions/batchupdate" } },

```

```

22983         "x-example":
22984         [
22985             {
22986                 "href": "/TimePeriodResURI",
22987                 "rep": {
22988                     "startTime": "2018-01-15T16:30Z",
22989                     "stopTime": "2018-01-16T16:30Z"
22990                 }
22991             }
22992         ]
22993     },
22994 ],
22995     "responses": {
22996         "200": {
22997             "description": "Success path response code\n"
22998         }
22999     }
23000 }
23001 },
23002 },
23003 "parameters": {
23004     "interface-all" : {
23005         "in" : "query",
23006         "name" : "if",
23007         "type" : "string",
23008         "enum" : ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
23009     },
23010     "interface-b" : {
23011         "in" : "query",
23012         "name" : "if",
23013         "type" : "string",
23014         "enum" : ["oic.if.b"]
23015     }
23016 },
23017 "definitions": {
23018     "links": {
23019         "type": "array",
23020         "items": {
23021             "$ref": "#/definitions/oic.oic-link"
23022         },
23023         "minItems": 2,
23024         "maxItems": 4
23025     },
23026     "oic.oic-link": {
23027         "properties": {
23028             "if": {
23029                 "description": "The interface set supported by the Linked Resource",
23030                 "items": {
23031                     "enum": [
23032                         "oic.if.baseline",
23033                         "oic.if.a",
23034                         "oic.if.s"
23035                     ],
23036                     "type": "string"
23037                 },
23038                 "minItems": 1,
23039                 "uniqueItems": true,
23040                 "readOnly": true,
23041                 "type": "array"
23042             },
23043             "rt": {
23044                 "description": "Resource Type of the linked Resource",
23045                 "items": {
23046                     "enum": [
23047                         "oic.r.time.period",
23048                         "oic.r.gas.consumption",
23049                         "oic.r.conversionfactor",
23050                         "oic.r.calorificvalue"
23051                     ],
23052                     "type": "string",
23053                     "maxLength": 64
23054                 }

```

```

23055         "minItems": 1,
23056         "uniqueItems": true,
23057         "readOnly": true,
23058         "type": "array"
23059     },
23060     "anchor": {
23061         "$ref":
23062 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23063 schema.json#/definitions/anchor"
23064     },
23065     "di": {
23066         "$ref":
23067 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23068 schema.json#/definitions/di"
23069     },
23070     "eps": {
23071         "$ref":
23072 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23073 schema.json#/definitions/eps"
23074     },
23075     "href": {
23076         "$ref":
23077 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23078 schema.json#/definitions/href"
23079     },
23080     "ins": {
23081         "$ref":
23082 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23083 schema.json#/definitions/ins"
23084     },
23085     "p": {
23086         "$ref":
23087 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23088 schema.json#/definitions/p"
23089     },
23090     "rel": {
23091         "$ref":
23092 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23093 schema.json#/definitions/rel_array"
23094     },
23095     "title": {
23096         "$ref":
23097 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23098 schema.json#/definitions/title"
23099     },
23100     "type": {
23101         "$ref":
23102 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23103 schema.json#/definitions/type"
23104     }
23105 },
23106 "required": [
23107     "href",
23108     "rt",
23109     "if"
23110 ],
23111 "type": "object"
23112 },
23113 "batch": {
23114     "title": "Collection Batch Retrieve Format",
23115     "minItems": 2,
23116     "maxItems": 4,
23117     "type": "array",
23118     "items": {
23119         "additionalProperties": true,
23120         "type": "object",
23121         "properties": {
23122             "href": {
23123                 "$ref":
23124 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23125 schema.json#/definitions/href"
23126             },

```

```

23127         "rep": {
23128             "anyOf": [
23129                 {
23130                     "$ref":
23131 "https://openconnectivityfoundation.github.io/IoTDataModels/TimePeriodResURI.swagger.json#/definitio
23132 ns/TimePeriod"
23133                 },
23134                 {
23135                     "$ref":
23136 "https://openconnectivityfoundation.github.io/IoTDataModels/GasConsumptionResURI.swagger.json#/defin
23137 itions/Consumption"
23138                 },
23139                 {
23140                     "$ref":
23141 "https://openconnectivityfoundation.github.io/IoTDataModels/CalorificValueResURI.swagger.json#/defin
23142 itions/Calorific"
23143                 },
23144                 {
23145                     "$ref":
23146 "https://openconnectivityfoundation.github.io/IoTDataModels/ConversionFactorResURI.swagger.json#/def
23147 initions/Conversion"
23148                 }
23149             ]
23150         },
23151     },
23152     "required": ["href", "rep"]
23153 }
23154 },
23155 "batchupdate" : {
23156     "title": "Collection Batch Update Format",
23157     "minItems": 1,
23158     "type": "array",
23159     "items": {
23160         "additionalProperties": true,
23161         "type": "object",
23162         "properties": {
23163             "href": {
23164                 "$ref":
23165 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23166 schema.json#/definitions/href"
23167             },
23168             "rep": {
23169                 "$ref":
23170 "https://openconnectivityfoundation.github.io/IoTDataModels/TimePeriodResURI.swagger.json#/definitio
23171 ns/TimePeriod"
23172             }
23173         }
23174     },
23175 },
23176 "Usage" : {
23177     "properties": {
23178         "rt" : {
23179             "description": "Resource Type",
23180             "items": {
23181                 "type": "string",
23182                 "enum": ["oic.r.gas.usage"],
23183                 "maxLength": 64
23184             },
23185             "minItems": 1,
23186             "readOnly": true,
23187             "uniqueItems": true,
23188             "type": "array"
23189         },
23190         "rts" : {
23191             "description": "Allowed Resource Type",
23192             "items": {
23193                 "type": "string",
23194                 "enum":
23195 ["oic.r.gas.consumption", "oic.r.time.period", "oic.r.calorificvalue", "oic.r.conversionfactor"],
23196                 "maxLength": 64
23197             },
23198             "minItems": 2,

```

```

23199         "readOnly": true,
23200         "uniqueItems": true,
23201         "type": "array"
23202     },
23203     "rts-m" : {
23204         "description": "Mandatory Resource Type",
23205         "items": {
23206             "type": "string",
23207             "enum": ["oic.r.gas.consumption","oic.r.time.period"],
23208             "maxLength": 64
23209         },
23210         "minItems": 2,
23211         "readOnly": true,
23212         "uniqueItems": true,
23213         "type": "array"
23214     },
23215     "n": {
23216         "$ref" :
23217         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23218         schema.json#/definitions/n"
23219     },
23220     "id": {
23221         "$ref" :
23222         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23223         schema.json#/definitions/id"
23224     },
23225     "resources" : {
23226         "$ref": "#/definitions/links"
23227     },
23228     "if" : {
23229         "description": "The interface set supported by this resource",
23230         "items": {
23231             "enum": [
23232                 "oic.if.ll",
23233                 "oic.if.b",
23234                 "oic.if.baseline"
23235             ],
23236             "type": "string",
23237             "maxLength": 64
23238         },
23239         "minItems": 1,
23240         "readOnly": true,
23241         "uniqueItems": true,
23242         "type": "array"
23243     }
23244 },
23245 "type" : "object",
23246 "required": ["resources"]
23247 }
23248 }
23249 }
23250

```

23251 6.119.5 Property definition

23252 Table 241 defines the Properties that are part of the "oic.r.gas.usage" Resource Type.

23253 **Table 241 – The Property definitions of the Resource with type "rt" = "oic.r.gas.usage".**

Property name	Value type	Mandatory	Access mode	Description
href	multiple types: see schema	Yes	Read Write	
rep	multiple types: see schema	Yes	Read Write	

p	multiple types: see schema	No	Read Write	
if	array: see schema	Yes	Read Only	The interface set supported by the Linked Resource
anchor	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
rt	array: see schema	Yes	Read Only	Resource Type of the linked Resource
eps	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
ins	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The interface set supported by this resource
rts	array: see schema	No	Read Only	Allowed Resource Type
rt	array: see schema	No	Read Only	Resource Type
rts-m	array: see schema	No	Read Only	Mandatory Resource Type

id	multiple types: see schema	No	Read Write	
resources	multiple types: see schema	Yes	Read Write	
href	multiple types: see schema		Read Write	
rep	multiple types: see schema		Read Write	

23254 **6.119.6 CRUDN behaviour**

23255 Table 242 defines the CRUDN operations that are supported on the "oic.r.gas.usage" Resource
23256 Type.

23257 **Table 242 – The CRUDN operations of the Resource with type "rt" = "oic.r.gas.usage".**

Create	Read	Update	Delete	Notify
	get			observe

23258 **6.120 Impact Sensor**

23259 **6.120.1 Introduction**

23260 This Resource provides a status and properties of an impact sensor. Included is the current status
23261 (boolean), horizontal and vertical direction (in degrees) and impact level (g force).

23262 **6.120.2 Example URI**

23263 /ImpactSensorResURI

23264 **6.120.3 Resource type**

23265 The Resource Type is defined as: "oic.r.impactsensor".

23266 **6.120.4 OpenAPI 2.0 definition**

```

23267 {
23268   "swagger": "2.0",
23269   "info": {
23270     "title": "Impact Sensor",
23271     "version": "12122018",
23272     "license": {
23273       "name": "OCF Data Model License",
23274       "url":
23275       "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
23276 CENSE.md",
23277       "x-copyright": "copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
23278     },
23279     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
23280   },
23281   "schemes": ["http"],
23282   "consumes": ["application/json"],
23283   "produces": ["application/json"],
23284   "paths": {
23285     "/ImpactSensorResURI" : {
23286       "get": {
23287         "description": "This Resource provides a status and properties of an impact sensor. Included
23288 is the current status (boolean), horizontal and vertical direction (in degrees) and impact level (g
23289 force).",

```

```

23290     "parameters": [
23291       {"$ref": "#/parameters/interface"}
23292     ],
23293     "responses": {
23294       "200": {
23295         "description": "The success path response for the Resource.",
23296         "x-example":
23297           {
23298             "rt": ["oic.r.impactsensor"],
23299             "if": ["oic.if.s", "oic.if.baseline"],
23300             "impactstatus": true,
23301             "impactlevel": 2.25,
23302             "impactdirectionhorizontal": 120.0,
23303             "impactdirectionvertical": 240.0
23304           },
23305         "schema": { "$ref": "#/definitions/ImpactSensor" }
23306       }
23307     }
23308   }
23309 },
23310 },
23311 "parameters": {
23312   "interface": {
23313     "in": "query",
23314     "name": "if",
23315     "type": "string",
23316     "enum": ["oic.if.s", "oic.if.baseline"]
23317   }
23318 },
23319 "definitions": {
23320   "ImpactSensor": {
23321     "properties": {
23322       "rt": {
23323         "description": "The Resource Type.",
23324         "items": {
23325           "maxLength": 64,
23326           "type": "string",
23327           "enum": ["oic.r.impactsensor"]
23328         },
23329         "minItems": 1,
23330         "uniqueItems": true,
23331         "readOnly": true,
23332         "type": "array"
23333       },
23334       "impactstatus": {
23335         "type": "boolean",
23336         "readOnly": true,
23337         "description": "The \"impactstatus\" Property indicates the impact as: \"true\" A physical
23338 impact is detected, \"false\" Normal status, an impact is not detected."
23339       },
23340       "impactlevel": {
23341         "type": "number",
23342         "readOnly": true,
23343         "description": "The \"impactlevel\" Property provides the level of impact. The unit is in
23344 \"G\" (G-force)."
23345       },
23346       "impactdirectionhorizontal": {
23347         "type": "number",
23348         "readOnly": true,
23349         "description": "The \"impactdirectionhorizontal\" Property shows a horizontal direction
23350 where the impact comes from. The value is 0 to 360 degrees. 0 is the front of the sensor and
23351 clockwise increment.",
23352         "minimum": 0,
23353         "maximum": 360
23354       },
23355       "impactdirectionvertical": {
23356         "type": "number",
23357         "readOnly": true,
23358         "description": "The \"impactdirectionvertical\" Property shows a vertical direction where
23359 the impact comes from. The value is 0 to 360 degrees. 0 is the front of the sensor and upward
23360 increment.",
23361         "minimum": 0,

```



```

23362         "maximum": 360
23363     },
23364     "n": {
23365         "$ref":
23366         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23367         schema.json#/definitions/n"
23368     },
23369     "id": {
23370         "$ref":
23371         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23372         schema.json#/definitions/id"
23373     },
23374     "if": {
23375         "description": "The OCF Interface set supported by this Resource.",
23376         "items": {
23377             "enum": [
23378                 "oic.if.s",
23379                 "oic.if.baseline"
23380             ],
23381             "type": "string"
23382         },
23383         "minItems": 2,
23384         "uniqueItems": true,
23385         "readOnly": true,
23386         "type": "array"
23387     }
23388 },
23389 "type": "object",
23390 "required": [ "impactstatus" ]
23391 }
23392 }
23393 }
23394

```

23395 6.120.5 Property definition

23396 Table 243 defines the Properties that are part of the "oic.r.impactsensor" Resource Type.

23397 **Table 243 – The Property definitions of the Resource with type "rt" = "oic.r.impactsensor".**

Property name	Value type	Mandatory	Access mode	Description
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.
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.

rt	array: see schema	No	Read Only	The Resource Type.
id	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
impactlevel	number	No	Read Only	The "impactlevel" Property provides the level of impact. The unit is in "G" (G-force).
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.

23398 **6.120.6 CRUDN behaviour**

23399 Table 244 defines the CRUDN operations that are supported on the "oic.r.impactsensor" Resource
 23400 Type.

23401 **Table 244 – The CRUDN operations of the Resource with type "rt" = "oic.r.impactsensor".**

Create	Read	Update	Delete	Notify
	get			observe

23402 **6.121 Keypad Character**

23403 **6.121.1 Introduction**

23404 This Resource describes a char (0-9, *, #) which is selected on a number keypad.

23405 **6.121.2 Example URI**

23406 /KeyPadCharResURI

23407 **6.121.3 Resource type**

23408 The Resource Type is defined as: "oic.r.keypadchar".

23409 **6.121.4 OpenAPI 2.0 definition**

23410 {
 23411 "swagger": "2.0",
 23412 "info": {

```

23413     "title": "KeyPadChar",
23414     "version": "12122018",
23415     "license": {
23416         "name": "OCF Data Model License",
23417         "url":
23418 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
23419 CENSE.md",
23420         "x-copyright": "copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
23421     },
23422     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
23423 },
23424     "schemes": ["http"],
23425     "consumes": ["application/json"],
23426     "produces": ["application/json"],
23427     "paths": {
23428         "/KeyPadCharResURI" : {
23429             "get": {
23430                 "description": "This Resource describes a char (0-9,*,#) which is selected on a number
23431 keypad.",
23432                 "parameters": [
23433                     {"$ref": "#/parameters/interface"}
23434                 ],
23435                 "responses": {
23436                     "200": {
23437                         "description": "Success path response for the Resource",
23438                         "x-example":
23439                             {
23440                                 "rt":      ["oic.r.keypadchar"],
23441                                 "if":      ["oic.if.rw", "oic.if.baseline"],
23442                                 "keyvalue": "7"
23443                             },
23444                         "schema": { "$ref": "#/definitions/KeyPadChar" }
23445                     }
23446                 },
23447             },
23448             "post": {
23449                 "description": "This Resource describes a char (0-9, *, #) which is selected on a number
23450 keypad.\n",
23451                 "parameters": [
23452                     {"$ref": "#/parameters/interface"},
23453                     {
23454                         "name": "body",
23455                         "in": "body",
23456                         "required": true,
23457                         "schema": { "$ref": "#/definitions/KeyPadChar" },
23458                         "x-example":
23459                             {
23460                                 "keyvalue": "4"
23461                             }
23462                     }
23463                 ],
23464                 "responses": {
23465                     "200": {
23466                         "description": "",
23467                         "x-example":
23468                             {
23469                                 "keyvalue": "4"
23470                             },
23471                         "schema": { "$ref": "#/definitions/KeyPadChar" }
23472                     }
23473                 }
23474             }
23475         }
23476     },
23477     "parameters": {
23478         "interface" : {
23479             "in": "query",
23480             "name": "if",
23481             "type": "string",
23482             "enum": ["oic.if.rw", "oic.if.baseline"]
23483         }
23484     },

```

```

23485 "definitions": {
23486   "KeyPadChar" : {
23487     "properties": {
23488       "rt": {
23489         "description": "The Resource Type.",
23490         "items": {
23491           "maxLength": 64,
23492           "type": "string",
23493           "enum": ["oic.r.keypadchar"]
23494         },
23495         "minItems": 1,
23496         "uniqueItems": true,
23497         "readOnly": true,
23498         "type": "array"
23499       },
23500       "keyvalue": {
23501         "type": "string",
23502         "enum": [
23503           "0",
23504           "1",
23505           "2",
23506           "3",
23507           "4",
23508           "5",
23509           "6",
23510           "7",
23511           "8",
23512           "9",
23513           "*",
23514           "#"
23515         ],
23516         "description": "The value of the key pad char."
23517       },
23518       "n": {
23519         "$ref":
23520         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23521         schema.json#/definitions/n"
23522       },
23523       "id": {
23524         "$ref":
23525         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23526         schema.json#/definitions/id"
23527       },
23528       "if": {
23529         "description": "The OCF Interface set supported by this Resource.",
23530         "items": {
23531           "enum": [
23532             "oic.if.baseline",
23533             "oic.if.rw"
23534           ],
23535           "type": "string"
23536         },
23537         "minItems": 2,
23538         "uniqueItems": true,
23539         "readOnly": true,
23540         "type": "array"
23541       }
23542     },
23543     "type": "object",
23544     "required": ["keyvalue"]
23545   }
23546 }
23547 }

```

23548 6.121.5 Property definition

23549 Table 245 defines the Properties that are part of the "oic.r.keypadchar" Resource Type.

23550 **Table 245 – The Property definitions of the Resource with type "rt" = "oic.r.keypadchar".**

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

23551 **6.121.6 CRUDN behaviour**

23552 Table 246 defines the CRUDN operations that are supported on the "oic.r.keypadchar" Resource
23553 Type.

23554 **Table 246 – The CRUDN operations of the Resource with type "rt" = "oic.r.keypadchar".**

Create	Read	Update	Delete	Notify
	get	post		observe

23555 **6.122 Opaque Data**

23556 **6.122.1 Introduction**

23557 This Resource defines opaque data that can be transferred between endpoints where the data itself
23558 is not interpretable by the OCF endpoints.
23559 The stringdata is a string of ASCII characters.

23560 **6.122.2 Example URI**

23561 /OpaqueDataResURI

23562 **6.122.3 Resource type**

23563 The Resource Type is defined as: "oic.r.opaquedata".

23564 **6.122.4 OpenAPI 2.0 definition**

23565 {
23566 "swagger": "2.0",
23567 "info": {
23568 "title": "Opaque Data",
23569 "version": "12122018",
23570 "license": {
23571 "name": "OCF Data Model License",
23572 "url":
23573 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI

```

23574 CENSE.md",
23575     "x-copyright": "copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
23576   },
23577   "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
23578 },
23579 "schemes": ["http"],
23580 "consumes": ["application/json"],
23581 "produces": ["application/json"],
23582 "paths": {
23583   "/OpaqueDataResURI" : {
23584     "get": {
23585       "description": "This Resource defines opaque data that can be transferred between endpoints
23586 where the data itself is not interpretable by the OCF endpoints.\n\nThe stringdata is a string of
23587 ASCII characters.",
23588       "parameters": [
23589         { "$ref": "#/parameters/interface" }
23590       ],
23591       "responses": {
23592         "200": {
23593           "description": "",
23594           "x-example":
23595             {
23596               "rt": ["oic.r.opaquedata"],
23597               "if": ["oic.if.rw", "oic.if.baseline"],
23598               "payload": "asdf0123",
23599               "payloadtype": "switch-get",
23600               "encoding": "base64",
23601               "size": 8,
23602               "hash": "AlA1",
23603               "system": "foreign system"
23604             },
23605           "schema": { "$ref": "#/definitions/OpaqueData" }
23606         }
23607       }
23608     },
23609     "post": {
23610       "description": "",
23611       "parameters": [
23612         { "$ref": "#/parameters/interface" },
23613         {
23614           "name": "body",
23615           "in": "body",
23616           "required": true,
23617           "schema": { "$ref": "#/definitions/OpaqueData" },
23618           "x-example":
23619             {
23620               "payload": "asdf0123",
23621               "payloadtype": "switch-get",
23622               "encoding": "base64",
23623               "size": 8,
23624               "hash": "AlA1",
23625               "system": "foreign system"
23626             }
23627         }
23628       ],
23629       "responses": {
23630         "200": {
23631           "description": "",
23632           "x-example":
23633             {
23634               "payload": "asdf0123",
23635               "payloadtype": "switch-get",
23636               "encoding": "base64",
23637               "size": 8,
23638               "hash": "AlA1",
23639               "system": "foreign system"
23640             },
23641           "schema": { "$ref": "#/definitions/OpaqueData" }
23642         }
23643       }
23644     }
23645   }

```

```

23646 },
23647 "parameters": {
23648   "interface": {
23649     "in": "query",
23650     "name": "if",
23651     "type": "string",
23652     "enum": ["oic.if.rw", "oic.if.baseline"]
23653   }
23654 },
23655 "definitions": {
23656   "OpaqueData": {
23657     "properties": {
23658       "rt": {
23659         "description": "The Resource Type.",
23660         "items": {
23661           "maxLength": 64,
23662           "type": "string",
23663           "enum": ["oic.r.opaquedata"]
23664         },
23665         "minItems": 1,
23666         "uniqueItems": true,
23667         "readOnly": true,
23668         "type": "array"
23669       },
23670       "payload": {
23671         "type": "string",
23672         "description": "This Property contains the opaque data."
23673       },
23674       "encoding": {
23675         "type": "string",
23676         "description": "This Property describes the encoding of the payload, e.g. binary as
23677 base64, json, xml, utf-8."
23678       },
23679       "payloadtype": {
23680         "type": "string",
23681         "description": "This Property describes the identification of the payload, e.g. what the
23682 payload is representing ."
23683       },
23684       "size": {
23685         "type": "integer",
23686         "description": "The size in bytes of the decoded binary object."
23687       },
23688       "hash": {
23689         "type": "string",
23690         "description": "The hash code of the blob. If present, it is used to check the decoded
23691 content of the object data point for integrity. The algorithm used for generating the hash value is
23692 SHA-2 [15]. The data point contains the hash as a hex encoded value."
23693       },
23694       "system": {
23695         "type": "string",
23696         "description": "The eco system that is using the payload."
23697       },
23698       "if": {
23699         "description": "The OCF Interface set supported by this Resource.",
23700         "items": {
23701           "enum": [
23702             "oic.if.baseline",
23703             "oic.if.rw"
23704           ],
23705           "type": "string"
23706         },
23707         "minItems": 2,
23708         "uniqueItems": true,
23709         "readOnly": true,
23710         "type": "array"
23711       }
23712     },
23713     "type": "object",
23714     "required": [ "payload", "encoding", "system" ]
23715   }
23716 }
23717 }

```

23718 **6.122.5 Property definition**

23719 Table 247 defines the Properties that are part of the "oic.r.opaquedata" Resource Type.

23720 **Table 247 – The Property definitions of the Resource with type "rt" = "oic.r.opaquedata".**

Property name	Value type	Mandatory	Access mode	Description
size	integer	No	Read Write	The size in bytes of the decoded binary object.
system	string	Yes	Read Write	The eco system that is using the payload.
if	array: schema see	No	Read Only	The OCF Interface set supported by this Resource.
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.
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 .
rt	array: see schema	No	Read Only	The Resource Type.

23721 **6.122.6 CRUDN behaviour**

23722 Table 248 defines the CRUDN operations that are supported on the "oic.r.opaquedata" Resource
23723 Type.

23724 **Table 248 – The CRUDN operations of the Resource with type "rt" = "oic.r.opaquedata".**

Create	Read	Update	Delete	Notify
	get	post		observe

23725 **6.123 User Info for Application Layer**

23726 **6.123.1 Introduction**

23727 This Resource defines credentials for user to application layer login. This does not relate to OCF
23728 Device to Device or Device to Cloud authentication. The username, password and token are strings.

23729 **6.123.2 Example URI**

23730 /UserInfoResURI

23731 **6.123.3 Resource type**

23732 The Resource Type is defined as: "oic.r.userinfo".

23733 **6.123.4 OpenAPI 2.0 definition**

```

23734 {
23735   "swagger": "2.0",
23736   "info": {
23737     "title": "User Info for Application Layer",
23738     "version": "12122018",
23739     "license": {
23740       "name": "OCF Data Model License",
23741       "url":
23742         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
23743         CENSE.md",
23744       "x-copyright": "copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
23745     },
23746     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
23747   },
23748   "schemes": ["http"],
23749   "consumes": ["application/json"],
23750   "produces": ["application/json"],
23751   "paths": {
23752     "/UserInfoResURI" : {
23753       "get": {
23754         "description": "This Resource defines credentials for user to application layer login. This
23755         does not relate to OCF Device to Device or Device to Cloud authentication. The username, password
23756         and token are strings.",
23757         "parameters": [
23758           {"$ref": "#/parameters/interface"}
23759         ],
23760         "responses": {
23761           "200": {
23762             "description": "Success path response for the Resource, note that the info supplied
23763             is NOT returned on RETRIEVE",
23764             "x-example":
23765             {

```

```

23766         "rt": ["oic.r.userinfo"],
23767         "if": ["oic.if.rw", "oic.if.baseline"]
23768     },
23769     "schema": { "$ref": "#/definitions/UserInfo-retrieve" }
23770 }
23771 },
23772 },
23773 "post": {
23774     "description": "This Resource defines credentials for user to application layer login. This
23775 does not relate to OCF Device to Device or Device to Cloud authentication. The username, password
23776 and token are strings.",
23777     "parameters": [
23778         { "$ref": "#/parameters/interface" },
23779         {
23780             "name": "body",
23781             "in": "body",
23782             "required": true,
23783             "schema": { "$ref": "#/definitions/UserInfo-update" },
23784             "x-example":
23785                 {
23786                     "username": "username",
23787                     "password": "password",
23788                     "token": "AlAl"
23789                 }
23790         }
23791     ],
23792     "responses": {
23793         "200": {
23794             "description": "The success path response for the Resource.",
23795             "x-example":
23796                 {
23797                     "username": "username",
23798                     "password": "password",
23799                     "token": "AlAl"
23800                 },
23801             "schema": { "$ref": "#/definitions/UserInfo-update" }
23802         }
23803     }
23804 },
23805 },
23806 },
23807 "parameters": {
23808     "interface": {
23809         "in": "query",
23810         "name": "if",
23811         "type": "string",
23812         "enum": ["oic.if.rw", "oic.if.baseline"]
23813     }
23814 },
23815 "definitions": {
23816     "UserInfo-retrieve": {
23817         "properties": {
23818             "rt": {
23819                 "description": "The Resource Type.",
23820                 "items": {
23821                     "maxLength": 64,
23822                     "type": "string",
23823                     "enum": ["oic.r.userinfo"]
23824                 },
23825                 "minItems": 1,
23826                 "uniqueItems": true,
23827                 "readOnly": true,
23828                 "type": "array"
23829             },
23830             "n": {
23831                 "$ref":
23832 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23833 schema.json#/definitions/n"
23834             },
23835             "id": {
23836                 "$ref":
23837 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-

```

```

23838 schema.json#/definitions/id"
23839     },
23840     "if": {
23841       "description": "The OCF Interface set supported by this Resource.",
23842       "items": {
23843         "enum": [
23844           "oic.if.rw",
23845           "oic.if.baseline"
23846         ],
23847         "type": "string"
23848       },
23849       "minItems": 2,
23850       "uniqueItems": true,
23851       "readOnly": true,
23852       "type": "array"
23853     }
23854   },
23855   "type": "object",
23856   "required": [ ]
23857 },
23858 "UserInfo-update": {
23859   "properties": {
23860     "username": {
23861       "type": "string",
23862       "description": "Login name."
23863     },
23864     "password": {
23865       "type": "string",
23866       "description": "Login password."
23867     },
23868     "token": {
23869       "type": "string",
23870       "description": "Authentication token."
23871     }
23872   },
23873   "type": "object",
23874   "required": [ ]
23875 }
23876 }
23877 }
23878

```

23879 **6.123.5 Property definition**

23880 Table 249 defines the Properties that are part of the "oic.r.userinfo" Resource Type.

23881 **Table 249 – The Property definitions of the Resource with type "rt" = "oic.r.userinfo".**

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

password	string	No	Read Write	Login password.
token	string	No	Read Write	Authentication token.
username	string	No	Read Write	Login name.

23882 **6.123.6 CRUDN behaviour**

23883 Table 250 defines the CRUDN operations that are supported on the "oic.r.userinfo" Resource Type.

23884 **Table 250 – The CRUDN operations of the Resource with type "rt" = "oic.r.userinfo".**

Create	Read	Update	Delete	Notify
	get	post		observe

23885

23886 **6.124 IAS Zone Info**

23887 **6.124.1 Introduction**

23888 This Resource describes information associated with an Intruder Alert System (IAS) Zone.

23889 Zone Type provides the information about the type of device/alarm.

23890 Zone Status provides an array which has 10 items representing various status information(e.g., battery status, mode, alarm (Up to two), supervision of IAS network, etc.

23891 A Device implementing this Resource can be enrolled to IAS Control and Indicator Equipment (CIE). IAS CIE can allocate an ID for the Device and update this Resource on the Device.

23892 This Resource may provide multiple sensitivity levels (>2).

23893 NumberofZoneSensitivityLevelSupported provides the number of the levels. A specific level can be selected as currentzonesensitivityLevel.

23897 **6.124.2 Example URI**

23898 /IASZoneInfoResURI

23899 **6.124.3 Resource type**

23900 The Resource Type is defined as: "oic.r.iaszoneinfo".

23901 **6.124.4 OpenAPI 2.0 definition**

```

23902 {
23903   "swagger": "2.0",
23904   "info": {
23905     "title": "IAS Zone Info",
23906     "version": "20190513",
23907     "license": {
23908       "name": "OCF Data Model License",
23909       "url":
23910 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
23911 CENSE.md",
23912       "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
23913     },
23914     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
23915   },
23916   "schemes": ["http"],
23917   "consumes": ["application/json"],
23918   "produces": ["application/json"],
23919   "paths": {
23920     "/IASZoneInfoResURI" : {
23921       "get": {

```

```

23922         "description": "This Resource describes information associated with an Intruder Alert System
23923 (IAS) Zone.\nZone Type provides the information about the type of device/alarm.\nZone Status
23924 provides an array which has 10 items representing various status information(e.g., battery status,
23925 mode, alarm (Up to two), supervision of IAS network, etc.\nA Device implementing this Resource can
23926 be enrolled to IAS Control and Indicator Equipment (CIE). IAS CIE can allocate an ID for the Device
23927 and update this Resource on the Device.\nThis Resource may provide multiple sensitivity levels (>2).
23928 NumberofZoneSensitivityLevelSupported provides the number of the levels. A specific level can be
23929 selected as currentzonesensitivityLevel.",
23930         "parameters": [
23931             { "$ref": "#/parameters/interface-all" }
23932         ],
23933         "responses": {
23934             "200": {
23935                 "description" : "",
23936                 "x-example":
23937                 {
23938                     "rt": ["oic.r.iaszoneinfo"],
23939                     "zonetype": "motionsensor",
23940                     "zonestatus": {
23941                         "alarms": ["presence"],
23942                         "tamper": false,
23943                         "zonestatusreports": "statuschangeonly",
23944                         "fault": false,
23945                         "test": false
23946                     },
23947                     "iascieaddress": "ACDE9F56A3FE6B98",
23948                     "zonestate": true,
23949                     "zoneid": 64,
23950                     "numzonesensitivitylevel": 3,
23951                     "currentzonesensitivitylevel": 2
23952                 },
23953                 "schema": { "$ref": "#/definitions/IASZoneInfo" }
23954             }
23955         },
23956         "post": {
23957             "description": "Sets the current sensitivity level of the IASZone.\n",
23958             "parameters": [
23959                 { "$ref": "#/parameters/interface-rw" },
23960                 {
23961                     "name": "body",
23962                     "in": "body",
23963                     "required": true,
23964                     "schema": { "$ref": "#/definitions/IASZoneInfo-Update" },
23965                     "x-example":
23966                     {
23967                         "currentzonesensitivitylevel": 3
23968                     }
23969                 }
23970             ],
23971             "responses": {
23972                 "200": {
23973                     "description" : "Success path response code\n"
23974                 }
23975             }
23976         }
23977     },
23978 },
23979 "parameters": {
23980     "interface-all" : {
23981         "in" : "query",
23982         "name" : "if",
23983         "type" : "string",
23984         "enum" : ["oic.if.rw", "oic.if.baseline"]
23985     },
23986     "interface-rw" : {
23987         "in" : "query",
23988         "name" : "if",
23989         "type" : "string",
23990         "enum" : ["oic.if.rw"]
23991     }
23992 },
23993 },

```

```

23994 "definitions": {
23995   "IASZoneInfo" : {
23996     "properties": {
23997       "rt" : {
23998         "description": "Resource Type",
23999         "items": {
24000           "type": "string",
24001           "enum": ["oic.r.iaszoneinfo"]
24002         },
24003         "minItems": 1,
24004         "readOnly": true,
24005         "type": "array"
24006       },
24007       "zonestate" : {
24008         "description": "The IAS zone state. True = enrolled, False = not enrolled.",
24009         "readOnly": true,
24010         "type": "boolean"
24011       },
24012       "zonestatus" : {
24013         "description": "Set of alarm indicators.",
24014         "properties": {
24015           "alarms": {
24016             "type": "array",
24017             "description": "Array of alarms. The alarms exposed are dependent on the zonetype.",
24018             "readOnly": true,
24019             "minItems": 1,
24020             "maxItems": 2,
24021             "items": {
24022               "type": "string",
24023               "enum":
24024               ["system", "intrusion", "presence", "1stportalopenclose", "2ndportalopenclose", "fire", "wateroverflow", "C
24025 O", "cooking", "fall", "emergencybutton", "movement", "vibration", "panic", "emergency", "glassbreak"]
24026             }
24027           },
24028           "zonestatusreports": {
24029             "description": "Controls the generation of status indications",
24030             "type": "string",
24031             "enum": ["none", "statuschangeonly", "alarmclearonly", "statuschangeandalarmclear"]
24032           },
24033           "tamper": {
24034             "description": "Tamper status. True = tampered, False = not tampered.",
24035             "readOnly": true,
24036             "type": "boolean"
24037           },
24038           "test": {
24039             "description": "Test mode indicator. True = sensor is in test mode, False = sensor is
24040 in operational mode",
24041             "readOnly": true,
24042             "type": "boolean"
24043           },
24044           "fault": {
24045             "description": "Fault indicator. True = fault detected, False = no fault detected",
24046             "readOnly": true,
24047             "type": "boolean"
24048           }
24049         },
24050         "readOnly": true,
24051         "type": "object"
24052       },
24053       "numzonesensitivitylevel" : {
24054         "description": "Number of supported zone sensitivity levels",
24055         "minimum": 2,
24056         "readOnly": true,
24057         "type": "integer"
24058       },
24059       "zoneid" : {
24060         "description": "ID allocated by the IAS CIE",
24061         "readOnly": true,
24062         "type": "integer"
24063       },
24064       "iascieaddress" : {
24065         "description": "EUI-64 Address of the enrolled IAS Control and Indicating Equipment

```

```

24066 (CIE)",
24067     "readOnly": true,
24068     "type": "string"
24069   },
24070   "zonetype" : {
24071     "description": "IAS zone type. See OCF enumeration map for set of valid values.",
24072     "readOnly": true,
24073     "type": "string"
24074   },
24075   "currentzonesensitivitylevel" : {
24076     "description": "Current zone sensitivity level",
24077     "minimum": 0,
24078     "type": "integer"
24079   },
24080   "n": {
24081     "$ref":
24082     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
24083     schema.json#/definitions/n"
24084   },
24085   "id": {
24086     "$ref":
24087     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
24088     schema.json#/definitions/id"
24089   },
24090   "if" : {
24091     "description": "The OCF Interface set supported by this Resource",
24092     "items": {
24093       "enum": [
24094         "oic.if.rw",
24095         "oic.if.baseline"
24096       ],
24097       "type": "string"
24098     },
24099     "minItems": 2,
24100     "maxItems": 2,
24101     "readOnly": true,
24102     "type": "array"
24103   }
24104 },
24105   "required": ["zonetype", "zonestate", "zonestatus", "zoneid", "iascieaddress"]
24106 },
24107   "IASZoneInfo-Update" : {
24108     "properties": {
24109       "currentzonesensitivitylevel" : {
24110         "description": "Current zone sensitivity level, Client can only set 1 or higher.",
24111         "minimum": 1,
24112         "type": "integer"
24113       }
24114     },
24115     "required": ["currentzonesensitivitylevel"]
24116   }
24117 }
24118 }
24119

```

24120 6.124.5 Property definition

24121 Table 251 defines the Properties that are part of the "oic.r.iaszoneinfo" Resource Type.

24122 **Table 251 – The Property definitions of the Resource with type "rt" = "oic.r.iaszoneinfo".**

Property name	Value type	Mandatory	Access mode	Description
zoneid	integer	Yes	Read Only	ID allocated by the IAS CIE
numzonesensitivitylevel	integer	No	Read Only	Number of supported zone sensitivity levels

if	array: schema	see	No	Read Only	The OCF Interface set supported by this Resource
zonestate	boolean		Yes	Read Only	The IAS zone state. True = enrolled, False = not enrolled.
zonestatus	object: schema	see	Yes	Read Only	Set of alarm indicators.
rt	array: schema	see	No	Read Only	Resource Type
iascieaddress	string		Yes	Read Only	EUI-64 Address of the enrolled IAS Control and Indicating Equipment (CIE)
id	multiple types: see schema		No	Read Write	
currentzonesensitivitylevel	integer		No	Read Write	Current zone sensitivity level
zonetype	string		Yes	Read Only	IAS zone type. See OCF enumeration map for set of valid values.
n	multiple types: see schema		No	Read Write	
currentzonesensitivitylevel	integer		Yes	Read Write	Current zone sensitivity level, Client can only set 1 or higher.

24123 **6.124.6 CRUDN behaviour**

24124 Table 252 defines the CRUDN operations that are supported on the "oic.r.iaszoneinfo" Resource
24125 Type.

24126 **Table 252 – The CRUDN operations of the Resource with type "rt" = "oic.r.iaszoneinfo".**

Create	Read	Update	Delete	Notify
	get	post		observe

24127 **6.125 IAS Zone Collection**

24128 **6.125.1 Introduction**

24129 This Resource is Collection that fully describes an Intruder Alert System (IAS) Zone. It is made
24130 up of an instance of IAS Zone Info, Battery, and Power Source.

24131 **6.125.2 Example URI**

24132 /IASZoneResURI

24133 **6.125.3 Resource type**

24134 The Resource Type is defined as: "oic.r.iaszone".

24135 6.125.4 OpenAPI 2.0 definition

```
24136 {
24137   "swagger": "2.0",
24138   "info": {
24139     "title": "IAS Zone Collection",
24140     "version": "20190513",
24141     "license": {
24142       "name": "OCF Data Model License",
24143       "url":
24144         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
24145 CENSE.md",
24146       "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
24147     },
24148     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
24149   },
24150   "schemes": ["http"],
24151   "consumes": ["application/json"],
24152   "produces": ["application/json"],
24153   "paths": {
24154     "/IASZoneResURI?if=oic.if.baseline" : {
24155       "get": {
24156         "description": "This Resource is Collection that fully describes an Intruder Alert System
24157 (IAS) Zone. It is made up of an instance of IAS Zone Info, Battery, and Power Source.",
24158         "parameters": [
24159           {"$ref": "#/parameters/interface-baseline"}
24160         ],
24161         "responses": {
24162           "200": {
24163             "description" : "",
24164             "schema": { "$ref": "#/definitions/baseline"},
24165             "x-example":
24166               {
24167                 "rt": ["oic.r.iaszone"],
24168                 "if": ["oic.if.ll", "oic.if.b", "oic.if.baseline"],
24169                 "links": [
24170                   {
24171                     "href": "/myIASZoneInfoResURI",
24172                     "rt": ["oic.r.iaszoneinfo"],
24173                     "if": ["oic.if.rw", "oic.if.baseline"]
24174                   },
24175                   {
24176                     "href": "/myBatteryResURI",
24177                     "rt": ["oic.r.energy.battery"],
24178                     "if": ["oic.if.rw", "oic.if.baseline"]
24179                   },
24180                   {
24181                     "href": "/myPowersourceResURI",
24182                     "rt": ["oic.r.powersource"],
24183                     "if": ["oic.if.r", "oic.if.baseline"]
24184                   }
24185                 ]
24186               }
24187             }
24188           }
24189         },
24190       },
24191       "/IASZoneResURI?if=oic.if.ll" : {
24192         "get": {
24193           "description": "This Resource is Collection that fully describes an Intruder Alert System
24194 (IAS) Zone. It is made up of an instance of IAS Zone Info, Battery, and Power Source.",
24195           "parameters": [
24196             {"$ref": "#/parameters/interface-ll"}
24197           ],
24198           "responses": {
24199             "200": {
24200               "description" : "",
24201               "schema": { "$ref": "#/definitions/links"},
24202               "x-example":
24203                 [
24204                   {
24205                     "href": "/myIASZoneInfoResURI",
```

```

24206         "rt": ["oic.r.iaszoneinfo"],
24207         "if": ["oic.if.rw", "oic.if.baseline"]
24208     },
24209     {
24210         "href": "/myBatteryResURI",
24211         "rt": ["oic.r.energy.battery"],
24212         "if": ["oic.if.rw", "oic.if.baseline"]
24213     },
24214     {
24215         "href": "/myPowersourceResURI",
24216         "rt": ["oic.r.powersource"],
24217         "if": ["oic.if.r", "oic.if.baseline"]
24218     }
24219 ]
24220 }
24221 }
24222 },
24223 ],
24224 "/IASZoneResURI?if=oic.if.b" : {
24225     "get": {
24226         "description": "This Resource is Collection that fully describes an Intruder Alert System
24227 (IAS) Zone. It is made up of an instance of IAS Zone Info, Battery, and Power Source.",
24228         "parameters": [
24229             {"$ref": "#/parameters/interface-b"}
24230         ],
24231         "responses": {
24232             "200": {
24233                 "description": "",
24234                 "schema": {"$ref": "#/definitions/IASZoneCollectionBatch-Retrieve"},
24235                 "x-example":
24236                 [
24237                     {
24238                         "href": "/myIASZoneInfoResURI",
24239                         "rep": {
24240                             "zonetype": "motionsensor",
24241                             "zonestatus": {
24242                                 "alarms": ["presence"],
24243                                 "tamper": false,
24244                                 "zonestatusreports": "statuschangeonly",
24245                                 "fault": false,
24246                                 "test": false
24247                             },
24248                             "iascieaddress": "ACDE9F56A3FE6B98",
24249                             "zonestate": true,
24250                             "zoneid": 64,
24251                             "numzonesensitivitylevel": 3,
24252                             "currentzonesensitivitylevel": 2
24253                         }
24254                     },
24255                     {
24256                         "href": "/myBatteryResURI",
24257                         "rep": {
24258                             "charge": 70,
24259                             "defect": false
24260                         }
24261                     },
24262                     {
24263                         "href": "/myPowersourceResURI",
24264                         "rep": {
24265                             "powerSources": ["AC (Mains) Power"],
24266                             "sourcefault": false
24267                         }
24268                     }
24269                 ]
24270             }
24271         }
24272     },
24273     "post": {
24274         "description": "Sets the current sensitivity level of the IASZone.\n",
24275         "parameters": [
24276             {"$ref": "#/parameters/interface-b"},
24277         ]

```

```

24278         "name": "body",
24279         "in": "body",
24280         "required": true,
24281         "schema": { "$ref": "#/definitions/IASZoneCollectionBatch-Update" },
24282         "x-example":
24283         [
24284             {
24285                 "href": "/myIASZoneInfoResURI",
24286                 "rep": {
24287                     "currentzonesensitivitylevel": 3
24288                 }
24289             }
24290         ]
24291     },
24292 ],
24293     "responses": {
24294         "200": {
24295             "description" : "Success path response code\n"
24296         }
24297     }
24298 },
24299 },
24300 },
24301 "parameters": {
24302     "interface-all" : {
24303         "in" : "query",
24304         "name" : "if",
24305         "type" : "string",
24306         "enum" : ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
24307     },
24308     "interface-ll" : {
24309         "in" : "query",
24310         "name" : "if",
24311         "type" : "string",
24312         "enum" : ["oic.if.ll"]
24313     },
24314     "interface-b" : {
24315         "in" : "query",
24316         "name" : "if",
24317         "type" : "string",
24318         "enum" : ["oic.if.b"]
24319     },
24320     "interface-baseline" : {
24321         "in" : "query",
24322         "name" : "if",
24323         "type" : "string",
24324         "enum" : ["oic.if.baseline"]
24325     }
24326 },
24327 "definitions": {
24328     "baseline": {
24329         "properties": {
24330             "rts" : {
24331                 "description": "Resource Type",
24332                 "items": {
24333                     "type": "string",
24334                     "enum": ["oic.r.iaszone"]
24335                 },
24336                 "minItems": 1,
24337                 "readOnly": true,
24338                 "type": "array"
24339             },
24340             "rts" : {
24341                 "description": "Allowed Resources",
24342                 "type": "array",
24343                 "minItems": 3,
24344                 "maxItems": 3,
24345                 "items": {
24346                     "type": "string",
24347                     "enum": ["oic.r.iaszoneinfo", "oic.r.energy.battery", "oic.r.powersource"]
24348                 }
24349             },

```

```

24350     "rts-m" : {
24351         "description": "Mandatory Resources",
24352         "type": "array",
24353         "minItems": 3,
24354         "maxItems": 3,
24355         "items": {
24356             "type": "string",
24357             "enum": ["oic.r.iaszoneinfo","oic.r.energy.battery","oic.r.powersource"]
24358         }
24359     },
24360     "n": {
24361         "$ref":
24362         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
24363         schema.json#/definitions/n"
24364     },
24365     "id": {
24366         "$ref":
24367         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
24368         schema.json#/definitions/id"
24369     },
24370     "links" : {
24371         "$ref": "#/definitions/links"
24372     },
24373     "if" : {
24374         "description": "The OCF Interface set supported by this Resource",
24375         "items": {
24376             "enum": [
24377                 "oic.if.ll",
24378                 "oic.if.b",
24379                 "oic.if.baseline"
24380             ],
24381             "type": "string"
24382         },
24383         "minItems": 1,
24384         "readOnly": true,
24385         "type": "array"
24386     }
24387 },
24388 "type" : "object",
24389 "required": ["links"]
24390 },
24391 "links": {
24392     "type": "array",
24393     "items": {
24394         "$ref": "#/definitions/oic.oic-link"
24395     }
24396 },
24397 "oic.oic-link": {
24398     "properties": {
24399         "if": {
24400             "description": "The OCF Interface set supported by this resource",
24401             "items": {
24402                 "enum": [
24403                     "oic.if.baseline",
24404                     "oic.if.rw",
24405                     "oic.if.r"
24406                 ],
24407                 "type": "string"
24408             },
24409             "minItems": 1,
24410             "uniqueItems": true,
24411             "readOnly": true,
24412             "type": "array"
24413         },
24414         "rt": {
24415             "description": "Resource Type of the Resource",
24416             "items": {
24417                 "enum": [
24418                     "oic.r.iaszoneinfo",
24419                     "oic.r.energy.battery",
24420                     "oic.r.powersource"
24421                 ],

```

```

24422         "type": "string"
24423     },
24424     "minItems": 1,
24425     "maxItems": 1,
24426     "uniqueItems": true,
24427     "readOnly": true,
24428     "type": "array"
24429 },
24430 "anchor": {
24431     "$ref":
24432 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
24433 schema.json#/definitions/anchor"
24434 },
24435 "di": {
24436     "$ref":
24437 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
24438 schema.json#/definitions/di"
24439 },
24440 "eps": {
24441     "$ref":
24442 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
24443 schema.json#/definitions/eps"
24444 },
24445 "href": {
24446     "$ref":
24447 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
24448 schema.json#/definitions/href"
24449 },
24450 "ins": {
24451     "$ref":
24452 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
24453 schema.json#/definitions/ins"
24454 },
24455 "p": {
24456     "$ref":
24457 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
24458 schema.json#/definitions/p"
24459 },
24460 "rel": {
24461     "$ref":
24462 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
24463 schema.json#/definitions/rel_array"
24464 },
24465 "title": {
24466     "$ref":
24467 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
24468 schema.json#/definitions/title"
24469 },
24470 "type": {
24471     "$ref":
24472 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
24473 schema.json#/definitions/type"
24474 }
24475 },
24476 "required": [
24477     "href",
24478     "rt",
24479     "if"
24480 ],
24481 "type": "object"
24482 },
24483 "IASZoneCollectionBatch-Retrieve": {
24484     "title": "Collection Batch Retrieve Format",
24485     "minItems": 3,
24486     "maxItems": 3,
24487     "type": "array",
24488     "uniqueItems": true,
24489     "items": {
24490         "additionalProperties": true,
24491         "type": "object",
24492         "properties": {
24493             "href": {

```

```

24494         "$ref":
24495         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
24496         schema.json#/definitions/href"
24497         },
24498         "rep": {
24499             "anyOf": [
24500                 {
24501                     "$ref":
24502                     "https://openconnectivityfoundation.github.io/IoTDataModels/IASZoneInfoResURI.swagger.json#/definiti
24503                     ons/IASZoneInfo"
24504                 },
24505                 {
24506                     "$ref":
24507                     "https://openconnectivityfoundation.github.io/IoTDataModels/BatteryResURI.swagger.json#/definitions/
24508                     Battery"
24509                 },
24510                 {
24511                     "$ref":
24512                     "https://openconnectivityfoundation.github.io/IoTDataModels/PowerSourcesResourceURI.swagger.json#/de
24513                     finitions/powerSourceSchema"
24514                 }
24515             ]
24516         }
24517     },
24518     "required": ["href", "rep"]
24519 }
24520 },
24521 "IASZoneCollectionBatch-Update" : {
24522     "title": "Collection Batch Update Format",
24523     "minItems": 1,
24524     "type": "array",
24525     "items": {
24526         "additionalProperties": true,
24527         "type": "object",
24528         "properties": {
24529             "href": {
24530                 "$ref":
24531                 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
24532                 schema.json#/definitions/href"
24533             },
24534             "rep": {
24535                 "type": "object",
24536                 "anyOf": [
24537                     {
24538                         "$ref":
24539                         "https://openconnectivityfoundation.github.io/IoTDataModels/IASZoneInfoResURI.swagger.json#/definiti
24540                         ons/IASZoneInfo-Update"
24541                     },
24542                     {
24543                         "$ref":
24544                         "https://openconnectivityfoundation.github.io/IoTDataModels/BatteryResURI.swagger.json#/definitions/
24545                         BatteryUpdate"
24546                     }
24547                 ]
24548             }
24549         }
24550     }
24551 }
24552 }
24553 }
24554

```

24555 6.125.5 Property definition

24556 Table 253 defines the Properties that are part of the "oic.r.iaszone" Resource Type.

24557 **Table 253 – The Property definitions of the Resource with type "rt" = "oic.r.iaszone".**

Property name	Value type	Mandatory	Access mode	Description
rep	multiple types: see schema	Yes	Read Write	

href	multiple types: see schema	Yes	Read Write	
rep	object: see schema		Read Write	
href	multiple types: see schema		Read Write	
ins	multiple types: see schema	No	Read Write	
if	array: see schema	Yes	Read Only	The OCF Interface set supported by this resource
type	multiple types: see schema	No	Read Write	
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
rt	array: see schema	Yes	Read Only	Resource Type of the Resource
title	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
eps	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
rts-m	array: see schema	No	Read Write	Mandatory Resources
rts	array: see schema	No	Read Write	Allowed Resources
rt	array: see schema	No	Read Only	Resource Type
id	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
links	multiple types: see schema	Yes	Read Write	

24558 **6.125.6 CRUDN behaviour**

24559 Table 254 defines the CRUDN operations that are supported on the "oic.r.iaszone" Resource Type.

24560 **Table 254 – The CRUDN operations of the Resource with type "rt" = "oic.r.iaszone".**

Create	Read	Update	Delete	Notify
	get			observe

24561 6.126 Window Covering

24562 6.126.1 Introduction

24563 This Resource describes the information of a window covering, i.e., type, configuration status,
24564 and mode.

24565 Velocity associated with lifting the window covering can be changed by updating

24566 Lift_Velocity(cm/sec).

24567 Ramp up/down times to reaching the velocity setting can be changed by updating

24568 Lift_Acceleration Time/Lift_Deceleration Time (0.1sec).

24569 6.126.2 Example URI

24570 /WindowCoveringResURI

24571 6.126.3 Resource type

24572 The Resource Type is defined as: "oic.r.windowcovering".

24573 6.126.4 OpenAPI 2.0 definition

```
24574 {  
24575   "swagger": "2.0",  
24576   "info": {  
24577     "title": "Window Covering",  
24578     "version": "20190513",  
24579     "license": {  
24580       "name": "OCF Data Model License",  
24581       "url":  
24582       "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
24583       CENSE.md",  
24584       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."  
24585     },  
24586     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
24587   },  
24588   "schemes": ["http"],  
24589   "consumes": ["application/json"],  
24590   "produces": ["application/json"],  
24591   "paths": {  
24592     "/WindowCoveringResURI" : {  
24593       "get": {  
24594         "description": "This Resource describes the information of a window covering, i.e., type,  
24595         configuration status, and mode.\nVelocity associated with lifting the window covering can be changed  
24596         by updating Lift_Velocity(cm/sec).\nRamp up/down times to reaching the velocity setting can be  
24597         changed by updating Lift_Acceleration Time/Lift_Deceleration Time (0.1sec).",  
24598         "parameters": [  
24599           {"$ref": "#/parameters/interface-all"}  
24600         ],  
24601         "responses": {  
24602           "200": {  
24603             "description" : "",  
24604             "x-example":  
24605             {  
24606               "rt": ["oic.r.windowcovering"],  
24607               "windowcoveringtype": "shutter",  
24608               "configstatus": {  
24609                 "operational": true,  
24610                 "online": true,  
24611                 "rotationdirection": "normal",  
24612                 "controllift": "closedloop",  
24613                 "controltilt": "closedloop",  
24614                 "closedloopliftcontrol": "encoder",  
24615                 "closedlooptiltcontrol": "encoder"  
24616               },  
24617               "mode": {  
24618                 "motordirection": false,  
24619                 "calibration": false,  
24620                 "maintenance": false,  
24621                 "ledfeedback": true  
24622               },  
24623               "liftvelocity": 5,
```



```

24624         "liftaccelerationtime": 200,
24625         "liftdecelerationtime": 200
24626     },
24627     "schema": { "$ref": "#/definitions/WindowCovering" }
24628 }
24629 }
24630 },
24631 "post": {
24632     "description": "Update window covering settings.\n",
24633     "parameters": [
24634         { "$ref": "#/parameters/interface-all" },
24635         {
24636             "name": "body",
24637             "in": "body",
24638             "required": true,
24639             "schema": { "$ref": "#/definitions/WindowCovering-Update" },
24640             "x-example":
24641             {
24642                 "mode": {
24643                     "motordirection": true,
24644                     "calibration": false,
24645                     "maintenance": false,
24646                     "ledfeedback": true
24647                 },
24648                 "liftvelocity": 10,
24649                 "liftaccelerationtime": 500,
24650                 "liftdecelerationtime": 500
24651             }
24652         }
24653     ],
24654     "responses": {
24655         "200": {
24656             "description" : "Success path response code\n"
24657         }
24658     }
24659 }
24660 }
24661 },
24662 "parameters": {
24663     "interface-all" : {
24664         "in" : "query",
24665         "name" : "if",
24666         "type" : "string",
24667         "enum" : ["oic.if.rw", "oic.if.baseline"]
24668     }
24669 },
24670 "definitions": {
24671     "WindowCovering" : {
24672         "properties": {
24673             "rt" : {
24674                 "description": "Resource Type",
24675                 "items": {
24676                     "maxLength": 64,
24677                     "type": "string",
24678                     "enum": ["oic.r.windowcovering"]
24679                 },
24680                 "minItems": 1,
24681                 "readOnly": true,
24682                 "type": "array"
24683             },
24684             "windowcoveringtype" : {
24685                 "description": "Window covering type. See OCF enumeration map for set of valid values.",
24686                 "readOnly": true,
24687                 "type": "string"
24688             },
24689             "liftvelocity" : {
24690                 "description": "Velocity in cm/sec associated with lifting the covering",
24691                 "type": "integer"
24692             },
24693             "configstatus" : {
24694                 "description": "Set of config status indicators.",
24695                 "properties": {

```

```

24696         "controllift": {
24697             "description": "Closed loop control allows for intermediate settings, open loop
24698 supports only up or down",
24699             "readOnly": true,
24700             "type": "string",
24701             "enum": ["closedloop","openloop"]
24702         },
24703         "controltilt": {
24704             "description": "Closed loop control allows for intermediate settings, open loop
24705 supports only tilted or not tilted",
24706             "readOnly": true,
24707             "type": "string",
24708             "enum": ["closedloop","openloop"]
24709         },
24710         "closedloopliftcontrol": {
24711             "description": "Encoder or timer controlled",
24712             "readOnly": true,
24713             "type": "string",
24714             "enum": ["encoder","timer"]
24715         },
24716         "closedlooptiltcontrol": {
24717             "description": "Encoder or timer controlled",
24718             "readOnly": true,
24719             "type": "string",
24720             "enum": ["encoder","timer"]
24721         },
24722         "online": {
24723             "description": "True = online, False = not online",
24724             "readOnly": true,
24725             "type": "boolean"
24726         },
24727         "operational": {
24728             "description": "True = operational, False = not operational",
24729             "readOnly": true,
24730             "type": "boolean"
24731         },
24732         "rotationdirection": {
24733             "description": "Identifies if the direction of rotation has been reversed to match
24734 physical installation.",
24735             "readOnly": true,
24736             "type": "string",
24737             "enum": ["normal","reversed"]
24738         },
24739     },
24740     "readOnly": true,
24741     "type": "object"
24742 },
24743 "liftaccelerationtime" : {
24744     "description": "Ramp up time to reach lift velocity (ms)",
24745     "type": "integer"
24746 },
24747 "liftdecelerationtime" : {
24748     "description": "Ramp down time from the velocity setting (ms)",
24749     "type": "integer"
24750 },
24751 "mode" : {
24752     "description": "Set of operational modes.",
24753     "properties": {
24754         "calibration": {
24755             "description": "True = calibration mode, False = normal mode",
24756             "type": "boolean"
24757         },
24758         "ledfeedback": {
24759             "description": "True = feedback enabled, False = LEDs are off",
24760             "type": "boolean"
24761         },
24762         "maintenance": {
24763             "description": "True = maintenance mode, False = normal mode",
24764             "type": "boolean"
24765         },
24766         "motordirection": {
24767             "description": "True = direction reversed, False = direction normal",

```

```

24768         "type": "boolean"
24769     }
24770 },
24771     "type": "object"
24772 },
24773     "n": {
24774         "$ref":
24775         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
24776         schema.json#/definitions/n"
24777     },
24778     "id": {
24779         "$ref":
24780         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
24781         schema.json#/definitions/id"
24782     },
24783     "if" : {
24784         "description": "The interface set supported by this resource",
24785         "items": {
24786             "enum": [
24787                 "oic.if.rw",
24788                 "oic.if.baseline"
24789             ],
24790             "type": "string"
24791         },
24792         "minItems": 2,
24793         "maxItems": 2,
24794         "readOnly": true,
24795         "type": "array"
24796     }
24797 },
24798     "required": ["windowcoveringtype", "configstatus", "mode"]
24799 },
24800 "WindowCovering-Update" : {
24801     "properties": {
24802         "liftaccelerationtime" : {
24803             "description": "Ramp up time to reach lift velocity (ms)",
24804             "type": "integer"
24805         },
24806         "liftdecelerationtime" : {
24807             "description": "Ramp down time from the velocity setting (ms)",
24808             "type": "integer"
24809         },
24810         "liftvelocity" : {
24811             "description": "Velocity in cm/sec associated with lifting the covering",
24812             "type": "integer"
24813         },
24814         "mode" : {
24815             "description": "Set of operational modes.",
24816             "properties": {
24817                 "calibration": {
24818                     "description": "True = calibration mode, False = normal mode",
24819                     "type": "boolean"
24820                 },
24821                 "ledfeedback": {
24822                     "description": "True = feedback enabled, False = LEDs are off",
24823                     "type": "boolean"
24824                 },
24825                 "maintenance": {
24826                     "description": "True = maintenance mode, False = normal mode",
24827                     "type": "boolean"
24828                 },
24829                 "motordirection": {
24830                     "description": "True = direction reversed, False = direction normal",
24831                     "type": "boolean"
24832                 }
24833             },
24834             "type": "object"
24835         }
24836     },
24837     "required": ["mode"]
24838 }
24839 }

```

24840 }
 24841

24842 **6.126.5 Property definition**

24843 Table 255 defines the Properties that are part of the "oic.r.windowcovering" Resource Type.

24844 **Table 255 – The Property definitions of the Resource with type "rt" =**
 24845 **"oic.r.windowcovering".**

Property name	Value type	Mandatory	Access mode	Description
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
if	array: see schema	No	Read Only	The interface set supported by this resource
windowcoveringtype	string	Yes	Read Only	Window covering type. See OCF enumeration map for set of valid values.
mode	object: see schema	Yes	Read Write	Set of operational modes.
configstatus	object: see schema	Yes	Read Only	Set of config status indicators.
id	multiple types: see schema	No	Read Write	
liftaccelerationtime	integer	No	Read Write	Ramp up time to reach lift velocity (ms)
n	multiple types: see schema	No	Read Write	
rt	array: see schema	No	Read Only	Resource Type
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
liftaccelerationtime	integer	No	Read Write	Ramp up time to reach lift velocity (ms)
mode	object: see schema	Yes	Read Write	Set of operational modes.

24846 **6.126.6 CRUDN behaviour**

24847 Table 256 defines the CRUDN operations that are supported on the "oic.r.windowcovering"
24848 Resource Type.

24849 **Table 256 – The CRUDN operations of the Resource with type "rt" =**
24850 **"oic.r.windowcovering".**

Create	Read	Update	Delete	Notify
	get	post		observe

24851

24852