

OCF Resource Type Specification

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CONTACT admin@openconnectivity.org

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1 Scope

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

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

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

2 Normative references

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

OCF Core Specification, *Open Connectivity Foundation Core Specification*, Version 1.3.0.

Available at: https://openconnectivity.org/specs/OCF_Core_Specification_v1.3.0.pdf

Latest version available at: https://openconnectivity.org/specs/OCF_Core_Specification.pdf

JSON SCHEMA, *JSON Schema: Core Definitions and Terminology*, Version 4.0,

<http://json-schema.org/latest/json-schema-core.html>.

RAML, *Restful API modelling language*, Version 0.8.

<https://github.com/raml-org/raml-spec/blob/master/versions/raml-08/raml-08.md>

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

CIE CIE159:2004, *A colour appearance model for colour management systems: CIECAM02*, January 19, 2004.

http://www.cie.co.at/index.php/Publications/index.php?i_ca_id=435

3 Terms, definitions, symbols and abbreviations

3.1 Terms and definitions

3.1.1

Actuator

Resource with support of the UPDATE operation.

3.1.2

Composite Resource Type

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

3.1.3

Sensor

Resource without support of the UPDATE operation.

1317 **3.2 Symbols and abbreviations**

1318 **3.2.1**

1319 **CRUDN**

1320 Create Retrieve Update Delete Notify

1321 This is an acronym indicating which operations are possible on the Resource.

1322 **3.2.2**

1323 **CSV**

1324 Comma Separated Value List

1325 Comma Separated Value List is a construction to have more fields in 1 string separated by commas.

1326 If a value contains a comma then the comma can be escaped by adding “\” in front of the comma.

1327 **3.2.3**

1328 **OCF**

1329 Open Connectivity Foundation

1330 OCF is the standards organization which created and owns this specification.

1331 **3.2.4**

1332 **RAML**

1333 RESTful API modelling language

1334 RAML is a simple and succinct way of describing RESTful APIs. See RAML for further details.

1335 **3.2.5**

1336 **REST**

1337 Representational State Transfer

1338 REST is an architecture style for designing networked applications and relies on a stateless, client-

1339 server, cacheable communications protocol.

1340 **3.2.6**

1341 **TBD**

1342 To Be Determined

1343 **3.3 Conventions**

1344 In this specification a number of terms, conditions, mechanisms, sequences, parameters, events,

1345 states, or similar terms are printed with the first letter of each word in uppercase and the rest

1346 lowercase (e.g., Resource Type). Any lowercase uses of these words have the normal technical

1347 English meaning.

1348 **4 Document conventions and organization**

1349 This document lists all the Resource Types currently specified by OCF. The Resources are used

1350 by application profile device definitions. The Resource Types mentioned in this document can be

1351 used by any OCF conforming device in any OCF Collection or device representation.

1352 For the purposes of this document, the terms and definitions given in OCF Core Specification apply.

1353 **4.1 Notation**

1354 In this document, features are described as required, recommended, allowed or DEPRECATED as

1355 follows:

1356 Required (or shall or mandatory).

1357 These basic features shall be implemented to comply with OCF Resource Type Specification.

1358 The phrases “shall not”, and “PROHIBITED” indicate behaviour that is prohibited, i.e. that if

1359 performed means the implementation is not in compliance.

1360 Recommended (or should).

1361 These features add functionality supported by the OCF Resource Type Specification and
1362 should be implemented. Recommended features take advantage of the capabilities of the OCF
1363 Resource Type Specification, usually without imposing major increase of complexity. Notice
1364 that for compliance testing, if a recommended feature is implemented, it shall meet the
1365 specified requirements to be in compliance with these guidelines. Some recommended features
1366 could become requirements in the future. The phrase “should not” indicates behaviour that is
1367 permitted but not recommended.

1368 Allowed (or allowed).

1369 These features are neither required nor recommended by OCF Resource Type Specification,
1370 but if the feature is implemented, it shall meet the specified requirements to be in compliance
1371 with these guidelines.

1372 DEPRECATED

1373 Although these features are still described in this specification, they should not be implemented
1374 except for backward compatibility. The occurrence of a deprecated feature during operation of
1375 an implementation compliant with the current specification has no effect on the
1376 implementation’s operation and does not produce any error conditions. Backward compatibility
1377 may require that a feature is implemented and functions as specified but it shall never be used
1378 by implementations compliant with this specification.

1379 Conditionally allowed (CA)

1380 The definition or behaviour depends on a condition. If the specified condition is met, then the
1381 definition or behaviour is allowed, otherwise it is not allowed.

1382 Conditionally required (CR)

1383 The definition or behaviour depends on a condition. If the specified condition is met, then the
1384 definition or behaviour is required. Otherwise the definition or behaviour is allowed as default
1385 unless specifically defined as not allowed.

1386 Strings that are to be taken literally are enclosed in “double quotes”.

1387 Words that are emphasized are printed in *italic*.

1388 **4.2 Data types**

1389 This specification adopts the types defined in the OCF Core Specification with the exceptions
1390 defined in this Section

1391 All Properties in this specification that are defined as JSON number type shall be transmitted
1392 encoded as floating point values and not integer values. Reception of Properties defined as JSON
1393 number type shall be as defined in the OCF Core Specification. See OCF Core Specification
1394 Section 12.3 for specifics.

1395 **5 Baseline Model Constructs**

1396 **5.1 URI**

1397 The URIs mentioned in this document are non-normative, they may be vendor defined.

1398 An Instance of a Resource is indicated by the URI. When more than one instance of the same
1399 Resource Type is used in an OCF Device, different URIs for the different Resource instances shall
1400 be used.

1401 An implementation shall follow the requirements defined in the OCF Core Specification with respect
1402 to population of the URI. Please refer to the OCF Core Specification Sections 6.2 and 6.3 for
1403 specific details.

5.2 Interfaces

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

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

Note that the functionality associated with, or visibility of, an instance of any Resource exposed by a Device may be restricted depending upon local (per country or legislative region) regulatory requirements or other restrictions (e.g. with respect to Binary Switch in some jurisdictions the ability to remotely power on a connected device is restricted; a lock status could be read-only depending on the context). In such cases the Device shall not expose the actuator interface for the Resource (“oic.if.a”), the Device shall expose the Resource in “/oic/res” with the Sensor Interface (“oic.if.s”) as the Default Interface in addition to any mandated interfaces.

5.3 RAML definition

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

The RAML definitions are used to describe the payloads of the CRUDN operations on the specified Resource Type. The CRUDN operations are defined in the OCF Core Specification. The OCF Core Specification also specifies additional Properties in the payloads of the CRUDN operations. The RAML definitions in this document are not of themselves sufficient to create an implementation, additional Properties defined in the Core specification need to be added to create a compliant implementation. This specification makes use of a subset of the responses supported by RAML specifics on the use of these responses are defined in Table 5-4 Return codes behaviour in RAML. Note that the actual values of success and error conditions are defined in the OCF Core Specification.

The RAML definitions map the OCF CRUDN behaviour to the RAML as defined in Table 5-1.

Table 5-1 Conversion between OCF CRUDN and RAML definitions¹

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

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

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

5.4 Property definition

5.4.1 Common Properties

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

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

Table 5-2 Common Properties for OCF Resources

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

5.4.2 Resource Properties

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

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

Such a Resource Type is specified with the Properties as defined Table 5-3. Mandatory in the table means that the Property shall be defined as part of the overall Resource Type schema; actual inclusion of the Property as part of a returned or generated payload is dependent upon the schema that applies to the operation being invoked.

Table 5-3 Property definitions of a Resource Type in the JSON schema

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	Linear range	Read-only	no	Range of input values, specified as a two element array.
step	Step	Dependent on the Resource	Integer or Number	Dependent on the Resource	Read-only	no	Step value across the defined range
precision	Precision	Dependent on the Resource	Number	Dependent on the Resource	Read-only	no	Accuracy granularity of the exposed value

1463

1464 For Resources, which by their nature have more than one physical parameter, the value Property
1465 can be replaced with multiple Properties specifying the different physical parameters. The type of
1466 the value shall be indicated in the RAML definition of the Resource Type and should be suitable
1467 for the conveyed value. All Property Names and Property Values defined in this specification are
1468 case sensitive.

1469 5.4.3 Basic Resource Schema

1470 All Resource Types defined herein are represented as previously noted by JSON schemas. The
1471 RAML definitions of the Resource Types embed the Resource Type specific schema elements.

1472 5.4.4 CRUDN Operation Response Codes

1473 A Resource can be created or updated depending on the Resource Type definition and the allowed
1474 CRUDN operations. The operation may have different response codes with different meanings.
1475 This is explained in Table 5-4.

1476 **Table 5-4 Return codes behaviour in RAML**

Response Code	Meaning
200	Payload of the response will confirm the change. The RAML definition will contain a schema to define the payload.

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

5.5 Example Resource Definitions

Please see the OCF Resource Types in Section 6 for examples of Resource Definitions. For an example Resource Type that models an actuator refer to Section 6.8 Dimming; for an example Resource Type that models a sensor refer to Section 6.39 Illuminance Sensor.

5.6 Observable Resource Types

The OCF Core Specification defines a mechanism by which Resources can advertise themselves as “Observable” to an OCF Client. All Resource Types defined in this specification may be observed. Whether or not a Resource Type is made observable via use of the Policy Link Parameter is entirely implementation dependent.

5.6.1 Conditional Notification

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

5.6.1.1 Conditional Notification Property Summary

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

Table 5-5 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 All Properties if exposed shall be set with initial values. All Properties may be exposed with a
 1499 value of "0" (zero); this indicates that the functionality associated with the Property is not active.
 1500 Any Client may update the exposed values subject to any ACL restrictions; such changes are
 1501 global and apply to all notifications that are sent to all observers. A notifier may reject an update
 1502 to the Property values; in such cases a diagnostic payload should be included in the rejection
 1503 response indicating the valid ranges for the Properties.

1504 **5.6.1.2 Property Definition: threshold**

1505 Minimum value change between two notifications. A notification shall be sent (within the
 1506 constraints of "minnotifyperiod") when the change since the last notification is greater than or equal
 1507 to this value. The measurement is done against the value in the last notification that was sent;
 1508 thus all notifications (within any "maxnotifyperiod" constraints that may be present) will carry values
 1509 that differ by at least "threshold". A "threshold" value of "0" means that no "threshold" is applied.

1510 **5.6.1.3 Property Definition: minnotifyperiod**

1511 Minimum time (in ms) that shall occur between notifications. If a value change condition is met
 1512 ("threshold" equalled or exceeded or any change in value if threshold is not present) before
 1513 expiration the notification shall not be sent till the period expires. If the Property is present and set
 1514 to "0" then no minimum notify period timer is run; if the Property is present and with a value greater
 1515 than "0" then a minimum notify period timer shall be run equal to the value. The Property value
 1516 itself is initially populated by the notifier. If the Property is not present the minimum notify period
 1517 is up to the notifier. The timer shall be reset each time a notification is sent.

1518 **5.6.1.4 Property Definition: maxnotifyperiod**

1519 Maximum time (in ms) that the notifier shall not exceed between notifications. When the timer
 1520 expires a notification shall be sent. If present and set to "0" then no maximum notify period timer
 1521 is run; if present and with a value greater than 0 then a maximum notify period timer shall be run
 1522 equal to the value. The Property value itself shall be initially populated by the notifier. When both
 1523 "minnotifyperiod" and "maxnotifyperiod" are present and both are non-zero the value of
 1524 "maxnotifyperiod" shall be larger than the "minnotifyperiod". If not present the value shall be set
 1525 by the notifier. The timer shall be reset each time a notification is sent.

1526 **5.6.1.5 Governing State Machine**

1527 The "minnotifyperiod" and "maxnotifyperiod" timers are restarted each time a notification is sent
 1528 (response to the Observe). A notification is sent when value change condition (threshold) and
 1529 "minnotifyperiod" are both met if both are present. If the observed Property value subsequently
 1530 drops beneath threshold before the expiration of "minnotifyperiod" the notifier may take no action
 1531 or a notification may be sent on expiration of "minnotifyperiod" containing the current observed
 1532 Property value (at the time of the notification). If there are no timer constraints; then notifications
 1533 are sent whenever the observed Property value has changed by an amount greater than or equal
 1534 to "threshold".

1535 Overall logic is defined in Figure 1: Overall conditional notification logic. Figure 2: Conditional
1536 Notification Example Flow provides an illustrative sequence.

If minnotifyperiod expired:
 If observed value changed:
 If change amount \geq threshold:
 Send notification with current value
 Reset minnotifyperiod , maxnotifyperiod
If maxnotifyperiod expired:
 Get current value
 Send notification with current value
 Reset minnotifyperiod , maxnotifyperiod

Figure 1: Overall conditional notification logic

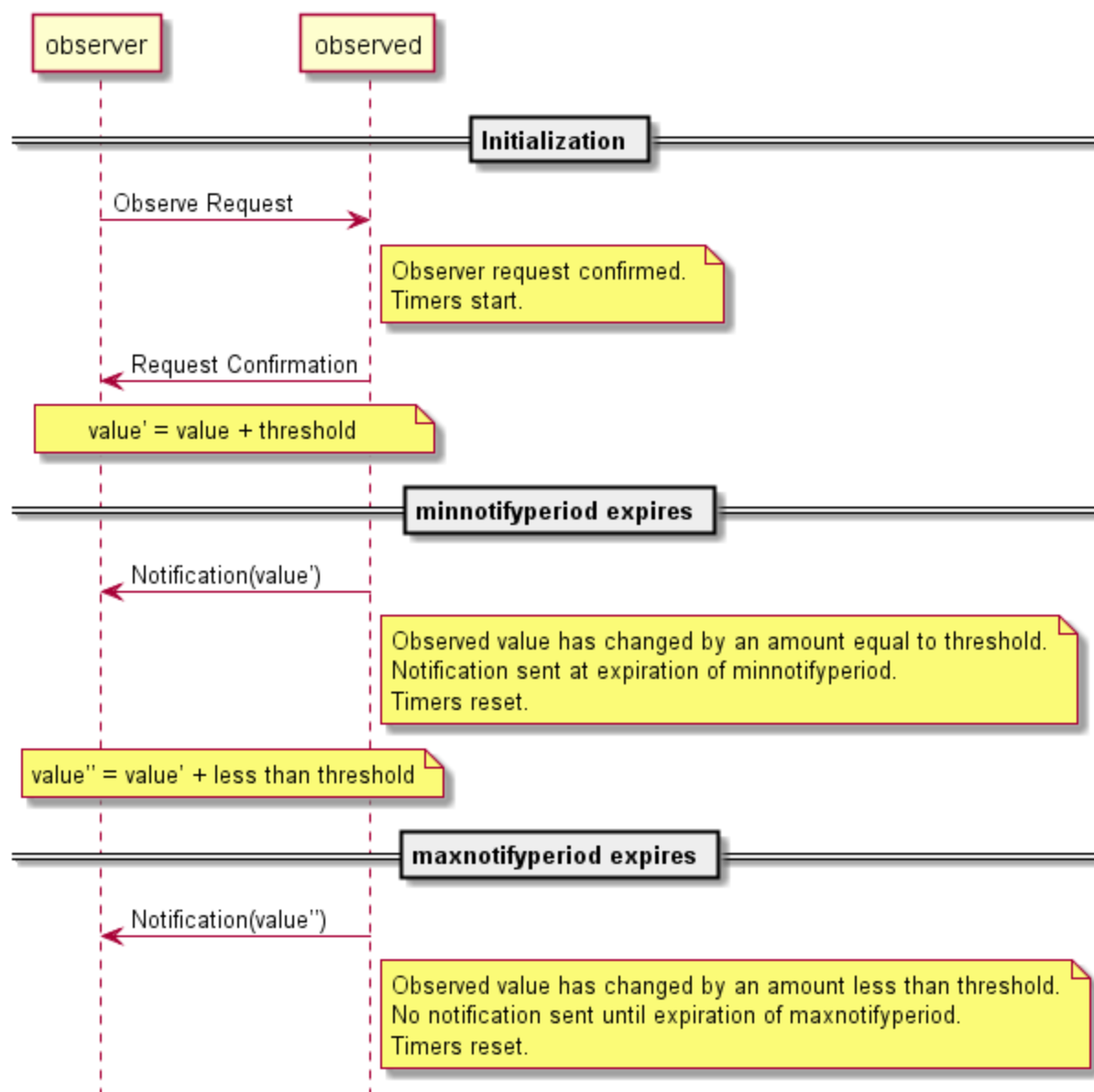


Figure 2: Conditional Notification Example Flow

5.7 Composite Resource Types

Composite Resource Types are Resources that comprises of one or more single or other composite Resource Types, an example of which is shown in Table 5-6 RAML example of Composite Resource Type. The Composite Resource Type can be viewed upon as a new single Resource Type. The Composite Resource Type mechanism is a powerful concept since it uses existing Resource Types in a new combination to express more contexts to a Resource without specifying new single unit Resource Types.

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

1552 The linking is done by using an array of Links; refer to the OCF Core Specification section 7.7.2
 1553 for more details. Note that the example listed below contains a partial schema of this definition as
 1554 it is for descriptive purpose only. The Property name of the array is “links”. The relationship type
 1555 shall be “contains”, denoting that the composite contains other Resource Types that make up the
 1556 Composite Resource Type.

1557 The access to the listed Resources can be achieved in a single operation by using the OCF Core
 1558 Specification defined oic.if.ll interface.

1559 **Table 5-6 RAML example of Composite Resource**

```

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

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

```

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

```

5.8 Specification Version

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

6 Resource Type definitions

This section contains definitions for all Resource Types; the complete set is listed in Table 6-1 Alphabetical list of Resource Types. Annex A.1 provides the basic underlying schema definition against which all other Resource Types are constructed. Annex A.1 also provides an example of the use of the “oic.if.baseline” interface that all Resource Types shall support. All other sections provide example representations of the Resource Type following the application of the default interface that is applied for that specific Resource Type.

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

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

Table 6-1 Alphabetical list of Resource Types

Friendly (informative)	Name	Resource Type (rt)	Section
Acceleration Sensor		oic.r.sensor.acceleration	6.55
Activity Count		oic.r.sensor.activity.count	6.23
Air Quality		oic.r.airquality	6.65
Air Quality Collection		oic.r.airqualitycollection	6.66
Altimeter		oic.r.altimeter	6.60

Atmospheric Pressure	oic.r.sensor.atmosphericpressure	6.24
Air Flow	oic.r.airflow	6.1
Air Flow Control	oic.r.airflowcontrol	6.2
Audio Controls	oic.r.audio	6.25
Auto Focus	oic.r.autofocus	6.26
Automatic Document Feeder	oic.r.automaticdocumentfeeder	6.27
Auto White Balance	oic.r.colour.autowhitebalance	6.31
Basic Resource Schema	Not Applicable	Annex A.1
Battery	oic.r.energy.battery	6.3
Battery Material	oic.r.batterymaterial	6.78
Binary switch	oic.r.switch.binary	6.4
Brewing	oic.r.brewing	6.79
Brightness	oic.r.light.brightness	6.5
Button Switch	oic.r.button	6.28
Carbon Dioxide Sensor	oic.r.sensor.carbondioxide	6.29
Carbon Monoxide Sensor	oic.r.sensor.carbonmonoxide	6.30
Clock	oic.r.clock	6.61
Colour Chroma	oic.r.colour.chroma	6.6
Colour Hue Saturation	oic.r.colour.hs	6.77
Colour RGB	oic.r.colour.rgb	6.7
Colour Saturation	oic.r.colour.saturation	6.32
Colour Space Coordinates	oic.r.colour.csc	6.75
Colour Temperature	oic.r.colour.temperature	6.76

Consumable	oic.r.consumable	6.67
Consumable Collection	oic.r.consumablecollection	6.68
Contact Sensor	oic.r.sensor.contact	6.33
Delay Defrost	oic.r.delaydefrost	6.69
Demand Response Load Control (DRLC)	oic.r.energy.drlc	6.34
Dimming	oic.r.light.dimming	6.8
Door	oic.r.door	6.9
Ecomode	oic.r.ecomode	6.70
Electric Vehicle Connector	oic.r.vehicle.connector	6.85
Electrical Energy	oic.r.energy.electrical	6.80
Energy Consumption	oic.r.energy.consumption	6.10
Energy Generation	oic.r.energy.generation	6.81
Energy Overload/Circuit Breaker	oic.r.energy.overload	6.35
Energy Usage	oic.r.energy.usage	6.11
Foaming	oic.r.foaming	6.82
Generic Sensor	oic.r.sensor	6.36
Geolocation Sensor	oic.r.sensor.geolocation	6.62
Glass Break Sensor	oic.r.sensor.glassbreak	6.37
Grinder	oic.r.grinder	6.83
Heart Rate Zone Sensor	oic.r.sensor.heart.zone	6.38
Heating Zone	oic.r.heatingzone	6.71
Heating Zone Collection	oic.r.heatingzonecollection	6.72
Height	oic.r.height	6.63

Humidity	oic.r.humidity	6.12
Icemaker	oic.r.ice maker	6.13
Illuminance Sensor	oic.r.sensor.illuminance	6.39
Liquid Level	oic.r.liquid.level	6.84
Lock	oic.r.lock.status	6.14
Lock Code	oic.r.lock.code	6.15
Magnetic Field Direction	oic.r.sensor.magneticfielddirection	6.40
Media	oic.r.media	6.41
Media Source	oic.r.mediasource	6.42
Media Source List	oic.r.mediasourcelist	6.43
Media Source Input	oic.r.media.input	6.44
Media Source Output	oic.r.media.output	6.45
Mode	oic.r.mode	6.16
Movement	oic.r.movement.linear	6.53
Motion Sensor	oic.r.sensor.motion	6.46
Night Mode	oic.r.nightmode	6.47
Open Level	oic.r.openlevel	6.17
Operational State	oic.r.operational.state	6.18
Pan Tilt Zoom Movement	oic.r.ptz	6.49
Presence Sensor	oic.r.sensor.presence	6.48
Ramp Time	oic.r.light.ramptime	6.19
Refrigeration	oic.r.refrigeration	6.20
Selectable Levels	oic.r.selectablelevels	6.73

Signal Strength	oic.r.signalstrength	6.50
Sleep Sensor	oic.r.sensor.sleep	6.57
Smoke Sensor	oic.r.sensor.smoke	6.58
Speech Synthesis	oic.r.speech.tts	6.51
Temperature	oic.r.temperature	6.21
Three Axis Sensor	oic.r.sensor.threeaxis	6.59
Time Period	oic.r.time.period	6.22
Touch Sensor	oic.r.sensor.touch	6.52
UV Radiation	oic.r.sensor.radiation.uv	6.53
Value Conditional	oic.r.value.conditional	6.74
Water Sensor	oic.r.sensor.water	6.54
Weight	oic.r.weight	6.64

1577

1578 6.1 Air Flow

1579 6.1.1 Introduction

1580 This resource describes the properties associated with air flow. The supporteddirections is the set
 1581 of valid values for the direction property for a particular instance of this resource type. The direction
 1582 is the directionality of the air flow if applicable, if supporteddirections is also present it must be a
 1583 value from that set. Direction values are dependent on the capabilities of the unit. The speed is an
 1584 integer representing the current speed level for the unit. The range (from oic.r.baseresource) is an
 1585 array of the min,max values for the speed level. If not present the range defaults to [0,100].
 1586 automode is the status of the automode feature; Off means automode is not enabled, On means
 1587 automode is active and the speed is automatically controlled by the device.

1588 6.1.2 Example URI

1589 /AirFlowResURI

1590 6.1.3 Resource Type

1591 The resource type (rt) is defined as: oic.r.airflow.

1592 6.1.4 RAML Definition

```

1593 #%RAML 0.8
1594 title: OICAirFlow
1595 version: v1.1.0-20160519
1596 traits:
1597   - interface :
1598     queryParameters:
1599       if:
1600         enum: ["oic.if.a", "oic.if.baseline"]

```

```

1601
1602 /AirFlowResURI:
1603     description: |
1604         This resource describes the properties associated with air flow.
1605         The supporteddirections is the set of valid values for the direction property for a particular
1606         instance of this resource type.
1607         The direction is the directionality of the air flow if applicable, if supporteddirections is
1608         also present it must be a value from that set.
1609         Direction values are dependent on the capabilities of the unit.
1610         The speed is an integer representing the current speed level for the unit.
1611         The range (from oic.r.baseresource) is an array of the min,max values for the speed level
1612         If not present the range defaults to [0,100].
1613         automode is the status of the automode feature; Off means automode is not enabled, On means
1614         automode is active and the speed is automatically controlled by the device.
1615
1616     is : ['interface']
1617     get:
1618         description: |
1619             Retrieves the current air flow values.
1620
1621     responses :
1622         200:
1623             body:
1624                 application/json:
1625                     schema: /
1626                         {
1627                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlow.json#",
1628                             "$schema": "http://json-schema.org/draft-04/schema#",
1629                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
1630 rights reserved.",
1631                             "title": "Air Flow",
1632                             "definitions": {
1633                                 "oic.r.airflow": {
1634                                     "type": "object",
1635                                     "properties": {
1636                                         "supporteddirections": {
1637                                             "type": "array",
1638                                             "description": "Array of possible direction settings for this instance of
1639 the Resource Type",
1640                                             "readOnly": true,
1641                                             "items": {
1642                                                 "type": "string",
1643                                                 "minItems": 1,
1644                                                 "uniqueItems": true
1645                                             }
1646                                         },
1647                                         "direction": {
1648                                             "type": "string",
1649                                             "description": "Directionality of the air flow"
1650                                         },
1651                                         "speed": {
1652                                             "type": "integer",
1653                                             "description": "Current speed level"
1654                                         },
1655                                         "automode": {
1656                                             "enum": ["On", "Off"],
1657                                             "description": "Status of the automode feature, if on speed is set by the
1658 device"
1659                                         }
1660                                     }
1661                                 },
1662                                 "type": "object",
1663                                 "allOf": [
1664                                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"}],

```

```

1666         {"$ref": "#/definitions/oic.r.airflow"}
1667     ],
1668     "required": ["speed"]
1669 }
1670
1671 example: /
1672 {
1673     "rt":          ["oic.r.airflow"],
1674     "id":          "unique_example_id",
1675     "supporteddirections": ["left", "right", "centre"],
1676     "direction":   "left",
1677     "speed":       5,
1678     "range":       [1,7],
1679     "automode":    "Off"
1680 }
1681
1682 post:
1683     description: |
1684         Sets the current air flow values.
1685         Only direction and speed may be set by an update operation.
1686
1687     body:
1688         application/json:
1689             schema: /
1690                 {
1691                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlow.json#",
1692                     "$schema": "http://json-schema.org/draft-04/schema#",
1693                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
1694 reserved.",
1695                     "title": "Air Flow",
1696                     "definitions": {
1697                         "oic.r.airflow": {
1698                             "type": "object",
1699                             "properties": {
1700                                 "supporteddirections": {
1701                                     "type": "array",
1702                                     "description": "Array of possible direction settings for this instance of the
1703 Resource Type",
1704                                     "readOnly": true,
1705                                     "items": {
1706                                         "type": "string",
1707                                         "minItems": 1,
1708                                         "uniqueItems": true
1709                                     }
1710                                 },
1711                                 "direction": {
1712                                     "type": "string",
1713                                     "description": "Directionality of the air flow"
1714                                 },
1715                                 "speed": {
1716                                     "type": "integer",
1717                                     "description": "Current speed level"
1718                                 },
1719                                 "automode": {
1720                                     "enum": ["On", "Off"],
1721                                     "description": "Status of the automode feature, if on speed is set by the
1722 device"
1723                                 }
1724                             }
1725                         }
1726                     },
1727                     "type": "object",
1728                     "allOf": [
1729                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1730                         {"$ref": "#/definitions/oic.r.airflow"}
1731                     ],
1732                     "required": ["speed"]

```

```

1733     }
1734
1735     example: /
1736     {
1737         "id": "unique_example_id",
1738         "direction": "right",
1739         "speed": 3
1740     }
1741
1742     responses :
1743     200:
1744         body:
1745             application/json:
1746                 schema: /
1747                 {
1748                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlow.json#",
1749                     "$schema": "http://json-schema.org/draft-04/schema#",
1750                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
1751 rights reserved.",
1752                     "title": "Air Flow",
1753                     "definitions": {
1754                         "oic.r.airflow": {
1755                             "type": "object",
1756                             "properties": {
1757                                 "supporteddirections": {
1758                                     "type": "array",
1759                                     "description": "Array of possible direction settings for this instance of
1760 the Resource Type",
1761                                     "readOnly": true,
1762                                     "items": {
1763                                         "type": "string",
1764                                         "minItems": 1,
1765                                         "uniqueItems": true
1766                                     }
1767                                 },
1768                                 "direction": {
1769                                     "type": "string",
1770                                     "description": "Directionality of the air flow"
1771                                 },
1772                                 "speed": {
1773                                     "type": "integer",
1774                                     "description": "Current speed level"
1775                                 },
1776                                 "automode": {
1777                                     "enum": ["On", "Off"],
1778                                     "description": "Status of the automode feature, if on speed is set by the
1779 device"
1780                                 }
1781                             }
1782                         }
1783                     },
1784                     "type": "object",
1785                     "allof": [
1786                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1787                         {"$ref": "#/definitions/oic.r.airflow"}
1788                     ],
1789                     "required": ["speed"]
1790                 }
1791
1792     example: /
1793     {
1794         "id": "unique_example_id",
1795         "direction": "right",
1796         "speed": 3
1797     }
1798

```

```

1799 403:
1800 description: |
1801     This response is generated by the OCF Server when the client sends:
1802     An update with an invalid property value for direction.
1803     An update with an out of range property value for speed.
1804     The server may respond with the current resource representation.
1805
1806 body:
1807     application/json:
1808         schema: /
1809             {
1810                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlow.json#",
1811                 "$schema": "http://json-schema.org/draft-04/schema#",
1812                 "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
1813 rights reserved.",
1814                 "title": "Air Flow",
1815                 "definitions": {
1816                     "oic.r.airflow": {
1817                         "type": "object",
1818                         "properties": {
1819                             "supporteddirections": {
1820                                 "type": "array",
1821                                 "description": "Array of possible direction settings for this instance of
1822 the Resource Type",
1823                                 "readOnly": true,
1824                                 "items": {
1825                                     "type": "string",
1826                                     "minItems": 1,
1827                                     "uniqueItems": true
1828                                 }
1829                             },
1830                             "direction": {
1831                                 "type": "string",
1832                                 "description": "Directionality of the air flow"
1833                             },
1834                             "speed": {
1835                                 "type": "integer",
1836                                 "description": "Current speed level"
1837                             },
1838                             "automode": {
1839                                 "enum": ["On", "Off"],
1840                                 "description": "Status of the automode feature, if on speed is set by the
1841 device"
1842                             }
1843                         }
1844                     },
1845                 },
1846                 "type": "object",
1847                 "allOf": [
1848                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1849                     {"$ref": "#/definitions/oic.r.airflow"}
1850                 ],
1851                 "required": ["speed"]
1852             }
1853
1854         example: /
1855             {
1856                 "id": "unique_example_id",
1857                 "supporteddirections": ["left", "right", "centre"],
1858                 "direction": "right",
1859                 "speed": 3
1860             }
1861

```

1862 6.1.5 Property Definition

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

automode	multiple types: see schema			Status of the automode feature, if on speed is set by the device
direction	string			Directionality of the air flow
supporteddirections	array: see schema		Read Only	Array of possible direction settings for this instance of the Resource Type
speed	integer	yes		Current speed level

6.1.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/AirFlowResURI		get	post		

6.2 Air Flow Control

6.2.1 Introduction

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

6.2.2 Example URI

/AirFlowControlResURI

6.2.3 Resource Type

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

6.2.4 RAML Definition

```

#%RAML 0.8

title: OICAirFlowControl
version: v1.1.0-20160519

traits:
- interface-b :
  queryParameters:
    if:
      enum: ["oic.if.b"]
- interface-all :
  queryParameters:
    if:
      enum: ["oic.if.ll", "oic.if.b", "oic.if.baseline"]

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

  get:
    description: |

```

```

1897         Retrieves the current air flow control values.
1898
1899     is : ['interface-all']
1900     responses :
1901         200:
1902             body:
1903                 application/json:
1904                     schema: /
1905                         {
1906                             "id":
1907 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlowControl.json#",
1908                             "$schema": "http://json-schema.org/draft-04/schema#",
1909                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
1910 rights reserved.",
1911                             "title": "Air Flow Control",
1912                             "definitions": {
1913                                 "oic.r.airflowcontrol": {
1914                                     "type": "object",
1915                                     "properties": {
1916                                         "airFlowControl": {
1917                                             "type": "array",
1918                                             "minItems": 2,
1919                                             "maxItems": 2,
1920                                             "items": {
1921                                                 "$ref": "oic.oic-link-schema.json#/definitions/oic.oic-link"
1922                                             }
1923                                         }
1924                                     }
1925                                 },
1926                                 "type": "object",
1927                                 "allOf": [
1928                                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
1929                                     { "$ref": "#/definitions/oic.r.airflowcontrol" }
1930                                 ],
1931                                 "required": ["airFlowControl"]
1932                             }
1933
1934     example: /
1935         {
1936             "rt": ["oic.r.airflowcontrol"],
1937             "id": "unique_example_id",
1938             "airFlowControl": [
1939                 {
1940                     "href": "/BinarySwitchResURI",
1941                     "rel": "contains",
1942                     "rt": ["oic.r.switch.binary"],
1943                     "if": ["oic.if.a"],
1944                     "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
1945                 },
1946                 {
1947                     "href": "/AirFlowResURI",
1948                     "rel": "contains",
1949                     "rt": ["oic.r.airflow"],
1950                     "if": ["oic.if.a"],
1951                     "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
1952                 }
1953             ]
1954         }
1955
1956
1957     post:
1958         description: |
1959             Sets the current air flow control values using the batch interface
1960
1961     is : ['interface-b']

```

```

1962     body:
1963     application/json:
1964         schema: /
1965             {
1966                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlowControl-
1967 Batch.json#",
1968                 "$schema": "http://json-schema.org/draft-04/schema#",
1969                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
1970 reserved.",
1971                 "title": "Air Flow Control",
1972                 "definitions": {
1973                     "oic.r.airflowcontrol": {
1974                         "type": "object",
1975                         "properties": {
1976                             "airFlowControl": {
1977                                 "type": "array",
1978                                 "items": {
1979                                     "anyOf": [
1980                                         {"$ref": "oic.r.switch.binary.json#/definitions/oic.r.switch.binary"},
1981                                         {"$ref": "oic.r.airFlow.json#/definitions/oic.r.airflow"}
1982                                     ]
1983                                 }
1984                             }
1985                         }
1986                     },
1987                     "type": "object",
1988                     "allOf": [
1989                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1990                         {"$ref": "#/definitions/oic.r.airflowcontrol"}
1991                     ],
1992                     "required": ["airFlowControl"]
1993                 }
1994             }
1995
1996     example: /
1997         {
1998             "id": "unique_example_id",
1999             "airFlowControl": [
2000                 {
2001                     "id": "unique_example_id",
2002                     "value": true
2003                 },
2004                 {
2005                     "id": "unique_example_id",
2006                     "direction": "right",
2007                     "speed": 3
2008                 }
2009             ]
2010         }
2011
2012     responses :
2013     200:
2014         body:
2015         application/json:
2016             schema: /
2017                 {
2018                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlowControl-
2019 Batch.json#",
2020                     "$schema": "http://json-schema.org/draft-04/schema#",
2021                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2022 rights reserved.",
2023                     "title": "Air Flow Control",
2024                     "definitions": {
2025                         "oic.r.airflowcontrol": {
2026                             "type": "object",
2027                             "properties": {

```



```

2028         "airFlowControl": {
2029             "type": "array",
2030             "items": {
2031                 "anyOf": [
2032                     {"$ref": "oic.r.switch.binary.json#/definitions/oic.r.switch.binary"},
2033                     {"$ref": "oic.r.airFlow.json#/definitions/oic.r.airflow"}
2034                 ]
2035             }
2036         }
2037     }
2038 },
2039 },
2040 "type": "object",
2041 "allOf": [
2042     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2043     {"$ref": "#/definitions/oic.r.airflowcontrol"}
2044 ],
2045 "required": ["airFlowControl"]
2046 }
2047

```

```

2048 example: /
2049 {
2050     "id": "unique_example_id",
2051     "airFlowControl": [
2052         {
2053             "id": "unique_example_id",
2054             "value": true
2055         },
2056         {
2057             "id": "unique_example_id",
2058             "direction": "right",
2059             "speed": 3
2060         }
2061     ]
2062 }
2063

```

2064 403:

```

2065 description: |
2066     This response is generated by the OIC Server when the client sends:
2067     An update with an invalid property value for direction.
2068     An update with an out of range property value for speed.
2069     The server responds with the current resource representation.
2070

```

2071 body:

2072 application/json:

```

2073     schema: /
2074     {
2075         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlowControl-
2076 Batch.json#",
2077         "$schema": "http://json-schema.org/draft-04/schema#",
2078         "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2079 rights reserved.",
2080         "title": "Air Flow Control",
2081         "definitions": {
2082             "oic.r.airflowcontrol": {
2083                 "type": "object",
2084                 "properties": {
2085                     "airFlowControl": {
2086                         "type": "array",
2087                         "items": {
2088                             "anyOf": [
2089                                 {"$ref": "oic.r.switch.binary.json#/definitions/oic.r.switch.binary"},
2090                                 {"$ref": "oic.r.airFlow.json#/definitions/oic.r.airflow"}
2091                             ]
2092                         }
2093                     }
2094                 }
2095             }
2096         }
2097     }
2098

```

```

2095     }
2096   },
2097   "type": "object",
2098   "allOf": [
2099     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
2100     { "$ref": "#/definitions/oic.r.airflowcontrol" }
2101   ],
2102   "required": ["airFlowControl"]
2103 }
2104
2105 example: /
2106 {
2107   "id": "unique_example_id",
2108   "airFlowControl": [
2109     {
2110       "id": "unique_example_id",
2111       "value": true
2112     },
2113     {
2114       "id": "unique_example_id",
2115       "direction": "right",
2116       "speed": 3
2117     }
2118   ]
2119 }
2120

```

6.2.5 Property Definition

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

6.2.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/AirFlowControlResURI		get	post		

6.3 Battery

6.3.1 Introduction

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

6.3.2 Example URI

/BatteryResURI

6.3.3 Resource Type

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

6.3.4 RAML Definition

```

2137 #%RAML 0.8
2138 title: Battery
2139 version: v1.2.0-20170814
2140 traits:
2141   - interface :
2142     queryParameters:
2143       if:
2144         enum: ["oic.if.rw", "oic.if.baseline"]

```

```

2145
2146 /BatteryResURI:
2147     description: |
2148         This resource describes the attributes associated with a battery
2149         The charge is an integer showing the current battery charge level as a percentage in the range
2150 0 (fully discharged) to 100 (fully charged)
2151         The capacity represents the total capacity of battery in Amp Hours (Ah)
2152         The charging status and discharging status are represented by boolean values set to "True"
2153 indicating enabled and "False" indicating disabled
2154         Low battery status is represented by a boolean value set to "True" indicating low charge level
2155 and "False" indicating otherwise, based upon the battery threshold represented as a percentage.
2156
2157     is : ['interface']
2158     get:
2159         description: |
2160             Retrieves the state of the battery.
2161
2162     responses :
2163         200:
2164             body:
2165                 application/json:
2166                     schema: /
2167                         {
2168                             "id":
2169 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.battery.json#",
2170                             "$schema": "http://json-schema.org/draft-04/schema#",
2171                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2172 rights reserved.",
2173                             "title": "Battery",
2174                             "definitions": {
2175                                 "oic.r.energy.battery": {
2176                                     "type": "object",
2177                                     "properties": {
2178                                         "charge" : {
2179                                             "type": "integer",
2180                                             "description": "The current charge percentage.",
2181                                             "readOnly": true,
2182                                             "minimum": 0,
2183                                             "maximum": 100
2184                                         },
2185                                         "capacity" : {
2186                                             "type": "number",
2187                                             "description": "The total capacity in Amp-hours (Ah).",
2188                                             "readOnly": true
2189                                         },
2190                                         "charging" : {
2191                                             "type": "boolean",
2192                                             "description": "The status of charging.",
2193                                             "readOnly": true
2194                                         },
2195                                         "discharging" : {
2196                                             "type": "boolean",
2197                                             "description": "The status of discharging.",
2198                                             "readOnly": true
2199                                         },
2200                                         "lowbattery" : {
2201                                             "type": "boolean",
2202                                             "description": "The status of the low battery warning based upon the
2203 defined threshold.",
2204                                             "readOnly": true
2205                                         },
2206                                         "batterythreshold" : {
2207                                             "type": "integer",
2208                                             "description": "The threshold percentage for the low battery warning.",
2209                                             "minimum": 0,

```

```

2210         "maximum": 100
2211     }
2212 }
2213 }
2214 },
2215 "type": "object",
2216 "allOf": [
2217     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2218     {"$ref": "#/definitions/oic.r.energy.battery"}
2219 ],
2220 "required": [ "charge" ]
2221 }
2222
2223 example: /
2224 {
2225     "rt":      ["oic.r.energy.battery"],
2226     "id":      "unique_example_id",
2227     "charge": 50,
2228     "capacity": 3000,
2229     "charging": true,
2230     "discharging": false,
2231     "lowbattery": false,
2232     "batterythreshold": 20
2233 }
2234
2235 post:
2236     description: |
2237         Sets current battery values
2238
2239     body:
2240         application/json:
2241             schema: /
2242                 {
2243                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.battery-
2244 Update.json#",
2245                     "$schema": "http://json-schema.org/draft-04/schema#",
2246                     "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
2247 reserved.",
2248                     "title": "Battery",
2249                     "definitions": {
2250                         "oic.r.energy.battery": {
2251                             "type": "object",
2252                             "properties": {
2253                                 "batterythreshold" : {
2254                                     "type": "integer",
2255                                     "description": "The threshold percentage for the low battery warning.",
2256                                     "minimum": 0,
2257                                     "maximum": 100
2258                                 }
2259                             }
2260                         }
2261                     },
2262                     "type": "object",
2263                     "allOf": [
2264                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2265                         {"$ref": "#/definitions/oic.r.energy.battery"}
2266                     ],
2267                     "required": [ "batterythreshold" ]
2268                 }
2269
2270             example: /
2271                 {
2272                     "id":      "unique_example_id",
2273                     "batterythreshold": 20
2274                 }
2275

```

```

2276     responses :
2277     200:
2278         body:
2279             application/json:
2280                 schema: /
2281                     {
2282                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.battery-
2283 Update.json#",
2284                         "$schema": "http://json-schema.org/draft-04/schema#",
2285                         "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
2286 reserved.",
2287                         "title": "Battery",
2288                         "definitions": {
2289                             "oic.r.energy.battery": {
2290                                 "type": "object",
2291                                 "properties": {
2292                                     "batterythreshold" : {
2293                                         "type": "integer",
2294                                         "description": "The threshold percentage for the low battery warning.",
2295                                         "minimum": 0,
2296                                         "maximum": 100
2297                                     }
2298                                 }
2299                             }
2300                         },
2301                         "type": "object",
2302                         "allOf": [
2303                             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
2304                             { "$ref": "#/definitions/oic.r.energy.battery" }
2305                         ],
2306                         "required": [ "batterythreshold" ]
2307                     }
2308
2309                 example: /
2310                     {
2311                         "id": "unique_example_id",
2312                         "batterythreshold": 20
2313                     }
2314

```

2315 6.3.5 Property Definition

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

6.3.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/BatteryResURI		get	post		

6.4 Binary Switch

6.4.1 Introduction

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

6.4.2 Example URI

/BinarySwitchResURI

6.4.3 Resource Type

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

6.4.4 RAML Definition

```
##RAML 0.8
title: OICBinarySwitch
version: v1.1.0-20160519

traits:
- interface :
    queryParameters:
        if:
            enum: ["oic.if.a", "oic.if.baseline"]

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

    is : ['interface']

    get:
        responses :
            200:
                body:
                    application/json:
                        schema: /
                            {
                                "id":
"http://openinterconnect.org/iotdatamodels/schemas/oic.r.switch.binary.json#",
                                "$schema": "http://json-schema.org/draft-04/schema#",
                                "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
                                "title": "Binary Switch",
                                "definitions": {
                                    "oic.r.switch.binary": {
                                        "type": "object",
                                        "properties": {
                                            "value": {
                                                "type": "boolean",
                                                "description": "Status of the switch"
                                            }
                                        }
                                    }
                                }
                            },
                        "type": "object",
                        "allOf": [
```

```

2369         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2370         {"$ref": "#/definitions/oic.r.switch.binary"}
2371     ],
2372     "required": [ "value" ]
2373 }
2374
2375     example: /
2376     {
2377         "rt":      ["oic.r.switch.binary"],
2378         "id":      "unique_example_id",
2379         "value":   false
2380     }
2381
2382     post:
2383     body:
2384     application/json:
2385     schema: /
2386     {
2387         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.switch.binary.json#",
2388         "$schema": "http://json-schema.org/draft-04/schema#",
2389         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
2390 reserved.",
2391         "title": "Binary Switch",
2392         "definitions": {
2393             "oic.r.switch.binary": {
2394                 "type": "object",
2395                 "properties": {
2396                     "value": {
2397                         "type": "boolean",
2398                         "description": "Status of the switch"
2399                     }
2400                 }
2401             },
2402             "type": "object",
2403             "allOf": [
2404                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2405                 {"$ref": "#/definitions/oic.r.switch.binary"}
2406             ],
2407             "required": [ "value" ]
2408         }
2409     }
2410
2411     example: /
2412     {
2413         "id":      "unique_example_id",
2414         "value":   true
2415     }
2416
2417     responses :
2418     200:
2419     body:
2420     application/json:
2421     schema: /
2422     {
2423         "id":
2424 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.switch.binary.json#",
2425         "$schema": "http://json-schema.org/draft-04/schema#",
2426         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2427 rights reserved.",
2428         "title": "Binary Switch",
2429         "definitions": {
2430             "oic.r.switch.binary": {
2431                 "type": "object",
2432                 "properties": {

```

```

2433         "value": {
2434             "type": "boolean",
2435             "description": "Status of the switch"
2436         }
2437     }
2438 },
2439 "type": "object",
2440 "allOf": [
2441     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2442     {"$ref": "#/definitions/oic.r.switch.binary"}
2443 ],
2444 "required": [ "value" ]
2445 }
2446
2447
2448 example: /
2449 {
2450     "id": "unique_example_id",
2451     "value": true
2452 }
2453

```

6.4.5 Property Definition

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

6.4.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/BinarySwitchResURI		get	post		

6.5 Brightness

6.5.1 Introduction

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

6.5.2 Example URI

/BrightnessResURI

6.5.3 Resource Type

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

6.5.4 RAML Definition

```

2466 #%RAML 0.8
2467 title: OICBrightness
2468 version: v1.1.0-20160519
2469 traits:
2470   - interface :
2471       queryParameters:
2472           if:
2473               enum: ["oic.if.a", "oic.if.baseline"]
2474
2475 /BrightnessResURI:
2476     description: |
2477         This resource describes the brightness of a light or lamp.
2478         brightness is an integer showing the current brightness level as a quantized representation in
2479         the range 0-100.
2480         A brightness of 0 is the minimum for the resource.

```



```

2481     A brightness of 100 is the maximum for the resource.
2482
2483     is : ['interface']
2484
2485     get:
2486         description: |
2487             Retrieves the current brightness level.
2488
2489     responses :
2490         200:
2491             body:
2492                 application/json:
2493                     schema: /
2494                         {
2495                             "id":
2496                             "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.brightness.json#",
2497                             "$schema": "http://json-schema.org/draft-04/schema#",
2498                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2499                             rights reserved.",
2500                             "title": "Brightness",
2501                             "definitions": {
2502                                 "oic.r.light.brightness": {
2503                                     "type": "object",
2504                                     "properties": {
2505                                         "brightness": {
2506                                             "type": "integer",
2507                                             "description": "Quantized representation in the range 0-100 of the current
2508                                             sensed or set value for Brightness",
2509                                             "minimum": 0,
2510                                             "maximum": 100
2511                                         }
2512                                     }
2513                                 },
2514                                 "type": "object",
2515                                 "allOf": [
2516                                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
2517                                     { "$ref": "#/definitions/oic.r.light.brightness" }
2518                                 ],
2519                                 "required": [ "brightness" ]
2520                             }
2521
2522                     example: /
2523                         {
2524                             "rt":          ["oic.r.light.brightness"],
2525                             "id":          "unique_example_id",
2526                             "brightness": 50
2527                         }
2528
2529     post:
2530         description: |
2531             Sets the desired brightness level.
2532
2533         body:
2534             application/json:
2535                 schema: /
2536                     {
2537                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.brightness.json#",
2538                         "$schema": "http://json-schema.org/draft-04/schema#",
2539                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
2540                         reserved.",
2541                         "title": "Brightness",
2542                         "definitions": {
2543                             "oic.r.light.brightness": {

```

```

2544         "type": "object",
2545         "properties": {
2546             "brightness": {
2547                 "type": "integer",
2548                 "description": "Quantized representation in the range 0-100 of the current
2549 sensed or set value for Brightness",
2550                 "minimum": 0,
2551                 "maximum": 100
2552             }
2553         }
2554     },
2555     "type": "object",
2556     "allOf": [
2557         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2558         {"$ref": "#/definitions/oic.r.light.brightness"}
2559     ],
2560     "required": [ "brightness" ]
2561 }
2562
2563
2564 example: /
2565 {
2566     "id":          "unique_example_id",
2567     "brightness": 10
2568 }
2569
2570 responses :
2571 200:
2572     description: |
2573         Indicates that the brightness was changed.
2574         The new brightness level is provided in the response.
2575
2576     body:
2577         application/json:
2578             schema: /
2579                 {
2580                     "id":
2581 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.brightness.json#",
2582                     "$schema": "http://json-schema.org/draft-04/schema#",
2583                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2584 rights reserved.",
2585                     "title": "Brightness",
2586                     "definitions": {
2587                         "oic.r.light.brightness": {
2588                             "type": "object",
2589                             "properties": {
2590                                 "brightness": {
2591                                     "type": "integer",
2592                                     "description": "Quantized representation in the range 0-100 of the current
2593 sensed or set value for Brightness",
2594                                     "minimum": 0,
2595                                     "maximum": 100
2596                                 }
2597                             }
2598                         },
2599                     },
2600                     "type": "object",
2601                     "allOf": [
2602                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2603                         {"$ref": "#/definitions/oic.r.light.brightness"}
2604                     ],
2605                     "required": [ "brightness" ]
2606                 }
2607
2608 example: /

```

```

2609     {
2610         "id": "unique_example_id",
2611         "brightness": 10
2612     }
2613 
```

2614 6.5.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
brightness	integer	yes		Quantized representation in the range 0-100 of the current sensed or set value for Brightness

2615 6.5.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/BrightnessResURI		get	post		

2616 6.6 ColourChromaResURI

2617 6.6.1 Introduction

2618 6.6.2 Example URI

2619 6.6.3 Resource Type

2620 6.6.4 RAML Definition

```

2621 #%RAML 0.8
2622 title: OICColourChroma
2623 version: v1.1.0-20160519
2624 traits:
2625   - interface :
2626     queryParameters:
2627       if:
2628         enum: ["oic.if.a", "oic.if.baseline"]

```

2629

2630 6.6.5 Property Definition

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

2631 6.6.6 CRUDN behaviour

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

2632 6.7 Colour RGB

2633 6.7.1 Introduction

2634 This resource specifies the actual colour in the RGB space represented as an array of integers.
 2635 Each colour value is described with a Red, Green, Blue component. These colour values are
 2636 encoded as an array of integer values ([R,G,B]). The minimum and maximum colour value per
 2637 component may be described by range (from oic.r.baseresource). When range (from
 2638 oic.r.baseresource) is omitted, then the range is [0,255].

2639 6.7.2 Example URI

2640 /ColourRGBResURI

2641 6.7.3 Resource Type

2642 The resource type (rt) is defined as: oic.r.colour.rgb.

```

2643 6.7.4 RAML Definition
2644 #%RAML 0.8
2645 title: OIIColourRGB
2646 version: v1.1.0-20160519
2647 traits:
2648   - interface :
2649     queryParameters:
2650       if:
2651         enum: ["oic.if.a", "oic.if.baseline"]
2652
2653 /ColourRGBResURI:
2654   description: |
2655     This resource specifies the actual colour in the RGB space represented as an array of integers.
2656     Each colour value is described with a Red, Green, Blue component.
2657     These colour values are encoded as an array of integer values ([R,G,B]).
2658     The minimum and maximum colour value per component may be described by range (from
2659     oic.r.baseresource).
2660     When range (from oic.r.baseresource) is omitted, then the range is [0,255].
2661
2662   is : ['interface']
2663   get:
2664     description: |
2665       Retrieves the current colour in RGB.
2666       Value is an array of integer values in the order R,G,B.
2667
2668   responses :
2669     200:
2670       body:
2671         application/json:
2672           schema: /
2673             {
2674               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.rgb.json#",
2675               "$schema": "http://json-schema.org/draft-04/schema#",
2676               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2677 rights reserved.",
2678               "title": "Colour RGB",
2679               "definitions": {
2680                 "oic.r.colour.rgb": {
2681                   "type": "object",
2682                   "properties": {
2683                     "rgbValue": {
2684                       "type": "array",
2685                       "description": "RGB value; the first item is the R, second the G, third the
2686 B.",
2687                       "minItems": 3,
2688                       "maxItems": 3,
2689                       "items": {
2690                         "type": "integer"
2691                       }
2692                     }
2693                   }
2694                 },
2695               "type": "object",
2696               "allOf": [
2697                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
2698                 { "$ref": "#/definitions/oic.r.colour.rgb" }
2699               ],
2700               "required": ["rgbValue"]
2701             }
2702           }
2703
2704   example: /

```

```

2705         {
2706             "rt":          ["oic.r.colour.rgb"],
2707             "id":          "unique_example_id",
2708             "rgbValue":    [255,255,255],
2709             "range":       [0,255]
2710         }
2711
2712     post:
2713         description: |
2714             Sets the current colourRGB value
2715
2716     body:
2717         application/json:
2718             schema: /
2719                 {
2720                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.rgb.json#",
2721                     "$schema": "http://json-schema.org/draft-04/schema#",
2722                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
2723 reserved.",
2724                     "title": "Colour RGB",
2725                     "definitions": {
2726                         "oic.r.colour.rgb": {
2727                             "type": "object",
2728                             "properties": {
2729                                 "rgbValue": {
2730                                     "type": "array",
2731                                     "description": "RGB value; the first item is the R, second the G, third the
2732 B.",
2733                                     "minItems": 3,
2734                                     "maxItems": 3,
2735                                     "items": {
2736                                         "type": "integer"
2737                                     }
2738                                 }
2739                             }
2740                         }
2741                     },
2742                     "type": "object",
2743                     "allOf": [
2744                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
2745                         { "$ref": "#/definitions/oic.r.colour.rgb" }
2746                     ],
2747                     "required": ["rgbValue"]
2748                 }
2749
2750     example: /
2751         {
2752             "id":          "unique_example_id",
2753             "rgbValue":    [255,0,0]
2754         }
2755
2756     responses :
2757         200:
2758             body:
2759                 application/json:
2760                     schema: /
2761                         {
2762                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.rgb.json#",
2763                             "$schema": "http://json-schema.org/draft-04/schema#",
2764                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2765 rights reserved.",
2766                             "title": "Colour RGB",
2767                             "definitions": {
2768                                 "oic.r.colour.rgb": {

```

```

2769         "type": "object",
2770         "properties": {
2771             "rgbValue": {
2772                 "type": "array",
2773                 "description": "RGB value; the first item is the R, second the G, third the
2774 B.",
2775                 "minItems": 3,
2776                 "maxItems": 3,
2777                 "items": {
2778                     "type": "integer"
2779                 }
2780             }
2781         },
2782     },
2783     "type": "object",
2784     "allOf": [
2785         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2786         {"$ref": "#/definitions/oic.r.colour.rgb"}
2787     ],
2788     "required": ["rgbValue"]
2789 }
2790
2791
2792 example: /
2793 {
2794     "id": "unique_example_id",
2795     "rgbValue": [255,0,0]
2796 }
2797

```

2798 6.7.5 Property Definition

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

2799 6.7.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/ColourRGBResURI		get	post		

2800 6.8 Dimming

2801 6.8.1 Introduction

2802 This resource describes a dimming function. The value is an integer showing the current dimming
2803 level. If step (from oic.r.baseresource) is present then it represents the increment between dimmer
2804 values. When range (from oic.r.baseresource) is omitted, then the range is [0,100]. A value of 0
2805 means total dimming; a value of 100 means no dimming.

2806 6.8.2 Example URI

2807 /DimmingResURI

2808 6.8.3 Resource Type

2809 The resource type (rt) is defined as: oic.r.light.dimming.

2810 6.8.4 RAML Definition

```

2811 #%RAML 0.8
2812 title: OICDimming
2813 version: v1.1.0-20160519
2814 traits:
2815   - interface :
2816       queryParameters:

```

```

2817         if:
2818             enum: ["oic.if.a", "oic.if.baseline"]
2819
2820 /DimmingResURI:
2821     description: |
2822         This resource describes a dimming function.
2823         The value is an integer showing the current dimming level.
2824         If step (from oic.r.baseresource) is present then it represents the increment between dimmer
2825         values.
2826         When range (from oic.r.baseresource) is omitted, then the range is [0,100].
2827         A value of 0 means total dimming; a value of 100 means no dimming.
2828
2829     is : ['interface']
2830
2831     get:
2832         description: |
2833             Retrieves the current dimming level.
2834
2835     responses :
2836         200:
2837             body:
2838                 application/json:
2839                     schema: /
2840                         {
2841                             "id":
2842                             "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.dimming.json#",
2843                             "$schema": "http://json-schema.org/draft-04/schema#",
2844                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2845                             rights reserved.",
2846                             "title": "Dimming",
2847                             "definitions": {
2848                                 "oic.r.light.dimming": {
2849                                     "type": "object",
2850                                     "properties": {
2851                                         "dimmingSetting": {
2852                                             "type": "integer",
2853                                             "description": "Current dimming value"
2854                                         }
2855                                     }
2856                                 }
2857                             },
2858                             "type": "object",
2859                             "allOf": [
2860                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
2861                                 { "$ref": "#/definitions/oic.r.light.dimming" }
2862                             ],
2863                             "required": ["dimmingSetting"]
2864                         }
2865
2866         example: /
2867             {
2868                 "rt": ["oic.r.light.dimming"],
2869                 "id": "unique_example_id",
2870                 "dimmingSetting": 30,
2871                 "step": 5,
2872                 "range": [0,100]
2873             }
2874
2875     post:
2876         description: |
2877             Sets the desired dimming level.
2878
2879         body:

```

```

2879     application/json:
2880         schema: /
2881             {
2882                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.dimming.json#",
2883                 "$schema": "http://json-schema.org/draft-04/schema#",
2884                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
2885 reserved.",
2886                 "title": "Dimming",
2887                 "definitions": {
2888                     "oic.r.light.dimming": {
2889                         "type": "object",
2890                         "properties": {
2891                             "dimmingSetting": {
2892                                 "type": "integer",
2893                                 "description": "Current dimming value"
2894                             }
2895                         }
2896                     }
2897                 },
2898                 "type": "object",
2899                 "allOf": [
2900                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2901                     {"$ref": "#/definitions/oic.r.light.dimming"}
2902                 ],
2903                 "required": ["dimmingSetting"]
2904             }
2905
2906         example: /
2907             {
2908                 "id": "unique_example_id",
2909                 "dimmingSetting": 40
2910             }
2911
2912     responses :
2913         200:
2914             description: |
2915                 Indicates that the dimming was changed.
2916                 The new dimming level is provided in the response.
2917
2918             body:
2919                 application/json:
2920                     schema: /
2921                         {
2922                             "id":
2923 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.dimming.json#",
2924                             "$schema": "http://json-schema.org/draft-04/schema#",
2925                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2926 rights reserved.",
2927                             "title": "Dimming",
2928                             "definitions": {
2929                                 "oic.r.light.dimming": {
2930                                     "type": "object",
2931                                     "properties": {
2932                                         "dimmingSetting": {
2933                                             "type": "integer",
2934                                             "description": "Current dimming value"
2935                                         }
2936                                     }
2937                                 }
2938                             },
2939                             "type": "object",
2940                             "allOf": [
2941                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2942                                 {"$ref": "#/definitions/oic.r.light.dimming"}
2943                             ],

```



```

2944         "required": ["dimmingSetting"]
2945     }
2946
2947     example: /
2948     {
2949         "id": "unique_example_id",
2950         "dimmingSetting": 40
2951     }
2952
2953     403:
2954     description: |
2955         This response is generated by the OIC Server when the client sends:
2956         An update with an out of range property value for dimmingSetting.
2957         The server responds with the current resource representation.
2958
2959     body:
2960         application/json:
2961         schema: /
2962         {
2963             "id":
2964             "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.dimming.json#",
2965             "$schema": "http://json-schema.org/draft-04/schema#",
2966             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2967 rights reserved.",
2968             "title": "Dimming",
2969             "definitions": {
2970                 "oic.r.light.dimming": {
2971                     "type": "object",
2972                     "properties": {
2973                         "dimmingSetting": {
2974                             "type": "integer",
2975                             "description": "Current dimming value"
2976                         }
2977                     }
2978                 }
2979             },
2980             "type": "object",
2981             "allOf": [
2982                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
2983                 { "$ref": "#/definitions/oic.r.light.dimming" }
2984             ],
2985             "required": ["dimmingSetting"]
2986         }
2987
2988     example: /
2989     {
2990         "id": "unique_example_id",
2991         "dimmingSetting": 40
2992     }
2993

```

6.8.5 Property Definition

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

6.8.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/DimmingResURI		get	post		

2996 6.9 Door

2997 6.9.1 Introduction

2998 This resource describes the open state of the door. A door is modelled by means of openState
2999 (Open/Closed), openDuration (ISO 8601 Time), and openAlarm (boolean). For openState, the
3000 value 'Open' indicates the door is open. The value 'Closed' indicates the door is closed. The type
3001 of openDuration is an ISO 8601 Time encoded string. The openAlarm value 'true' indicates that
3002 the open alarm is active. The openAlarm value 'false' indicates that open alarm is not active.

3003 6.9.2 Example URI

3004 /DoorResURI

3005 6.9.3 Resource Type

3006 The resource type (rt) is defined as: oic.r.door.

3007 6.9.4 RAML Definition

```
3008 #%RAML 0.8
3009 title: OICDoor
3010 version: v1.1.0-20160519
3011 traits:
3012   - interface-actuator :
3013       queryParameters:
3014           if:
3015               enum: ["oic.if.a", "oic.if.baseline"]
3016   - interface-all :
3017       queryParameters:
3018           if:
3019               enum: ["oic.if.a", "oic.if.s", "oic.if.baseline"]
3020
3021 /DoorResURI:
3022   description: |
3023     This resource describes the open state of the door.
3024     A door is modelled by means of openState (Open/Closed), openDuration (ISO 8601 Time), and
3025     openAlarm (boolean).
3026     For openState, the value 'Open' indicates the door is open.
3027     The value 'Closed' indicates the door is closed.
3028     The type of openDuration is an ISO 8601 Time encoded string.
3029     The openAlarm value 'true' indicates that the open alarm is active.
3030     The openAlarm value 'false' indicates that open alarm is not active.
3031
3032   get:
3033     description: |
3034       retrieves the state of the Door.
3035
3036     is : ['interface-all']
3037     responses :
3038       200:
3039         body:
3040           application/json:
3041             schema: /
3042               {
3043                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.door.json#",
3044                 "$schema": "http://json-schema.org/draft-04/schema#",
3045                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3046                 rights reserved.",
3047                 "title": "Door",
3048                 "definitions": {
3049                   "oic.r.door": {
```

```

3050         "type": "object",
3051         "properties": {
3052             "openState": {
3053                 "enum": ["Open", "Closed"],
3054                 "readOnly": true,
3055                 "description": "The state of the door (open or closed)"
3056             },
3057             "openDuration": {
3058                 "type": "string",
3059                 "readOnly": true,
3060                 "description": "The time duration the door has been open"
3061             },
3062             "openAlarm": {
3063                 "type": "boolean",
3064                 "description": "The state of the door open alarm"
3065             }
3066         }
3067     },
3068     "type": "object",
3069     "allOf": [
3070         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3071         {"$ref": "#/definitions/oic.r.door"}
3072     ],
3073     "required": ["openState"]
3074 }
3075
3076
3077 example: /
3078 {
3079     "rt" :          ["oic.r.door"],
3080     "id":           "unique_example_id",
3081     "openState":    "Open",
3082     "openDuration": "P0Y0M0DT2H25M5S",
3083     "openAlarm":    true
3084 }
3085
3086 post:
3087     description: |
3088         Sets the current Door properties.
3089         The only property that can be set as part of an update operation is
3090         the openAlarm.
3091         This can be made active (true) or inactive (false)
3092
3093 is : ['interface-actuator']
3094 body:
3095     application/json:
3096         schema: /
3097             {
3098                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.door-Update.json#",
3099                 "$schema": "http://json-schema.org/draft-04/schema#",
3100                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
3101 reserved.",
3102                 "title": "Door",
3103                 "definitions": {
3104                     "oic.r.door": {
3105                         "type": "object",
3106                         "properties": {
3107                             "openAlarm": {
3108                                 "type": "boolean",
3109                                 "description": "The state of the door open alarm"
3110                             }
3111                         }
3112                     }
3113                 },
3114                 "type": "object",
3115                 "allOf": [
3116                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},

```

```

3117         {"$ref": "#/definitions/oic.r.door"}
3118     ]
3119 }
3120
3121 example: /
3122 {
3123     "id":         "unique_example_id",
3124     "openAlarm":  false
3125 }
3126
3127 responses :
3128 200:
3129     body:
3130     application/json:
3131         schema: /
3132             {
3133                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.door-Update.json#",
3134                 "$schema": "http://json-schema.org/draft-04/schema#",
3135                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3136 rights reserved.",
3137                 "title": "Door",
3138                 "definitions": {
3139                     "oic.r.door": {
3140                         "type": "object",
3141                         "properties": {
3142                             "openAlarm": {
3143                                 "type": "boolean",
3144                                 "description": "The state of the door open alarm"
3145                             }
3146                         }
3147                     }
3148                 },
3149                 "type": "object",
3150                 "allOf": [
3151                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3152                     {"$ref": "#/definitions/oic.r.door"}
3153                 ]
3154             }
3155
3156 example: /
3157 {
3158     "id":         "unique_example_id",
3159     "openAlarm":  false
3160 }
3161

```

3162 6.9.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
openDuration	string		Read Only	The time duration the door has been open
openAlarm	boolean			The state of the door open alarm
openState	multiple types: see schema	yes	Read Only	The state of the door (open or closed)

3163 6.9.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/DoorResURI		get	post		

6.10 Energy Consumption

6.10.1 Introduction

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

6.10.2 Example URI

/EnergyConsumptionResURI

6.10.3 Resource Type

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

6.10.4 RAML Definition

```

#%RAML 0.8
title: OICEnergyConsumption
version: v1.1.0-20160519

traits:
- interface :
    queryParameters:
        if:
            enum: ["oic.if.s", "oic.if.baseline"]

/energyconsumptionresuri:
    description: |
        This resource describes the energy consumed by the device since power up (the energy value is
        in Watt Hours [Wh])
        and the instantaneous power draw of the device (the power value is in Watts [W]) at the time
        the resource was queried.
        The power value is in Watts [W].
        The energy value is in Watt Hours [Wh].

    is : ['interface']

    get:
        description: |
            Provides the current power draw and cumulative energy usage.

        responses :
            200:
                body:
                    application/json:
                        schema: /
                            {
                                "id":
                                "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.consumption.json#",
                                "$schema": "http://json-schema.org/draft-04/schema#",
                                "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
                                rights reserved.",
                                "title": "Energy Consumption",
                                "definitions": {
                                    "oic.r.energy.consumption": {
                                        "type": "object",
                                        "properties": {
                                            "power": {
                                                "type": "number",
                                                "readOnly": true,
                                                "description": "Instantaneous Power"
                                            },
                                            "energy": {

```

```

3220         "type": "number",
3221         "readOnly": true,
3222         "description": "Energy consumed"}
3223     }
3224 }
3225 },
3226 "type": "object",
3227 "allOf": [
3228     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3229     {"$ref": "#/definitions/oic.r.energy.consumption"}
3230 ],
3231 "required": ["power", "energy"]
3232 }
3233
3234 example: /
3235 {
3236     "rt":      ["oic.r.energy.consumption"],
3237     "id":      "unique_example_id",
3238     "power":   2000.1,
3239     "energy":  3500.4
3240 }
3241

```

3242 6.10.5 Property Definition

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

3243 6.10.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/EnergyConsumptionResURI		get			

3244 6.11 Energy Usage

3245 6.11.1 Introduction

3246 This resource describes a cumulative time-based energy usage query.. The resource is a
3247 composite resource being made up as a collection of: TimePeriod Resource EnergyConsumption
3248 Resource

3249 6.11.2 Example URI

3250 /EnergyUsageResURI

3251 6.11.3 Resource Type

3252 The resource type (rt) is defined as: oic.r.energy.usage.

3253 6.11.4 RAML Definition

```

3254 #%RAML 0.8
3255 title: OICEnergyUsage
3256 version: v1.1.0-20160519
3257 traits:
3258   - interface :
3259       queryParameters:
3260           if:
3261               enum: ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
3262
3263 /EnergyUsageResURI:
3264     description: |
3265         This resource describes a cumulative time-based energy usage query..
3266         The resource is a composite resource being made up as a collection of:

```

```

3267     TimePeriod Resource
3268     EnergyConsumption Resource
3269
3270 is : ['interface']
3271 get:
3272     description: |
3273         Retrieves the energy usage information as a composite of consumption over time.
3274
3275 responses :
3276     200:
3277         body:
3278             application/json:
3279                 schema: /
3280                     {
3281                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.usage.json#",
3282                         "$schema": "http://json-schema.org/draft-04/schema#",
3283                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3284 rights reserved.",
3285                         "title": "Energy Usage",
3286                         "definitions": {
3287                             "oic.r.energy.usage": {
3288                                 "type": "object",
3289                                 "properties": {
3290                                     "resources": {
3291                                         "type": "array",
3292                                         "minItems": 2,
3293                                         "maxItems": 2,
3294                                         "items": {
3295                                             "$ref": "oic.oic-link-schema.json#/definitions/oic.oic-link"
3296                                         }
3297                                     }
3298                                 }
3299                             }
3300                         },
3301                         "type": "object",
3302                         "allOf": [
3303                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3304                             {"$ref": "#/definitions/oic.r.energy.usage"}
3305                         ],
3306                         "required": ["resources"]
3307                     }
3308
3309     example: /
3310         {
3311             "rt": ["oic.r.energy.usage"],
3312             "id": "unique_example_id",
3313             "resources": [
3314                 {
3315                     "href": "/TimeIntervalResURI",
3316                     "rel": "contains",
3317                     "rt": ["oic.r.time.period"],
3318                     "if": ["oic.if.a"],
3319                     "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
3320                 },
3321                 {
3322                     "href": "/EnergyConsumptionResURI",
3323                     "rel": "contains",
3324                     "rt": ["oic.r.energy.consumption"],
3325                     "if": ["oic.if.s"],
3326                     "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
3327                 }
3328             ]
3329         }
3330

```

6.11.5 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/EnergyUsageResURI		get			

6.12 Humidity

6.12.1 Introduction

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

6.12.2 Example URI

/HumidityResURI

6.12.3 Resource Type

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

6.12.4 RAML Definition

```
##RAML 0.8
title: OIcHumidity
version: v1.1.0-20160519

traits:
  - interface :
      queryParameters:
        if:
          enum: ["oic.if.a", "oic.if.s", "oic.if.baseline"]

/HumidityResURI:
  description: |
    This resource describes a sensed or desired humidity.
    The value humidity is an integer describing the percentage measured relative humidity.
    The value desiredHumidity is an integer showing the desired target relative humidity.

  is : ['interface']

  get:
    description: |
      Retrieves the current (relative) humidity level.

    responses :
      200:
        body:
          application/json:
            schema: /
              {
                "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.humidity.json#",
                "$schema": "http://json-schema.org/draft-04/schema#",
                "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
                "title": "Humidity",
                "definitions": {
                  "oic.r.humidity": {
                    "type": "object",
                    "properties": {
                      "humidity": {
                        "type": "integer",
                        "readOnly": true,
                        "description": "Current sensed value for Humidity",
                        "minimum": 0,
                        "maximum": 100
                      }
                    }
                  }
                }
              }
```



```

3383         },
3384         "desiredHumidity": {
3385             "type": "integer",
3386             "description": "Desired value for Humidity",
3387             "minimum": 0,
3388             "maximum": 100
3389         }
3390     }
3391 }
3392 },
3393 "type": "object",
3394 "allOf": [
3395     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3396     {"$ref": "#/definitions/oic.r.humidity"}
3397 ],
3398 "required": ["humidity"]
3399 }
3400
3401 example: /
3402 {
3403     "rt": ["oic.r.humidity"],
3404     "id": "unique_example_id",
3405     "humidity": 40,
3406     "desiredHumidity": 40
3407 }
3408
3409 post:
3410     description: |
3411         Sets the desired relative humidity level.
3412
3413     body:
3414         application/json:
3415             schema: /
3416             {
3417                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.humidity-Update.json#",
3418                 "$schema": "http://json-schema.org/draft-04/schema#",
3419                 "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
3420 reserved.",
3421                 "title": "Humidity",
3422                 "definitions": {
3423                     "oic.r.humidity": {
3424                         "type": "object",
3425                         "properties": {
3426                             "desiredHumidity": {
3427                                 "type": "integer",
3428                                 "description": "Desired value for Humidity",
3429                                 "minimum": 0,
3430                                 "maximum": 100
3431                             }
3432                         }
3433                     }
3434                 },
3435                 "type": "object",
3436                 "allOf": [
3437                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3438                     {"$ref": "#/definitions/oic.r.humidity"}
3439                 ]
3440             }
3441
3442     example: /
3443     {
3444         "id": "unique_example_id",
3445         "desiredHumidity": 45
3446     }
3447

```

```

3448     responses :
3449     200:
3450         description: |
3451             Indicates that the relative humidity level was changed.
3452             The new relative humidity level is provided in the response.
3453
3454         body:
3455             application/json:
3456                 schema: /
3457                     {
3458                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.humidity-
3459 Update.json#",
3460                         "$schema": "http://json-schema.org/draft-04/schema#",
3461                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3462 rights reserved.",
3463                         "title": "Humidity",
3464                         "definitions": {
3465                             "oic.r.humidity": {
3466                                 "type": "object",
3467                                 "properties": {
3468                                     "desiredHumidity": {
3469                                         "type": "integer",
3470                                         "description": "Desired value for Humidity",
3471                                         "minimum": 0,
3472                                         "maximum": 100
3473                                     }
3474                                 }
3475                             }
3476                         },
3477                         "type": "object",
3478                         "allOf": [
3479                             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
3480                             { "$ref": "#/definitions/oic.r.humidity" }
3481                         ]
3482                     }
3483
3484                 example: /
3485                     {
3486                         "id": "unique_example_id",
3487                         "desiredHumidity": 45
3488                     }
3489

```

3490 6.12.5 Property Definition

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

3491 6.12.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/HumidityResURI		get	post		

3492 6.13 Ice Maker

3493 6.13.1 Introduction

3494 This resource describes an the operational state of an Ice Maker. The status is a string containing
3495 a value from the set of possible ice maker statuses. The possible statuses are defined by the
3496 enumeration [on, off, full] A status of 'on' means that the Ice Maker is operating. A status of 'off'

3497 means that the Ice Maker is not operating. A status of 'full' means that the ice collection bin is full
3498 (Ice Maker is operating).

3499 6.13.2 Example URI

3500 /IceMakerResURI

3501 6.13.3 Resource Type

3502 The resource type (rt) is defined as: oic.r.icemaker.

3503 6.13.4 RAML Definition

```
3504 #%RAML 0.8
3505 title: OICIceMaker
3506 version: v1.1.0-20160519
3507 traits:
3508   - interface :
3509       queryParameters:
3510           if:
3511               enum: ["oic.if.a", "oic.if.baseline"]
3512
3513 /IceMakerResURI:
3514   description: |
3515     This resource describes an the operational state of an Ice Maker.
3516     The status is a string containing a value from the set of possible ice maker statuses.
3517     The possible statuses are defined by the enumeration [on, off, full]
3518     A status of 'on' means that the Ice Maker is operating.
3519     A status of 'off' means that the Ice Maker is not operating.
3520     A status of 'full' means that the ice collection bin is full (Ice Maker is operating).
3521
3522   is : ['interface']
3523   get:
3524     description: |
3525       Retrieves the current Ice Maker status.
3526
3527   responses :
3528     200:
3529       body:
3530         application/json:
3531           schema: /
3532             {
3533               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.iceMaker.json#",
3534               "$schema": "http://json-schema.org/draft-04/schema#",
3535               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3536 rights reserved.",
3537               "title": "Ice Maker",
3538               "definitions": {
3539                 "oic.r.iceMaker": {
3540                   "type": "object",
3541                   "properties": {
3542                     "status": {
3543                       "enum": ["on","off","full"],
3544                       "description": "Status of the Ice Maker"
3545                     }
3546                   }
3547                 }
3548               },
3549               "type": "object",
3550               "allOf": [
3551                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3552                 {"$ref": "#/definitions/oic.r.iceMaker"}
3553               ],
3554               "required": ["status"]
```

```

3555         }
3556
3557     example: /
3558     {
3559         "rt":      ["oic.r.icemaker"],
3560         "id":      "unique_example_id",
3561         "status":  "on"
3562     }
3563
3564     post:
3565         description: |
3566             Sets the desired Ice Maker status.
3567             Only valid settings for status in a Post shall be [on,off].
3568
3569         body:
3570             application/json:
3571                 schema: /
3572                 {
3573                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.iceMaker-Update.json#",
3574                     "$schema": "http://json-schema.org/draft-04/schema#",
3575                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
3576 reserved.",
3577                     "title": "Ice Maker",
3578                     "definitions": {
3579                         "oic.r.icemaker": {
3580                             "type": "object",
3581                             "properties": {
3582                                 "status": {
3583                                     "enum": ["on", "off"],
3584                                     "description": "Set the status of the Ice Maker"
3585                                 }
3586                             }
3587                         }
3588                     },
3589                     "type": "object",
3590                     "allOf": [
3591                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3592                         {"$ref": "#/definitions/oic.r.icemaker"}
3593                     ],
3594                     "required": ["status"]
3595                 }
3596
3597     example: /
3598     {
3599         "id":      "unique_example_id",
3600         "status":  "off"
3601     }
3602
3603     responses :
3604         200:
3605             description: |
3606                 Indicates that the Ice Maker status was changed.
3607                 The new status is provided in the response.
3608
3609             body:
3610                 application/json:
3611                     schema: /
3612                     {
3613                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.iceMaker-
3614 Update.json#",
3615                         "$schema": "http://json-schema.org/draft-04/schema#",
3616                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3617 rights reserved.",

```

```

3618         "title": "Ice Maker",
3619         "definitions": {
3620             "oic.r.icemaker": {
3621                 "type": "object",
3622                 "properties": {
3623                     "status": {
3624                         "enum": ["on", "off"],
3625                         "description": "Set the status of the Ice Maker"
3626                     }
3627                 }
3628             }
3629         },
3630         "type": "object",
3631         "allOf": [
3632             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3633             {"$ref": "#/definitions/oic.r.icemaker"}
3634         ],
3635         "required": ["status"]
3636     }
3637
3638     example: /
3639     {
3640         "id": "unique_example_id",
3641         "status": "off"
3642     }
3643
3644 403:
3645     description: |
3646         This response is generated by the OIC Server when the client sends:
3647         An update with an invalid property value for status.
3648         The server responds with the current resource representation.
3649
3650     body:
3651         application/json:
3652             schema: /
3653             {
3654                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.iceMaker-
3655 Update.json#",
3656                 "$schema": "http://json-schema.org/draft-04/schema#",
3657                 "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3658 rights reserved.",
3659                 "title": "Ice Maker",
3660                 "definitions": {
3661                     "oic.r.icemaker": {
3662                         "type": "object",
3663                         "properties": {
3664                             "status": {
3665                                 "enum": ["on", "off"],
3666                                 "description": "Set the status of the Ice Maker"
3667                             }
3668                         }
3669                     }
3670                 },
3671                 "type": "object",
3672                 "allOf": [
3673                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3674                     {"$ref": "#/definitions/oic.r.icemaker"}
3675                 ],
3676                 "required": ["status"]
3677             }
3678
3679     example: /
3680     {
3681         "id": "unique_example_id",
3682         "status": "off"

```

3683 }
3684

3685 **6.13.5 Property Definition**

Property name	Value type	Mandatory	Access mode	Description
status	multiple types: see schema	yes		Status of the Ice Maker

3686 **6.13.6 CRUDN behaviour**

Resource	Create	Read	Update	Delete	Notify
/IceMakerResURI		get	post		

3687 **6.14 Lock**

3688 **6.14.1 Introduction**

3689 Resource describing a lock. For the type of lockState, the value 'Locked' indicates that the door is
3690 Locked. The value 'Unlocked' indicates that the door is Unlocked.

3691 **6.14.2 Example URI**

3692 /LockStatusResURI

3693 **6.14.3 Resource Type**

3694 The resource type (rt) is defined as: oic.r.lock.status.

3695 **6.14.4 RAML Definition**

```
3696 #%RAML 0.8
3697 title: OICLock
3698 version: v1.1.0-20160519
3699 traits:
3700   - interface :
3701       queryParameters:
3702         if:
3703           enum: ["oic.if.a", "oic.if.baseline"]
3704
3705 /LockStatusResURI:
3706   description: |
3707     Resource describing a lock.
3708     For the type of lockState, the value 'Locked' indicates that the door is Locked.
3709     The value 'Unlocked' indicates that the door is Unlocked.
3710
3711   is : ['interface']
3712   get:
3713     description: |
3714       Retrieves the state of the lock.
3715
3716   responses :
3717     200:
3718       body:
3719         application/json:
3720           schema: /
3721             {
3722               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.status.json#",
3723               "$schema": "http://json-schema.org/draft-04/schema#",
3724               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3725 rights reserved.",
3726               "title": "Lock",
3727               "definitions": {
3728                 "oic.r.lock.status": {
```

```

3729         "type": "object",
3730         "properties": {
3731             "lockState": {
3732                 "type": "string",
3733                 "enum": ["Locked", "Unlocked"],
3734                 "description": "State of the lock."
3735             }
3736         }
3737     },
3738     "type": "object",
3739     "allOf": [
3740         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3741         {"$ref": "#/definitions/oic.r.lock.status"}
3742     ],
3743     "required": ["lockState"]
3744 }
3745
3746
3747 example: /
3748 {
3749     "rt":          ["oic.r.lock.status"],
3750     "id":          "unique_example_id",
3751     "lockState":   "Locked"
3752 }
3753
3754 post:
3755     description: |
3756         Sets the current lock state.
3757
3758 body:
3759     application/json:
3760         schema: /
3761             {
3762                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.status.json#",
3763                 "$schema": "http://json-schema.org/draft-04/schema#",
3764                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
3765 reserved.",
3766                 "title": "Lock",
3767                 "definitions": {
3768                     "oic.r.lock.status": {
3769                         "type": "object",
3770                         "properties": {
3771                             "lockState": {
3772                                 "type": "string",
3773                                 "enum": ["Locked", "Unlocked"],
3774                                 "description": "State of the lock."
3775                             }
3776                         }
3777                     }
3778                 },
3779                 "type": "object",
3780                 "allOf": [
3781                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3782                     {"$ref": "#/definitions/oic.r.lock.status"}
3783                 ],
3784                 "required": ["lockState"]
3785             }
3786
3787         example: /
3788             {
3789                 "id":          "unique_example_id",
3790                 "lockState":   "Unlocked"
3791             }
3792
3793 responses :

```

```

3794 200:
3795   body:
3796     application/json:
3797       schema: /
3798         {
3799           "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.status.json#",
3800           "$schema": "http://json-schema.org/draft-04/schema#",
3801           "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3802 rights reserved.",
3803           "title": "Lock",
3804           "definitions": {
3805             "oic.r.lock.status": {
3806               "type": "object",
3807               "properties": {
3808                 "lockState" : {
3809                   "type": "string",
3810                   "enum": ["Locked", "Unlocked"],
3811                   "description": "State of the lock."
3812                 }
3813             }
3814           },
3815           "type": "object",
3816           "allof": [
3817             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3818             {"$ref": "#/definitions/oic.r.lock.status"}
3819           ],
3820           "required": ["lockState"]
3821         }
3822
3823
3824     example: /
3825       {
3826         "id": "unique_example_id",
3827         "lockState": "Unlocked"
3828       }
3829
3830 403:
3831   description: |
3832     This response is generated by the OIC Server when the client sends:
3833     An update with an invalid property value for lockState.
3834     The server responds with the current resource representation.
3835
3836   body:
3837     application/json:
3838       schema: /
3839         {
3840           "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.status.json#",
3841           "$schema": "http://json-schema.org/draft-04/schema#",
3842           "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3843 rights reserved.",
3844           "title": "Lock",
3845           "definitions": {
3846             "oic.r.lock.status": {
3847               "type": "object",
3848               "properties": {
3849                 "lockState" : {
3850                   "type": "string",
3851                   "enum": ["Locked", "Unlocked"],
3852                   "description": "State of the lock."
3853                 }
3854             }
3855           },
3856           "type": "object",
3857           "allof": [

```



```

3859         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3860         {"$ref": "#/definitions/oic.r.lock.status"}
3861     ],
3862     "required": ["lockState"]
3863 }
3864
3865     example: /
3866     {
3867         "lockState": "Unlocked"
3868     }
3869

```

3870 6.14.5 Property Definition

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

3871 6.14.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/LockStatusResURI		get	post		

3872 6.15 Lock Code

3873 6.15.1 Introduction

3874 Resource describing a lock code. The lockCodeList is an array of possible codes that may be
 3875 associated with a lock. These are all presented as strings.

3876 6.15.2 Example URI

3877 /LockCodeResURI

3878 6.15.3 Resource Type

3879 The resource type (rt) is defined as: oic.r.lock.code.

3880 6.15.4 RAML Definition

```

3881 #%RAML 0.8
3882 title: OICLockCode
3883 version: v1.1.0-20160519
3884 traits:
3885   - interface :
3886       queryParameters:
3887           if:
3888               enum: ["oic.if.a", "oic.if.baseline"]
3889
3890 /LockCodeResURI:
3891     description: |
3892         Resource describing a lock code.
3893         The lockCodeList is an array of possible codes that may be associated with a lock.
3894         These are all presented as strings.
3895
3896     is : ['interface']
3897     get:
3898         description: |
3899             Retrieves the current lock code values.
3900
3901         responses :
3902             200:
3903                 body:
3904                     application/json:
3905                         schema: /

```

```

3906     {
3907         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.code.json#",
3908         "$schema": "http://json-schema.org/draft-04/schema#",
3909         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3910 rights reserved.",
3911         "title": "Lock Code",
3912         "definitions": {
3913             "oic.r.lock.code": {
3914                 "type": "object",
3915                 "properties": {
3916                     "lockCodeList" : {
3917                         "type": "array",
3918                         "items": {
3919                             "type": "string",
3920                             "description": "Value for the lock code"
3921                         }
3922                     }
3923                 }
3924             }
3925         },
3926         "type": "object",
3927         "allOf": [
3928             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
3929             { "$ref": "#/definitions/oic.r.lock.code" }
3930         ],
3931         "required": ["lockCodeList"]
3932     }
3933
3934     example: /
3935     {
3936         "rt":          ["oic.r.lock.code"],
3937         "id":          "unique_example_id",
3938         "lockCodeList": ["012345", "112233"]
3939     }
3940
3941     post:
3942         description: |
3943             Updates the current lock code values.
3944
3945     body:
3946         application/json:
3947             schema: /
3948             {
3949                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.code.json#",
3950                 "$schema": "http://json-schema.org/draft-04/schema#",
3951                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
3952 reserved.",
3953                 "title": "Lock Code",
3954                 "definitions": {
3955                     "oic.r.lock.code": {
3956                         "type": "object",
3957                         "properties": {
3958                             "lockCodeList" : {
3959                                 "type": "array",
3960                                 "items": {
3961                                     "type": "string",
3962                                     "description": "Value for the lock code"
3963                                 }
3964                             }
3965                         }
3966                     }
3967                 },
3968                 "type": "object",
3969                 "allOf": [
3970                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
3971                     { "$ref": "#/definitions/oic.r.lock.code" }
3972                 ],

```

```

3973         "required": ["lockCodeList"]
3974     }
3975
3976     example: /
3977     {
3978         "id": "unique_example_id",
3979         "lockCodeList": ["543210", "332211"]
3980     }
3981
3982     responses :
3983         200:
3984             body:
3985                 application/json:
3986                     schema: /
3987                     {
3988                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.code.json#",
3989                         "$schema": "http://json-schema.org/draft-04/schema#",
3990                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3991 rights reserved.",
3992                         "title": "Lock Code",
3993                         "definitions": {
3994                             "oic.r.lock.code": {
3995                                 "type": "object",
3996                                 "properties": {
3997                                     "lockCodeList" : {
3998                                         "type": "array",
3999                                         "items": {
4000                                             "type": "string",
4001                                             "description": "Value for the lock code"
4002                                         }
4003                                     }
4004                                 }
4005                             },
4006                             "type": "object",
4007                             "allOf": [
4008                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
4009                                 { "$ref": "#/definitions/oic.r.lock.code" }
4010                             ],
4011                             "required": ["lockCodeList"]
4012                         }
4013                     }
4014
4015     example: /
4016     {
4017         "id": "unique_example_id",
4018         "lockCodeList": ["543210", "332211"]
4019     }
4020

```

6.15.5 Property Definition

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

6.15.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/LockCodeResURI		get	post		

6.16 Mode

6.16.1 Introduction

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

6.16.2 Example URI

/ModeResURI

6.16.3 Resource Type

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

6.16.4 RAML Definition

```

#%RAML 0.8
title: OICMode
version: v1.1.0-20160519

traits:
  - interface :
      queryParameters:
        if:
          enum: ["oic.if.a", "oic.if.baseline"]

/ModeResURI:

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

  is : ['interface']

  get:
    description: |
      Retrieves the current mode.

  responses :
    200:
      body:
        application/json:
          schema: /
            {
              "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mode.json#",
              "$schema": "http://json-schema.org/draft-04/schema#",
              "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
              "title": "Mode",
              "definitions": {
                "oic.r.mode": {
                  "type": "object",
                  "properties": {
                    "supportedModes": {
                      "type": "array",
                      "readOnly": true,
                      "description": "Array of possible modes the device supports.",
                      "items": {
                        "type": "string"
                      }
                    }
                  },
                  "modes": {
                    "type": "array",

```

```

4079         "description": "Array of the currently active mode(s)",
4080         "items": {
4081             "type": "string"
4082         }
4083     }
4084 }
4085 }
4086 },
4087 "type": "object",
4088 "allOf": [
4089     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4090     {"$ref": "#/definitions/oic.r.mode"}
4091 ],
4092 "required": ["supportedModes", "modes"]
4093 }
4094
4095 example: /
4096 {
4097     "rt": ["oic.r.mode"],
4098     "id": "unique_example_id",
4099     "supportedModes": ["active", "armedAway", "armedStay", "armedInstant"],
4100     "modes": ["active"]
4101 }
4102
4103 post:
4104     description: |
4105         Sets the desired mode.
4106
4107     body:
4108         application/json:
4109             schema: /
4110                 {
4111                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mode-Update.json#",
4112                     "$schema": "http://json-schema.org/draft-04/schema#",
4113                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
4114 reserved.",
4115                     "title": "Mode",
4116                     "definitions": {
4117                         "oic.r.mode": {
4118                             "type": "object",
4119                             "properties": {
4120                                 "modes": {
4121                                     "type": "array",
4122                                     "description": "Desired mode",
4123                                     "items": {
4124                                         "type": "string"
4125                                     }
4126                                 }
4127                             }
4128                         }
4129                     },
4130                     "type": "object",
4131                     "allOf": [
4132                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4133                         {"$ref": "#/definitions/oic.r.mode"}
4134                     ],
4135                     "required": ["modes"]
4136                 }
4137
4138             example: /
4139                 {
4140                     "id": "unique_example_id",
4141                     "modes": ["armedAway"]
4142                 }
4143

```

```

4144     responses :
4145         200:
4146             body:
4147                 application/json:
4148                 schema: /
4149                     {
4150                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mode-Update.json#",
4151                         "$schema": "http://json-schema.org/draft-04/schema#",
4152                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4153 rights reserved.",
4154                         "title": "Mode",
4155                         "definitions": {
4156                             "oic.r.mode": {
4157                                 "type": "object",
4158                                 "properties": {
4159                                     "modes": {
4160                                         "type": "array",
4161                                         "description": "Desired mode",
4162                                         "items": {
4163                                             "type": "string"
4164                                         }
4165                                     }
4166                                 }
4167                             },
4168                             "type": "object",
4169                             "allOf": [
4170                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
4171                                 { "$ref": "#/definitions/oic.r.mode" }
4172                             ],
4173                             "required": ["modes"]
4174                         }
4175                     }
4176
4177                 example: /
4178                     {
4179                         "id": "unique_example_id",
4180                         "modes": ["armedAway"]
4181                     }
4182
4183         403:
4184             description: |
4185                 This response is generated by the OIC Server when the client sends:
4186                 An update with an value for mode that is not found in supportedModes.
4187                 The server responds with the current resource representation.
4188
4189             body:
4190                 application/json:
4191                 schema: /
4192                     {
4193                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mode.json#",
4194                         "$schema": "http://json-schema.org/draft-04/schema#",
4195                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4196 rights reserved.",
4197                         "title": "Mode",
4198                         "definitions": {
4199                             "oic.r.mode": {
4200                                 "type": "object",
4201                                 "properties": {
4202                                     "supportedModes": {
4203                                         "type": "array",
4204                                         "readOnly": true,
4205                                         "description": "Array of possible modes the device supports.",
4206                                         "items": {
4207                                             "type": "string"
4208                                         }
4209                                     }
4210                                 }
4211                             }
4212                         }

```

```

4209         },
4210         "modes": {
4211             "type": "array",
4212             "description": "Array of the currently active mode(s)",
4213             "items": {
4214                 "type": "string"
4215             }
4216         }
4217     },
4218     },
4219     },
4220     "type": "object",
4221     "allOf": [
4222         {"$ref": "oic.baseresource.json#/definitions/oic.r.baseresource"},
4223         {"$ref": "#/definitions/oic.r.mode"}
4224     ],
4225     "required": ["supportedModes", "modes"]
4226 }
4227
4228 example: /
4229 {
4230     "id": "unique_example_id",
4231     "supportedModes": ["active", "armedAway", "armedStay", "armedInstant"],
4232     "modes": ["active"]
4233 }
4234

```

6.16.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
supportedModes	array: see schema	yes	Read Only	Array of possible modes the device supports.
modes	array: see schema	yes		Array of the currently active mode(s)

6.16.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/ModeResURI		get	post		

6.17 Open Level

6.17.1 Introduction

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

6.17.2 Example URI

/OpenLevelResURI

6.17.3 Resource Type

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

6.17.4 RAML Definition

```

4251 #%RAML 0.8
4252 title: OICOpenLevel
4253 version: v1.1.0-20160519
4254 traits:

```

```

4255 - interface :
4256     queryParameters:
4257         if:
4258             enum: ["oic.if.a", "oic.if.baseline"]
4259
4260 /OpenLevelResURI:
4261     description: |
4262         This resource describes how open or ajar an entity such as a window, door, blind or shutter is.
4263         The openLevel can be read (acting as a sensor).
4264         The openLevel can also be set (acting as an actuator).
4265         The openLevel is device dependent across the range provided.
4266         When range (from oic.r.baseresource) is omitted then 0 to 100 is assumed where 0 means closed,
4267 100 means fully open.
4268         If a range is provided then the lower bound=closed, upper bound=open.
4269         If step (from oic.r.baseresource) is present then it represents the increment between possible
4270 values; if not provided 1 is assumed.
4271
4272     is : ['interface']
4273     get:
4274         description: |
4275             Retrieves the current openLevel.
4276
4277     responses :
4278         200:
4279             body:
4280                 application/json:
4281                     schema: /
4282                         {
4283                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.openLevel.json#",
4284                             "$schema": "http://json-schema.org/draft-04/schema#",
4285                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4286 rights reserved.",
4287                             "title": "Open Level",
4288                             "definitions": {
4289                                 "oic.r.openlevel": {
4290                                     "type": "object",
4291                                     "properties": {
4292                                         "openLevel": {
4293                                             "type": "integer",
4294                                             "description": "How open or ajar the entity is"
4295                                         },
4296                                         "increment": {
4297                                             "type": "integer",
4298                                             "description": "Deprecated, use 'step' instead.",
4299                                             "readOnly": true
4300                                         }
4301                                     }
4302                                 }
4303                             },
4304                             "type": "object",
4305                             "allOf": [
4306                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4307                                 {"$ref": "#/definitions/oic.r.openlevel"}
4308                             ],
4309                             "required": ["openLevel"]
4310                         }
4311
4312     example: /
4313         {
4314             "rt": ["oic.r.openlevel"],
4315             "id": "unique_example_id",
4316             "openLevel": 50,
4317             "step": 2,

```



```

4318         "range":      [0,100]
4319     }
4320
4321     post:
4322         description: |
4323             Sets the desired openLevel.
4324
4325         body:
4326             application/json:
4327                 schema: /
4328                     {
4329                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.openLevel.json#",
4330                         "$schema": "http://json-schema.org/draft-04/schema#",
4331                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
4332 reserved.",
4333                         "title": "Open Level",
4334                         "definitions": {
4335                             "oic.r.openlevel": {
4336                                 "type": "object",
4337                                 "properties": {
4338                                     "openLevel": {
4339                                         "type": "integer",
4340                                         "description": "How open or ajar the entity is"
4341                                     },
4342                                     "increment": {
4343                                         "type": "integer",
4344                                         "description": "Deprecated, use 'step' instead.",
4345                                         "readOnly": true
4346                                     }
4347                                 }
4348                             }
4349                         },
4350                         "type": "object",
4351                         "allOf": [
4352                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4353                             {"$ref": "#/definitions/oic.r.openlevel"}
4354                         ],
4355                         "required": ["openLevel"]
4356                     }
4357
4358                 example: /
4359                     {
4360                         "id":      "unique_example_id",
4361                         "openLevel": 0
4362                     }
4363
4364     responses :
4365         200:
4366             body:
4367                 application/json:
4368                     schema: /
4369                         {
4370                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.openLevel.json#",
4371                             "$schema": "http://json-schema.org/draft-04/schema#",
4372                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4373 rights reserved.",
4374                             "title": "Open Level",
4375                             "definitions": {
4376                                 "oic.r.openlevel": {
4377                                     "type": "object",
4378                                     "properties": {
4379                                         "openLevel": {
4380                                             "type": "integer",
4381                                             "description": "How open or ajar the entity is"

```

```

4382         },
4383         "increment": {
4384             "type": "integer",
4385             "description": "Deprecated, use 'step' instead.",
4386             "readOnly": true
4387         }
4388     }
4389 },
4390 },
4391 "type": "object",
4392 "allOf": [
4393     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4394     {"$ref": "#/definitions/oic.r.openlevel"}
4395 ],
4396 "required": ["openLevel"]
4397 }
4398
4399 example: /
4400 {
4401     "id": "unique_example_id",
4402     "openLevel": 0
4403 }
4404
4405 403:
4406 description: |
4407     This response is generated by the OIC Server when the client sends:
4408     An update with an out of range property value for openLevel.
4409     The server responds with the current resource representation.
4410
4411 body:
4412 application/json:
4413     schema: /
4414     {
4415         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.openLevel.json#",
4416         "$schema": "http://json-schema.org/draft-04/schema#",
4417         "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4418 rights reserved.",
4419         "title": "Open Level",
4420         "definitions": {
4421             "oic.r.openlevel": {
4422                 "type": "object",
4423                 "properties": {
4424                     "openLevel": {
4425                         "type": "integer",
4426                         "description": "How open or ajar the entity is"
4427                     },
4428                     "increment": {
4429                         "type": "integer",
4430                         "description": "Deprecated, use 'step' instead.",
4431                         "readOnly": true
4432                     }
4433                 }
4434             }
4435         },
4436         "type": "object",
4437         "allOf": [
4438             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4439             {"$ref": "#/definitions/oic.r.openlevel"}
4440         ],
4441         "required": ["openLevel"]
4442     }
4443
4444 example: /
4445 {
4446     "id": "unique_example_id",
4447     "openLevel": 50,

```

```

4448         "step":      2,
4449         "range":     [0,100]
4450     }
4451

```

4452 6.17.5 Property Definition

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

4453 6.17.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/OpenLevelResURI		get	post		

4454 6.18 Operational State

4455 6.18.1 Introduction

4456 This resource describes the operational and job states on a device. The states can be read or set,
 4457 setting indicates a desired state. A device may reject an attempt to set a state that would result in
 4458 adverse operational characteristics. The machineStates is an array of the possible operational
 4459 states. The currentMachineState is the current state of operation of the device. The jobStates is
 4460 an array of the possible job states. The currentJobState is the currently active jobState. The
 4461 runningTime is the ISO8601 encoded elapsed time in the current operational state. The
 4462 remainingTime is the ISO8601 encoded time till completion of the current operational state. The
 4463 progressPercentage is the percentage completeness of the current jobState.

4464 6.18.2 Example URI

4465 /OperationalStateResURI

4466 6.18.3 Resource Type

4467 The resource type (rt) is defined as: oic.r.operational.state.

4468 6.18.4 RAML Definition

```

4469 #%RAML 0.8
4470 title: OICOperation
4471 version: v1.1.0-20160519
4472 traits:
4473   - interface :
4474       queryParameters:
4475           if:
4476               enum: ["oic.if.a", "oic.if.baseline"]
4477
4478 /OperationalStateResURI:
4479     description: |
4480       This resource describes the operational and job states on a device.
4481       The states can be read or set, setting indicates a desired state.
4482       A device may reject an attempt to set a state that would result
4483       in adverse operational characteristics.
4484       The machineStates is an array of the possible operational states.
4485       The currentMachineState is the current state of operation of the device.
4486       The jobStates is an array of the possible job states.
4487       The currentJobState is the currently active jobState.
4488       The runningTime is the ISO8601 encoded elapsed time in the current operational state.
4489       The remainingTime is the ISO8601 encoded time till completion of the current operational state.
4490       The progressPercentage is the percentage completeness of the current jobState.
4491
4492     is : ['interface']

```

```

4493     get:
4494         description: |
4495             Retrieves the current operational and job states.
4496
4497     responses :
4498         200:
4499             body:
4500                 application/json:
4501                     schema: /
4502                         {
4503                             "id":
4504 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.operational.state.json#",
4505                             "$schema": "http://json-schema.org/draft-04/schema#",
4506                             "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4507 rights reserved.",
4508                             "title": "Operational State",
4509                             "definitions": {
4510                                 "oic.r.operational.state": {
4511                                     "type": "object",
4512                                     "properties": {
4513                                         "machineStates": {
4514                                             "type": "array",
4515                                             "readOnly": true,
4516                                             "description": "array of the possible operational states.",
4517                                             "items": {
4518                                                 "type": "string"
4519                                             }
4520                                         },
4521                                         "currentMachineState": {
4522                                             "type": "string",
4523                                             "description": "Current state of operation of the device."
4524                                         },
4525                                         "jobStates": {
4526                                             "type": "array",
4527                                             "readOnly": true,
4528                                             "description": "array of the possible job states.",
4529                                             "items": {
4530                                                 "type": "string"
4531                                             }
4532                                         },
4533                                         "currentJobState": {
4534                                             "type": "string",
4535                                             "description": "Currently active jobState"
4536                                         },
4537                                         "runningTime": {
4538                                             "type": "string",
4539                                             "readOnly": true,
4540                                             "description": "Elapsed time in the current operational state"
4541                                         },
4542                                         "remainingTime": {
4543                                             "type": "string",
4544                                             "readOnly": true,
4545                                             "description": "Time till completion of the current operational state"
4546                                         },
4547                                         "progressPercentage": {
4548                                             "type": "integer",
4549                                             "readOnly": true,
4550                                             "description": "Percentage completeness of the current jobState",
4551                                             "minimum": 0,
4552                                             "maximum": 100
4553                                         }
4554                                     }
4555                                 }
4556                             },
4557                             "type": "object",
4558                             "allOf": [
4559                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4560                                 {"$ref": "#/definitions/oic.r.operational.state"}

```

```

4561         ],
4562         "required": ["machineStates", "currentMachineState"]
4563     }
4564
4565     example: /
4566     {
4567         "rt":                ["oic.r.operational.state"],
4568         "id":                "unique_example_id",
4569         "machineStates":     ["pause", "stopped", "idle", "active"],
4570         "currentMachineState": "active",
4571         "jobStates":         ["preWash", "wash", "rinse", "spin", "dry", "airDry",
4572 "wrinklePrevent"],
4573         "currentJobState":   "rinse",
4574         "runningTime":       "PT15M20S",
4575         "remainingTime":     "PT10M40S",
4576         "progressPercentage": 75
4577     }
4578
4579     post:
4580         description: |
4581             Sets the desired operational or job state.
4582
4583         body:
4584             application/json:
4585                 schema: /
4586                 {
4587                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.operational.state-
4588 Update.json#",
4589                     "$schema": "http://json-schema.org/draft-04/schema#",
4590                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
4591 reserved.",
4592                     "title": "Operational State",
4593                     "definitions": {
4594                         "oic.r.operational.state": {
4595                             "type": "object",
4596                             "properties": {
4597                                 "currentMachineState": {
4598                                     "type": "string",
4599                                     "description": "Current state of operation of the device."
4600                                 },
4601                                 "currentJobState": {
4602                                     "type": "string",
4603                                     "description": "Currently active jobState"
4604                                 }
4605                             }
4606                         },
4607                     },
4608                     "type": "object",
4609                     "allOf": [
4610                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
4611                         { "$ref": "#/definitions/oic.r.operational.state" }
4612                     ]
4613                 }
4614
4615                 example: /
4616                 {
4617                     "id":                "unique_example_id",
4618                     "currentMachineState": "pause",
4619                     "currentJobState":     "wash"
4620                 }
4621
4622     responses :
4623         200:
4624             body:

```

```

4625     application/json:
4626         schema: /
4627             {
4628                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.operational.state-
4629 Update.json#",
4630                 "$schema": "http://json-schema.org/draft-04/schema#",
4631                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4632 rights reserved.",
4633                 "title": "Operational State",
4634                 "definitions": {
4635                     "oic.r.operational.state": {
4636                         "type": "object",
4637                         "properties": {
4638                             "currentMachineState": {
4639                                 "type": "string",
4640                                 "description": "Current state of operation of the device."
4641                             },
4642                             "currentJobState": {
4643                                 "type": "string",
4644                                 "description": "Currently active jobState"
4645                             }
4646                         }
4647                     }
4648                 },
4649                 "type": "object",
4650                 "allOf": [
4651                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4652                     {"$ref": "#/definitions/oic.r.operational.state"}
4653                 ]
4654             }
4655
4656         example: /
4657             {
4658                 "id": "unique_example_id",
4659                 "currentMachineState": "pause",
4660                 "currentJobState": "wash"
4661             }
4662
4663     403:
4664         description: |
4665             This response is generated by the OIC Server when the client sends:
4666             An update with an value for currentMachineState that is not found in machineStates.
4667             An update with an value for currentJobState that is not found in jobStates.
4668             The server responds with the current resource representation.
4669
4670     body:
4671         application/json:
4672             schema: /
4673                 {
4674                     "id":
4675 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.operational.state.json#",
4676                     "$schema": "http://json-schema.org/draft-04/schema#",
4677                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4678 rights reserved.",
4679                     "title": "Operational State",
4680                     "definitions": {
4681                         "oic.r.operational.state": {
4682                             "type": "object",
4683                             "properties": {
4684                                 "machineStates": {
4685                                     "type": "array",
4686                                     "readOnly": true,
4687                                     "description": "array of the possible operational states.",
4688                                     "items": {
4689                                         "type": "string"
4690                                     }
4691                                 }
4692                             }
4693                         }
4694                     }
4695                 }

```

```

4691         },
4692         "currentMachineState": {
4693             "type": "string",
4694             "description": "Current state of operation of the device."
4695         },
4696         "jobStates": {
4697             "type": "array",
4698             "readOnly": true,
4699             "description": "array of the possible job states.",
4700             "items": {
4701                 "type": "string"
4702             }
4703         },
4704         "currentJobState": {
4705             "type": "string",
4706             "description": "Currently active jobState"
4707         },
4708         "runningTime": {
4709             "type": "string",
4710             "readOnly": true,
4711             "description": "Elapsed time in the current operational state"
4712         },
4713         "remainingTime": {
4714             "type": "string",
4715             "readOnly": true,
4716             "description": "Time till completion of the current operational state"
4717         },
4718         "progressPercentage": {
4719             "type": "integer",
4720             "readOnly": true,
4721             "description": "Percentage completeness of the current jobState",
4722             "minimum": 0,
4723             "maximum": 100
4724         }
4725     }
4726 }
4727 },
4728 "type": "object",
4729 "allof": [
4730     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4731     {"$ref": "#/definitions/oic.r.operational.state"}
4732 ],
4733 "required": ["machineStates", "currentMachineState"]
4734 }
4735
4736 example: /
4737 {
4738     "id": "unique_example_id",
4739     "machineStates": ["pause", "stopped", "idle", "active"],
4740     "currentMachineState": "active",
4741     "jobStates": ["preWash", "wash", "rinse", "spin", "dry", "airDry",
4742 "wrinklePrevent"],
4743     "currentJobState": "rinse",
4744     "runningTime": "PT15M20S",
4745     "remainingTime": "PT10M40S",
4746     "progressPercentage": 75
4747 }
4748

```

6.18.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
currentMachineState	string	yes		Current state of operation of the device.
currentJobState	string			Currently active jobState

machineStates	array: see schema	yes	Read Only	array of the possible operational states.
runningTime	string		Read Only	Elapsed time in the current operational state
remainingTime	string		Read Only	Time till completion of the current operational state
progressPercentage	integer		Read Only	Percentage completeness of the current jobState
jobStates	array: see schema		Read Only	array of the possible job states.

6.18.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/OperationalStateResURI		get	post		

6.19 Ramp Time

6.19.1 Introduction

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

6.19.2 Example URI

/RampTimeResURI

6.19.3 Resource Type

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

6.19.4 RAML Definition

```

#%RAML 0.8
title: OICRampTime
version: v1.1.0-20160519

traits:
- interface :
    queryParameters:
        if:
            enum: ["oic.if.a", "oic.if.baseline"]

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

    is : ['interface']
    get:

```



```

4781     description: |
4782         Retrieves the current RampTime.
4783
4784     responses :
4785         200:
4786             body:
4787                 application/json:
4788                 schema: /
4789                     {
4790                         "id":
4791 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.rampTime.json#",
4792                         "$schema": "http://json-schema.org/draft-04/schema#",
4793                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4794 rights reserved.",
4795                         "title": "Ramp Time",
4796                         "definitions": {
4797                             "oic.r.light.ramptime": {
4798                                 "type": "object",
4799                                 "properties": {
4800                                     "rampTime": {
4801                                         "type": "integer",
4802                                         "description": "Actual speed of changing between 2 dimming values"
4803                                     }
4804                                 }
4805                             }
4806                         },
4807                         "type": "object",
4808                         "allOf": [
4809                             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
4810                             { "$ref": "#/definitions/oic.r.light.ramptime" }
4811                         ],
4812                         "required": ["rampTime"]
4813                     }
4814
4815                 example: /
4816                     {
4817                         "rt":          ["oic.r.light.ramptime"],
4818                         "id":          "unique_example_id",
4819                         "rampTime": 0,
4820                         "range":      [0,100]
4821                     }
4822
4823     post:
4824         description: |
4825             Sets the current RampTime.
4826
4827         body:
4828             application/json:
4829             schema: /
4830                 {
4831                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.rampTime.json#",
4832                     "$schema": "http://json-schema.org/draft-04/schema#",
4833                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
4834 reserved.",
4835                     "title": "Ramp Time",
4836                     "definitions": {
4837                         "oic.r.light.ramptime": {
4838                             "type": "object",
4839                             "properties": {
4840                                 "rampTime": {
4841                                     "type": "integer",
4842                                     "description": "Actual speed of changing between 2 dimming values"
4843                                 }
4844                             }
4845                         }
4846                     }

```

```

4845     }
4846   },
4847   "type": "object",
4848   "allOf": [
4849     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4850     {"$ref": "#/definitions/oic.r.light.ramptime"}
4851   ],
4852   "required": ["rampTime"]
4853 }
4854
4855 example: /
4856 {
4857   "id": "unique_example_id",
4858   "rampTime": 50
4859 }
4860
4861 responses :
4862 200:
4863   body:
4864     application/json:
4865       schema: /
4866         {
4867           "id":
4868 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.rampTime.json#",
4869           "$schema": "http://json-schema.org/draft-04/schema#",
4870           "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4871 rights reserved.",
4872           "title": "Ramp Time",
4873           "definitions": {
4874             "oic.r.light.ramptime": {
4875               "type": "object",
4876               "properties": {
4877                 "rampTime": {
4878                   "type": "integer",
4879                   "description": "Actual speed of changing between 2 dimming values"
4880                 }
4881             }
4882           },
4883           "type": "object",
4884           "allOf": [
4885             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4886             {"$ref": "#/definitions/oic.r.light.ramptime"}
4887           ],
4888           "required": ["rampTime"]
4889         }
4890
4891 example: /
4892 {
4893   "id": "unique_example_id",
4894   "rampTime": 50
4895 }
4896
4897
4898 403:
4899   description: |
4900     This response is generated by the OIC Server when the client sends:
4901     An update with an out of range property value for rampTime.
4902     The server responds with the current resource representation.
4903
4904   body:
4905     application/json:
4906       schema: /

```

```

4907     {
4908         "id":
4909         "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.rampTime.json#",
4910         "$schema": "http://json-schema.org/draft-04/schema#",
4911         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4912 rights reserved.",
4913         "title": "Ramp Time",
4914         "definitions": {
4915             "oic.r.light.ramptime": {
4916                 "type": "object",
4917                 "properties": {
4918                     "rampTime": {
4919                         "type": "integer",
4920                         "description": "Actual speed of changing between 2 dimming values"
4921                     }
4922                 }
4923             },
4924             "type": "object",
4925             "allof": [
4926                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
4927                 { "$ref": "#/definitions/oic.r.light.ramptime" }
4928             ],
4929             "required": ["rampTime"]
4930         }
4931     }
4932
4933     example: /
4934     {
4935         "id": "unique_example_id",
4936         "rampTime": 40
4937     }
4938

```

4939 6.19.5 Property Definition

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

4940 6.19.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/RampTimeResURI		get	post		

4941 6.20 Refrigeration

4942 6.20.1 Introduction

4943 This resource describes a refrigeration function. The filter state is a read-only value providing the
4944 percentage life time remaining for the water filter. RapidFreeze is a boolean that controls the rapid
4945 freeze capability if present. RapidCool is a boolean that controls the rapid cool capability if present.
4946 Defrost is a boolean that controls the defrost cycle if present. At least one of the listed Properties
4947 shall be present in a Resource Instance.

4948 6.20.2 Example URI

4949 /RefrigerationResURI

4950 6.20.3 Resource Type

4951 The resource type (rt) is defined as: oic.r.refrigeration.

4952 6.20.4 RAML Definition

4953 *##RAML 0.8*

4954 *title: OICRefrigeration*
4955 *version: v1.1.0-20160519*

```

4956 traits:
4957   - interface :
4958     queryParameters:
4959       if:
4960         enum: ["oic.if.a", "oic.if.baseline"]
4961
4962 /RefrigerationResURI:
4963   description: |
4964     This resource describes a refrigeration function.
4965     The filter state is a read-only value providing the percentage life time remaining for the
4966     water filter.
4967     RapidFreeze is a boolean that controls the rapid freeze capability if present.
4968     RapidCool is a boolean that controls the rapid cool capability if present.
4969     Defrost is a boolean that controls the defrost cycle if present.
4970     At least one of the listed Properties shall be present in a Resource Instance.
4971
4972   is : ['interface']
4973   get:
4974     description: |
4975       Retrieves the current Refrigeration function status; all Properties supported by the Device
4976       are returned.
4977
4978   responses :
4979     200:
4980       body:
4981         application/json:
4982           schema: /
4983             {
4984               "id":
4985 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.refrigeration.json#",
4986               "$schema": "http://json-schema.org/draft-04/schema#",
4987               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4988 rights reserved.",
4989               "title": "Refrigeration",
4990               "definitions": {
4991                 "oic.r.refrigeration": {
4992                   "type": "object",
4993                   "anyOf": [
4994                     {"required": ["filter"]},
4995                     {"required": ["rapidFreeze"]},
4996                     {"required": ["rapidCool"]},
4997                     {"required": ["defrost"]}
4998                   ],
4999                   "properties": {
5000                     "filter": {
5001                       "type": "integer",
5002                       "readOnly": true,
5003                       "description": "Percentage life time remaining for the water filter",
5004                       "minimum": 0,
5005                       "maximum": 100
5006                     },
5007                     "rapidFreeze": {
5008                       "type": "boolean",
5009                       "description": "Indicates whether the unit has a rapid freeze capability
5010 active."
5011                     },
5012                     "rapidCool": {
5013                       "type": "boolean",
5014                       "description": "Indicates whether the unit has a rapid cool capability
5015 active"
5016                     },
5017                     "defrost": {
5018                       "type": "boolean",
5019                       "description": "Indicates whether a defrost cycle is currently active"

```

```

5020         }
5021     }
5022 }
5023 },
5024 "type": "object",
5025 "allOf": [
5026     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5027     {"$ref": "#/definitions/oic.r.refrigeration"}
5028 ]
5029 }
5030
5031 example: /
5032 {
5033     "rt":          ["oic.r.refrigeration"],
5034     "id":          "unique_example_id",
5035     "filter":      75,
5036     "rapidFreeze": false,
5037     "rapidCool":   false,
5038     "defrost":     true
5039 }
5040
5041 post:
5042     description: |
5043         Activates the desired Refrigeration functions.
5044         Supported values are rapidFreeze, rapidCool and defrost.
5045         At least one of the supported values shall be provided.
5046
5047     body:
5048         application/json:
5049             schema: /
5050                 {
5051                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.refrigeration-
5052 Update.json#",
5053                     "$schema": "http://json-schema.org/draft-04/schema#",
5054                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
5055 reserved.",
5056                     "title": "Refrigeration",
5057                     "definitions": {
5058                         "oic.r.refrigeration": {
5059                             "type": "object",
5060                             "anyOf": [
5061                                 {"required": ["rapidFreeze"]},
5062                                 {"required": ["rapidCool"]},
5063                                 {"required": ["defrost"]}
5064                             ],
5065                             "properties": {
5066                                 "rapidFreeze": {
5067                                     "type": "boolean",
5068                                     "description": "Indicates whether the unit has a rapid freeze capability
5069 active."
5070                                 },
5071                                 "rapidCool": {
5072                                     "type": "boolean",
5073                                     "description": "Indicates whether the unit has a rapid cool capability active"
5074                                 },
5075                                 "defrost": {
5076                                     "type": "boolean",
5077                                     "description": "Indicates whether a defrost cycle is currently active"
5078                                 }
5079                             }
5080                         }
5081                     },
5082                     "type": "object",
5083                     "allOf": [
5084                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5085                         {"$ref": "#/definitions/oic.r.refrigeration"}
5086                     ]

```

```

5087         }
5088
5089     example: /
5090     {
5091         "id": "unique_example_id",
5092         "rapidFreeze": true
5093     }
5094
5095     responses :
5096     200:
5097         description: |
5098             Indicates that the Refrigeration function was changed.
5099             The new status can be provided in the response.
5100
5101         body:
5102             application/json:
5103                 schema: /
5104                 {
5105                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.refrigeration-
5106 Update.json#",
5107                     "$schema": "http://json-schema.org/draft-04/schema#",
5108                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5109 rights reserved.",
5110                     "title": "Refrigeration",
5111                     "definitions": {
5112                         "oic.r.refrigeration": {
5113                             "type": "object",
5114                             "anyOf": [
5115                                 {"required": ["rapidFreeze"]},
5116                                 {"required": ["rapidCool"]},
5117                                 {"required": ["defrost"]}
5118                             ],
5119                             "properties": {
5120                                 "rapidFreeze": {
5121                                     "type": "boolean",
5122                                     "description": "Indicates whether the unit has a rapid freeze capability
5123 active."
5124                                 },
5125                                 "rapidCool": {
5126                                     "type": "boolean",
5127                                     "description": "Indicates whether the unit has a rapid cool capability
5128 active"
5129                                 },
5130                                 "defrost": {
5131                                     "type": "boolean",
5132                                     "description": "Indicates whether a defrost cycle is currently active"
5133                                 }
5134                             }
5135                         }
5136                     },
5137                     "type": "object",
5138                     "allOf": [
5139                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5140                         {"$ref": "#/definitions/oic.r.refrigeration"}
5141                     ]
5142                 }
5143
5144     example: /
5145     {
5146         "id": "unique_example_id",
5147         "rapidFreeze": true
5148     }
5149

```

5150 6.20.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
filter	integer	yes	Read Only	Percentage life time remaining for the water filter
rapidFreeze	boolean	yes		Indicates whether the unit has a rapid freeze capability active.
defrost	boolean	yes		Indicates whether a defrost cycle is currently active
rapidCool	boolean	yes		Indicates whether the unit has a rapid cool capability active

5151 6.20.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/RefrigerationResURI		get	post		

5152 6.21 Temperature

5153 6.21.1 Introduction

5154 This resource describes a sensed or actuated Temperature value. The temperature describes the
 5155 current value measured. The units is a single value that is one of C, F or K. It provides the unit of
 5156 measurement for the temperature value. It is a read-only value that is provided by the server. If
 5157 the units Property is missing the default is Celsius [C]. When range (from oic.r.baseresource) is
 5158 omitted the default is +/- MAXINT.

5159 6.21.2 Example URI

5160 /TemperatureResURI

5161 6.21.3 Resource Type

5162 The resource type (rt) is defined as: oic.r.temperature.

5163 6.21.4 RAML Definition

```

5164 #%RAML 0.8
5165 title: OICTemperature
5166 version: v1.1.0-20160519
5167 traits:
5168   - interface :
5169     queryParameters:
5170       if:
5171         enum: ["oic.if.a", "oic.if.s", "oic.if.baseline"]
5172
5173 /TemperatureResURI:
5174   description: |
5175     This resource describes a sensed or actuated Temperature value.
5176     The temperature describes the current value measured.
5177     The units is a single value that is one of C, F or K.
5178     It provides the unit of measurement for the temperature value.
5179     It is a read-only value that is provided by the server.
5180     If the units Property is missing the default is Celsius [C].
  
```

```

5181     When range (from oic.r.baseresource) is omitted the default is +/- MAXINT.
5182
5183     is : ['interface']
5184     get:
5185         description: |
5186             Retrieves the current temperature value.
5187             A client can specify the units for the requested temperature by use of a query parameter.
5188             If no query parameter is provided the server provides its default measure or set value.
5189             It is recommended to return always the units Property in the result.
5190
5191     queryParameters:
5192         units:
5193             enum: CFK
5194     responses :
5195         200:
5196             body:
5197                 application/json:
5198                     schema: /
5199                         {
5200                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.temperature.json#",
5201                             "$schema": "http://json-schema.org/draft-04/schema#",
5202                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
5203                             "title": "Temperature",
5204                             "definitions": {
5205                                 "oic.r.temperature": {
5206                                     "type": "object",
5207                                     "properties": {
5208                                         "temperature": {
5209                                             "type": "number",
5210                                             "description": "Current temperature setting or measurement"
5211                                         },
5212                                         "units": {
5213                                             "enum": ["C", "F", "K"],
5214                                             "description": "Units for the temperature value",
5215                                             "readOnly": true
5216                                         }
5217                                     }
5218                                 }
5219                             },
5220                             "type": "object",
5221                             "allOf": [
5222                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5223                                 {"$ref": "#/definitions/oic.r.temperature"}
5224                             ],
5225                             "required": ["temperature"]
5226                         }
5227
5228     example: /
5229         {
5230             "rt": ["oic.r.temperature"],
5231             "id": "unique_example_id",
5232             "temperature": 20.0,
5233             "units": "C",
5234             "range": [0.0,100.0]
5235         }
5236
5237
5238     403:
5239         description: |
5240             This response is generated by the OIC Server when the client sends:
5241             A retrieve with q queryParameter indicating a unit that the server does not support.
5242             The server responds with the current resource representation including the

```



```

5243         units property illustrating the supported units and the error.
5244
5245     body:
5246         application/json:
5247             schema: /
5248                 {
5249                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.temperature.json#",
5250                     "$schema": "http://json-schema.org/draft-04/schema#",
5251                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5252 rights reserved.",
5253                     "title": "Temperature",
5254                     "definitions": {
5255                         "oic.r.temperature": {
5256                             "type": "object",
5257                             "properties": {
5258                                 "temperature": {
5259                                     "type": "number",
5260                                     "description": "Current temperature setting or measurement"
5261                                 },
5262                                 "units": {
5263                                     "enum": ["C", "F", "K"],
5264                                     "description": "Units for the temperature value",
5265                                     "readOnly": true
5266                                 }
5267                             }
5268                         }
5269                     },
5270                     "type": "object",
5271                     "allOf": [
5272                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5273                         {"$ref": "#/definitions/oic.r.temperature"}
5274                     ],
5275                     "required": ["temperature"]
5276                 }
5277
5278     example: /
5279         {
5280             "id": "unique_example_id",
5281             "temperature": 20.0,
5282             "units": "C"
5283         }
5284
5285     post:
5286         description: |
5287             Sets the desired temperature value.
5288             If a unit is included and the server does not support the unit indicated the request will
5289 fail.
5290             If the units are omitted value is taken to be in C.
5291
5292     body:
5293         application/json:
5294             schema: /
5295                 {
5296                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.temperature.json#",
5297                     "$schema": "http://json-schema.org/draft-04/schema#",
5298                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
5299 reserved.",
5300                     "title": "Temperature",
5301                     "definitions": {
5302                         "oic.r.temperature": {
5303                             "type": "object",
5304                             "properties": {
5305                                 "temperature": {
5306                                     "type": "number",
5307                                     "description": "Current temperature setting or measurement"

```

```

5308         },
5309         "units": {
5310             "enum": ["C", "F", "K"],
5311             "description": "Units for the temperature value",
5312             "readOnly": true
5313         }
5314     }
5315 }
5316 },
5317 "type": "object",
5318 "allOf": [
5319     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5320     {"$ref": "#/definitions/oic.r.temperature"}
5321 ],
5322 "required": ["temperature"]
5323 }
5324
5325 example: /
5326 {
5327     "id": "unique_example_id",
5328     "temperature": 18.0
5329 }
5330
5331 responses :
5332 200:
5333     body:
5334         application/json:
5335             schema: /
5336                 {
5337                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.temperature.json#",
5338                     "$schema": "http://json-schema.org/draft-04/schema#",
5339                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5340 rights reserved.",
5341                     "title": "Temperature",
5342                     "definitions": {
5343                         "oic.r.temperature": {
5344                             "type": "object",
5345                             "properties": {
5346                                 "temperature": {
5347                                     "type": "number",
5348                                     "description": "Current temperature setting or measurement"
5349                                 },
5350                                 "units": {
5351                                     "enum": ["C", "F", "K"],
5352                                     "description": "Units for the temperature value",
5353                                     "readOnly": true
5354                                 }
5355                             }
5356                         }
5357                     },
5358                     "type": "object",
5359                     "allOf": [
5360                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5361                         {"$ref": "#/definitions/oic.r.temperature"}
5362                     ],
5363                     "required": ["temperature"]
5364                 }
5365
5366             example: /
5367                 {
5368                     "id": "unique_example_id",
5369                     "temperature": 18.0
5370                 }
5371
5372 403:

```

```

5373     description: |
5374         This response is generated by the OIC Server when the client sends:
5375         An update with an out of range property value for temperature.
5376         An update with an unsupported unit for this server.
5377         The server responds with the current resource representation including
5378         the range property illustrating the supported range and the error.
5379
5380     body:
5381         application/json:
5382             schema: /
5383                 {
5384                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.temperature.json#",
5385                     "$schema": "http://json-schema.org/draft-04/schema#",
5386                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
5387                     "title": "Temperature",
5388                     "definitions": {
5389                         "oic.r.temperature": {
5390                             "type": "object",
5391                             "properties": {
5392                                 "temperature": {
5393                                     "type": "number",
5394                                     "description": "Current temperature setting or measurement"
5395                                 },
5396                                 "units": {
5397                                     "enum": ["C", "F", "K"],
5398                                     "description": "Units for the temperature value",
5399                                     "readOnly": true
5400                                 }
5401                             }
5402                         }
5403                     },
5404                     "type": "object",
5405                     "allOf": [
5406                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5407                         {"$ref": "#/definitions/oic.r.temperature"}
5408                     ],
5409                     "required": ["temperature"]
5410                 }
5411
5412     example: /
5413         {
5414             "id": "unique_example_id",
5415             "temperature": 20.0,
5416             "units": "C",
5417             "range": [0.0,100.0]
5418         }
5419
5420

```

6.21.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
units	multiple types: see schema		Read Only	Units for the temperature value
temperature	number	yes		Current temperature setting or measurement

6.21.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/TemperatureResURI		get	post		

5423 6.22 Time Period

5424 6.22.1 Introduction

5425 This resource describes the time period over which any additionally provided information is derived
5426 or bounded. The startTime and stopTime are ISO8601 encoded strings. startTime must be present.
5427 The interval is the interval of the time period in minutes, if present this value must be no less than
5428 1 minute. stopTime and interval are mutually exclusive; both Properties cannot be present in a
5429 Resource instance.

5430 6.22.2 Example URI

5431 /TimePeriodResURI

5432 6.22.3 Resource Type

5433 The resource type (rt) is defined as: oic.r.time.period.

5434 6.22.4 RAML Definition

```
5435 #%RAML 0.8
5436 title: OICTimePeriod
5437 version: v1.1.0-20160519
5438 traits:
5439   - interface :
5440       queryParameters:
5441         if:
5442           enum: ["oic.if.a", "oic.if.baseline"]
5443
5444 /TimePeriodResURI:
5445   description: |
5446     This resource describes the time period over which any additionally provided
5447     information is derived or bounded.
5448     The startTime and stopTime are ISO8601 encoded strings
5449     startTime must be present.
5450     The interval is the interval of the time period in minutes, if present this value must be no
5451     less than 1 minute.
5452     stopTime and interval are mutually exclusive; both Properties cannot be present in a Resource
5453     instance.
5454
5455   is : ['interface']
5456   get:
5457     description: |
5458       Defines a time period for information retrieval, action or other behaviour.
5459
5460   responses :
5461     200:
5462       body:
5463         application/json:
5464           schema: /
5465             {
5466               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.time.period.json#",
5467               "$schema": "http://json-schema.org/draft-04/schema#",
5468               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5469 rights reserved.",
5470               "title": "Time Period",
5471               "definitions": {
5472                 "oic.r.time.period": {
5473                   "type": "object",
5474                   "properties": {
5475                     "startTime": {
5476                       "type": "string",
5477                       "description": "Start time for the time period"
```

```

5478         },
5479         "stopTime": {
5480             "type": "string",
5481             "description": "Stop time for the time period, if present interval cannot
5482 be present"
5483         },
5484         "interval": {
5485             "type": "integer",
5486             "description": "Time interval in minutes after the startTime, if present
5487 stopTime cannot be present"
5488         },
5489     },
5490     "required": ["startTime"]
5491 }
5492 },
5493 "type": "object",
5494 "allOf": [
5495     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5496     {"$ref": "#/definitions/oic.r.time.period"}
5497 ]
5498 }
5499
5500 example: /
5501 {
5502     "rt": ["oic.r.time.period"],
5503     "id": "unique_example_id",
5504     "startTime": "2015-01-09T14:30Z",
5505     "stopTime": "2015-01-09T14:45Z"
5506 }
5507
5508 post:
5509     description: |
5510         Sets or updates a time period for information retrieval, action or other behavior.
5511
5512     body:
5513         application/json:
5514             schema: /
5515                 {
5516                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.time.period.json#",
5517                     "$schema": "http://json-schema.org/draft-04/schema#",
5518                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
5519 reserved.",
5520                     "title": "Time Period",
5521                     "definitions": {
5522                         "oic.r.time.period": {
5523                             "type": "object",
5524                             "properties": {
5525                                 "startTime": {
5526                                     "type": "string",
5527                                     "description": "Start time for the time period"
5528                                 },
5529                                 "stopTime": {
5530                                     "type": "string",
5531                                     "description": "Stop time for the time period, if present interval cannot be
5532 present"
5533                                 },
5534                                 "interval": {
5535                                     "type": "integer",
5536                                     "description": "Time interval in minutes after the startTime, if present
5537 stopTime cannot be present"
5538                                 }
5539                             },
5540                             "required": ["startTime"]
5541                         }
5542                     },
5543                     "type": "object",
5544                     "allOf": [

```

```

5545         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5546         {"$ref": "#/definitions/oic.r.time.period"}
5547     ]
5548 }
5549
5550 example: /
5551 {
5552     "id": "unique_example_id",
5553     "startTime": "2015-01-09T14:30Z",
5554     "stopTime": "2015-01-09T14:45Z"
5555 }
5556
5557 responses :
5558 200:
5559     body:
5560     application/json:
5561         schema: /
5562         {
5563             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.time.period.json#",
5564             "$schema": "http://json-schema.org/draft-04/schema#",
5565             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5566 rights reserved.",
5567             "title": "Time Period",
5568             "definitions": {
5569                 "oic.r.time.period": {
5570                     "type": "object",
5571                     "properties": {
5572                         "startTime": {
5573                             "type": "string",
5574                             "description": "Start time for the time period"
5575                         },
5576                         "stopTime": {
5577                             "type": "string",
5578                             "description": "Stop time for the time period, if present interval cannot
5579 be present"
5580                         },
5581                         "interval": {
5582                             "type": "integer",
5583                             "description": "Time interval in minutes after the startTime, if present
5584 stopTime cannot be present"
5585                         }
5586                     },
5587                     "required": ["startTime"]
5588                 }
5589             },
5590             "type": "object",
5591             "allOf": [
5592                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5593                 {"$ref": "#/definitions/oic.r.time.period"}
5594             ]
5595         }
5596
5597 example: /
5598 {
5599     "id": "unique_example_id",
5600     "startTime": "2015-01-09T14:30Z",
5601     "stopTime": "2015-01-09T14:45Z"
5602 }
5603
5604

```

6.22.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
stopTime	string			Stop time for the time period, if

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

6.22.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/TimePeriodResURI		get	post		

6.23 Activity Count

6.23.1 Introduction

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

6.23.2 Example URI

/ActivityCountResURI

6.23.3 Resource Type

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

6.23.4 RAML Definition

```

#%RAML 0.8
title: OICActivityCount
version: v1.1.0-20160519

traits:
  - interface :
      queryParameters:
        if:
          enum: ["oic.if.s", "oic.if.a", "oic.if.baseline"]

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

  is : ['interface']
  get:
    description: |
      Retrieves the current activity count.

    responses :
      200:
        body:
          application/json:

```

```

5643         schema: /
5644             {
5645                 "id":
5646 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.activity.count.json#",
5647                 "$schema": "http://json-schema.org/draft-04/schema#",
5648                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5649 rights reserved.",
5650                 "title": "Activity Count Sensor",
5651                 "definitions": {
5652                     "oic.r.sensor.activity.count": {
5653                         "properties": {
5654                             "count": {
5655                                 "type": "integer",
5656                                 "description": "Current or Target count."
5657                             }
5658                         }
5659                     }
5660                 },
5661                 "type": "object",
5662                 "allOf": [
5663                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5664                     {"$ref": "#/definitions/oic.r.sensor.activity.count"}
5665                 ],
5666                 "required": ["count"]
5667             }
5668
5669         example: /
5670             {
5671                 "rt":      ["oic.r.sensor.activity.count"],
5672                 "id":      "unique_example_id",
5673                 "count":   2500
5674             }
5675
5676     post:
5677         description: |
5678             Sets the count target
5679
5680         body:
5681             application/json:
5682                 schema: /
5683                     {
5684                         "id":
5685 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.activity.count.json#",
5686                         "$schema": "http://json-schema.org/draft-04/schema#",
5687                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
5688 reserved.",
5689                         "title": "Activity Count Sensor",
5690                         "definitions": {
5691                             "oic.r.sensor.activity.count": {
5692                                 "properties": {
5693                                     "count": {
5694                                         "type": "integer",
5695                                         "description": "Current or Target count."
5696                                     }
5697                                 }
5698                             }
5699                         },
5700                         "type": "object",
5701                         "allOf": [
5702                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5703                             {"$ref": "#/definitions/oic.r.sensor.activity.count"}
5704                         ],
5705                         "required": ["count"]
5706                     }
5707
5708                 example: /

```



```

5709     {
5710         "id": "unique_example_id",
5711         "count": 5000
5712     }
5713
5714     responses :
5715         200:
5716             body:
5717                 application/json:
5718                     schema: /
5719                         {
5720                             "id":
5721 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.activity.count.json#",
5722                             "$schema": "http://json-schema.org/draft-04/schema#",
5723                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5724 rights reserved.",
5725                             "title": "Activity Count Sensor",
5726                             "definitions": {
5727                                 "oic.r.sensor.activity.count": {
5728                                     "properties": {
5729                                         "count": {
5730                                             "type": "integer",
5731                                             "description": "Current or Target count."
5732                                         }
5733                                     }
5734                                 },
5735                             },
5736                             "type": "object",
5737                             "allOf": [
5738                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
5739                                 { "$ref": "#/definitions/oic.r.sensor.activity.count" }
5740                             ],
5741                             "required": ["count"]
5742                         }
5743
5744                     example: /
5745                         {
5746                             "id": "unique_example_id",
5747                             "count": 5000
5748                         }
5749

```

5750 6.23.5 Property Definition

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

5751 6.23.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/ActivityCountResURI		get	post		

5752 6.24 Atmospheric Pressure Sensor

5753 6.24.1 Introduction

5754 This resource provides a measurement of Mean Sea Level Pressure experienced at the measuring
5755 point expressed in millibars. The value is float which describes the atmospheric pressure in hPa
5756 (hectoPascals). Note that hPa and the also commonly used unit of millibars (mbar) are numerically
5757 equivalent.

5758 6.24.2 Example URI

5759 /AtmosphericPressureResURI

6.24.3 Resource Type

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

6.24.4 RAML Definition

```
5763 #%RAML 0.8
5764 title: OICAtmosphericPressureSensor
5765 version: v1.1.0-20160519
5766 traits:
5767   - interface :
5768     queryParameters:
5769       if:
5770         enum: ["oic.if.s", "oic.if.baseline"]
5771
5772 /AtmosphericPressureResURI:
5773   description: |
5774     This resource provides a measurement of Mean Sea Level Pressure experienced at the measuring
5775     point expressed in millibars.
5776     The value is float which describes the atmospheric pressure in hPa (hectoPascals).
5777     Note that hPa and the also commonly used unit of millibars (mbar) are numerically equivalent.
5778
5779   is : ['interface']
5780   get:
5781     responses :
5782       200:
5783         body:
5784           application/json:
5785             schema: /
5786               {
5787                 "id":
5788 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.atmosphericPressure.json#",
5789                 "$schema": "http://json-schema.org/draft-04/schema#",
5790                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5791 rights reserved.",
5792                 "title": "Atmospheric Pressure Sensor",
5793                 "definitions": {
5794                   "oic.r.sensor.atmosphericpressure": {
5795                     "properties": {
5796                       "atmosphericPressure": {
5797                         "type": "number",
5798                         "readOnly": true,
5799                         "description": "Current atmospheric pressure in hPa."
5800                       }
5801                     }
5802                   }
5803                 },
5804                 "type": "object",
5805                 "allOf": [
5806                   { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
5807                   { "$ref": "#/definitions/oic.r.sensor.atmosphericpressure" }
5808                 ],
5809                 "required": ["atmosphericPressure"]
5810               }
5811
5812   example: /
5813     {
5814       "rt": ["oic.r.sensor.atmosphericpressure"],
5815       "id": "unique_example_id",
5816       "atmosphericPressure": 1000.4
5817     }
5818
```

6.24.5 Property Definition

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

6.24.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/AtmosphericPressureResURI		get			

6.25 Audio Controls

6.25.1 Introduction

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

6.25.2 Example URI

/AudioResURI

6.25.3 Resource Type

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

6.25.4 RAML Definition

```
##RAML 0.8
title: OICAudio
version: v1.1.0-20160519

traits:
- interface :
    queryParameters:
        if:
            enum: ["oic.if.a", "oic.if.baseline"]

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

    is : ['interface']

    get:
        responses :
            200:
                body:
                    application/json:
                        schema: /
                        {
                            "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.audio.json#",
                            "$schema": "http://json-schema.org/draft-04/schema#",
                            "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
                            "definitions": {
```

```

5865         "oic.r.audio": {
5866             "type": "object",
5867             "properties": {
5868                 "volume": {
5869                     "type": "integer",
5870                     "description": "Volume setting of an audio rendering device.",
5871                     "minimum": 0,
5872                     "maximum": 100
5873                 },
5874                 "mute": {
5875                     "type": "boolean",
5876                     "description": "Mute setting of an audio rendering device"
5877                 }
5878             }
5879         },
5880     },
5881     "type": "object",
5882     "allOf": [
5883         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5884         {"$ref": "#/definitions/oic.r.audio"}
5885     ],
5886     "required": ["volume", "mute"]
5887 }
5888
5889 example: /
5890 {
5891     "rt":      ["oic.r.audio"],
5892     "id":      "unique_example_id",
5893     "volume":  50,
5894     "mute":    false
5895 }
5896
5897 post:
5898 body:
5899 application/json:
5900 schema: /
5901 {
5902     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.audio.json#",
5903     "$schema": "http://json-schema.org/draft-04/schema#",
5904     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
5905 reserved.",
5906     "definitions": {
5907         "oic.r.audio": {
5908             "type": "object",
5909             "properties": {
5910                 "volume": {
5911                     "type": "integer",
5912                     "description": "Volume setting of an audio rendering device.",
5913                     "minimum": 0,
5914                     "maximum": 100
5915                 },
5916                 "mute": {
5917                     "type": "boolean",
5918                     "description": "Mute setting of an audio rendering device"
5919                 }
5920             }
5921         }
5922     },
5923     "type": "object",
5924     "allOf": [
5925         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5926         {"$ref": "#/definitions/oic.r.audio"}
5927     ],
5928     "required": ["volume", "mute"]
5929 }
5930
5931 example: /

```

```

5932     {
5933         "id": "unique_example_id",
5934         "volume": 75,
5935         "mute": false
5936     }
5937
5938     responses :
5939         200:
5940             body:
5941                 application/json:
5942                     schema: /
5943                         {
5944                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.audio.json#",
5945                             "$schema": "http://json-schema.org/draft-04/schema#",
5946                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5947 rights reserved.",
5948                             "definitions": {
5949                                 "oic.r.audio": {
5950                                     "type": "object",
5951                                     "properties": {
5952                                         "volume": {
5953                                             "type": "integer",
5954                                             "description": "Volume setting of an audio rendering device.",
5955                                             "minimum": 0,
5956                                             "maximum": 100
5957                                         },
5958                                         "mute": {
5959                                             "type": "boolean",
5960                                             "description": "Mute setting of an audio rendering device"
5961                                         }
5962                                     }
5963                                 }
5964                             },
5965                             "type": "object",
5966                             "allOf": [
5967                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5968                                 {"$ref": "#/definitions/oic.r.audio"}
5969                             ],
5970                             "required": ["volume", "mute"]
5971                         }
5972
5973                     example: /
5974                         {
5975                             "id": "unique_example_id",
5976                             "volume": 75,
5977                             "mute": false
5978                         }
5979

```

6.25.5 Property Definition

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

6.25.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/AudioResURI		get	post		

6.26 Auto Focus

6.26.1 Introduction

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

6.26.2 Example URI

/AutoFocusResURI

6.26.3 Resource Type

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

6.26.4 RAML Definition

```
##RAML 0.8
title: OICAutoFocus
version: v1.1.0-20160519

traits:
  - interface :
      queryParameters:
        if:
          enum: ["oic.if.a", "oic.if.baseline"]

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

  is : ['interface']

  get:
    responses :
      200:
        body:
          application/json:
            schema: /
              {
                "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.autofocus.json#",
                "$schema": "http://json-schema.org/draft-04/schema#",
                "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
                "title": "Auto Focus",
                "definitions": {
                  "oic.r.autofocus": {
                    "type": "object",
                    "properties": {
                      "autoFocus": {
                        "type": "boolean",
                        "description": "Status of the Auto Focus"
                      }
                    }
                  }
                }
              },
            "type": "object",
            "allOf": [
              {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
              {"$ref": "#/definitions/oic.r.autofocus"}
            ]
          }
```

```

6039         ],
6040         "required": [ "autoFocus" ]
6041     }
6042
6043     example: /
6044     {
6045         "rt":          ["oic.r.autofocus"],
6046         "id":          "unique_example_id",
6047         "autoFocus":   false
6048     }
6049
6050     post:
6051     body:
6052     application/json:
6053     schema: /
6054     {
6055         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.autofocus.json#",
6056         "$schema": "http://json-schema.org/draft-04/schema#",
6057         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
6058 reserved.",
6059         "title": "Auto Focus",
6060         "definitions": {
6061             "oic.r.autofocus": {
6062                 "type": "object",
6063                 "properties": {
6064                     "autoFocus": {
6065                         "type": "boolean",
6066                         "description": "Status of the Auto Focus"
6067                     }
6068                 }
6069             }
6070         },
6071         "type": "object",
6072         "allOf": [
6073             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
6074             { "$ref": "#/definitions/oic.r.autofocus" }
6075         ],
6076         "required": [ "autoFocus" ]
6077     }
6078
6079     example: /
6080     {
6081         "id":          "unique_example_id",
6082         "autoFocus":   true
6083     }
6084
6085     responses :
6086     200:
6087     body:
6088     application/json:
6089     schema: /
6090     {
6091         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.autofocus.json#",
6092         "$schema": "http://json-schema.org/draft-04/schema#",
6093         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6094 rights reserved.",
6095         "title": "Auto Focus",
6096         "definitions": {
6097             "oic.r.autofocus": {
6098                 "type": "object",
6099                 "properties": {
6100                     "autoFocus": {
6101                         "type": "boolean",
6102                         "description": "Status of the Auto Focus"

```

```
6103         }
6104     }
6105 }
6106 },
6107 "type": "object",
6108 "allOf": [
6109     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
6110     { "$ref": "#/definitions/oic.r.autofocus" }
6111 ],
6112 "required": [ "autoFocus" ]
6113 }
6114
6115 example: /
6116 {
6117     "id": "unique_example_id",
6118     "autoFocus": true
6119 }
6120
```

6121 **6.26.5 Property Definition**

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

6122 **6.26.6 CRUDN behaviour**

Resource	Create	Read	Update	Delete	Notify
/AutoFocusResURI		get	post		

6123 **6.27 Automatic Document Feeder**

6124 **6.27.1 Introduction**

6125 This resource describes the state of an automatic document feeder, typically used with a scanner.
6126 The states are read only. The adfStates is an array of the possible operational states.
6127 adfProcessing is the OK state, other states are errors or require 'user attention'. The
6128 currentAdfState is the current value of the ADF state on the device.

6129 **6.27.2 Example URI**

6130 /AutomaticDocumentFeederResURI

6131 **6.27.3 Resource Type**

6132 The resource type (rt) is defined as: oic.r.automaticdocumentfeeder.

6133 **6.27.4 RAML Definition**

```
6134 #%RAML 0.8
6135 title: OICAutomaticDocumentFeeder
6136 version: v1.1.0-20160519
6137 traits:
6138   - interface :
6139       queryParameters:
6140           if:
6141               enum: ["oic.if.s", "oic.if.baseline"]
6142
6143 /AutomaticDocumentFeederResURI:
6144     description: |
6145         This resource describes the state of an automatic document feeder, typically used with a
6146         scanner.
6147         The states are read only.
6148         The adfStates is an array of the possible operational states.
6149         adfProcessing is the OK state, other states are errors or require 'user attention'.
6150         The currentAdfState is the current value of the ADF state on the device.
6151
```



```

6152     is : ['interface']
6153     get:
6154         description: |
6155             Retrieves the current automatic document feeder state.
6156
6157     responses :
6158         200:
6159             body:
6160                 application/json:
6161                     schema: /
6162                         {
6163                             "id":
6164 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.automaticDocumentFeeder.json#",
6165                             "$schema": "http://json-schema.org/draft-04/schema#",
6166                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6167 rights reserved.",
6168                             "title": "Automatic Document Feeder",
6169                             "definitions": {
6170                                 "oic.r.automaticdocumentfeeder": {
6171                                     "type": "object",
6172                                     "properties": {
6173                                         "adfStates": {
6174                                             "type": "array",
6175                                             "readOnly": true,
6176                                             "description": "array of the possible adf states.",
6177                                             "items": {
6178                                                 "type": "string"
6179                                             }
6180                                         },
6181                                         "currentAdfState": {
6182                                             "type": "string",
6183                                             "readOnly": true,
6184                                             "description": "Current adf state."
6185                                         }
6186                                     }
6187                                 }
6188                             },
6189                             "type": "object",
6190                             "allOf": [
6191                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6192                                 {"$ref": "#/definitions/oic.r.automaticdocumentfeeder"}
6193                             ],
6194                             "required": ["adfStates", "currentAdfState"]
6195                         }
6196
6197     example: /
6198         {
6199             "rt":
6200                 ["oic.r.automaticdocumentfeeder"],
6201             "id":
6202                 "unique_example_id",
6203             "adfStates":
6204                 ["adfProcessing", "adfEmpty", "adfJam", "adfLoaded",
6205 "adfMispick", "adfHatchOpen", "adfDuplexPageTooShort", "adfDuplexPageTooLong",
6206 "adfMultipickDetected", "adfInputTrayFailed", "adfInputTrayOverloaded"],
6207             "currentAdfState": "adfProcessing"
6208         }

```

6.27.5 Property Definition

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

6208 6.27.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/AutomaticDocumentFeederResURI		get			

6209 6.28 Button Switch

6210 6.28.1 Introduction

6211 This resource describes the operation of a button style switch. The value is a boolean. A value of
 6212 'true' means that the button is being pushed/pressed. A value of 'false' means that the button is
 6213 not being pushed/pressed.

6214 6.28.2 Example URI

6215 /ButtonResURI

6216 6.28.3 Resource Type

6217 The resource type (rt) is defined as: oic.r.button.

6218 6.28.4 RAML Definition

```

6219 #%RAML 0.8
6220 title: OICButton
6221 version: v1.1.0-20160519
6222 traits:
6223   - interface :
6224       queryParameters:
6225         if:
6226           enum: ["oic.if.s", "oic.if.baseline"]
6227
6228 /ButtonResURI:
6229   description: |
6230     This resource describes the operation of a button style switch.
6231     The value is a boolean.
6232     A value of 'true' means that the button is being pushed/pressed.
6233     A value of 'false' means that the button is not being pushed/pressed.
6234
6235   is : ['interface']
6236   get:
6237     responses :
6238       200:
6239         body:
6240           application/json:
6241             schema: /
6242               {
6243                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.button.json#",
6244                 "$schema": "http://json-schema.org/draft-04/schema#",
6245                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6246 rights reserved.",
6247                 "title": "Button Switch",
6248                 "definitions": {
6249                   "oic.r.button": {
6250                     "properties": {
6251                       "value": {
6252                         "type": "boolean",
6253                         "readOnly": true,
6254                         "description": "Status of the button"
6255                       }
6256                     }
6257                   }
6258                 },
6259                 "type": "object",
6260                 "allOf": [

```

```

6261         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6262         {"$ref": "#/definitions/oic.r.button"}
6263     ],
6264     "required": ["value"]
6265 }
6266
6267     example: /
6268     {
6269         "rt":      ["oic.r.button"],
6270         "id":      "unique_example_id",
6271         "value":   true
6272     }
6273

```

6.28.5 Property Definition

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

6.28.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/ButtonResURI		get			

6.29 Carbon Dioxide Sensor

6.29.1 Introduction

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

6.29.2 Example URI

/CarbonDioxideResURI

6.29.3 Resource Type

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

6.29.4 RAML Definition

```

6286 #%RAML 0.8
6287 title: OICCarbonDioxideSensor
6288 version: v1.1.0-20160519
6289 traits:
6290   - interface :
6291       queryParameters:
6292           if:
6293               enum: ["oic.if.s", "oic.if.baseline"]
6294
6295 /CarbonDioxideResURI:
6296     description: |
6297         This resource describes whether carbon dioxide has been sensed or not.
6298         The value is a boolean.
6299         A value of 'true' means that carbon dioxide has been detected.
6300         A value of 'false' means that carbon dioxide has not been detected.
6301
6302     is : ['interface']
6303     get:
6304         responses :
6305             200:
6306                 body:
6307                     application/json:

```

```

6308     schema: /
6309         {
6310             "id":
6311 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.carbonDioxide.json#",
6312             "$schema": "http://json-schema.org/draft-04/schema#",
6313             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6314 rights reserved.",
6315             "title": "Carbon Dioxide Sensor",
6316             "definitions": {
6317                 "oic.r.sensor.carbondioxide": {
6318                     "allOf": [
6319                         {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
6320                     ]
6321                 }
6322             },
6323             "type": "object",
6324             "allOf": [
6325                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6326                 {"$ref": "#/definitions/oic.r.sensor.carbondioxide"}
6327             ],
6328             "required": ["value"]
6329         }
6330
6331     example: /
6332         {
6333             "rt": ["oic.r.sensor.carbondioxide"],
6334             "id": "unique_example_id",
6335             "value": true
6336         }
6337

```

6.29.5 Property Definition

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

6.29.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/CarbonDioxideResURI		get			

6.30 Carbon Monoxide Sensor

6.30.1 Introduction

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

6.30.2 Example URI

/CarbonMonoxideResURI

6.30.3 Resource Type

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

6.30.4 RAML Definition

```

6350 #%RAML 0.8
6351 title: OIICarbonMonoxideSensor
6352 version: v1.1.0-20160519
6353 traits:
6354   - interface :
6355       queryParameters:
6356           if:

```

```

6357         enum: ["oic.if.s", "oic.if.baseline"]
6358
6359 /CarbonMonoxideResURI:
6360     description: |
6361         This resource describes whether carbon monoxide has been sensed or not.
6362         The value is a boolean.
6363         A value of 'true' means that carbon monoxide has been detected.
6364         A value of 'false' means that carbon monoxide has not been detected.
6365
6366     is : ['interface']
6367     get:
6368         responses :
6369             200:
6370                 body:
6371                     application/json:
6372                         schema: /
6373                             {
6374                                 "id":
6375 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.carbonMonoxide.json#",
6376                                 "$schema": "http://json-schema.org/draft-04/schema#",
6377                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6378 rights reserved.",
6379                                 "title": "Carbon Monoxide Sensor",
6380                                 "definitions": {
6381                                     "oic.r.sensor.carbonmonoxide": {
6382                                         "allOf": [
6383                                             { "$ref": "oic.r.sensor.json#/definitions/oic.r.sensor" }
6384                                         ]
6385                                     }
6386                                 },
6387                                 "type": "object",
6388                                 "allOf": [
6389                                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
6390                                     { "$ref": "#/definitions/oic.r.sensor.carbonmonoxide" }
6391                                 ],
6392                                 "required": ["value"]
6393                             }
6394
6395                         example: /
6396                             {
6397                                 "rt":      ["oic.r.sensor.carbonmonoxide"],
6398                                 "id":      "unique_example_id",
6399                                 "value":   true
6400                             }
6401

```

6402 6.30.5 Property Definition

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

6403 6.30.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/CarbonMonoxideResURI		get			

6.31 Auto White Balance

6.31.1 Introduction

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

6.31.2 Example URI

/AutoWhiteBalanceResURI

6.31.3 Resource Type

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

6.31.4 RAML Definition

```
##RAML 0.8
title: OICAutoWhiteBalance
version: v1.1.0-20160519

traits:
  - interface :
      queryParameters:
        if:
          enum: ["oic.if.a", "oic.if.baseline"]

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

  is : ['interface']

  get:
    responses :
      200:
        body:
          application/json:
            schema: /
              {
                "id":
"http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.autowhitebalance.json#",
                "$schema": "http://json-schema.org/draft-04/schema#",
                "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
                "title": "Auto White Balance",
                "definitions": {
                  "oic.r.colour.autowhitebalance": {
                    "type": "object",
                    "properties": {
                      "autoWhiteBalance": {
                        "type": "boolean",
                        "description": "Status of the Auto White balance"
                      }
                    }
                  }
                },
                "type": "object",
                "allOf": [
                  { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
                  { "$ref": "#/definitions/oic.r.colour.autowhitebalance" }
                ],
                "required": [ "autoWhiteBalance" ]
              }
```

```

6461         }
6462
6463     example: /
6464         {
6465             "rt": ["oic.r.colour.autowhitebalance"],
6466             "id": "unique_example_id",
6467             "autoWhiteBalance": false
6468         }
6469
6470     post:
6471         body:
6472             application/json:
6473                 schema: /
6474                     {
6475                         "id":
6476 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.autowhitebalance.json#",
6477                         "$schema": "http://json-schema.org/draft-04/schema#",
6478                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
6479 reserved.",
6480                         "title": "Auto White Balance",
6481                         "definitions": {
6482                             "oic.r.colour.autowhitebalance": {
6483                                 "type": "object",
6484                                 "properties": {
6485                                     "autoWhiteBalance": {
6486                                         "type": "boolean",
6487                                         "description": "Status of the Auto White balance"
6488                                     }
6489                                 }
6490                             },
6491                             "type": "object",
6492                             "allOf": [
6493                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
6494                                 { "$ref": "#/definitions/oic.r.colour.autowhitebalance" }
6495                             ],
6496                             "required": [ "autoWhiteBalance" ]
6497                         }
6498
6499
6500     example: /
6501         {
6502             "id": "unique_example_id",
6503             "autoWhiteBalance": true
6504         }
6505
6506     responses :
6507         200:
6508             body:
6509                 application/json:
6510                     schema: /
6511                         {
6512                             "id":
6513 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.autowhitebalance.json#",
6514                             "$schema": "http://json-schema.org/draft-04/schema#",
6515                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6516 rights reserved.",
6517                             "title": "Auto White Balance",
6518                             "definitions": {
6519                                 "oic.r.colour.autowhitebalance": {
6520                                     "type": "object",
6521                                     "properties": {
6522                                         "autoWhiteBalance": {
6523                                             "type": "boolean",
6524                                             "description": "Status of the Auto White balance"

```

```

6525         }
6526     }
6527 }
6528 },
6529 "type": "object",
6530 "allOf": [
6531     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
6532     { "$ref": "#/definitions/oic.r.colour.autowhitebalance" }
6533 ],
6534 "required": [ "autoWhiteBalance" ]
6535 }
6536
6537 example: /
6538 {
6539     "id": "unique_example_id",
6540     "autoWhiteBalance": true
6541 }
6542

```

6.31.5 Property Definition

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

6.31.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/AutoWhiteBalanceResURI		get	post		

6.32 Colour Saturation

6.32.1 Introduction

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

6.32.2 Example URI

/ColourSaturationResURI

6.32.3 Resource Type

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

6.32.4 RAML Definition

```

6556 #%RAML 0.8
6557 title: OICColourSaturation
6558 version: v1.1.0-20160519
6559 traits:
6560   - interface :
6561       queryParameters:
6562           if:
6563               enum: ["oic.if.a", "oic.if.baseline"]
6564
6565 /ColourSaturationResURI:
6566     description: |
6567         This resource describes a Colour saturation value.
6568         The value is an integer.
6569         A coloursaturation has a range of [0,100].
6570         A coloursaturation value of 0 means producing black and white images.
6571         A coloursaturation value of 50 means producing device specific normal colour images.

```



```

6572         A coloursaturation value of 100 means producing device very full colour images.
6573
6574     is : ['interface']
6575
6576     get:
6577         responses :
6578             200:
6579                 body:
6580                     application/json:
6581                         schema: /
6582                             {
6583                                 "id":
6584                                     "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.saturation.json#",
6585                                 "$schema": "http://json-schema.org/draft-04/schema#",
6586                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6587 rights reserved.",
6588                                 "title": "Colour Saturation",
6589                                 "definitions": {
6590                                     "oic.r.colour.saturation": {
6591                                         "type": "object",
6592                                         "properties": {
6593                                             "colourSaturation": {
6594                                                 "type": "integer",
6595                                                 "description": "The colour saturation value",
6596                                                 "minimum": 0,
6597                                                 "maximum": 100
6598                                             }
6599                                         }
6600                                     }
6601                                 },
6602                                 "type": "object",
6603                                 "allof": [
6604                                     { "$ref": "oic.core.json#/definitions/oic.core" },
6605                                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
6606                                     { "$ref": "#/definitions/oic.r.colour.saturation" }
6607                                 ],
6608                                 "required": [ "colourSaturation" ]
6609                             }
6610
6611                         example: /
6612                             {
6613                                 "rt":          ["oic.r.colour.saturation"],
6614                                 "id":          "unique_example_id",
6615                                 "colourSaturation": 50
6616                             }
6617
6618     post:
6619         body:
6620             application/json:
6621                 schema: /
6622                     {
6623                         "id":
6624                             "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.saturation.json#",
6625                         "$schema": "http://json-schema.org/draft-04/schema#",
6626                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
6627 reserved.",
6628                         "title": "Colour Saturation",
6629                         "definitions": {
6630                             "oic.r.colour.saturation": {
6631                                 "type": "object",
6632                                 "properties": {
6633                                     "colourSaturation": {
6634                                         "type": "integer",
6635                                         "description": "The colour saturation value",
6636                                         "minimum": 0,
6637                                         "maximum": 100

```

```

6637         }
6638     }
6639 }
6640 },
6641 "type": "object",
6642 "allOf": [
6643     {"$ref": "oic.core.json#/definitions/oic.core"},
6644     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6645     {"$ref": "#/definitions/oic.r.colour.saturation"}
6646 ],
6647 "required": [ "colourSaturation" ]
6648 }
6649
6650 example: /
6651 {
6652     "id": "unique_example_id",
6653     "colourSaturation": 60
6654 }
6655
6656 responses :
6657 200:
6658     body:
6659         application/json:
6660             schema: /
6661                 {
6662                     "id":
6663 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.saturation.json#",
6664                     "$schema": "http://json-schema.org/draft-04/schema#",
6665                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6666 rights reserved.",
6667                     "title": "Colour Saturation",
6668                     "definitions": {
6669                         "oic.r.colour.saturation": {
6670                             "type": "object",
6671                             "properties": {
6672                                 "colourSaturation": {
6673                                     "type": "integer",
6674                                     "description": "The colour saturation value",
6675                                     "minimum": 0,
6676                                     "maximum": 100
6677                                 }
6678                             }
6679                         }
6680                     },
6681                     "type": "object",
6682                     "allOf": [
6683                         {"$ref": "oic.core.json#/definitions/oic.core"},
6684                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6685                         {"$ref": "#/definitions/oic.r.colour.saturation"}
6686                     ],
6687                     "required": [ "colourSaturation" ]
6688                 }
6689
6690 example: /
6691 {
6692     "id": "unique_example_id",
6693     "colourSaturation": 60
6694 }
6695

```

6.32.5 Property Definition

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

6697 6.32.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/ColourSaturationResURI		get	post		

6698 6.33 Contact Sensor

6699 6.33.1 Introduction

6700 This resource describes whether a contact sensor has been tripped or not. Typical use case is in
 6701 Security Systems detecting window or door open. The value is a boolean. A value of 'true' means
 6702 that contact has been broken (open). A value of 'false' means that contact is in place (closed).

6703 6.33.2 Example URI

6704 /ContactResURI

6705 6.33.3 Resource Type

6706 The resource type (rt) is defined as: oic.r.sensor.contact.

6707 6.33.4 RAML Definition

```

6708 #%RAML 0.8
6709 title: OIContactSensor
6710 version: v1.1.0-20160519
6711 traits:
6712   - interface :
6713       queryParameters:
6714           if:
6715               enum: ["oic.if.s", "oic.if.baseline"]
6716
6717 /ContactResURI:
6718   description: |
6719     This resource describes whether a contact sensor has been tripped or not.
6720     Typical use case is in Security Systems detecting window or door open.
6721     The value is a boolean.
6722     A value of 'true' means that contact has been broken (open).
6723     A value of 'false' means that contact is in place (closed).
6724
6725   is : ['interface']
6726   get:
6727     responses :
6728       200:
6729         body:
6730           application/json:
6731             schema: /
6732               {
6733                 "id":
6734                   "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.contact.json#",
6735                 "$schema": "http://json-schema.org/draft-04/schema#",
6736                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6737 rights reserved.",
6738                 "title": "Contact Sensor",
6739                 "definitions": {
6740                   "oic.r.sensor.contact": {
6741                     "allOf": [
6742                       { "$ref": "oic.r.sensor.json#/definitions/oic.r.sensor" }
6743                     ]
6744                   }
6745                 },
6746                 "type": "object",
6747                 "allOf": [
6748                   { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
6749                   { "$ref": "#/definitions/oic.r.sensor.contact" }
6750                 ]
6751               }

```

```

6750         ],
6751         "required": ["value"]
6752     }
6753
6754     example: /
6755     {
6756         "rt":      ["oic.r.sensor.contact"],
6757         "id":      "unique_example_id",
6758         "value":   true
6759     }
6760

```

6.33.5 Property Definition

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

6.33.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/ContactResURI		get			

6.34 Demand Response Load Control (DRLC).

6.34.1 Introduction

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

6.34.2 Example URI

/DRLCResURI

6.34.3 Resource Type

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

6.34.4 RAML Definition

```

6774 #%RAML 0.8
6775 title: OICDRLC
6776 version: v1.1.0-20160519
6777 traits:
6778   - interface :
6779       queryParameters:
6780           if:
6781               enum: ["oic.if.b", "oic.if.baseline"]
6782
6783 /DRLCResURI:
6784     description: |
6785         This resource describes any to be applied or currently being applied DRLC signal.
6786         The DRType is the ApplianceLoadReductionType defined in Zigbee/HA Smart Energy Profile 2.0.
6787         Start is a string containing an ISO8601 encoded start time.
6788         The duration value is in minutes.
6789         Override indicates whether the consumer has overridden the request (true) or not (false).
6790
6791     is : ['interface']
6792     get:
6793         description: |
6794             Provides the current DRLC action that is being applied.
6795

```

```

6796     responses :
6797         200:
6798             body:
6799                 application/json:
6800                     schema: /
6801                         {
6802                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.drlc.json#",
6803                             "$schema": "http://json-schema.org/draft-04/schema#",
6804                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6805 rights reserved.",
6806                             "definitions": {
6807                                 "oic.r.energy.drlc": {
6808                                     "type": "object",
6809                                     "properties": {
6810                                         "DRType": {
6811                                             "type": "integer",
6812                                             "description": "The to be applied demand-response type"
6813                                         },
6814                                         "start": {
6815                                             "type": "string",
6816                                             "description": "The start time for the application of DR"
6817                                         },
6818                                         "duration": {
6819                                             "type": "integer",
6820                                             "description": "The duration of the to be applied DR type"
6821                                         },
6822                                         "override": {
6823                                             "type": "boolean",
6824                                             "description": "Whether the consumer has overridden the application of DR"
6825                                         }
6826                                     }
6827                                 },
6828                                 "type": "object",
6829                                 "allOf": [
6830                                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
6831                                     { "$ref": "#/definitions/oic.r.energy.drlc" }
6832                                 ],
6833                                 "required": ["DRType"]
6834                             }
6835                         }
6836
6837                     example: /
6838                         {
6839                             "rt": ["oic.r.energy.drlc"],
6840                             "id": "unique_example_id",
6841                             "DRType": 1,
6842                             "start": "2015-01-09T16:45Z",
6843                             "duration": 10,
6844                             "override": false
6845                         }
6846
6847         put:
6848             description: |
6849                 Provides the DRLC action to be applied to the device or updates an existing action.
6850
6851             body:
6852                 application/json:
6853                     schema: /
6854                         {
6855                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.drlc.json#",
6856                             "$schema": "http://json-schema.org/draft-04/schema#",
6857                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
6858 reserved.",
6859                             "definitions": {
6860                                 "oic.r.energy.drlc": {

```

```

6861         "type": "object",
6862         "properties": {
6863             "DRTType": {
6864                 "type": "integer",
6865                 "description": "The to be applied demand-response type"
6866             },
6867             "start": {
6868                 "type": "string",
6869                 "description": "The start time for the application of DR"
6870             },
6871             "duration": {
6872                 "type": "integer",
6873                 "description": "The duration of the to be applied DR type"
6874             },
6875             "override": {
6876                 "type": "boolean",
6877                 "description": "Whether the consumer has overridden the application of DR"
6878             }
6879         }
6880     },
6881     "type": "object",
6882     "allOf": [
6883         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
6884         { "$ref": "#/definitions/oic.r.energy.drlc" }
6885     ],
6886     "required": ["DRTType"]
6887 }
6888
6889
6890 example: /
6891 {
6892     "rt": ["oic.r.energy.drlc"],
6893     "id": "unique_example_id",
6894     "DRTType": 1,
6895     "start": "2015-01-09T16:45Z",
6896     "duration": 10
6897 }
6898
6899 responses :
6900 200:
6901     description: |
6902         Indicates that the target DRLC resource was changed.
6903         The new resource attributes are provided in the response.
6904
6905     body:
6906         application/json:
6907             schema: /
6908                 {
6909                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.drlc.json#",
6910                     "$schema": "http://json-schema.org/draft-04/schema#",
6911                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6912 rights reserved.",
6913                     "definitions": {
6914                         "oic.r.energy.drlc": {
6915                             "type": "object",
6916                             "properties": {
6917                                 "DRTType": {
6918                                     "type": "integer",
6919                                     "description": "The to be applied demand-response type"
6920                                 },
6921                                 "start": {
6922                                     "type": "string",
6923                                     "description": "The start time for the application of DR"
6924                                 },
6925                                 "duration": {
6926                                     "type": "integer",
6927                                     "description": "The duration of the to be applied DR type"

```

```

6928         },
6929         "override": {
6930             "type": "boolean",
6931             "description": "Whether the consumer has overridden the application of DR"
6932         }
6933     }
6934 }
6935 },
6936 "type": "object",
6937 "allOf": [
6938     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6939     {"$ref": "#/definitions/oic.r.energy.drlc"}
6940 ],
6941 "required": ["DRType"]
6942 }
6943

```

```

6944 example: /
6945 {
6946     "DRType": 1,
6947     "id": "unique_example_id",
6948     "start": "2015-01-09T17:00Z",
6949     "duration": 15,
6950     "override": false
6951 }
6952

```

201:

```

6954 description: |
6955     Indicates successful creation of the DRLC resource with the attributes provided.
6956     The response includes the URI of the created resource.
6957

```

```

6958 body:
6959     application/json:

```

```

6960         schema: /
6961         {
6962             "id": "http://openinterconnect.org/iotdatamodels/chemas/oic.create.json#",
6963             "$schema": "http://json-schema.org/draft-04/schema#",
6964             "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
6965 reserved.",
6966             "definitions": {
6967                 "oic.create": {
6968                     "type": "object",
6969                     "properties": {
6970                         "ResURI": { "type": "string" }
6971                     }
6972                 }
6973             },
6974             "type": "object",
6975             "allOf": [
6976                 {"$ref": "#/definitions/oic.create"}
6977             ]
6978         }
6979

```

```

6980 example: /
6981 {
6982     "ResURI": "/MyDevice/MyDRLCURI"
6983 }
6984

```

6.34.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
DRType	integer	yes		The to be applied demand-response type

start	string			The start time for the application of DR
duration	integer			The duration of the to be applied DR type
override	boolean			Whether the consumer has overridden the application of DR

6.34.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/DRLCResURI	put	get			

6.35 Energy Overload/Circuit Breaker

6.35.1 Introduction

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

6.35.2 Example URI

/EnergyOverloadResURI

6.35.3 Resource Type

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

6.35.4 RAML Definition

```

#%RAML 0.8
title: OICEnergyOverload
version: v1.1.0-20160519

traits:
- interface :
    queryParameters:
        if:
            enum: ["oic.if.s", "oic.if.baseline"]

/energyOverloadResURI:

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

    is : ['interface']

    get:
        responses :
            200:
                body:
                    application/json:
                        schema: /
                            {
                                "id":
"http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.overload.json#",
                                "$schema": "http://json-schema.org/draft-04/schema#",

```



```

7025         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7026 rights reserved.",
7027         "title": "Energy Overload Sensor",
7028         "definitions": {
7029             "oic.r.energy.overload": {
7030                 "allof": [
7031                     {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
7032                 ]
7033             }
7034         },
7035         "type": "object",
7036         "allof": [
7037             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7038             {"$ref": "#/definitions/oic.r.energy.overload"}
7039         ],
7040         "required": ["value"]
7041     }
7042
7043     example: /
7044     {
7045         "rt":      ["oic.r.energy.overload"],
7046         "id":      "unique_example_id",
7047         "value": true
7048     }
7049

```

7050 6.35.5 Property Definition

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

7051 6.35.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/EnergyOverloadResURI		get			

7052 6.36 Generic Sensor

7053 6.36.1 Introduction

7054 This resource describes whether some value or property or entity has been sensed or not. The
7055 value is a boolean. A value of 'true' means that the target has been sensed. A value of 'false'
7056 means that the target has not been sensed.

7057 6.36.2 Example URI

7058 /GenericSensorResURI

7059 6.36.3 Resource Type

7060 The resource type (rt) is defined as: oic.r.sensor.

7061 6.36.4 RAML Definition

```

7062 #%RAML 0.8
7063 title: OICGenericSensor
7064 version: v1.1.0-20160519
7065 traits:
7066   - interface :
7067       queryParameters:
7068           if:
7069               enum: ["oic.if.s", "oic.if.baseline"]
7070
7071 /GenericSensorResURI:
7072     description: |

```

```

7073     This resource describes whether some value or property or entity has been sensed or not.
7074     The value is a boolean.
7075     A value of 'true' means that the target has been sensed.
7076     A value of 'false' means that the target has not been sensed.
7077
7078     is : ['interface']
7079
7079     get:
7080         responses :
7081             200:
7082                 body:
7083                     application/json:
7084                         schema: /
7085                             {
7086                                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.json#",
7087                                 "$schema": "http://json-schema.org/draft-04/schema#",
7088                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7089 rights reserved.",
7090                                 "title": "Generic Sensor",
7091                                 "definitions": {
7092                                     "oic.r.sensor": {
7093                                         "type": "object",
7094                                         "properties": {
7095                                             "value": {
7096                                                 "type": "boolean",
7097                                                 "readOnly": true,
7098                                                 "description": "true = sensed, false = not sensed."
7099                                             }
7100                                         }
7101                                     }
7102                                 },
7103                                 "type": "object",
7104                                 "allOf": [
7105                                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
7106                                     { "$ref": "#/definitions/oic.r.sensor" }
7107                                 ]
7108                             }
7109
7110                         example: /
7111                             {
7112                                 "rt":      ["oic.r.sensor"],
7113                                 "id":      "unique_example_id",
7114                                 "value": true
7115                             }
7116

```

6.36.5 Property Definition

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

6.36.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/GenericSensorResURI		get			

6.37 Glass Break Sensor

6.37.1 Introduction

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

6.37.2 Example URI

/GlassBreakResURI

6.37.3 Resource Type

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

6.37.4 RAML Definition

```
##RAML 0.8
title: OICGlassBreakSensor
version: v1.1.0-20160519

traits:
  - interface :
      queryParameters:
        if:
          enum: ["oic.if.s", "oic.if.baseline"]

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

  is : ['interface']

  get:
    responses :
      200:
        body:
          application/json:
            schema: /
              {
                "id":
"http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.glassBreak.json#",
                "$schema": "http://json-schema.org/draft-04/schema#",
                "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
                "title": "Glass Break Sensor",
                "definitions": {
                  "oic.r.sensor.glassbreak": {
                    "allOf": [
                      {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
                    ]
                  }
                },
                "type": "object",
                "allOf": [
                  {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
                  {"$ref": "#/definitions/oic.r.sensor.glassbreak"}
                ],
                "required": ["value"]
              }

            example: /
              {
                "rt":      ["oic.r.sensor.glassbreak"],
                "id":      "unique_example_id",
                "value":    true
              }
```

6.37.5 Property Definition

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

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

6.37.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/GlassBreakResURI		get			

6.38 Heart Rate Zone

6.38.1 Introduction

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

6.38.2 Example URI

/HeartRateZoneResURI

6.38.3 Resource Type

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

6.38.4 RAML Definition

```

#%RAML 0.8

title: OICHeartRateZone
version: v1.1.0-20160519

traits:
- interface :
    queryParameters:
        if:
            enum: ["oic.if.s", "oic.if.baseline"]

/HeartRateZoneResURI:

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

    is : ['interface']

    get:
        responses :
            200:
                body:
                    application/json:
                        schema: /
                            {
                                "id":
                                    "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.heart.zone.json#",
                                    "$schema": "http://json-schema.org/draft-04/schema#",
                                    "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
                                    rights reserved.",
                                    "title": "Heart Rate Zone",
                                    "definitions": {
                                        "oic.r.sensor.heart.zone": {
                                            "properties": {
                                                "heartRateZone": {
                                                    "enum": ["Zone1", "Zone2", "Zone3", "Zone4", "Zone5"],

```

```

7229         "readOnly": true,
7230         "description": "Current heart rate zone based on the Zoladz system."
7231     }
7232 }
7233 },
7234 },
7235 "type": "object",
7236 "allOf": [
7237     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7238     {"$ref": "#/definitions/oic.r.sensor.heart.zone"}
7239 ],
7240 "required": ["heartRateZone"]
7241 }
7242
7243 example: /
7244 {
7245     "rt": ["oic.r.sensor.heart.zone"],
7246     "id": "unique_example_id",
7247     "heartRateZone": "Zone3"
7248 }
7249

```

7250 6.38.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
heartRateZone	multiple types: see schema	yes	Read Only	Current heart rate zone based on the Zoladz system.

7251 6.38.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/HeartRateZoneResURI		get			

7252 6.39 Illuminance Sensor

7253 6.39.1 Introduction

7254 This resource describes an illuminance sensor. Illuminance is a float and represents the sensed
7255 luminous flux per unit area in lux.

7256 6.39.2 Example URI

7257 /IlluminanceSensorResURI

7258 6.39.3 Resource Type

7259 The resource type (rt) is defined as: oic.r.sensor.illuminance.

7260 6.39.4 RAML Definition

```

7261 #%RAML 0.8
7262 title: OICilluminanceSensor
7263 version: v1.1.0-20160519
7264 traits:
7265   - interface :
7266       queryParameters:
7267         if:
7268             enum: ["oic.if.s", "oic.if.baseline"]
7269
7270 /IlluminanceSensorResURI:
7271     description: |
7272         This resource describes an illuminance sensor.
7273         Illuminance is a float and represents the sensed luminous flux per unit area in lux.
7274

```

```

7275     is : ['interface']
7276     get:
7277         responses :
7278             200:
7279                 body:
7280                     application/json:
7281                         schema: /
7282                             {
7283                                 "id":
7284 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.illuminance.json#",
7285                                 "$schema": "http://json-schema.org/draft-04/schema#",
7286                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7287 rights reserved.",
7288                                 "title": "Illuminance Sensor",
7289                                 "definitions": {
7290                                     "oic.r.sensor.illuminance": {
7291                                         "properties": {
7292                                             "illuminance": {
7293                                                 "type": "number",
7294                                                 "readOnly": true,
7295                                                 "description": "Sensed luminous flux per unit area in lux."
7296                                             }
7297                                         }
7298                                     }
7299                                 },
7300                                 "type": "object",
7301                                 "allOf": [
7302                                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
7303                                     { "$ref": "#/definitions/oic.r.sensor.illuminance" }
7304                                 ],
7305                                 "required": ["illuminance"]
7306                             }
7307
7308                         example: /
7309                             {
7310                                 "rt":          ["oic.r.sensor.illuminance"],
7311                                 "id":          "unique_example_id",
7312                                 "illuminance": 450.0
7313                             }
7314

```

7315 6.39.5 Property Definition

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

7316 6.39.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/IlluminanceSensorResURI		get			

7317 6.40 Magnetic Field Direction Sensor

7318 6.40.1 Introduction

7319 This resource describes the direction of the Earth's magnetic field at the observer's current point
7320 in space. Typical use case includes measurement of compass readings on a personal device. The
7321 value is an array containing Hx, Hy, Hz (in that order) each of which are floats. Each of Hx, Hy and
7322 Hz are expressed in A/m (Amperes per metre)

7323 6.40.2 Example URI

7324 /MagneticFieldDirectionResURI

6.40.3 Resource Type

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

6.40.4 RAML Definition

```
7325 6.40.3 Resource Type
7326 The resource type (rt) is defined as: oic.r.sensor.magneticfielddirection.
7327 6.40.4 RAML Definition
7328 ##RAML 0.8
7329 title: OICMagneticFieldDirection
7330 version: v1.1.0-20160519
7331 traits:
7332   - interface :
7333     queryParameters:
7334       if:
7335         enum: ["oic.if.s", "oic.if.baseline"]
7336
7337 /MagneticFieldDirectionResURI:
7338   description: |
7339     This resource describes the direction of the Earth's magnetic field at the observer's current
7340     point in space.
7341     Typical use case includes measurement of compass readings on a personal device.
7342     The value is an array containing Hx, Hy, Hz (in that order) each of which are floats.
7343     Each of Hx, Hy and Hz are expressed in A/m (Amperes per metre)
7344
7345   is : ['interface']
7346   get:
7347     responses :
7348       200:
7349         body:
7350           application/json:
7351             schema: /
7352               {
7353                 "id":
7354                 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.magneticFieldDirection.json#",
7355                 "$schema": "http://json-schema.org/draft-04/schema#",
7356                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7357                 rights reserved.",
7358                 "title": "Magnetic Field Direction Sensor",
7359                 "definitions": {
7360                   "oic.r.sensor.magneticfielddirection": {
7361                     "properties": {
7362                       "value": {
7363                         "type": "array",
7364                         "readOnly": true,
7365                         "description": "Array containing Hx, Hy, Hz.",
7366                         "minItems": 3,
7367                         "maxItems": 3,
7368                         "items": {
7369                           "type": "number"
7370                         }
7371                       }
7372                     }
7373                   }
7374                 },
7375                 "type": "object",
7376                 "allOf": [
7377                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7378                   {"$ref": "#/definitions/oic.r.sensor.magneticfielddirection"}
7379                 ],
7380                 "required": ["value"]
7381               }
7382
7383   example: /
7384     {
7385       "rt":      ["oic.r.sensor.magneticfielddirection"],
```

```

7386         "id":      "unique_example_id",
7387         "value":    [100.0,15.0,90.0]
7388     }
7389

```

7390 6.40.5 Property Definition

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

7391 6.40.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/MagneticFieldDirectionResURI		get			

7392 6.41 Media

7393 6.41.1 Introduction

7394 This resource specifies the media types that an OCF Server supports. The resource is an array of
7395 media elements. Each element contains: A URL at which the specified media type can be
7396 accessed. A string array containing the definition of the media using SDP. Each entry in the
7397 sdp array is an SDP line. Each line shall follow the SDP description syntax as defined in the
7398 SDP specification. The SDP specification can be found at <http://tools.ietf.org/html/rfc4566>.

7399 6.41.2 Example URI

7400 /MediaResURI

7401 6.41.3 Resource Type

7402 The resource type (rt) is defined as: oic.r.media.

7403 6.41.4 RAML Definition

```

7404 #%RAML 0.8
7405 title: OICMedia
7406 version: v1.1.0-20160519
7407 traits:
7408   - interface :
7409       queryParameters:
7410           if:
7411               enum: ["oic.if.s", "oic.if.baseline"]
7412
7413 /MediaResURI:
7414     description: |
7415       This resource specifies the media types that an OCF Server supports.
7416       The resource is an array of media elements
7417       Each element contains:
7418         A URL at which the specified media type can be accessed.
7419         A string array containing the definition of the media using SDP.
7420         Each entry in the sdp array is an SDP line.
7421         Each line shall follow the SDP description syntax as defined in the SDP specification.
7422         The SDP specification can be found at http://tools.ietf.org/html/rfc4566.
7423
7424     is : ['interface']
7425     get:
7426         description: |
7427           Retrieves the current media resource.
7428
7429     responses :
7430         200:
7431             body:
7432                 application/json:

```



```

7433     schema: /
7434     {
7435         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.media.json#",
7436         "$schema": "http://json-schema.org/draft-04/schema#",
7437         "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7438 rights reserved.",
7439         "title": "Media",
7440         "definitions": {
7441             "oic.r.media": {
7442                 "properties": {
7443                     "media": {
7444                         "type": "array",
7445                         "items": {
7446                             "type": "object",
7447                             "properties": {
7448                                 "url": {
7449                                     "type": "string",
7450                                     "description": "url for the media instance"
7451                                 },
7452                                 "sdp": {
7453                                     "type": "array",
7454                                     "description": "Array of strings, one per SDP line",
7455                                     "items": {
7456                                         "type": "string",
7457                                         "description": "SDP media or attribute line"
7458                                     }
7459                                 }
7460                             }
7461                         }
7462                     }
7463                 }
7464             },
7465             "type": "object",
7466             "allOf": [
7467                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
7468                 { "$ref": "#/definitions/oic.r.media" }
7469             ],
7470             "required": ["media"]
7471         }
7472     }
7473
7474     example: /
7475     {
7476         "rt": ["oic.r.media"],
7477         "id": "unique_example_id",
7478         "media": [
7479             {
7480                 "url": "some example url",
7481                 "sdp": [
7482                     "m=video 1 RTP/AVP 96",
7483                     "a=rtpmap:96 H264/9000",
7484                     "a=fmtp:96 profile-level-id=42A028;packetization-mode=1"
7485                 ]
7486             },
7487             {
7488                 "url": "some other example1 url",
7489                 "sdp": [
7490                     "m=audio 2 RTP/AVP 97",
7491                     "a=rtpmap:97 MP4A-LATM/90000"
7492                 ]
7493             },
7494             {
7495                 "url": "some other example2 url",
7496                 "sdp": [
7497                     "m=video 3 RTP/AVP 98",
7498                     "a=rtpmap:98 jpeg/90000",
7499                     "a=fmtp:98 sampling=YCbCr-4:2:0;width=256;height=256"
7500                 ]
7501             }
7502         ]
7503     }

```

```

7502         ]
7503     }
7504

```

6.41.5 Property Definition

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

6.41.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/MediaResURI		get			

6.42 Media Source

6.42.1 Introduction

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

6.42.2 Example URI

/mediaSourceResURI

6.42.3 Resource Type

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

6.42.4 RAML Definition

```

7521 #%RAML 0.8
7522 title: OIC Media Source
7523 version: v1.1.0-20160519
7524 traits:
7525   - interface :
7526       queryParameters:
7527         if:
7528             enum: ["oic.if.a", "oic.if.baseline"]
7529
7530 /mediaSourceResURI:
7531     description: |
7532         This resource defines a media source that exists on a device.
7533         The source can be an input source or output source, this resource is agnostic of that.
7534         The sourceName specifies a pre-defined media input or output (e.g. "HDMI", "DVI")
7535         The sourceNumber is a numeric identifier to specify the instance (e.g
7536         "PC", 1)
7537         The sourceType is an enumeration defining whether the source is audio, video or both.
7538         The status is a boolean that determines if the specific source instance is selected or not.
7539         A status of true means that the source instance is selected.
7540         A status of false means that the source instance is not selected.
7541
7542     is : ['interface']
7543     get:
7544         responses :

```

```

7545     200:
7546     body:
7547         application/json:
7548         schema: /
7549             {
7550                 "$schema": "http://json-schema.org/draft-04/schema#",
7551                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7552 rights reserved.",
7553                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediasource.json#",
7554                 "title": "Media Source",
7555                 "definitions": {
7556                     "oic.r.mediasource": {
7557                         "properties": {
7558                             "sourceName": {
7559                                 "type": "string",
7560                                 "description": "Specifies a pre-defined media input or output"
7561                             },
7562                             "sourceNumber": {
7563                                 "type": [ "integer", "string" ],
7564                                 "readOnly": true,
7565                                 "description": "Numeric identifier to specify the instance"
7566                             },
7567                             "sourceType": {
7568                                 "enum": [ "audioOnly", "videoOnly", "audioPlusVideo" ],
7569                                 "readOnly": true,
7570                                 "description": "Specifies the type of the source"
7571                             },
7572                             "status": {
7573                                 "type": "boolean",
7574                                 "description": "Specifies if the specific source instance is selected or
7575 not"
7576                             }
7577                         }
7578                     },
7579                 },
7580                 "type": "object",
7581                 "allOf": [
7582                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
7583                     { "$ref": "#/definitions/oic.r.mediasource" }
7584                 ],
7585                 "required": [ "sourceName", "status" ]
7586             }
7587
7588     example: /
7589         {
7590             "rt": [ "oic.r.mediasource" ],
7591             "id": "unique_example_id",
7592             "sourceName": "HDMI-CEC",
7593             "sourceNumber": "1",
7594             "sourceType": "audioPlusVideo",
7595             "status": true
7596         }
7597
7598     post:
7599         description: |
7600             Changes the status of the source.
7601             Allows changes of the sourceName and the status.
7602
7603     body:
7604         application/json:
7605         schema: /
7606             {
7607                 "$schema": "http://json-schema.org/draft-04/schema#",
7608                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
7609 reserved.",

```

```

7610     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSource.json#",
7611     "title": "Media Source",
7612     "definitions": {
7613         "oic.r.mediasource": {
7614             "properties": {
7615                 "sourceName": {
7616                     "type": "string",
7617                     "description": "Specifies a pre-defined media input or output"
7618                 },
7619                 "sourceNumber": {
7620                     "type": [ "integer", "string" ],
7621                     "readOnly": true,
7622                     "description": "Numeric identifier to specify the instance"
7623                 },
7624                 "sourceType": {
7625                     "enum": [ "audioOnly", "videoOnly", "audioPlusVideo" ],
7626                     "readOnly": true,
7627                     "description": "Specifies the type of the source"
7628                 },
7629                 "status": {
7630                     "type": "boolean",
7631                     "description": "Specifies if the specific source instance is selected or not"
7632                 }
7633             }
7634         },
7635     },
7636     "type": "object",
7637     "allOf": [
7638         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
7639         { "$ref": "#/definitions/oic.r.mediasource" }
7640     ],
7641     "required": [ "sourceName", "status" ]
7642 }
7643
7644 example: /
7645 {
7646     "id": "unique_example_id",
7647     "sourceName": "my new name",
7648     "sourceNumber": "1",
7649     "status": true
7650 }
7651
7652 responses :
7653 200:
7654     body:
7655         application/json:
7656             schema: /
7657                 {
7658                     "$schema": "http://json-schema.org/draft-04/schema#",
7659                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7660 rights reserved.",
7661                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSource.json#",
7662                     "title": "Media Source",
7663                     "definitions": {
7664                         "oic.r.mediasource": {
7665                             "properties": {
7666                                 "sourceName": {
7667                                     "type": "string",
7668                                     "description": "Specifies a pre-defined media input or output"
7669                                 },
7670                                 "sourceNumber": {
7671                                     "type": [ "integer", "string" ],
7672                                     "readOnly": true,
7673                                     "description": "Numeric identifier to specify the instance"
7674                                 },
7675                                 "sourceType": {
7676                                     "enum": [ "audioOnly", "videoOnly", "audioPlusVideo" ],

```

```

7677         "readOnly": true,
7678         "description": "Specifies the type of the source"
7679     },
7680     "status": {
7681         "type": "boolean",
7682         "description": "Specifies if the specific source instance is selected or
7683 not"
7684     }
7685 }
7686 }
7687 },
7688 "type": "object",
7689 "allOf": [
7690     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7691     {"$ref": "#/definitions/oic.r.mediasource"}
7692 ],
7693 "required": ["sourceName", "status"]
7694 }
7695
7696 example: /
7697 {
7698     "id":         "unique_example_id",
7699     "sourceName": "my new name",
7700     "sourceNumber": "1",
7701     "status":     true
7702 }
7703

```

6.42.5 Property Definition

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

6.42.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/mediaSourceResURI		get	post		

6.43 Media Source List

6.43.1 Introduction

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

```

7716 6.43.2 Example URI
7717 /mediaSourceListResURI
7718 6.43.3 Resource Type
7719 The resource type (rt) is defined as: oic.r.mediasourcelist.
7720 6.43.4 RAML Definition
7721 #%RAML 0.8
7722 title: OICMediaSourceList
7723 version: v1.1.0-20160519
7724 traits:
7725   - interface :
7726       queryParameters:
7727         if:
7728           enum: ["oic.if.a", "oic.if.baseline"]
7729
7730 /mediaSourceListResURI:
7731   description: |
7732     This resource provides the list of media sources available on the device.
7733     The sources are an array of mediaSource(s) as separately defined.
7734     The basic resource type oic.r.mediaSourceList does not provide any indications whether the
7735     source is input or output.
7736     Hence, two specializations of this resource exist.
7737     When a device exposes input sources then an instance of this resource with a resource type of
7738     oic.r.media.input is exposed.
7739     When a device exposes output sources then an instance of this resource with a resource type of
7740     oic.r.media.output is exposed.
7741     A device that exposes both input and output media sources then exposes two instances of this
7742     resource,
7743     one with a resource type of oic.r.media.input and one with a resource type of
7744     oic.r.media.output
7745
7746   is : ['interface']
7747   get:
7748     responses :
7749       200:
7750         body:
7751           application/json:
7752             schema: /
7753               {
7754                 "$schema": "http://json-schema.org/draft-04/schema#",
7755                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7756                 rights reserved.",
7757                 "id":
7758                 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
7759                 "title": "Media Source List",
7760                 "definitions": {
7761                   "oic.r.mediasourcelist": {
7762                     "properties": {
7763                       "sources": {
7764                         "type": "array",
7765                         "items": {
7766                           "oneOf": [
7767                             { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
7768                           ]
7769                         }
7770                     }
7771                   }
7772                 },
7773                 "type": "object",
7774                 "allOf": [

```

```

7776         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
7777         { "$ref": "#/definitions/oic.r.mediasourcelist" }
7778     ],
7779     "required": [ "sources" ]
7780 }
7781
7782 example: /
7783 {
7784     "rt": [ "oic.r.mediasourcelist" ],
7785     "id": "unique_example_id",
7786     "sources": [
7787         {
7788             "sourceName": "HDMI-CEC",
7789             "sourceNumber": "1",
7790             "sourceType": "audioPlusVideo",
7791             "status": true
7792         },
7793         {
7794             "sourceName": "dualRCA",
7795             "sourceNumber": "1",
7796             "sourceType": "audioOnly",
7797             "status": false
7798         }
7799     ]
7800 }
7801
7802 post:
7803     description: |
7804         Changes the status of the source(s).
7805         Allows changes of the sourceName and the status.
7806
7807     body:
7808         application/json:
7809             schema: /
7810             {
7811                 "$schema": "http://json-schema.org/draft-04/schema#",
7812                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
7813 reserved.",
7814                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
7815                 "title": "Media Source List",
7816                 "definitions": {
7817                     "oic.r.mediasourcelist": {
7818                         "properties": {
7819                             "sources": {
7820                                 "type": "array",
7821                                 "items": {
7822                                     "oneOf": [
7823                                         { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediaSource" }
7824                                     ]
7825                                 }
7826                             }
7827                         }
7828                     }
7829                 },
7830                 "type": "object",
7831                 "allOf": [
7832                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
7833                     { "$ref": "#/definitions/oic.r.mediasourcelist" }
7834                 ],
7835                 "required": [ "sources" ]
7836             }
7837
7838 example: /
7839 {
7840     "id": "unique_example_id",
7841     "sources": [

```

```

7842         {
7843             "sourceName":    "my new name",
7844             "sourceNumber":  "1",
7845             "status":       true
7846         }
7847     ]
7848 }
7849
7850 responses :
7851     200:
7852         body:
7853             application/json:
7854                 schema: /
7855                     {
7856                         "$schema": "http://json-schema.org/draft-04/schema#",
7857                         "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7858 rights reserved.",
7859                         "id":
7860 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
7861                         "title": "Media Source List",
7862                         "definitions": {
7863                             "oic.r.mediasourcelist": {
7864                                 "properties": {
7865                                     "sources": {
7866                                         "type": "array",
7867                                         "items": {
7868                                             "oneOf": [
7869                                                 { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
7870                                             ]
7871                                         }
7872                                     }
7873                                 }
7874                             },
7875                             "type": "object",
7876                             "allOf": [
7877                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
7878                                 { "$ref": "#/definitions/oic.r.mediasourcelist" }
7879                             ],
7880                             "required": ["sources"]
7881                         }
7882                     }
7883
7884                 example: /
7885                     {
7886                         "id": "unique_example_id",
7887                         "sources": [
7888                             {
7889                                 "sourceName":    "my new name",
7890                                 "sourceNumber":  "1",
7891                                 "status":       true
7892                             }
7893                         ]
7894                     }
7895

```

6.43.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
sources	array: see schema	yes		
sourceName	string	yes		Specifies a pre-defined media input or output
status	boolean	yes		Specifies if the specific source

				instance is selected or not
sourceNumber	[u'integer', u'string']		Read Only	Numeric identifier to specify the instance
sourceType	multiple types: see schema		Read Only	Specifies the type of the source

6.43.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/mediaSourceListResURI		get	post		

6.43.7 Referenced JSON schemas

6.43.7.1 oic.r.mediaSource.json

```

{
  "$schema": "http://json-schema.org/draft-04/schema#",
  "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights reserved.",
  "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSource.json#",
  "title": "Media Source",
  "definitions": {
    "oic.r.mediasource": {
      "properties": {
        "sourceName": {
          "type": "string",
          "description": "Specifies a pre-defined media input or output"
        },
        "sourceNumber": {
          "type": [ "integer", "string" ],
          "readOnly": true,
          "description": "Numeric identifier to specify the instance"
        },
        "sourceType": {
          "enum": [ "audioOnly", "videoOnly", "audioPlusVideo" ],
          "readOnly": true,
          "description": "Specifies the type of the source"
        },
        "status": {
          "type": "boolean",
          "description": "Specifies if the specific source instance is selected or not"
        }
      }
    }
  },
  "type": "object",
  "allOf": [
    { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
    { "$ref": "#/definitions/oic.r.mediasource" }
  ],
  "required": [ "sourceName", "status" ]
}

```

6.44 Media Source Input

6.44.1 Introduction

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

6.44.2 Example URI

/mediaSourceInputResURI

6.44.3 Resource Type

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

6.44.4 RAML Definition

```
7947 ##RAML 0.8
7948 title: OICMediaSourceInput
7949 version: v1.1.0-20160519
7950 traits:
7951   - interface :
7952     queryParameters:
7953       if:
7954         enum: ["oic.if.a", "oic.if.baseline"]
7955
7956 /mediaSourceInputResURI:
7957   description: |
7958     This resource provides the list of input media sources available on the device.
7959     The sources are an array of mediaSource(s) as separately defined.
7960
7961   is : ['interface']
7962   get:
7963     responses :
7964       200:
7965         body:
7966           application/json:
7967             schema: /
7968               {
7969                 "$schema": "http://json-schema.org/draft-04/schema#",
7970                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
7971                 "id":
7972                 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
7973                 "title": "Media Source List",
7974                 "definitions": {
7975                   "oic.r.mediasourcelist": {
7976                     "properties": {
7977                       "sources": {
7978                         "type": "array",
7979                         "items": {
7980                           "oneOf": [
7981                             { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
7982                           ]
7983                         }
7984                       }
7985                     }
7986                   }
7987                 },
7988                 "type": "object",
7989                 "allOf": [
7990                   { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
7991                   { "$ref": "#/definitions/oic.r.mediasourcelist" }
7992                 ],
7993                 "required": ["sources"]
7994               }
7995             }
7996
7997   example: /
7998     {
7999       "rt": ["oic.r.media.input"],
8000       "id": "unique_example_id",
8001       "sources": [
8002         {
8003           "sourceName": "HDMI-CEC",
8004           "sourceNumber": "1",
```

```

8005         "sourceType": "audioPlusVideo",
8006         "status": true
8007     },
8008     {
8009         "sourceName": "dualRCA",
8010         "sourceNumber": "1",
8011         "sourceType": "audioOnly",
8012         "status": false
8013     }
8014 ]
8015 }
8016
8017 post:
8018     description: |
8019         Changes the status of the source(s).
8020         Allows changes of the sourceName and the status.
8021
8022     body:
8023         application/json:
8024             schema: /
8025                 {
8026                     "$schema": "http://json-schema.org/draft-04/schema#",
8027                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
8028 reserved.",
8029                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
8030                     "title": "Media Source List",
8031                     "definitions": {
8032                         "oic.r.mediasourcelist": {
8033                             "properties": {
8034                                 "sources": {
8035                                     "type": "array",
8036                                     "items": {
8037                                         "oneOf": [
8038                                             { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediaSource" }
8039                                         ]
8040                                     }
8041                                 }
8042                             }
8043                         }
8044                     },
8045                     "type": "object",
8046                     "allOf": [
8047                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8048                         { "$ref": "#/definitions/oic.r.mediasourcelist" }
8049                     ],
8050                     "required": ["sources"]
8051                 }
8052
8053     example: /
8054         {
8055             "id": "unique_example_id",
8056             "sources": [
8057                 {
8058                     "sourceName": "my new name",
8059                     "sourceNumber": "1",
8060                     "status": true
8061                 }
8062             ]
8063         }
8064
8065     responses :
8066         200:
8067             body:
8068                 application/json:
8069                     schema: /

```

```

8070      {
8071          "$schema": "http://json-schema.org/draft-04/schema#",
8072          "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8073 rights reserved.",
8074          "id":
8075 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
8076          "title": "Media Source List",
8077          "definitions": {
8078              "oic.r.mediasourcelist": {
8079                  "properties": {
8080                      "sources": {
8081                          "type": "array",
8082                          "items": {
8083                              "oneOf": [
8084                                  { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
8085                              ]
8086                          }
8087                      }
8088                  }
8089              }
8090          },
8091          "type": "object",
8092          "allOf": [
8093              { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8094              { "$ref": "#/definitions/oic.r.mediasourcelist" }
8095          ],
8096          "required": ["sources"]
8097      }
8098
8099      example: /
8100      {
8101          "id": "unique_example_id",
8102          "sources": [
8103              {
8104                  "sourceName": "my new name",
8105                  "sourceNumber": "1",
8106                  "status": true
8107              }
8108          ]
8109      }
8110

```

8111 6.44.5 Property Definition

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

8112 6.44.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/mediaSourceInputResURI		get	post		

8113 6.45 Media Source Output

8114 6.45.1 Introduction

8115 This resource provides the list of output media sources available on the device. The sources are
8116 an array of mediaSource(s) as separately defined.

8117 6.45.2 Example URI

8118 /mediaSourceOutputResURI

8119 6.45.3 Resource Type

8120 The resource type (rt) is defined as: oic.r.media.output.

8121 6.45.4 RAML Definition

8122 [#%RAML 0.8](#)

```

8123 title: OICMediaSourceOutput
8124 version: v1.1.0-20160519
8125 traits:
8126   - interface :
8127     queryParameters:
8128       if:
8129         enum: ["oic.if.a", "oic.if.baseline"]
8130
8131 /mediaSourceOutputResURI:
8132   description: |
8133     This resource provides the list of output media sources available on the device.
8134     The sources are an array of mediaSource(s) as separately defined.
8135
8136   is : ['interface']
8137   get:
8138     responses :
8139       200:
8140         body:
8141           application/json:
8142             schema: /
8143               {
8144                 "$schema": "http://json-schema.org/draft-04/schema#",
8145                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8146 rights reserved.",
8147                 "id":
8148 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
8149                 "title": "Media Source List",
8150                 "definitions": {
8151                   "oic.r.mediasourcelist": {
8152                     "properties": {
8153                       "sources": {
8154                         "type": "array",
8155                         "items": {
8156                           "oneOf": [
8157                             { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
8158                           ]
8159                         }
8160                     }
8161                   }
8162                 },
8163                 "type": "object",
8164                 "allOf": [
8165                   { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8166                   { "$ref": "#/definitions/oic.r.mediasourcelist" }
8167                 ],
8168                 "required": ["sources"]
8169               }
8170
8171   example: /
8172     {
8173       "rt": ["oic.r.media.output"],
8174       "id": "unique_example_id",
8175       "sources": [
8176         {
8177           "sourceName": "HDMI-CEC",
8178           "sourceNumber": "1",
8179           "sourceType": "audioPlusVideo",
8180           "status": true
8181         },
8182         {
8183           "sourceName": "dualRCA",
8184           "sourceNumber": "1",
8185           "sourceType": "audioOnly",
8186

```

```

8187         "status": false
8188     }
8189 }
8190 }
8191
8192 post:
8193     description: |
8194         Changes the status of the source(s).
8195         Allows changes of the sourceName and the status.
8196
8197     body:
8198         application/json:
8199             schema: /
8200                 {
8201                     "$schema": "http://json-schema.org/draft-04/schema#",
8202                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
8203 reserved.",
8204                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
8205                     "title": "Media Source List",
8206                     "definitions": {
8207                         "oic.r.mediasourcelist": {
8208                             "properties": {
8209                                 "sources": {
8210                                     "type": "array",
8211                                     "items": {
8212                                         "oneOf": [
8213                                             { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
8214                                         ]
8215                                     }
8216                                 }
8217                             }
8218                         }
8219                     },
8220                     "type": "object",
8221                     "allOf": [
8222                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8223                         { "$ref": "#/definitions/oic.r.mediasourcelist" }
8224                     ],
8225                     "required": ["sources"]
8226                 }
8227
8228     example: /
8229         {
8230             "id": "unique_example_id",
8231             "sources": [
8232                 {
8233                     "sourceName": "my new name",
8234                     "sourceNumber": "1",
8235                     "status": true
8236                 }
8237             ]
8238         }
8239
8240     responses :
8241         200:
8242             body:
8243                 application/json:
8244                     schema: /
8245                         {
8246                             "$schema": "http://json-schema.org/draft-04/schema#",
8247                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8248 rights reserved.",
8249                             "id":
8250 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",

```

```

8251         "title": "Media Source List",
8252         "definitions": {
8253             "oic.r.mediasourcelist": {
8254                 "properties": {
8255                     "sources": {
8256                         "type": "array",
8257                         "items": {
8258                             "oneOf": [
8259                                 { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
8260                             ]
8261                         }
8262                     }
8263                 }
8264             },
8265             "type": "object",
8266             "allOf": [
8267                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8268                 { "$ref": "#/definitions/oic.r.mediasourcelist" }
8269             ],
8270             "required": ["sources"]
8271         }
8272     }
8273
8274     example: /
8275     {
8276         "id": "unique_example_id",
8277         "sources": [
8278             {
8279                 "sourceName": "my new name",
8280                 "sourceNumber": "1",
8281                 "status": true
8282             }
8283         ]
8284     }
8285

```

8286 6.45.5 Property Definition

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

8287 6.45.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/mediaSourceOutputResURI		get	post		

8288 6.46 Motion Sensor

8289 6.46.1 Introduction

8290 This resource describes whether motion has been sensed or not. The value is a boolean. A value
8291 of 'true' means that motion has been sensed. A value of 'false' means that motion not been sensed.

8292 6.46.2 Example URI

8293 /MotionResURI

8294 6.46.3 Resource Type

8295 The resource type (rt) is defined as: oic.r.sensor.motion.

8296 6.46.4 RAML Definition

```

8297 #%RAML 0.8
8298 title: OICMotionSensor
8299 version: v1.1.0-20160519
8300 traits:
8301   - interface :
8302       queryParameters:

```

```

8303         if:
8304             enum: ["oic.if.s", "oic.if.baseline"]
8305
8306 /MotionResURI:
8307     description: |
8308         This resource describes whether motion has been sensed or not.
8309         The value is a boolean.
8310         A value of 'true' means that motion has been sensed.
8311         A value of 'false' means that motion not been sensed.
8312
8313     is : ['interface']
8314
8315     get:
8316         responses :
8317             200:
8318                 body:
8319                     application/json:
8320                         schema: /
8321                             {
8322                                 "id":
8323                                 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.motion.json#",
8324                                 "$schema": "http://json-schema.org/draft-04/schema#",
8325                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8326                                 rights reserved.",
8327                                 "title": "Motion Sensor",
8328                                 "definitions": {
8329                                     "oic.r.sensor.motion": {
8330                                         "allOf": [
8331                                             {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
8332                                         ]
8333                                     },
8334                                     "type": "object",
8335                                     "allOf": [
8336                                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8337                                         {"$ref": "#/definitions/oic.r.sensor.motion"}
8338                                     ],
8339                                     "required": ["value"]
8340                                 }
8341
8342                         example: /
8343                             {
8344                                 "rt":      ["oic.r.sensor.motion"],
8345                                 "id":      "unique_example_id",
8346                                 "value": true
8347                             }
8348

```

8349 6.46.5 Property Definition

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

8350 6.46.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/MotionResURI		get			

8351 **6.47 Night Mode**

8352 **6.47.1 Introduction**

8353 This resource describes a night mode on/off feature. A nightMode value of 'true' means that the
8354 feature is on. A nightMode value of 'false' means that the feature is off.

8355 **6.47.2 Example URI**

8356 /NightModeResURI

8357 **6.47.3 Resource Type**

8358 The resource type (rt) is defined as: oic.r.nightmode.

8359 **6.47.4 RAML Definition**

8360 `##RAML 0.8`

8361 `title: OICNightMode`

8362 `version: v1.1.0-20160519`

8363 `traits:`

8364 `- interface :`

8365 `queryParameters:`

8366 `if:`

8367 `enum: ["oic.if.a", "oic.if.baseline"]`

8368

8369 `/NightModeResURI:`

8370 `description: |`

8371 `This resource describes a night mode on/off feature.`

8372 `A nightMode value of 'true' means that the feature is on.`

8373 `A nightMode value of 'false' means that the feature is off.`

8374

8375 `is : ['interface']`

8376 `get:`

8377 `responses :`

8378 `200:`

8379 `body:`

8380 `application/json:`

8381 `schema: /`

8382 `{`

8383 `"id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.nightMode.json#",`

8384 `"$schema": "http://json-schema.org/draft-04/schema#",`

8385 `"description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All`

8386 `rights reserved.",`

8387 `"title": "Night Mode",`

8388 `"definitions": {`

8389 `"oic.r.nightmode": {`

8390 `"type": "object",`

8391 `"properties": {`

8392 `"nightMode": {`

8393 `"type": "boolean",`

8394 `"description": "Status of the Night Mode"`

8395 `}`

8396 `}`

8397 `}`

8398 `},`

8399 `"type": "object",`

8400 `"allOf": [`

8401 `{ "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },`

8402 `{ "$ref": "#/definitions/oic.r.nightmode" }`

8403 `],`

8404 `"required": ["nightMode"]`

8405 `}`

8406

8407 `example: /`

```

8408         {
8409             "rt":          ["oic.r.nightmode"],
8410             "id":          "unique_example_id",
8411             "nightMode":   false
8412         }
8413
8414     post:
8415     body:
8416     application/json:
8417         schema: /
8418             {
8419                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.nightMode.json#",
8420                 "$schema": "http://json-schema.org/draft-04/schema#",
8421                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
8422 reserved.",
8423                 "title": "Night Mode",
8424                 "definitions": {
8425                     "oic.r.nightmode": {
8426                         "type": "object",
8427                         "properties": {
8428                             "nightMode": {
8429                                 "type": "boolean",
8430                                 "description": "Status of the Night Mode"
8431                             }
8432                         }
8433                     },
8434                 },
8435                 "type": "object",
8436                 "allOf": [
8437                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8438                     { "$ref": "#/definitions/oic.r.nightmode" }
8439                 ],
8440                 "required": [ "nightMode" ]
8441             }
8442
8443     example: /
8444         {
8445             "id":          "unique_example_id",
8446             "nightMode":   true
8447         }
8448
8449     responses :
8450     200:
8451     body:
8452     application/json:
8453         schema: /
8454             {
8455                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.nightMode.json#",
8456                 "$schema": "http://json-schema.org/draft-04/schema#",
8457                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8458 rights reserved.",
8459                 "title": "Night Mode",
8460                 "definitions": {
8461                     "oic.r.nightmode": {
8462                         "type": "object",
8463                         "properties": {
8464                             "nightMode": {
8465                                 "type": "boolean",
8466                                 "description": "Status of the Night Mode"
8467                             }
8468                         }
8469                     },
8470                 },
8471                 "type": "object",
8472                 "allOf": [

```

```

8473         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8474         {"$ref": "#/definitions/oic.r.nightmode"}
8475     ],
8476     "required": [ "nightMode" ]
8477 }
8478
8479     example: /
8480     {
8481         "id":          "unique_example_id",
8482         "nightMode":   true
8483     }
8484

```

6.47.5 Property Definition

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

6.47.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/NightModeResURI		get	post		

6.48 Presence Sensor

6.48.1 Introduction

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

6.48.2 Example URI

/PresenceResURI

6.48.3 Resource Type

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

6.48.4 RAML Definition

```

8497 ##RAML 0.8
8498 title: OICPresenceSensor
8499 version: v1.1.0-20160519
8500 traits:
8501   - interface :
8502     queryParameters:
8503       if:
8504         enum: ["oic.if.s", "oic.if.baseline"]
8505
8506 /PresenceResURI:
8507   description: |
8508     This resource describes whether presence has been sensed or not.
8509     The value is a boolean.
8510     A value of 'true' means that presence has been sensed.
8511     A value of 'false' means that presence not been sensed.
8512
8513   is : ['interface']
8514   get:
8515     responses :
8516       200:
8517         body:
8518           application/json:

```

```

8519     schema: /
8520         {
8521             "id":
8522 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.presence.json#",
8523             "$schema": "http://json-schema.org/draft-04/schema#",
8524             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8525 rights reserved.",
8526             "title": "Presence Sensor",
8527             "definitions": {
8528                 "oic.r.sensor.presence": {
8529                     "allOf": [
8530                         {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
8531                     ]
8532                 }
8533             },
8534             "type": "object",
8535             "allOf": [
8536                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8537                 {"$ref": "#/definitions/oic.r.sensor.presence"}
8538             ],
8539             "required": ["value"]
8540         }
8541
8542     example: /
8543         {
8544             "rt":      ["oic.r.sensor.presence"],
8545             "id":      "unique_example_id",
8546             "value": true
8547         }
8548

```

8549 6.48.5 Property Definition

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

8550 6.48.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/PresenceResURI		get			

8551 6.49 Pan Tilt Zoom Movement

8552 6.49.1 Introduction

8553 This resource specifies the pan tilt and zoom capabilities of a device. The resource rt is dynamic
8554 and reflects whether the values apply to physical movement of the device or digital/virtual
8555 enhancements to the image. For physical movement the rt is 'oic.r.movement.ptz'. For
8556 digital/virtual image enhancements the rt is 'oic.r.image.ptz'. The Pan and Tilt are specified in
8557 degrees. The Zoom Factor is a value in the range 1-100 for linear (optical) zoom. The Zoom Factor
8558 is a value in the range [1x, 2x, 4x, 8x, 16x, 32x] for digital zoom. If there is no zoom value to set
8559 the Zoom Factor shall be '1x'. The value 0 degrees means neutral, this is the vendor defined setting.
8560 Note that this resource also can be used to create an offset for physical movement. When that is
8561 the case, the rt value is: oic.r.movement.offset.ptz Note that this resource also can be used to
8562 create an offset for image movement. When that is the case, the rt value is: oic.r.image.offset.ptz
8563 When the pan_range value is omitted, then the range is [-180.0,180.0]. If pan is not supported
8564 then the range shall be [0.0,0.0] When the tilt_range value is omitted, then the range is [-
8565 180.0,180.0]. If tilt is not supported then the range shall be [0.0,0.0]

8566 6.49.2 Example URI

8567 /PanTiltZoomResURI

6.49.3 Resource Type

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

6.49.4 RAML Definition

```
8571  #RAML 0.8
8572  title: OICPanTiltZoom
8573  version: v1.1.0-20160519
8574  traits:
8575    - interface :
8576      queryParameters:
8577        if:
8578          enum: ["oic.if.a", "oic.if.baseline"]
8579
8580  /PanTiltZoomResURI:
8581    description: |
8582      This resource specifies the pan tilt and zoom capabilities of a device.
8583      The resource rt is dynamic and reflects whether the values apply to
8584      physical movement of the device or digital/virtual enhancements to the image.
8585      For physical movement the rt is 'oic.r.movement.ptz'.
8586      For digital/virtual image enhancements the rt is 'oic.r.image.ptz'.
8587      The Pan and Tilt are specified in degrees.
8588      The Zoom Factor is a value in the range 1-100 for linear (optical) zoom.
8589      The Zoom Factor is a value in the range [1x, 2x, 4x, 8x, 16x, 32x] for digital zoom.
8590      If there is no zoom value to set the Zoom Factor shall be '1x'.
8591      The value 0 degrees means neutral, this is the vendor defined setting.
8592      Note that this resource also can be used to create an offset for physical movement.
8593      When that is the case, the rt value is: oic.r.movement.offset.ptz
8594      Note that this resource also can be used to create an offset for image movement.
8595      When that is the case, the rt value is: oic.r.image.offset.ptz
8596      When the pan_range value is omitted, then the range is [-180.0,180.0].
8597      If pan is not supported then the range shall be [0.0,0.0]
8598      When the tilt_range value is omitted, then the range is [-180.0,180.0].
8599      If tilt is not supported then the range shall be [0.0,0.0]
8600
8601    is : ['interface']
8602    get:
8603      description: |
8604        Retrieves the current pan, tilt and zoom setting.
8605
8606    responses :
8607      200:
8608        body:
8609          application/json:
8610            schema: /
8611              {
8612                "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.ptz.json#",
8613                "$schema": "http://json-schema.org/draft-04/schema#",
8614                "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8615 rights reserved.",
8616                "title": "Pan Tilt Zoom",
8617                "definitions": {
8618                  "oic.r.ptz": {
8619                    "type": "object",
8620                    "properties": {
8621                      "pan": {
8622                        "type": "number",
8623                        "description": "horizontal pan in degrees"
8624                      },
8625                      "tilt": {
8626                        "type": "number",
8627                        "description": "vertical tilt in degrees"
8628                      }
8629                    }
8630                  }
8631                }
```

```

8629         "pan_range": {
8630             "type": "array",
8631             "readOnly": true,
8632             "description": "Min and Max values for the pan setting",
8633             "minItems": 2,
8634             "maxItems": 2,
8635             "items": {
8636                 "type": "number"
8637             }
8638         },
8639         "tilt_range": {
8640             "type": "array",
8641             "readOnly": true,
8642             "description": "Min and Max values for the tilt setting",
8643             "minItems": 2,
8644             "maxItems": 2,
8645             "items": {
8646                 "type": "number"
8647             }
8648         },
8649         "zoomFactor": {
8650             "type": "string",
8651             "description": "The Zoomfactor value"
8652         },
8653         "zoomFactorRange": {
8654             "type": "string",
8655             "enum": ["linear", "1x", "2x", "4x", "8x", "16x", "32x"],
8656             "readOnly": true,
8657             "description": "allowed Zoom Factor values. Linear equates to a 1-100
min/max."
8658         }
8659     }
8660 }
8661 }
8662 },
8663 "type": "object",
8664 "allOf": [
8665     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8666     {"$ref": "#/definitions/oic.r.ptz"}
8667 ],
8668 "required": ["pan", "tilt", "zoomFactor"]
8669 }
8670
8671 example: /
8672 {
8673     "rt": ["oic.r.ptz"],
8674     "id": "unique_example_id",
8675     "pan": 0.0,
8676     "tilt": 0.0,
8677     "zoomFactor": "2x"
8678 }
8679
8680 post:
8681     description: |
8682         Sets the current pan, tilt and zoom value
8683
8684     body:
8685         application/json:
8686             schema: /
8687             {
8688                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.ptz.json#",
8689                 "$schema": "http://json-schema.org/draft-04/schema#",
8690                 "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
reserved.",
8691                 "title": "Pan Tilt Zoom",
8692                 "definitions": {
8693                     "oic.r.ptz": {
8694                         "type": "object",

```

```

8696     "properties": {
8697         "pan": {
8698             "type": "number",
8699             "description": "horizontal pan in degrees"
8700         },
8701         "tilt": {
8702             "type": "number",
8703             "description": "vertical tilt in degrees"
8704         },
8705         "pan_range": {
8706             "type": "array",
8707             "readOnly": true,
8708             "description": "Min and Max values for the pan setting",
8709             "minItems": 2,
8710             "maxItems": 2,
8711             "items": {
8712                 "type": "number"
8713             }
8714         },
8715         "tilt_range": {
8716             "type": "array",
8717             "readOnly": true,
8718             "description": "Min and Max values for the tilt setting",
8719             "minItems": 2,
8720             "maxItems": 2,
8721             "items": {
8722                 "type": "number"
8723             }
8724         },
8725         "zoomFactor": {
8726             "type": "string",
8727             "description": "The Zoomfactor value"
8728         },
8729         "zoomFactorRange": {
8730             "type": "string",
8731             "enum": ["linear", "1x", "2x", "4x", "8x", "16x", "32x"],
8732             "readOnly": true,
8733             "description": "allowed Zoom Factor values. Linear equates to a 1-100 min/max."
8734         }
8735     }
8736 },
8737 "type": "object",
8738 "allOf": [
8739     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8740     {"$ref": "#/definitions/oic.r.ptz"}
8741 ],
8742 "required": ["pan", "tilt", "zoomFactor"]
8743 }
8744
8745

```

```

8746 example: /
8747 {
8748     "id": "unique_example_id",
8749     "pan": 10.0,
8750     "tilt": -10.0,
8751     "zoomFactor": "4x"
8752 }
8753

```

```

8754 responses :
8755 200:
8756   body:
8757     application/json:
8758       schema: /
8759         {
8760             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.ptz.json#",
8761             "$schema": "http://json-schema.org/draft-04/schema#",
8762             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All

```

```

8763 rights reserved.",
8764     "title": "Pan Tilt Zoom",
8765     "definitions": {
8766         "oic.r.ptz": {
8767             "type": "object",
8768             "properties": {
8769                 "pan": {
8770                     "type": "number",
8771                     "description": "horizontal pan in degrees"
8772                 },
8773                 "tilt": {
8774                     "type": "number",
8775                     "description": "vertical tilt in degrees"
8776                 },
8777                 "pan_range": {
8778                     "type": "array",
8779                     "readOnly": true,
8780                     "description": "Min and Max values for the pan setting",
8781                     "minItems": 2,
8782                     "maxItems": 2,
8783                     "items": {
8784                         "type": "number"
8785                     }
8786                 },
8787                 "tilt_range": {
8788                     "type": "array",
8789                     "readOnly": true,
8790                     "description": "Min and Max values for the tilt setting",
8791                     "minItems": 2,
8792                     "maxItems": 2,
8793                     "items": {
8794                         "type": "number"
8795                     }
8796                 },
8797                 "zoomFactor": {
8798                     "type": "string",
8799                     "description": "The Zoomfactor value"
8800                 },
8801                 "zoomFactorRange": {
8802                     "type": "string",
8803                     "enum": ["linear", "1x", "2x", "4x", "8x", "16x", "32x"],
8804                     "readOnly": true,
8805                     "description": "allowed Zoom Factor values. Linear equates to a 1-100
8806 min/max."
8807                 }
8808             }
8809         },
8810     },
8811     "type": "object",
8812     "allOf": [
8813         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8814         {"$ref": "#/definitions/oic.r.ptz"}
8815     ],
8816     "required": ["pan", "tilt", "zoomFactor"]
8817 }
8818
8819 example: /
8820 {
8821     "id": "unique_example_id",
8822     "pan": 10.0,
8823     "tilt": -10.0,
8824     "zoomFactor": "4x"
8825 }
8826

```

8827 6.49.5 Property Definition

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

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

6.49.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/PanTiltZoomResURI		get	post		

6.50 Signal Strength

6.50.1 Introduction

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

6.50.2 Example URI

/SignalStrengthResURI

6.50.3 Resource Type

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

6.50.4 RAML Definition

```

#%RAML 0.8
title: OICSignalStrength
version: v1.1.0-20160519

traits:
- interface :
    queryParameters:
        if:
            enum: ["oic.if.s", "oic.if.baseline"]

/SignalStrengthResURI:
    description: |
        This resource describes the strength of a signal by means of lqi and rssi.
        The lqi is a floating point number that represents Link Quality Indicator.
        The rssi is a floating point number that represents the received signal strength indicator.

    is : ['interface']
    get:
        responses :
            200:
                body:
                    application/json:

```

```

8860     schema: /
8861     {
8862         "id":
8863         "http://openinterconnect.org/iotdatamodels/schemas/oic.r.signalStrength.json#",
8864         "$schema": "http://json-schema.org/draft-04/schema#",
8865         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8866 rights reserved.",
8867         "title": "Signal Strength",
8868         "definitions": {
8869             "oic.r.signalstrength": {
8870                 "type": "object",
8871                 "properties": {
8872                     "lqi": {
8873                         "type": "number",
8874                         "readOnly": true,
8875                         "description": "current value of Link Quality Indicator"
8876                     },
8877                     "rssi": {
8878                         "type": "number",
8879                         "readOnly": true,
8880                         "description": "current value of Received Signal Strength Indicator"
8881                     }
8882                 }
8883             }
8884         },
8885         "type": "object",
8886         "allOf": [
8887             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8888             { "$ref": "#/definitions/oic.r.signalstrength" }
8889         ],
8890         "required": ["lqi", "rssi"]
8891     }
8892
8893     example: /
8894     {
8895         "rt": ["oic.r.signalstrength"],
8896         "id": "unique_example_id",
8897         "lqi": 10.0,
8898         "rssi": 55.0
8899     }
8900

```

8901 6.50.5 Property Definition

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

8902 6.50.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/SignalStrengthResURI		get			

8903 6.51 Speech Synthesis-TTS

8904 6.51.1 Introduction

8905 This resource may be created on the OIC Server that is capable of rendering speech by an OIC
8906 Client and allows the client to provide an SSML document with text to render or may be created
8907 on the OIC Server by some resident application. The audio rendered is at this stage local to the
8908 Server (i.e. not streamed). The utterance is an SSML document. The supportedLanguages is an

8909 array of the RFC 5646 defined language tags that are supported. The supportedVoices is an SSML
8910 document fragment indicating the voices that are supported.

8911 **6.51.2 Example URI**

8912 /SpeechTTSTResURI

8913 **6.51.3 Resource Type**

8914 The resource type (rt) is defined as: oic.r.speech.tts.

8915 **6.51.4 RAML Definition**

```
8916 #%RAML 0.8
8917 title: OICSpeechTTS
8918 version: v1.1.0-20160519
8919 traits:
8920   - interface :
8921       queryParameters:
8922         if:
8923           enum: ["oic.if.a", "oic.if.baseline"]
8924
8925 /SpeechTTSTResURI:
8926   description: |
8927     This resource may be created on the OIC Server that is capable of rendering speech by an OIC
8928     Client
8929     and allows the client to provide an SSML document with text to render
8930     or may be created on the OIC Server by some resident application.
8931     The audio rendered is at this stage local to the Server (i.e
8932     not streamed).
8933     The utterance is an SSML document.
8934     The supportedLanguages is an array of the RFC 5646 defined language tags that are supported.
8935     The supportedVoices is an SSML document fragment indicating the voices that are supported.
8936
8937   is : ['interface']
8938   get:
8939     description: |
8940       Utterance in the example shall be a properly escaped (JSON rules) SSML document
8941       An example is given below:
8942       "<?xml version=\"1.0\" encoding=\"ISO-8859-1\"?>\n\r
8943       <speak version=\"1.1\" xmlns=\"http://www.w3.org/2001/10/synthesis\" \n\r
8944       \txmlns:xsi=\"http://www.w3.org/2001/XMLSchema-instance\" \n\r
8945       \txsi:schemaLocation=\"http://www.w3.org/2001/10/synthesis\n\r
8946       \thttp://www.w3.org/TR/speech-synthesis11/synthesis.xsd\" \n\r
8947       \txml:lang=\"en-US\">\n\r
8948       \n\r
8949       \tThe title of the movie is:\n\r
8950       \t\"Monty Pythons The Meaning of Life\" \n\r
8951       \twhich is directed by Terry Jones.\n\r
8952       </speak\"
8953
8954   responses :
8955     200:
8956       body:
8957         application/json:
8958           schema: /
8959           {
8960             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.speech.tts.json#",
8961             "$schema": "http://json-schema.org/draft-04/schema#",
8962             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8963             rights reserved.",
8964             "title": "Speech Synthesis-TTS",
8965             "definitions": {
8966               "oic.r.speech.tts": {
```

```

8967         "type": "object",
8968         "properties": {
8969             "utterance": {
8970                 "type": "string",
8971                 "description": "SSML document including the speech body"
8972             },
8973             "supportedLanguages": {
8974                 "type": "array",
8975                 "readOnly": true,
8976                 "description": "array of supported language tags",
8977                 "items": {
8978                     "type": "string"
8979                 }
8980             },
8981             "supportedVoices": {
8982                 "type": "string",
8983                 "readOnly": true,
8984                 "description": "SSML document fragment indicating supported voices"
8985             }
8986         }
8987     },
8988     "type": "object",
8989     "allOf": [
8990         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8991         { "$ref": "#/definitions/oic.r.speech.tts" }
8992     ],
8993     "required": ["utterance"]
8994 }
8995
8996
8997     example: /
8998     {
8999         "rt":
9000             ["oic.r.speech.tts"],
9001         "id":
9002             "unique_example_id",
9003         "utterance":
9004             "SSML Document",
9005         "supportedLanguages": ["en-US", "en-GB", "fr-CA"],
9006         "supportedVoices":
9007             "<voice gender=\"female\" variant=\"2\"></voice>\n\r<voice
9008             name=\"Mike\"></voice>"
9009     }
9010
9011
9012     post:
9013         description: |
9014             Changes the utterance being rendered.
9015             Example shows a change in language selected.
9016
9017         body:
9018             application/json:
9019
9020             schema: /
9021             {
9022                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.speech.tts.json#",
9023                 "$schema": "http://json-schema.org/draft-04/schema#",
9024                 "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
9025                 reserved.",
9026                 "title": "Speech Synthesis-TTS",
9027                 "definitions": {
9028                     "oic.r.speech.tts": {
9029                         "type": "object",
9030                         "properties": {
9031                             "utterance": {
9032                                 "type": "string",
9033                                 "description": "SSML document including the speech body"
9034                             },
9035                             "supportedLanguages": {
9036                                 "type": "array",
9037                                 "readOnly": true,
9038                                 "description": "array of supported language tags",
9039                                 "items": {

```

```

9034         "type": "string"
9035     },
9036 },
9037 "supportedVoices": {
9038     "type": "string",
9039     "readOnly": true,
9040     "description": "SSML document fragment indicating supported voices"
9041 }
9042 }
9043 }
9044 },
9045 "type": "object",
9046 "allOf": [
9047     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9048     {"$ref": "#/definitions/oic.r.speech.tts"}
9049 ],
9050 "required": ["utterance"]
9051 }
9052
9053 example: /
9054 {
9055     "rt":          ["oic.r.speech.tts"],
9056     "id":          "unique_example_id",
9057     "utterance":   "SSML Document"
9058 }
9059
9060 responses :
9061 200:
9062     body:
9063         application/json:
9064             schema: /
9065                 {
9066                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.speech.tts.json#",
9067                     "$schema": "http://json-schema.org/draft-04/schema#",
9068                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9069 rights reserved.",
9070                     "title": "Speech Synthesis-TTS",
9071                     "definitions": {
9072                         "oic.r.speech.tts": {
9073                             "type": "object",
9074                             "properties": {
9075                                 "utterance": {
9076                                     "type": "string",
9077                                     "description": "SSML document including the speech body"
9078                                 },
9079                                 "supportedLanguages": {
9080                                     "type": "array",
9081                                     "readOnly": true,
9082                                     "description": "array of supported language tags",
9083                                     "items": {
9084                                         "type": "string"
9085                                     }
9086                                 },
9087                                 "supportedVoices": {
9088                                     "type": "string",
9089                                     "readOnly": true,
9090                                     "description": "SSML document fragment indicating supported voices"
9091                                 }
9092                             }
9093                         }
9094                     },
9095                     "type": "object",
9096                     "allOf": [
9097                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9098                         {"$ref": "#/definitions/oic.r.speech.tts"}
9099                     ],
9100                     "required": ["utterance"]

```

```

9101     }
9102
9103     example: /
9104     {
9105         "rt":          ["oic.r.speech.tts"],
9106         "id":          "unique_example_id",
9107         "utterance":   "SSML Document"
9108     }
9109

```

9110 6.51.5 Property Definition

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

9111 6.51.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/SpeechTTSResURI		get	post		

9112 6.52 Touch Sensor

9113 6.52.1 Introduction

9114 This resource describes whether touch has been sensed or not. The value is a boolean. A value
 9115 of 'true' means that touch has been sensed. A value of 'false' means that touch not been sensed.

9116 6.52.2 Example URI

9117 /TouchResURI

9118 6.52.3 Resource Type

9119 The resource type (rt) is defined as: oic.r.sensor.touch.

9120 6.52.4 RAML Definition

```

9121 #%RAML 0.8
9122 title: OICTouchSensor
9123 version: v1.1.0-20160519
9124 traits:
9125   - interface :
9126       queryParameters:
9127         if:
9128             enum: ["oic.if.s", "oic.if.baseline"]
9129
9130 /TouchResURI:
9131     description: |
9132         This resource describes whether touch has been sensed or not.
9133         The value is a boolean.
9134         A value of 'true' means that touch has been sensed.
9135         A value of 'false' means that touch not been sensed.
9136
9137     is : ['interface']

```

```

9138     get:
9139         responses :
9140             200:
9141                 body:
9142                     application/json:
9143                         schema: /
9144                             {
9145                                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.touch.json#",
9146                                 "$schema": "http://json-schema.org/draft-04/schema#",
9147                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9148 rights reserved.",
9149                                 "title": "Touch Sensor",
9150                                 "definitions": {
9151                                     "oic.r.sensor.touch": {
9152                                         "allOf": [
9153                                             { "$ref": "oic.r.sensor.json#/definitions/oic.r.sensor" }
9154                                         ]
9155                                     }
9156                                 },
9157                                 "type": "object",
9158                                 "allOf": [
9159                                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
9160                                     { "$ref": "#/definitions/oic.r.sensor.touch" }
9161                                 ],
9162                                 "required": ["value"]
9163                             }
9164
9165                         example: /
9166                             {
9167                                 "rt":      ["oic.r.sensor.touch"],
9168                                 "id":      "unique_example_id",
9169                                 "value": true
9170                             }
9171

```

9172 6.52.5 Property Definition

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

9173 6.52.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/TouchResURI		get			

9174 6.53 UV Radiation

9175 6.53.1 Introduction

9176 This resource specifies UV radiation measurement. The measurement is the current measured UV
9177 Index

9178 6.53.2 Example URI

9179 /UVRadiationResURI

9180 6.53.3 Resource Type

9181 The resource type (rt) is defined as: oic.r.sensor.radiation.uv.

9182 6.53.4 RAML Definition

```

9183 #%RAML 0.8
9184 title: OICUVRadiation
9185 version: v1.1.0-20160519
9186 traits:

```

```

9187 - interface :
9188     queryParameters:
9189         if:
9190             enum: ["oic.if.s", "oic.if.baseline"]
9191
9192 /UVRadiationResURI:
9193     description: |
9194         This resource specifies UV radiation measurement.
9195         The measurement is the current measured UV Index
9196
9197     is : ['interface']
9198     get:
9199         description: |
9200             Retrieves the current UV Radiation value
9201
9202     responses :
9203         200:
9204             body:
9205                 application/json:
9206                     schema: /
9207                         {
9208                             "id":
9209 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.radiation.uv.json#",
9210                             "$schema": "http://json-schema.org/draft-04/schema#",
9211                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9212 rights reserved.",
9213                             "title": "UV Radiation",
9214                             "definitions": {
9215                                 "oic.r.sensor.radiation.uv": {
9216                                     "type": "object",
9217                                     "properties": {
9218                                         "measurement": {
9219                                             "type": "number",
9220                                             "readOnly": true,
9221                                             "description": "The measured UV Index"
9222                                         }
9223                                     }
9224                                 },
9225                             },
9226                             "type": "object",
9227                             "allOf": [
9228                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9229                                 {"$ref": "#/definitions/oic.r.sensor.radiation.uv"}
9230                             ],
9231                             "required": ["measurement"]
9232                         }
9233
9234     example: /
9235         {
9236             "rt": ["oic.r.sensor.radiation.uv"],
9237             "id": "unique_example_id",
9238             "measurement": 3.5
9239         }
9240

```

6.53.5 Property Definition

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

6.53.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/UVRadiationResURI		get			

6.54 Water Sensor

6.54.1 Introduction

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

6.54.2 Example URI

/WaterResURI

6.54.3 Resource Type

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

6.54.4 RAML Definition

```
#%RAML 0.8
title: OICWaterSensor
version: v1.1.0-20160519

traits:
- interface :
    queryParameters:
        if:
            enum: ["oic.if.s", "oic.if.baseline"]

/WaterResURI:
    description: |
        This resource describes whether water has been sensed or not.
        The value is a boolean.
        A value of 'true' means that water has been sensed.
        A value of 'false' means that water not been sensed.

    is : ['interface']

    get:
        responses :
            200:
                body:
                    application/json:
                        schema: /
                            {
                                "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.water.json#",
                                "$schema": "http://json-schema.org/draft-04/schema#",
                                "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
                                "title": "Water Sensor",
                                "definitions": {
                                    "oic.r.sensor.water": {
                                        "allOf": [
                                            { "$ref": "oic.r.sensor.json#/definitions/oic.r.sensor" }
                                        ]
                                    }
                                },
                                "type": "object",
                                "allOf": [
                                    { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
                                    { "$ref": "#/definitions/oic.r.sensor.water" }
                                ],
                                "required": ["value"]
```

```

9294     }
9295
9296     example: /
9297     {
9298         "rt":    ["oic.r.sensor.water"],
9299         "id":    "unique_example_id",
9300         "value": true
9301     }
9302

```

9303 6.54.5 Property Definition

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

9304 6.54.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/WaterResURI		get			

9305 6.55 Acceleration Sensor

9306 6.55.1 Introduction

9307 This resource provides a measure of proper acceleration (g force) as opposed to co-ordinate
 9308 acceleration (which is dependent on the co-ordinate system and the observer). The value is a float
 9309 which describes the acceleration experienced by the object in "g".

9310 6.55.2 Example URI

9311 /AccelerationResURI

9312 6.55.3 Resource Type

9313 The resource type (rt) is defined as: oic.r.sensor.acceleration.

9314 6.55.4 RAML Definition

```

9315 ##RAML 0.8
9316 title: OICAcceleration
9317 version: v1.1.0-20160519
9318 traits:
9319   - interface :
9320     queryParameters:
9321       if:
9322         enum: ["oic.if.s", "oic.if.baseline"]
9323
9324 /AccelerationResURI:
9325   description: |
9326     This resource provides a measure of proper acceleration (g force) as opposed to co-ordinate
9327 acceleration
9328 (which is dependent on the co-ordinate system and the observer).
9329 The value is a float which describes the acceleration experienced by the object in "g".
9330
9331   is : ['interface']
9332   get:
9333     responses :
9334       200:
9335         body:
9336           application/json:
9337             schema: /

```

```

9338     {
9339         "id":
9340         "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.acceleration.json#",
9341         "$schema": "http://json-schema.org/draft-04/schema#",
9342         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9343 rights reserved.",
9344         "title": "Acceleration Sensor",
9345         "definitions": {
9346             "oic.r.sensor.acceleration": {
9347                 "properties": {
9348                     "acceleration": {
9349                         "type": "number",
9350                         "readOnly": true,
9351                         "description": "sensed acceleration experienced in 'g'."
9352                     }
9353                 }
9354             },
9355             "type": "object",
9356             "allOf": [
9357                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
9358                 { "$ref": "#/definitions/oic.r.sensor.acceleration" }
9359             ],
9360             "required": ["acceleration"]
9361         }
9362     }
9363
9364     example: /
9365     {
9366         "rt":          ["oic.r.sensor.acceleration"],
9367         "id":          "unique_example_id",
9368         "acceleration": 0.5
9369     }
9370

```

9371 6.55.5 Property Definition

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

9372 6.55.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/AccelerationResURI		get			

9373 6.56 Movement

9374 6.56.1 Introduction

9375 This resource specifies linear movement. The movementSettings is an array of strings containing
9376 possible movement values (e.g. spin, stop, left, right). The movement is the currently selected
9377 movement value. The movementModifier is a modifier to the movement value (e.g. "spin", "90")

9378 6.56.2 Example URI

9379 /MovementResURI

9380 6.56.3 Resource Type

9381 The resource type (rt) is defined as: oic.r.movement.linear.

9382 6.56.4 RAML Definition

```

9383 #%RAML 0.8
9384 title: OICAcceleration
9385 version: v1.1.0-20160519
9386 traits:

```

```

9387 - interface :
9388     queryParameters:
9389
9389         if:
9390             enum: ["oic.if.s", "oic.if.baseline"]
9391
9392 /MovementResURI:
9393     description: |
9394         This resource specifies linear movement.
9395         The movementSettings is an array of strings containing possible movement values (e.g
9396         spin, stop, left, right).
9397         The movement is the currently selected movement value.
9398         The movementModifier is a modifier to the movement value (e.g
9399         "spin", "90")
9400
9401     is : ['interface']
9402
9402     get:
9403         responses :
9404
9404             200:
9405                 body:
9406                     application/json:
9407                         schema: /
9408
9408                             {
9409                                 "id":
9410 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.movement.linear.json#",
9411                                 "$schema": "http://json-schema.org/draft-04/schema#",
9412                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9413 rights reserved.",
9414                                 "title": "Linear Movement",
9415                                 "definitions": {
9416                                     "oic.r.movement.linear": {
9417                                         "type": "object",
9418                                         "properties": {
9419                                             "movementSettings": {
9420                                                 "type": "array",
9421                                                 "readOnly": true,
9422                                                 "description": "array of possible movement values",
9423                                                 "items": {
9424                                                     "type": "string"
9425                                                 }
9426                                             },
9427                                             "movement": {
9428                                                 "type": "string",
9429                                                 "description": "Current movement value"
9430                                             },
9431                                             "movementModifier": {
9432                                                 "type": "string",
9433                                                 "description": "Modifier to the movement value (e.g. spin-90, left-20),
9434 units are device dependent"
9435                                             }
9436                                         }
9437                                     }
9438                                 },
9439                                 "type": "object",
9440                                 "allOf": [
9441                                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9442                                     {"$ref": "#/definitions/oic.r.movement.linear"}
9443                                 ],
9444                                 "required": ["movementSettings", "movement"]
9445                             }
9446
9447     example: /
9448
9448         {
9449             "rt":
9449                 ["oic.r.movement.linear"],
9450             "id":
9450                 "unique_example_id",

```

```

9451         "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
9452         "movement":           "rotate",
9453         "movementModifier": "90"
9454     }
9455
9456     post:
9457         description: |
9458             Sets the current device movement
9459
9460     body:
9461         application/json:
9462             schema: /
9463                 {
9464                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.movement.linear.json#",
9465                     "$schema": "http://json-schema.org/draft-04/schema#",
9466                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
9467 reserved.",
9468                     "title": "Linear Movement",
9469                     "definitions": {
9470                         "oic.r.movement.linear": {
9471                             "type": "object",
9472                             "properties": {
9473                                 "movementSettings": {
9474                                     "type": "array",
9475                                     "readOnly": true,
9476                                     "description": "array of possible movement values",
9477                                     "items": {
9478                                         "type": "string"
9479                                     }
9480                                 },
9481                                 "movement": {
9482                                     "type": "string",
9483                                     "description": "Current movement value"
9484                                 },
9485                                 "movementModifier": {
9486                                     "type": "string",
9487                                     "description": "Modifier to the movement value (e.g. spin-90, left-20), units
9488 are device dependent"
9489                                 }
9490                             }
9491                         }
9492                     },
9493                     "type": "object",
9494                     "allOf": [
9495                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9496                         {"$ref": "#/definitions/oic.r.movement.linear"}
9497                     ],
9498                     "required": ["movementSettings", "movement"]
9499                 }
9500
9501     example: /
9502         {
9503             "id":           "unique_example_id",
9504             "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
9505             "movement": "stop"
9506         }
9507
9508     responses :
9509         200:
9510             body:
9511                 application/json:
9512                     schema: /
9513                         {
9514                             "id":

```

```

9515 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.movement.linear.json#",
9516 "$schema": "http://json-schema.org/draft-04/schema#",
9517 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9518 rights reserved.",
9519 "title": "Linear Movement",
9520 "definitions": {
9521     "oic.r.movement.linear": {
9522         "type": "object",
9523         "properties": {
9524             "movementSettings": {
9525                 "type": "array",
9526                 "readOnly": true,
9527                 "description": "array of possible movement values",
9528                 "items": {
9529                     "type": "string"
9530                 }
9531             },
9532             "movement": {
9533                 "type": "string",
9534                 "description": "Current movement value"
9535             },
9536             "movementModifier": {
9537                 "type": "string",
9538                 "description": "Modifier to the movement value (e.g. spin-90, left-20),
9539 units are device dependent"
9540             }
9541         }
9542     },
9543     "type": "object",
9544     "allOf": [
9545         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9546         {"$ref": "#/definitions/oic.r.movement.linear"}
9547     ],
9548     "required": ["movementSettings", "movement"]
9549 }
9550
9551
9552 example: /
9553 {
9554     "id": "unique_example_id",
9555     "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
9556     "movement": "stop"
9557 }
9558

```

6.56.5 Property Definition

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

6.56.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/MovementResURI		get	post		

9561 6.57 Sleep Sensor

9562 6.57.1 Introduction

9563 This resource describes whether human sleep has been sensed or not. The value is a boolean. A
9564 value of 'true' means that sleep has been sensed. A value of 'false' means that sleep not been
9565 sensed.

9566 6.57.2 Example URI

9567 /SleepSensorResURI

9568 6.57.3 Resource Type

9569 The resource type (rt) is defined as: oic.r.sensor.sleep.

9570 6.57.4 RAML Definition

```
9571 #%RAML 0.8
9572 title: OICSleepSensor
9573 version: v1.1.0-20160519
9574 traits:
9575   - interface :
9576       queryParameters:
9577         if:
9578           enum: ["oic.if.s", "oic.if.baseline"]
9579
9580 /SleepSensorResURI:
9581   description: |
9582     This resource describes whether human sleep has been sensed or not.
9583     The value is a boolean.
9584     A value of 'true' means that sleep has been sensed.
9585     A value of 'false' means that sleep not been sensed.
9586
9587   is : ['interface']
9588   get:
9589     responses :
9590       200:
9591         body:
9592           application/json:
9593             schema: /
9594               {
9595                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.sleep.json#",
9596                 "$schema": "http://json-schema.org/draft-04/schema#",
9597                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9598 rights reserved.",
9599                 "title": "Sleep Sensor",
9600                 "definitions": {
9601                   "oic.r.sensor.sleep": {
9602                     "allOf": [
9603                       {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
9604                     ]
9605                   }
9606                 },
9607                 "type": "object",
9608                 "allOf": [
9609                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9610                   {"$ref": "#/definitions/oic.r.sensor.sleep"}
9611                 ],
9612                 "required": ["value"]
9613               }
9614
9615   example: /
```

```

9616     {
9617         "rt":      ["oic.r.sensor.sleep"],
9618         "id":      "unique_example_id",
9619         "value":   true
9620     }
9621

```

6.57.5 Property Definition

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

6.57.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/SleepSensorResURI		get			

6.58 Smoke Sensor

6.58.1 Introduction

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

6.58.2 Example URI

/SmokeSensorResURI

6.58.3 Resource Type

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

6.58.4 RAML Definition

```

9633 #%RAML 0.8
9634 title: OICSmokeSensor
9635 version: v1.1.0-20160519
9636
9637 traits:
9638   - interface :
9639     queryParameters:
9640       if:
9641         enum: ["oic.if.s", "oic.if.baseline"]
9642
9643 /SmokeSensorResURI:
9644   description: |
9645     This resource describes whether smoke has been sensed or not.
9646     The value is a boolean.
9647     A value of 'true' means that smoke has been sensed.
9648     A value of 'false' means that smoke not been sensed.
9649
9650   is : ['interface']
9651   get:
9652     responses :
9653       200:
9654         body:
9655           application/json:
9656             schema: /
9657             {
9658               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.smoke.json#",
9659               "$schema": "http://json-schema.org/draft-04/schema#",
9660               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9661               rights reserved.",
9662               "title": "Smoke Sensor",

```



```

9662         "definitions": {
9663             "oic.r.sensor.smoke": {
9664                 "allof": [
9665                     {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
9666                 ]
9667             },
9668         },
9669         "type": "object",
9670         "allof": [
9671             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9672             {"$ref": "#/definitions/oic.r.sensor.smoke"}
9673         ],
9674         "required": ["value"]
9675     }
9676
9677     example: /
9678     {
9679         "rt":      ["oic.r.sensor.smoke"],
9680         "id":      "unique_example_id",
9681         "value":   true
9682     }
9683

```

6.58.5 Property Definition

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

6.58.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/SmokeSensorResURI		get			

6.59 Three Axis Sensor

6.59.1 Introduction

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

6.59.2 Example URI

/ThreeAxisResURI

6.59.3 Resource Type

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

6.59.4 RAML Definition

```

9696 #%RAML 0.8
9697 title: OICThreeAxis
9698 version: v1.1.0-20160519
9699 traits:
9700   - interface :
9701       queryParameters:
9702           if:
9703               enum: ["oic.if.s", "oic.if.baseline"]
9704
9705 /ThreeAxisResURI:
9706     description: |
9707         This resource provides a representation of the measurement from a three-axis sensor.
9708         The orientation is an array of numbers representing x-plane, y-plane and z-plane values.

```

```

9709         The unit of measurement for each pane is 'g'.
9710
9711     is : ['interface']
9712     get:
9713         responses :
9714             200:
9715                 body:
9716                     application/json:
9717                         schema: /
9718                             {
9719                                 "id":
9720 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.threeaxis.json#",
9721                                 "$schema": "http://json-schema.org/draft-04/schema#",
9722                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9723 rights reserved.",
9724                                 "title": "Three Axis Sensor",
9725                                 "definitions": {
9726                                     "oic.r.sensor.threeaxis": {
9727                                         "properties": {
9728                                             "orientation": {
9729                                                 "type": "array",
9730                                                 "readOnly": true,
9731                                                 "description": "Array containing x-plane, y-plane and z-plane orientation
9732 in 'g'.",
9733                                                 "minItems": 3,
9734                                                 "maxItems": 3,
9735                                                 "items": {
9736                                                     "type": "number"
9737                                                 }
9738                                             }
9739                                         }
9740                                     }
9741                                 },
9742                                 "type": "object",
9743                                 "allOf": [
9744                                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9745                                     {"$ref": "#/definitions/oic.r.sensor.threeaxis"}
9746                                 ],
9747                                 "required": ["orientation"]
9748                             }
9749
9750                 example: /
9751                     {
9752                         "rt":          ["oic.r.sensor.threeaxis"],
9753                         "id":          "unique_example_id",
9754                         "orientation": [0.7, 1.1, -0.2]
9755                     }
9756

```

9757 6.59.5 Property Definition

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

9758 6.59.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/ThreeAxisResURI		get			

9759 **6.60 Altimeter**

9760 **6.60.1 Introduction**

9761 This resource describes the properties associated with altimeter. Altimeter is a height of the
9762 position (metres).

9763 **6.60.2 Example URI**

9764 /AltimeterResURI

9765 **6.60.3 Resource Type**

9766 The resource type (rt) is defined as: oic.r.altimeter.

9767 **6.60.4 RAML Definition**

9768 `##RAML 0.8`

9769 `title: OICAltimeter`

9770 `version: v1.1.0-20160519`

9771 `traits:`

9772 `- interface :`

9773 `queryParameters:`

9774 `if:`

9775 `enum: ["oic.if.s", "oic.if.baseline"]`

9776

9777 `/AltimeterResURI:`

9778 `description: |`

9779 `This resource describes the properties associated with altimeter.`

9780 `Altimeter is a height of the position (metres).`

9781

9782 `is : ['interface']`

9783 `get:`

9784 `description: |`

9785 `Retrieves the current the height of the position (metres).`

9786

9787 `responses :`

9788 `200:`

9789 `body:`

9790 `application/json:`

9791 `schema: /`

9792 `{`

9793 `"id": "http://openinterconnect.org/schemas/oic.r.altimeter#",`

9794 `"$schema": "http://json-schema.org/draft-04/schema#",`

9795 `"description": "Copyright (c) 2016, 2017 Open Interconnect Consortium, Inc. All`

9796 `rights reserved.",`

9797 `"title": "Altimeter",`

9798 `"definitions": {`

9799 `"oic.r.altimeter": {`

9800 `"type": "object",`

9801 `"properties": {`

9802 `"alt": {`

9803 `"type": "number",`

9804 `"minimum": 0,`

9805 `"readOnly": true,`

9806 `"description": "The current height of the position (metres)"`

9807 `}`

9808 `}`

9809 `}`

9810 `},`

9811 `"type": "object",`

9812 `"allOf": [`

9813 `{ "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },`

9814 `{ "$ref": "#/definitions/oic.r.altimeter" }`

```

9815         ],
9816         "required": ["alt"]
9817     }
9818
9819     example: /
9820     {
9821         "rt": ["oic.r.altimeter"],
9822         "id": "unique_example_id",
9823         "alt": 1500.0
9824     }
9825

```

9826 6.60.5 Property Definition

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

9827 6.60.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/AltimeterResURI		get			

9828 6.61 Clock

9829 6.61.1 Introduction

9830 This resource describes the properties associated with clock and time. Clock is a time information.
 9831 Datetime is using ISO 8601 datetime format (e.g: "2007-04-05T14:30Z") (Time+Date+Timezone)
 9832 Countdown is the desired total seconds for countdown.

9833 6.61.2 Example URI

9834 /ClockResURI

9835 6.61.3 Resource Type

9836 The resource type (rt) is defined as: oic.r.clock.

9837 6.61.4 RAML Definition

```

9838 #%RAML 0.8
9839 title: OICClock
9840 version: v1.1.0-20160519
9841 traits:
9842   - interface :
9843       queryParameters:
9844         if:
9845             enum: ["oic.if.a", "oic.if.baseline"]
9846
9847 /ClockResURI:
9848     description: |
9849         This resource describes the properties associated with clock and time.
9850         Clock is a time information.
9851         Datetime is using ISO 8601 datetime format (e.g: "2007-04-05T14:30Z") (Time+Date+Timezone)
9852         Countdown is the desired total seconds for countdown.
9853
9854     is : ['interface']
9855     get:
9856         description: |
9857             Retrieves the current datetime data.
9858
9859     responses :

```

```

9860     200:
9861     body:
9862         application/json:
9863         schema: /
9864             {
9865                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.clock.json#",
9866                 "$schema": "http://json-schema.org/draft-04/schema#",
9867                 "description": "(c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
9868 reserved.",
9869                 "title": "Clock",
9870                 "definitions": {
9871                     "oic.r.clock": {
9872                         "type": "object",
9873                         "properties": {
9874                             "datetime": {
9875                                 "type": "string",
9876                                 "description": "Using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z,
9877 2007-04-05T14:30+09:00)"
9878                             },
9879                             "countdown": {
9880                                 "type": "number",
9881                                 "minimum": 0,
9882                                 "description": "Desired total seconds for countdown"
9883                             }
9884                         }
9885                     }
9886                 },
9887                 "type": "object",
9888                 "allOf": [
9889                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9890                     {"$ref": "#/definitions/oic.r.clock"}
9891                 ],
9892                 "required": ["datetime"]
9893             }
9894
9895         example: /
9896             {
9897                 "rt": ["oic.r.clock"],
9898                 "id": "unique_example_id",
9899                 "datetime": "2015-11-05T14:30Z",
9900                 "countdown": 0.0
9901             }
9902
9903     post:
9904         description: |
9905             Sets the desired datetime.
9906
9907         body:
9908             application/json:
9909             schema: /
9910                 {
9911                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.clock.json#",
9912                     "$schema": "http://json-schema.org/draft-04/schema#",
9913                     "description": "(c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
9914 reserved.",
9915                     "title": "Clock",
9916                     "definitions": {
9917                         "oic.r.clock": {
9918                             "type": "object",
9919                             "properties": {
9920                                 "datetime": {
9921                                     "type": "string",
9922                                     "description": "Using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z, 2007-
9923 04-05T14:30+09:00)"
9924                                 },

```

```

9925         "countdown": {
9926             "type": "number",
9927             "minimum": 0,
9928             "description": "Desired total seconds for countdown"
9929         }
9930     }
9931 },
9932 },
9933 "type": "object",
9934 "allof": [
9935     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9936     {"$ref": "#/definitions/oic.r.clock"}
9937 ],
9938 "required": ["datetime"]
9939 }
9940
9941 example: /
9942 {
9943     "id": "unique_example_id",
9944     "datetime": "2015-11-05T14:30Z",
9945     "countdown": 0.0
9946 }
9947
9948 responses :
9949 200:
9950     description: |
9951         Indicates that the datetime value was successfully changed.
9952         The new datetime value is provided in the response.
9953
9954     body:
9955         application/json:
9956             schema: /
9957                 {
9958                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.clock.json#",
9959                     "$schema": "http://json-schema.org/draft-04/schema#",
9960                     "description": "(c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
9961 reserved.",
9962                     "title": "Clock",
9963                     "definitions": {
9964                         "oic.r.clock": {
9965                             "type": "object",
9966                             "properties": {
9967                                 "datetime": {
9968                                     "type": "string",
9969                                     "description": "Using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z,
9970 2007-04-05T14:30+09:00)"
9971                                 },
9972                                 "countdown": {
9973                                     "type": "number",
9974                                     "minimum": 0,
9975                                     "description": "Desired total seconds for countdown"
9976                                 }
9977                             }
9978                         }
9979                     },
9980                     "type": "object",
9981                     "allof": [
9982                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9983                         {"$ref": "#/definitions/oic.r.clock"}
9984                     ],
9985                     "required": ["datetime"]
9986                 }
9987
9988 example: /

```

```

9989         {
9990             "id": "unique_example_id",
9991             "datetime": "2015-11-05T14:30Z",
9992             "countdown": 0.0
9993         }
9994
9995     403:
9996         description: |
9997             Indicates that OIC client sent an invalid property value to the server.
9998             The server responds with the required input representation.
9999
10000     body:
10001         application/json:
10002             schema: /
10003                 {
10004                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.clock.json#",
10005                     "$schema": "http://json-schema.org/draft-04/schema#",
10006                     "description": "(c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
reserved.",
10007                     "title": "Clock",
10008                     "definitions": {
10009                         "oic.r.clock": {
10010                             "type": "object",
10011                             "properties": {
10012                                 "datetime": {
10013                                     "type": "string",
10014                                     "description": "Using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z,
2007-04-05T14:30+09:00)"
10015                                 },
10016                                 "countdown": {
10017                                     "type": "number",
10018                                     "minimum": 0,
10019                                     "description": "Desired total seconds for countdown"
10020                                 }
10021                             }
10022                         }
10023                     },
10024                     "type": "object",
10025                     "allOf": [
10026                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
10027                         { "$ref": "#/definitions/oic.r.clock" }
10028                     ],
10029                     "required": ["datetime"]
10030                 }
10031
10032     example: /
10033         {
10034             "id": "unique_example_id",
10035             "datetime": "2015-11-05T14:30Z",
10036             "countdown": 0.0
10037         }
10038
10039
10040

```

6.61.5 Property Definition

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

6.61.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/ClockResURI		get	post		

6.62 Geolocation

6.62.1 Introduction

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

6.62.2 Example URI

/GeolocationResURI

6.62.3 Resource Type

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

6.62.4 RAML Definition

```
##RAML 0.8
title: OICGeolocation
version: v1.1.0-20160519

traits:
  - interface :
      queryParameters:
          if:
              enum: ["oic.if.s", "oic.if.baseline"]

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

  is : ['interface']

  get:
    description: |
      Retrieves the current geolocation coordinates.

    responses :
      200:
        body:
          application/json:
            schema: /
              {
                "id": "http://openinterconnect.org/schemas/oic.r.sensor.geolocation#",
                "$schema": "http://json-schema.org/draft-04/schema#",
                "description": "Copyright (c) 2016, 2017 Open Interconnect Consortium, Inc. All
rights reserved."
              }
```



```

10093         "title": "Geolocation",
10094         "definitions": {
10095             "oic.r.sensor.geolocation": {
10096                 "type": "object",
10097                 "allOf": [
10098                     { "$ref": "oic.r.altimeter.json#/definitions/oic.r.altimeter" },
10099                     { "properties": {
10100                         "latitude": {
10101                             "type": "number",
10102                             "readOnly": true,
10103                             "description": "Device's Current Latitude coordinate (degrees)"
10104                         },
10105                         "longitude": {
10106                             "type": "number",
10107                             "readOnly": true,
10108                             "description": "Device's Current Longitude coordinate (degrees)"
10109                         },
10110                         "accuracy": {
10111                             "type": "number",
10112                             "minimum": 0,
10113                             "readOnly": true,
10114                             "description": "The accuracy level of the latitude and longitude
10115 coordinates (metres)"
10116                         },
10117                         "altitudeAccuracy": {
10118                             "type": "number",
10119                             "minimum": 0,
10120                             "readOnly": true,
10121                             "description": "The accuracy level of the altitude coordinates (metres)"
10122                         },
10123                         "heading": {
10124                             "type": "number",
10125                             "minimum": 0,
10126                             "maximum": 360,
10127                             "readOnly": true,
10128                             "description": "Direction of travel of device (degree)"
10129                         },
10130                         "speed": {
10131                             "type": "number",
10132                             "minimum": 0,
10133                             "readOnly": true,
10134                             "description": "Device's current velocity (metres per second)"
10135                         }
10136                     }
10137                 ]
10138             }
10139         },
10140         "type": "object",
10141         "allOf": [
10142             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
10143             { "$ref": "#/definitions/oic.r.sensor.geolocation" }
10144         ],
10145         "required": ["latitude", "longitude", "alt"]
10146     }
10147 }
10148
10149 example: /
10150 {
10151     "rt":          ["oic.r.sensor.geolocation"],
10152     "id":          "unique_example_id",
10153     "latitude":    55.070859,
10154     "longitude":   -3.60512,
10155     "alt":         12.07,
10156     "accuracy":    65.0,
10157     "altitudeAccuracy": 0.0,
10158     "heading":     90.0,
10159     "speed":       0.0
10160 }
10161

```

10162 **6.62.5 Property Definition**

Property name	Value type	Mandatory	Access mode	Description
longitude	number	yes	Read Only	Device's Current Longitude coordinate (degrees)
latitude	number	yes	Read Only	Device's Current Latitude coordinate (degrees)
altitudeAccuracy	number		Read Only	The accuracy level of the altitude coordinates (metres)
speed	number		Read Only	Device's current velocity (metres per second)
heading	number		Read Only	Direction of travel of device (degree)
accuracy	number		Read Only	The accuracy level of the latitude and longitude coordinates (metres)

10163 **6.62.6 CRUDN behaviour**

Resource	Create	Read	Update	Delete	Notify
/GeolocationResURI		get			

10164 **6.63 Height**

10165 **6.63.1 Introduction**

10166 This resource describes the properties associated with height of an object's physical size. Height
10167 (height) is height of an object.

10168 **6.63.2 Example URI**

10169 /HeightResURI

10170 **6.63.3 Resource Type**

10171 The resource type (rt) is defined as: oic.r.height.

10172 **6.63.4 RAML Definition**

```

10173 #%RAML 0.8
10174 title: OICHeight
10175 version: v1.1.0-20160519
10176 traits:
10177   - interface :
10178       queryParameters:
10179         if:
10180           enum: ["oic.if.a", "oic.if.baseline"]
10181
10182 /HeightResURI:
10183   description: |

```

```

10184     This resource describes the properties associated with height of an object's physical size.
10185     Height (height) is height of an object.
10186
10187     is : ['interface']
10188
10189     get:
10190         description: |
10191             Retrieves height of an object.
10192
10193     responses :
10194         200:
10195             body:
10196                 application/json:
10197                     schema: /
10198                         {
10199                             "id": "http://openinterconnect.org/schemas/oic.r.height.json#",
10200                             "$schema": "http://json-schema.org/draft-04/schema#",
10201                             "description": "Copyright (c) 2016, 2017 Open Interconnect Consortium, Inc. All
rights reserved.",
10202                             "title": "Height",
10203                             "definitions": {
10204                                 "oic.r.height": {
10205                                     "type": "object",
10206                                     "properties": {
10207                                         "height": {
10208                                             "type": "number",
10209                                             "minimum": 0,
10210                                             "description": "Height of an object"
10211                                         }
10212                                     }
10213                                 }
10214                             },
10215                             "type": "object",
10216                             "allOf": [
10217                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
10218                                 { "$ref": "#/definitions/oic.r.height" }
10219                             ],
10220                             "required": ["height"]
10221                         }
10222
10223                     example: /
10224                         {
10225                             "rt": ["oic.r.height"],
10226                             "id": "unique_example_id",
10227                             "height": 100.0
10228                         }
10229
10230     post:
10231         description: |
10232             Sets the Height.
10233
10234         body:
10235             application/json:
10236                 schema: /
10237                     {
10238                         "id": "http://openinterconnect.org/schemas/oic.r.height.json#",
10239                         "$schema": "http://json-schema.org/draft-04/schema#",
10240                         "description": "Copyright (c) 2016, 2017 Open Interconnect Consortium, Inc. All rights
reserved.",
10241                         "title": "Height",
10242                         "definitions": {
10243                             "oic.r.height": {
10244                                 "type": "object",
10245                                 "properties": {

```

```

10247         "height": {
10248             "type": "number",
10249             "minimum": 0,
10250             "description": "Height of an object"
10251         }
10252     }
10253 },
10254 },
10255 "type": "object",
10256 "allOf": [
10257     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
10258     {"$ref": "#/definitions/oic.r.height"}
10259 ],
10260 "required": ["height"]
10261 }
10262
10263 example: /
10264 {
10265     "id": "unique_example_id",
10266     "height": 200.0
10267 }
10268
10269 responses :
10270 200:
10271     description: |
10272         Indicates that the height was successfully changed.
10273         The new height is provided in the response.
10274
10275     body:
10276         application/json:
10277             schema: /
10278                 {
10279                     "id": "http://openinterconnect.org/schemas/oic.r.height.json#",
10280                     "$schema": "http://json-schema.org/draft-04/schema#",
10281                     "description": "Copyright (c) 2016, 2017 Open Interconnect Consortium, Inc. All
10282 rights reserved.",
10283                     "title": "Height",
10284                     "definitions": {
10285                         "oic.r.height": {
10286                             "type": "object",
10287                             "properties": {
10288                                 "height": {
10289                                     "type": "number",
10290                                     "minimum": 0,
10291                                     "description": "Height of an object"
10292                                 }
10293                             }
10294                         }
10295                     },
10296                     "type": "object",
10297                     "allOf": [
10298                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
10299                         {"$ref": "#/definitions/oic.r.height"}
10300                     ],
10301                     "required": ["height"]
10302                 }
10303
10304             example: /
10305                 {
10306                     "id": "unique_example_id",
10307                     "height": 200.0
10308                 }
10309
10310 403:

```

```
10311      description: |
10312          Indicates that OIC client sent an invalid property value to the server.
10313          The server responds with the current resource representation.
10314
10315      body:
10316          application/json:
10317          schema: /
10318              {
10319                  "id": "http://openinterconnect.org/schemas/oic.r.height.json#",
10320                  "$schema": "http://json-schema.org/draft-04/schema#",
10321                  "description": "Copyright (c) 2016, 2017 Open Interconnect Consortium, Inc. All
10322 rights reserved.",
10323                  "title": "Height",
10324                  "definitions": {
10325                      "oic.r.height": {
10326                          "type": "object",
10327                          "properties": {
10328                              "height": {
10329                                  "type": "number",
10330                                  "minimum": 0,
10331                                  "description": "Height of an object"
10332                              }
10333                          }
10334                      }
10335                  },
10336                  "type": "object",
10337                  "allOf": [
10338                      {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
10339                      {"$ref": "#/definitions/oic.r.height"}
10340                  ],
10341                  "required": ["height"]
10342              }
10343
10344      example: /
10345          {
10346              "id": "unique_example_id",
10347              "height": 200.0
10348          }
10349
```

10350 **6.63.5 Property Definition**

Property name	Value type	Mandatory	Access mode	Description
height	number	yes		Height of an object

10351 **6.63.6 CRUDN behaviour**

Resource	Create	Read	Update	Delete	Notify
/HeightResURI		get	post		

10352 **6.64 Weight**

10353 **6.64.1 Introduction**

10354 This resource describes the properties associated with weight of an object. Weight (weight) is
10355 weight of an object.

10356 **6.64.2 Example URI**

10357 /WeightResURI

10358 **6.64.3 Resource Type**

10359 The resource type (rt) is defined as: oic.r.weight.

10360 **6.64.4 RAML Definition**

10361 `##RAML 0.8`

```
10362 title: OICWeight
10363 version: v1.1.0-20160519
10364 traits:
10365   - interface :
10366     queryParameters:
10367       if:
10368         enum: ["oic.if.s", "oic.if.baseline"]
10369
10370 /WeightResURI:
10371   description: |
10372     This resource describes the properties associated with weight of an object.
10373     Weight (weight) is weight of an object.
10374
10375   is : ['interface']
10376   get:
10377     description: |
10378       Retrieves weight of an object.
10379
10380   responses :
10381     200:
10382       body:
10383         application/json:
10384           schema: /
10385             {
10386               "id": "http://openinterconnect.org/schemas/oic.r.weight.json#",
10387               "$schema": "http://json-schema.org/draft-04/schema#",
10388               "description": "Copyright (c) 2016, 2017 Open Interconnect Consortium, Inc. All
10389 rights reserved.",
10390               "title": "Weight",
10391               "definitions": {
10392                 "oic.r.weight": {
10393                   "type": "object",
10394                   "properties": {
10395                     "weight": {
10396                       "type": "number",
10397                       "minimum": 0,
10398                       "readOnly": true,
10399                       "description": "Weight of an object"
10400                     }
10401                   }
10402                 }
10403               },
10404               "type": "object",
10405               "allOf": [
10406                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
10407                 {"$ref": "#/definitions/oic.r.weight"}
10408               ],
10409               "required": ["weight"]
10410             }
10411
10412   example: /
10413     {
10414       "rt":      ["oic.r.weight"],
10415       "id":      "unique_example_id",
10416       "weight":  200.0
10417     }
10418
10419
```

6.64.5 Property Definition

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

weight	number	yes	Read Only	Weight of an object
--------	--------	-----	-----------	---------------------

6.64.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/WeightResURI		get			

6.65 Air Quality

6.65.1 Introduction

This resource describes a qualitative or measured contaminant that can be used to infer Air Quality. Measured is the actual sensed value with units per contaminant type as described below. Qualitative is a representative value within the range provided where the minium value is minimum contamination and maximum value is maximum contamination for the specific contaminant. The valueType indicates a qualitative or measured reading within the contaminantvalue Property. contaminantvalue contains the actual measured or qualitative level. range contains the allowed range for the value that is being reported (from oic.r.baseresource). If valueType is 'Measured' then the units for the contaminant types are as follows: Methanal (also known as Formaldehyde): CH₂O (ug/m³), Carbon Dioxide: CO₂ (ppm), Carbon Monoxide: CO (ppm), Particulate Matter (less than 2.5 microns in diameter): PM_{2.5} (ug/m³), Particulate Matter (less than 10 microns in diameter): PM₁₀ (ug/m³), Volatile Organic Compounds: VOC (ug/m³)

6.65.2 Example URI

/AirQualityResURI

6.65.3 Resource Type

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

6.65.4 RAML Definition

```

#%RAML 0.8
title: OICAirQuality
version: v1.1.0-20160519

traits:
  - interface :
      queryParameters:
        if:
          enum: ["oic.if.s", "oic.if.baseline"]

/AirQualityResURI:
  description: |
    This resource describes a qualitative or measured contaminant that can be used to infer Air
    Quality.
    Measured is the actual sensed value with units per contaminant type as described below.
    Qualitative is a representative value within the range provided where the minium value is
    minimum contamination and maximum value is maximum contamination for the specific contaminant.
    The valueType indicates a qualitative or measured reading within the contaminantvalue Property.
    contaminantvalue contains the actual measured or qualitative level.
    range contains the allowed range for the value that is being reported (from
    oic.r.baseresource).
    If valueType is 'Measured' then the units for the contaminant types are as follows:
    Methanal (also known as Formaldehyde): CH2O (ug/m3),
    Carbon Dioxide: CO2 (ppm),
    Carbon Monoxide: CO (ppm),
    Particulate Matter (less than 2.5 microns in diameter): PM2.5 (ug/m3),
    Particulate Matter (less than 10 microns in diameter): PM10 (ug/m3),
    Volatile Organic Compounds: VOC (ug/m3)

  is : ['interface']
  get:

```

```

10469     description: |
10470         Retrieves the current air quality.
10471
10472     responses :
10473         200:
10474             body:
10475                 application/json:
10476                     schema: /
10477                         {
10478                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airquality.json#",
10479                             "$schema": "http://json-schema.org/draft-04/schema#",
10480                             "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
10481 reserved.",
10482                             "title": "Air Quality",
10483                             "definitions": {
10484                                 "oic.r.airquality": {
10485                                     "type": "object",
10486                                     "properties": {
10487                                         "contaminantvalue": {
10488                                             "type": "integer",
10489                                             "readOnly": true,
10490                                             "description": "The measured or qualitative value for the contaminant."
10491                                         },
10492                                         "contaminanttype": {
10493                                             "enum":
10494 [ "CH2O", "CO2", "CO", "PM2.5", "PM10", "VOC", "Smoke", "Odor", "AirPollution"],
10495                                             "description": "The contaminant being measured.",
10496                                             "readOnly": true
10497                                         },
10498                                         "valuetype": {
10499                                             "enum": [ "Qualitative", "Measured"],
10500                                             "description": "Indicates whether the provided value is qualitative or
10501 measured.",
10502                                             "readOnly": true
10503                                         }
10504                                     }
10505                                 }
10506                             },
10507                             "type": "object",
10508                             "allOf": [
10509                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
10510                                 { "$ref": "#/definitions/oic.r.airquality" }
10511                             ],
10512                             "required": [ "contaminantvalue", "contaminanttype", "valuetype", "range" ]
10513                         }
10514
10515                     example: /
10516                         {
10517                             "rt":          [ "oic.r.airquality" ],
10518                             "id":          "unique_example_id",
10519                             "contaminanttype": "CO",
10520                             "valuetype": "Measured",
10521                             "contaminantvalue": 10,
10522                             "range": [ 0, 500 ]
10523                         }
10524

```

6.65.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
valuetype	multiple types: see schema	yes	Read Only	Indicates whether the provided value is qualitative or measured.

contaminantvalue	integer	yes	Read Only	The measured or qualitative value for the contaminant.
contaminanttype	multiple types: see schema	yes	Read Only	The contaminant being measured.

6.65.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/AirQualityResURI		get			

6.66 Air Quality Collection

6.66.1 Introduction

This resource describes a sensor that provides the qualitative or measured Air Quality. The resource is a collection of instances of oic.r.airquality detailing the individual exposed contaminant measures. There is one collection entry per contaminant type supported by the device. A device must expose at least one measured or qualitative value.

6.66.2 Example URI

/AirQualityBaselineResURI

6.66.3 Resource Type

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

6.66.4 RAML Definition

```

#%RAML 0.8
title: OICAirQuality
version: v1.1.0-20160519

traits:
- interface-ll :
    queryParameters:
        if:
            enum: ["oic.if.ll"]
- interface-baseline :
    queryParameters:
        if:
            enum: ["oic.if.baseline"]
- interface-all :
    queryParameters:
        if:
            enum: ["oic.if.ll", "oic.if.baseline"]

/AirQualityBaselineResURI:
    description: |
        This resource describes a sensor that provides the qualitative or measured Air Quality.
        The resource is a collection of instances of oic.r.airquality detailing the individual exposed
        contaminant measures
        There is one collection entry per contaminant type supported by the device
        A device must expose at least one measured or qualitative value.

    is : ['interface-baseline']
    get:
        description: |
            Retrieves the current air quality.

        responses :

```

```

10569     200:
10570     body:
10571         application/json:
10572             schema: /
10573                 {
10574                     "id":
10575 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airqualitycollection.json#",
10576                     "$schema": "http://json-schema.org/draft-04/schema#",
10577                     "description": "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
10578 reserved.",
10579                     "title": "Air Quality Collection",
10580                     "definitions": {
10581                         "oic.r.airqualitycollection": {
10582                             "type": "object",
10583                             "allOf": [
10584                                 {
10585                                     "$ref": "oic.collection-schema.json#/definitions/oic.collection"
10586                                 },
10587                                 {
10588                                     "properties": {
10589                                         "rt": {
10590                                             "type": "array",
10591                                             "minItems": 2,
10592                                             "maxItems": 2,
10593                                             "uniqueItems": true,
10594                                             "items": {
10595                                                 "enum": ["oic.r.airqualitycollection", "oic.wk.col"]
10596                                             }
10597                                         },
10598                                         "rts": {
10599                                             "type": "array",
10600                                             "minItems": 1,
10601                                             "maxItems": 2,
10602                                             "uniqueItems": true,
10603                                             "items": {
10604                                                 "anyOf": [
10605                                                     {
10606                                                         "enum": ["oic.r.airquality", "oic.r.value.conditional"]
10607                                                     },
10608                                                     {
10609                                                         "enum": ["oic.r.airquality"]
10610                                                     }
10611                                                 ]
10612                                             }
10613                                         }
10614                                     }
10615                                 }
10616                             ]
10617                         },
10618                         "type": "object",
10619                         "allOf": [
10620                             {
10621                                 "$ref": "oic.core.json#/definitions/oic.core",
10622                                 "$ref": "#/definitions/oic.r.airqualitycollection"
10623                             }
10624                         ]
10625                     }
10626             example: /
10627                 {
10628                     "rt": ["oic.r.airqualitycollection", "oic.wk.col"],
10629                     "if": ["oic.if.baseline", "oic.if.ll"],
10630                     "id": "unique_example_id",
10631                     "links": [
10632                         {
10633                             "href": "/myCOMeasureResURI", "rt": ["oic.r.airquality"], "if":
10634 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::bld6]:1122"}]},
10635                         {
10636                             "href": "/myCO2ResURI", "rt": ["oic.r.airquality"], "if":
10637 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::bld6]:1122"}]}
10638                     ]
10639                 }

```

10637 }
10638
10639

6.66.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema			
rts	array: see schema			
drel	string			When specified this is the default relationship to use when an OIC Link does not specify an explicit relationship with *rel* parameter
links	multiple types: see schema			
id	multiple types: see schema			ID for the collection. Can be an value that is unique to the use context or a UUIDv4
rts	multiple types: see schema			Defines the list of allowable resource types (for Target and anchors) in links included in the collection; new links being created can only be from this list
di	multiple types: see schema			The device ID which is an UUIDv4 string; used for backward compatibility with Spec A definition of /oic/res

10640 6.66.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/AirQualityBaselineResURI		get			

10641 6.66.7 Referenced JSON schemas

10642 6.66.7.1 oic.collection-schema.json

10643 {
10644 "\$schema": "http://json-schema.org/draft-04/schema#",
10645 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights reserved.",
10646 "id": "https://www.openconnectivity.org/ocf-apis/core/schemas/oic.collection-schema.json#",
10647 "title": "Collection",
10648 "definitions": {

```

10649     "oic.collection.setoflinks": {
10650         "description": "A set (array) of simple or individual OIC Links. In addition to
10651 properties required for an OIC Link, the identifier for that link in this set is also required",
10652         "type": "array",
10653         "items": {
10654             "$ref": "oic.oic-link-schema.json#/definitions/oic.oic-link"
10655         }
10656     },
10657     "oic.collection.alllinks": {
10658         "description": "All forms of links in a collection",
10659         "oneOf": [
10660             {
10661                 "$ref": "#/definitions/oic.collection.setoflinks"
10662             }
10663         ]
10664     },
10665     "oic.collection": {
10666         "type": "object",
10667         "description": "A collection is a set (array) of tagged-link or set (array) of simple
10668 links along with additional properties to describe the collection itself",
10669         "properties": {
10670             "id": {
10671                 "anyOf": [
10672                     {
10673                         "type": "integer",
10674                         "description": "A number that is unique to that collection; like an
10675 ordinal number that is not repeated"
10676                     },
10677                     {
10678                         "type": "string",
10679                         "description": "A unique string that could be a hash or similarly
10680 unique"
10681                     },
10682                     {
10683                         "$ref": "oic.types-schema.json#/definitions/uuid",
10684                         "description": "A unique string that could be a UUIDv4"
10685                     }
10686                 ],
10687                 "description": "ID for the collection. Can be an value that is unique to the
10688 use context or a UUIDv4"
10689             },
10690             "di": {
10691                 "$ref": "oic.types-schema.json#/definitions/uuid",
10692                 "description": "The device ID which is an UUIDv4 string; used for backward
10693 compatibility with Spec A definition of /oic/res"
10694             },
10695             "rts": {
10696                 "$ref": "oic.core-schema.json#/definitions/oic.core/properties/rt",
10697                 "description": "Defines the list of allowable resource types (for Target and
10698 anchors) in links included in the collection; new links being created can only be from this
10699 list"
10700             },
10701             "drel": {
10702                 "type": "string",
10703                 "description": "When specified this is the default relationship to use when an
10704 OIC Link does not specify an explicit relationship with *rel* parameter"
10705             },
10706             "links": {
10707                 "$ref": "#/definitions/oic.collection.alllinks"
10708             }
10709         }
10710     },
10711     "type": "object",
10712     "allOf": [
10713         {"$ref": "oic.core-schema.json#/definitions/oic.core"},
10714         {"$ref": "#/definitions/oic.collection"}
10715     ]
10716 }
10717

```

6.67 Consumable

6.67.1 Introduction

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

6.67.2 Example URI

/ConsumableResURI

6.67.3 Resource Type

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

6.67.4 RAML Definition

```
##RAML 0.8
title: OICConsumables
version: OCF-v1.0.0-20160620

traits:
  - interface :
      queryParameters:
        if:
          enum: ["oic.if.s", "oic.if.baseline"]

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

  is : ['interface']

  get:
    responses :
      200:
        body:
          application/json:
            schema: /
              {
                "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.consumable#",
                "$schema": "http://json-schema.org/draft-04/schema#",
                "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
reserved.",
                "title": "Consumable",
                "definitions": {
                  "oic.r.consumable": {
                    "type": "object",
                    "properties": {
                      "typeofconsumable": {
                        "type": "string",
                        "description": "Thing that is being consumed.",
                        "readOnly": true
                      },
                      "remaining": {
```

```

10774         "type": "integer",
10775         "description": "Percentage remaining lifespan.",
10776         "readOnly": true,
10777         "minimum": 0,
10778         "maximum": 100
10779     },
10780     "orderpercentage": {
10781         "type": "integer",
10782         "description": "Percentage at which re-ordering is recommended by the
10783 manufacturer",
10784         "readOnly": true,
10785         "minimum": 0,
10786         "maximum": 100
10787     },
10788     "url": {
10789         "type": "string",
10790         "format": "uri",
10791         "description": "URL at which additional ordering information may be
10792 found.",
10793         "readOnly": true
10794     }
10795 }
10796 }
10797 },
10798 "type": "object",
10799 "allOf": [
10800     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
10801     { "$ref": "#/definitions/oic.r.consumable" }
10802 ],
10803 "required": ["typeofconsumable", "remaining"]
10804 }
10805
10806 example: /
10807 {
10808     "rt":                ["oic.r.consumable"],
10809     "id":                "unique_example_id",
10810     "typeofconsumable": "tonerBlack",
10811     "remaining":         20,
10812     "orderpercentage":   10,
10813     "url":               "http://myreorderURL"
10814 }
10815

```

6.67.5 Property Definition

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

6.67.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/ConsumableResURI		get			

10818 6.68 Consumable Collection

10819 6.68.1 Introduction

10820 This resource specifies things that can be consumed such as filter material, printer toner etc The
10821 resource is a collection of instances of oic.r.consumable detailing the individual consumed items
10822 supportedconsumables is the set of consumable types that this instance of the Resource supports

10823 6.68.2 Example URI

10824 /ConsumablesBaselineResURI

10825 6.68.3 Resource Type

10826 The resource type (rt) is defined as: oic.r.consumablecollection.

10827 6.68.4 RAML Definition

```
10828 #%RAML 0.8
10829 title: OICConsumables
10830 version: OCF-v1.0.0-20160620
10831 traits:
10832   - interface-ll :
10833       queryParameters:
10834           if:
10835               enum: ["oic.if.ll"]
10836   - interface-baseline :
10837       queryParameters:
10838           if:
10839               enum: ["oic.if.baseline"]
10840   - interface-all :
10841       queryParameters:
10842           if:
10843               enum: ["oic.if.ll", "oic.if.baseline"]
10844
10845 /ConsumablesBaselineResURI:
10846   description: |
10847     This resource specifies things that can be consumed such as filter material, printer toner etc
10848     The resource is a collection of instances of oic.r.consumable detailing the individual consumed
10849 items
10850     supportedconsumables is the set of consumable types that this instance of the Resource supports
10851
10852   is : ['interface-baseline']
10853   get:
10854       responses :
10855           200:
10856               body:
10857                   application/json:
10858                       schema: /
10859                           {
10860                               "id":
10861 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.consumablecollection#",
10862                               "$schema": "http://json-schema.org/draft-04/schema#",
10863                               "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
10864 reserved.",
10865                               "title": "Consumables Collection",
10866                               "definitions": {
10867                                   "oic.r.consumablecollection": {
10868                                       "type": "object",
10869                                       "allOf": [
10870                                           {
10871                                               "$ref": "oic.collection-schema.json#/definitions/oic.collection"
10872                                           },
10873                                       ],
10874                                   },
10875                               },
10876                           }
```

```

10873     {
10874         "properties": {
10875             "rt": {
10876                 "type": "array",
10877                 "minItems": 2,
10878                 "maxItems": 2,
10879                 "uniqueItems": true,
10880                 "items": {
10881                     "enum": ["oic.r.consumablecollection", "oic.wk.col"]
10882                 }
10883             },
10884             "rts": {
10885                 "type": "array",
10886                 "minItems": 1,
10887                 "maxItems": 2,
10888                 "uniqueItems": true,
10889                 "items": {
10890                     "anyOf": [
10891                         {
10892                             "enum": ["oic.r.consumable", "oic.r.value.conditional"]
10893                         },
10894                         {
10895                             "enum": ["oic.r.consumable"]
10896                         }
10897                     ]
10898                 }
10899             },
10900             "supportedconsumables": {
10901                 "type": "array",
10902                 "description": "Array of possible consumables the device measures.",
10903                 "readOnly": true,
10904                 "items": {
10905                     "type": "string"
10906                 }
10907             }
10908         }
10909     }
10910 ]
10911 }
10912 },
10913 "type": "object",
10914 "allOf": [
10915     { "$ref": "oic.core.json#/definitions/oic.core" },
10916     { "$ref": "#/definitions/oic.r.consumablecollection" }
10917 ]
10918 }
10919

```

```

10920 example: /
10921 {
10922     "rt": ["oic.r.consumablecollection", "oic.wk.col"],
10923     "id": "unique_example_id",
10924     "rts": ["oic.r.consumable", "oic.r.value.conditional"],
10925     "supportedconsumables": ["tonerBlack", "tonerCyan", "tonerMagenta", "tonerYellow"],
10926     "links": [
10927         { "href": "/myTonerBlackResURI", "rt": ["oic.r.consumable"], "if":
10928 ["oic.if.s", "oic.if.baseline"], "eps": [{ "ep": "coaps://[fe80::b1d6]:1122" }] },
10929         { "href": "/myTonerCyanResURI", "rt": ["oic.r.consumable"], "if":
10930 ["oic.if.s", "oic.if.baseline"], "eps": [{ "ep": "coaps://[fe80::b1d6]:1122" }] },
10931         { "href": "/myTonerMagentaResURI", "rt": ["oic.r.consumable"], "if":
10932 ["oic.if.s", "oic.if.baseline"], "eps": [{ "ep": "coaps://[fe80::b1d6]:1122" }] },
10933         { "href": "/myTonerYellowResURI", "rt": ["oic.r.consumable"], "if":
10934 ["oic.if.s", "oic.if.baseline"], "eps": [{ "ep": "coaps://[fe80::b1d6]:1122" }] }
10935     ]
10936 }
10937

```

10938 6.68.5 Property Definition

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

rt	array: see schema			
supportedconsumables	array: see schema		Read Only	Array of possible consumables the device measures.
rts	array: see schema			
drel	string			When specified this is the default relationship to use when an OIC Link does not specify an explicit relationship with *rel* parameter
links	multiple types: see schema			
id	multiple types: see schema			ID for the collection. Can be an value that is unique to the use context or a UUIDv4
rts	multiple types: see schema			Defines the list of allowable resource types (for Target and anchors) in links included in the collection; new links being created can only be from this list
di	multiple types: see schema			The device ID which is an UUIDv4 string; used for backward compatibility with Spec A definition of /oic/res

10939 **6.68.6 CRUDN behaviour**

Resource	Create	Read	Update	Delete	Notify
/ConsumablesBaselineResURI		get			

10940 **6.68.7 Referenced JSON schemas**

10941 **6.68.7.1 oic.collection-schema.json**

10942 {
10943 "schema": "http://json-schema.org/draft-04/schema#",
10944 "description": "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights reserved.",

```

10945     "id": "https://www.openconnectivity.org/ocf-apis/core/schemas/oic.collection-schema.json#",
10946     "title": "Collection",
10947     "definitions": {
10948         "oic.collection.setoflinks": {
10949             "description": "A set (array) of simple or individual OIC Links. In addition to
10950 properties required for an OIC Link, the identifier for that link in this set is also required",
10951             "type": "array",
10952             "items": {
10953                 "$ref": "oic.oic-link-schema.json#/definitions/oic.oic-link"
10954             }
10955         },
10956         "oic.collection.alllinks": {
10957             "description": "All forms of links in a collection",
10958             "oneOf": [
10959                 {
10960                     "$ref": "#/definitions/oic.collection.setoflinks"
10961                 }
10962             ],
10963         },
10964         "oic.collection": {
10965             "type": "object",
10966             "description": "A collection is a set (array) of tagged-link or set (array) of simple
10967 links along with additional properties to describe the collection itself",
10968             "properties": {
10969                 "id": {
10970                     "anyOf": [
10971                         {
10972                             "type": "integer",
10973                             "description": "A number that is unique to that collection; like an
10974 ordinal number that is not repeated"
10975                         },
10976                         {
10977                             "type": "string",
10978                             "description": "A unique string that could be a hash or similarly
10979 unique"
10980                         },
10981                         {
10982                             "$ref": "oic.types-schema.json#/definitions/uuid",
10983                             "description": "A unique string that could be a UUIDv4"
10984                         }
10985                     ],
10986                     "description": "ID for the collection. Can be an value that is unique to the
10987 use context or a UUIDv4"
10988                 },
10989                 "di": {
10990                     "$ref": "oic.types-schema.json#/definitions/uuid",
10991                     "description": "The device ID which is an UUIDv4 string; used for backward
10992 compatibility with Spec A definition of /oic/res"
10993                 },
10994                 "rts": {
10995                     "$ref": "oic.core-schema.json#/definitions/oic.core/properties/rt",
10996                     "description": "Defines the list of allowable resource types (for Target and
10997 anchors) in links included in the collection; new links being created can only be from this
10998 list"
10999                 },
11000                 "drel": {
11001                     "type": "string",
11002                     "description": "When specified this is the default relationship to use when an
11003 OIC Link does not specify an explicit relationship with *rel* parameter"
11004                 },
11005                 "links": {
11006                     "$ref": "#/definitions/oic.collection.alllinks"
11007                 }
11008             }
11009         },
11010         "type": "object",
11011         "allOf": [
11012             { "$ref": "oic.core-schema.json#/definitions/oic.core" },
11013             { "$ref": "#/definitions/oic.collection" }
11014         ]

```

```

11015 }
11016
11017 6.69 Delay Defrost
11018 6.69.1 Introduction
11019 This resource describes the delay defrost function as defined by the US Energy Star Specifications.
11020 See Energy Star Refrigerator Requirements Version 5 Section 4)G
11021 (https://www.energystar.gov/sites/default/files/specs//private/ENERGY%20STAR%20Final%20Version%205.0%20Residential%20Refrigerators%20and%20Freezers%20Program%20Requirements.pdf)
11022 The status is a boolean indicating whether the function is on, if off then defrost is scheduled
11023 as part of normal device operation. startTime, from oir.r.time.period (mandatory) is an ISO8601
11024 encoded start time for the interval in which defrost shall not occur. stopTime, from oic.r.time.period
11025 is an ISO8601 encoded stop time for the interval in which defrost shall not occur. interval, from
11026 oic.r.time.period with additional range restrictions is the time in minutes of the period that starts at
11027 starttime (if not present the default is 240). stopTime and interval are mutually exclusive; they
11028 cannot both be present in a Resource instance
11029
11030 6.69.2 Example URI
11031 /DelayDefrostResURI
11032 6.69.3 Resource Type
11033 The resource type (rt) is defined as: oic.r.delaydefrost.
11034 6.69.4 RAML Definition
11035 ##RAML 0.8
11036 title: OICDelayDefrost
11037 version: OCF_v1.0.0-2016____
11038 traits:
11039   - interface :
11040     queryParameters:
11041       if:
11042         enum: ["oic.if.a", "oic.if.baseline"]
11043
11044 /DelayDefrostResURI:
11045   description: |
11046     This resource describes the delay defrost function as defined by the US Energy Star
11047 Specifications.
11048     See Energy Star Refrigerator Requirements Version 5 Section 4)G
11049 (https://www.energystar.gov/sites/default/files/specs//private/ENERGY%20STAR%20Final%20Version%205.0%20Residential%20Refrigerators%20and%20Freezers%20Program%20Requirements.pdf)
11050     The status is a boolean indicating whether the function is on, if off then defrost is scheduled
11051 as part of normal device operation.
11052     startTime, from oir.r.time.period (mandatory) is an ISO8601 encoded start time for the interval
11053 in which defrost shall not occur.
11054     stopTime, from oic.r.time.period is an ISO8601 encoded stop time for the interval in which
11055 defrost shall not occur.
11056     interval, from oic.r.time.period with additional range restrictions is the time in minutes of
11057 the period that starts at starttime (if not present the default is 240).
11058     stopTime and interval are mutually exclusive; they cannot both be present in a Resource
11059 instance
11060
11061 is : ['interface']
11062
11063 get:
11064   description: |
11065     Retrieves the current Delay Defrost function status
11066
11067 responses :
11068   200:

```

```

11070     body:
11071         application/json:
11072             schema: /
11073                 {
11074                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.delaydefrost.json#",
11075                     "$schema": "http://json-schema.org/draft-04/schema#",
11076                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
11077 rights reserved.",
11078                     "title": "Delay Defrost",
11079                     "definitions": {
11080                         "oic.r.delaydefrost": {
11081                             "type": "object",
11082                             "allOf": [
11083                                 {
11084                                     "$ref": "oic.r.time.period.json#/definitions/oic.r.time.period"
11085                                 },
11086                                 {
11087                                     "properties": {
11088                                         "interval": {
11089                                             "type": "integer",
11090                                             "description": "Defrost interval as defined by Energy Star",
11091                                             "minimum": 1,
11092                                             "maximum": 1440,
11093                                             "default": 240
11094                                         },
11095                                         "status": {
11096                                             "type": "boolean",
11097                                             "description": "Indicates whether any supported delay defrost function
11098 is active"
11099                                         }
11100                                     },
11101                                     "required": ["status"]
11102                                 }
11103                             ]
11104                         }
11105                     },
11106                     "type": "object",
11107                     "allOf": [
11108                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
11109                         { "$ref": "#/definitions/oic.r.delaydefrost" }
11110                     ]
11111                 }
11112
11113             example: /
11114                 {
11115                     "rt": ["oic.r.delaydefrost"],
11116                     "id": "unique_example_id",
11117                     "startTime": "06:00Z",
11118                     "status": false
11119                 }
11120
11121     post:
11122         description: |
11123             Activates the desired Delay Defrost functions
11124
11125     body:
11126         application/json:
11127             schema: /
11128                 {
11129                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.delaydefrost.json#",
11130                     "$schema": "http://json-schema.org/draft-04/schema#",
11131                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
11132 reserved.",
11133                     "title": "Delay Defrost",
11134                     "definitions": {
11135                         "oic.r.delaydefrost": {

```

```

11136         "type": "object",
11137         "allOf": [
11138             {
11139                 "$ref": "oic.r.time.period.json#/definitions/oic.r.time.period"
11140             },
11141             {
11142                 "properties": {
11143                     "interval": {
11144                         "type": "integer",
11145                         "description": "Defrost interval as defined by Energy Star",
11146                         "minimum": 1,
11147                         "maximum": 1440,
11148                         "default": 240
11149                     },
11150                     "status": {
11151                         "type": "boolean",
11152                         "description": "Indicates whether any supported delay defrost function is
11153 active"
11154                     }
11155                 },
11156                 "required": ["status"]
11157             }
11158         ]
11159     },
11160     {
11161         "type": "object",
11162         "allOf": [
11163             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
11164             {"$ref": "#/definitions/oic.r.delaydefrost"}
11165         ]
11166     }
11167
11168     example: /
11169     {
11170         "id":          "unique_example_id",
11171         "status":      true,
11172         "startTime":   "06:00Z",
11173         "interval":    180
11174     }
11175
11176     responses :
11177     200:
11178         description: |
11179             Indicates that the DelayDefrost function was changed.
11180             The new representation may be provided in the response.
11181
11182     body:
11183     application/json:
11184         schema: /
11185         {
11186             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.delaydefrost.json#",
11187             "$schema": "http://json-schema.org/draft-04/schema#",
11188             "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
11189 rights reserved.",
11190             "title": "Delay Defrost",
11191             "definitions": {
11192                 "oic.r.delaydefrost": {
11193                     "type": "object",
11194                     "allOf": [
11195                         {
11196                             "$ref": "oic.r.time.period.json#/definitions/oic.r.time.period"
11197                         },
11198                         {
11199                             "properties": {
11200                                 "interval": {
11201                                     "type": "integer",
11202                                     "description": "Defrost interval as defined by Energy Star",

```

```

11203         "minimum": 1,
11204         "maximum": 1440,
11205         "default": 240
11206     },
11207     "status": {
11208         "type": "boolean",
11209         "description": "Indicates whether any supported delay defrost function
11210 is active"
11211     }
11212 },
11213 "required": ["status"]
11214 }
11215 ]
11216 }
11217 },
11218 "type": "object",
11219 "allOf": [
11220     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
11221     {"$ref": "#/definitions/oic.r.delaydefrost"}
11222 ]
11223 }
11224
11225 example: /
11226 {
11227     "id": "unique_example_id",
11228     "status": true,
11229     "startTime": "06:00Z",
11230     "interval": 180
11231 }
11232
11233 403:
11234 description: |
11235     Indicates the update to the time properties was rejected.
11236     Reasons for rejection:
11237         invalid time entry
11238     The current unchanged representation may be provided in the response.
11239
11240 body:
11241 application/json:
11242 schema: /
11243 {
11244     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.delaydefrost.json#",
11245     "$schema": "http://json-schema.org/draft-04/schema#",
11246     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
11247 rights reserved.",
11248     "title": "Delay Defrost",
11249     "definitions": {
11250         "oic.r.delaydefrost": {
11251             "type": "object",
11252             "allOf": [
11253                 {
11254                     "$ref": "oic.r.time.period.json#/definitions/oic.r.time.period"
11255                 },
11256                 {
11257                     "properties": {
11258                         "interval": {
11259                             "type": "integer",
11260                             "description": "Defrost interval as defined by Energy Star",
11261                             "minimum": 1,
11262                             "maximum": 1440,
11263                             "default": 240
11264                         },
11265                         "status": {
11266                             "type": "boolean",
11267                             "description": "Indicates whether any supported delay defrost function
11268 is active"
11269                         }
11270                     }
11271                 }
11272             ]
11273         }
11274     }
11275 }

```

```

11270         },
11271         "required": ["status"]
11272     }
11273 }
11274 ]
11275 },
11276 "type": "object",
11277 "allOf": [
11278     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
11279     {"$ref": "#/definitions/oic.r.delaydefrost"}
11280 ]
11281 }
11282
11283 example: /
11284 {
11285     "id": "unique_example_id",
11286     "status": true,
11287     "startTime": "06:00Z",
11288     "interval": 180
11289 }
11290

```

6.69.5 Property Definition

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

6.69.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/DelayDefrostResURI		get	post		

6.69.7 Referenced JSON schemas

6.69.7.1 oic.r.time.period.json

```

11295 {
11296     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.time.period.json#",
11297     "$schema": "http://json-schema.org/draft-04/schema#",
11298     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
11299 reserved.",
11300     "title": "Time Period",
11301     "definitions": {
11302         "oic.r.time.period": {
11303             "type": "object",

```

```

11304     "properties": {
11305         "startTime": {
11306             "type": "string",
11307             "description": "Start time for the time period"
11308         },
11309         "stopTime": {
11310             "type": "string",
11311             "description": "Stop time for the time period, if present interval cannot be present"
11312         },
11313         "interval": {
11314             "type": "integer",
11315             "description": "Time interval in minutes after the startTime, if present stopTime cannot
11316 be present"
11317         },
11318     },
11319     "required": ["startTime"]
11320 }
11321 },
11322 "type": "object",
11323 "allOf": [
11324     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
11325     {"$ref": "oic.r.time.period"}
11326 ]
11327 }
11328

```

11329 6.70 Eco Mode

11330 6.70.1 Introduction

11331 This resource specifies the supported and currently active Eco Mode of a Device The Resource
11332 uses the existing schema for Mode (oic.r.mode) with a restriction that the population of
11333 supportedmodes and modes Properties is restricted to the set of values given below:
11334 "disabled","enabled","notsupported" The adminforced Property indicates that the value has been
11335 set by another party (e.g. via some offboard Smart Energy interaction)

11336 6.70.2 Example URI

11337 /EcomodeResURI

11338 6.70.3 Resource Type

11339 The resource type (rt) is defined as: oic.r.ecomode.

11340 6.70.4 RAML Definition

```

11341 #%RAML 0.8
11342 title: OICEcomode
11343 version: OCF-v1.0.0-20160620
11344 traits:
11345   - interface :
11346       queryParameters:
11347         if:
11348             enum: ["oic.if.a", "oic.if.baseline"]
11349
11350 /EcomodeResURI:
11351     description: |
11352         This resource specifies the supported and currently active Eco Mode of a Device
11353         The Resource uses the existing schema for Mode (oic.r.mode) with a restriction that the
11354 population of supportedmodes and modes Properties is restricted to the set of values given below:
11355         "disabled","enabled","notsupported"
11356         The adminforced Property indicates that the value has been set by another party (e.g
11357         via some offboard Smart Energy interaction)
11358
11359     is : ['interface']
11360     get:
11361         responses :

```



```

11362     200:
11363     body:
11364         application/json:
11365             schema: /
11366                 {
11367                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.ecomode#",
11368                     "$schema": "http://json-schema.org/draft-04/schema#",
11369                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
11370 rights reserved.",
11371                     "title": "Eco Mode",
11372                     "definitions": {
11373                         "oic.r.ecomode": {
11374                             "type": "object",
11375                             "allOf": [
11376                                 {
11377                                     "$ref": "oic.r.mode.json#/definitions/oic.r.mode"
11378                                 },
11379                                 {
11380                                     "properties": {
11381                                         "adminforced": {
11382                                             "type": "boolean",
11383                                             "readOnly": true,
11384                                             "description": "Indicator that the current mode of operation has
11385 been forced by admin action."
11386                                         }
11387                                     }
11388                                 }
11389                             ]
11390                         }
11391                     },
11392                     "type": "object",
11393                     "allOf": [
11394                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
11395                         { "$ref": "#/definitions/oic.r.ecomode" }
11396                     ],
11397                     "required": ["supportedModes", "modes"]
11398                 }
11399
11400             example: /
11401                 {
11402                     "rt": ["oic.r.ecomode"],
11403                     "id": "unique_example_id",
11404                     "supportedModes": ["disabled", "enabled"],
11405                     "modes": ["disabled"],
11406                     "adminforced": false
11407                 }
11408
11409     post:
11410     body:
11411         application/json:
11412             schema: /
11413                 {
11414                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.ecomode-Update#",
11415                     "$schema": "http://json-schema.org/draft-04/schema#",
11416                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
11417 reserved.",
11418                     "title": "Eco Mode",
11419                     "definitions": {
11420                         "oic.r.ecomode": {
11421                             "type": "object",
11422                             "allOf": [
11423                                 {
11424                                     "$ref": "oic.r.mode-update.json#/definitions/oic.r.mode"
11425                                 }
11426                             ]
11427                         }
11428                     },

```

```

11429         "type": "object",
11430         "allOf": [
11431             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
11432             {"$ref": "#/definitions/oic.r.ecomode"}
11433         ],
11434         "required": ["modes"]
11435     }
11436
11437     example: /
11438     {
11439         "id": "unique_example_id",
11440         "modes": ["enabled"]
11441     }
11442
11443     responses :
11444     200:
11445         body:
11446             application/json:
11447                 schema: /
11448                 {
11449                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.ecomode-Update#",
11450                     "$schema": "http://json-schema.org/draft-04/schema#",
11451                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
11452 rights reserved.",
11453                     "title": "Eco Mode",
11454                     "definitions": {
11455                         "oic.r.ecomode": {
11456                             "type": "object",
11457                             "allOf": [
11458                                 {
11459                                     "$ref": "oic.r.mode-update.json#/definitions/oic.r.mode"
11460                                 }
11461                             ]
11462                         },
11463                     },
11464                     "type": "object",
11465                     "allOf": [
11466                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
11467                         {"$ref": "#/definitions/oic.r.ecomode"}
11468                     ],
11469                     "required": ["modes"]
11470                 }
11471
11472     example: /
11473     {
11474         "id": "unique_example_id",
11475         "modes": ["enabled"]
11476     }
11477

```

6.70.5 Property Definition

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

modes	array: schema	see	yes		Array of the currently active mode(s)
-------	------------------	-----	-----	--	---

6.70.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/EcomodeResURI		get	post		

6.70.7 Referenced JSON schemas

6.70.7.1 oic.r.mode.json

```

{
  "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mode.json#",
  "$schema": "http://json-schema.org/draft-04/schema#",
  "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
reserved.",
  "title": "Mode",
  "definitions": {
    "oic.r.mode": {
      "type": "object",
      "properties": {
        "supportedModes": {
          "type": "array",
          "readOnly": true,
          "description": "Array of possible modes the device supports.",
          "items": {
            "type": "string"
          }
        },
        "modes": {
          "type": "array",
          "description": "Array of the currently active mode(s)",
          "items": {
            "type": "string"
          }
        }
      }
    }
  },
  "type": "object",
  "allOf": [
    { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
    { "$ref": "#/definitions/oic.r.mode" }
  ],
  "required": ["supportedModes", "modes"]
}

```

6.71 Heating Zone

6.71.1 Introduction

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

6.71.2 Example URI

/HeatingZoneResURI

6.71.3 Resource Type

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

6.71.4 RAML Definition

`##RAML 0.8`

```

11531 title: OICHeatingZone
11532 version: OCF1.0-20160722

11533 traits:
11534   - interface :
11535     queryParameters:

11536       if:
11537         enum: ["oic.if.s", "oic.if.baseline"]

11538
11539 /HeatingZoneResURI:
11540   description: |
11541     This Resource provides information about the status of a heating zone of a Cook-Top.
11542     It describes the case of a Cook-Top whose zones can be activated dynamically (i.e
11543     the device implements pot recognition).
11544     maxheatinglevel defines the max level for the heating zone
11545     heatinglevel is the current heating level of the zone
11546     For each element the value range is from 0 (indication that the zone is not heating) to
11547     maxheatinglevel,
11548
11549   is : ['interface']
11550   get:
11551     description: |
11552       Retrieves the current heating zone information.
11553
11554   responses :
11555     200:
11556       body:
11557         application/json:
11558           schema: /
11559             {
11560               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.heatingzone.json#",
11561               "$schema": "http://json-schema.org/draft-04/schema#",
11562               "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
11563 reserved.",
11564               "title": "Heating Zone",
11565               "definitions": {
11566                 "oic.r.heatingzone": {
11567                   "type": "object",
11568                   "properties": {
11569                     "maxheatinglevel": {
11570                       "type": "integer",
11571                       "readOnly": true,
11572                       "description": "Maximum heating level for the zone indicated."
11573                     },
11574                     "heatinglevel": {
11575                       "type": "integer",
11576                       "readOnly": true,
11577                       "description": "Current heating level for the zone indicated."
11578                     }
11579                   }
11580                 },
11581               "type": "object",
11582               "allOf": [
11583                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
11584                 { "$ref": "#/definitions/oic.r.heatingzone" }
11585               ],
11586               "required": ["maxheatinglevel", "heatinglevel"]
11587             }
11588
11589   example: /
11590     {
11591       "rt":
11592         ["oic.r.heatingzone"],

```

11593 "id": "unique_example_id",
11594 "maxheatinglevel": 6,
11595 "heatinglevel": 0
11596 }
11597

11598 **6.71.5 Property Definition**

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

11599 **6.71.6 CRUDN behaviour**

Resource	Create	Read	Update	Delete	Notify
/HeatingZoneResURI		get			

11600 **6.72 Heating Zone Collection**

11601 **6.72.1 Introduction**

11602 This Resource provides information about the status of the heating zones of a Cook-Top. It
11603 describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the device
11604 implements pot recognition). The resource is a collection of instances of oic.r.heatingzone detailing
11605 the individual cooktop zones

11606 **6.72.2 Example URI**

11607 /HeatingZoneBaselineResURI

11608 **6.72.3 Resource Type**

11609 The resource type (rt) is defined as: oic.r.heatingzonecollection.

11610 **6.72.4 RAML Definition**

11611

```
##RAML 0.8
```



```
title: OICHeatingZone  
version: OCF1.0-20160722
```



```
traits:  
  - interface-ll :  
    queryParameters:  
      if:  
        enum: ["oic.if.ll"]
```



```
  - interface-baseline :  
    queryParameters:  
      if:  
        enum: ["oic.if.baseline"]
```



```
  - interface-all :  
    queryParameters:  
      if:  
        enum: ["oic.if.ll", "oic.if.baseline"]
```


11627

```
/HeatingZoneBaselineResURI:
```



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

```

11634 zones
11635
11636 is : ['interface-baseline']
11637 get:
11638     description: |
11639         Retrieves the current heating zone information.
11640
11641 responses :
11642     200:
11643         body:
11644             application/json:
11645                 schema: /
11646                     {
11647                         "id":
11648 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.heatingzonecollection.json#",
11649                         "$schema": "http://json-schema.org/draft-04/schema#",
11650                         "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
11651 reserved.",
11652                         "title": "Heating Zone Collection",
11653                         "definitions": {
11654                             "oic.r.heatingzonecollection": {
11655                                 "type": "object",
11656                                 "allOf": [
11657                                     {
11658                                         "$ref": "oic.collection-schema.json#/definitions/oic.collection"
11659                                     },
11660                                     {
11661                                         "properties": {
11662                                             "rt": {
11663                                                 "type": "array",
11664                                                 "minItems": 2,
11665                                                 "maxItems": 2,
11666                                                 "uniqueItems": true,
11667                                                 "items": {
11668                                                     "enum": ["oic.r.heatingzonecollection", "oic.wk.col"]
11669                                                 }
11670                                             },
11671                                             "rts": {
11672                                                 "type": "array",
11673                                                 "minItems": 1,
11674                                                 "maxItems": 2,
11675                                                 "uniqueItems": true,
11676                                                 "items": {
11677                                                     "anyOf": [
11678                                                         {
11679                                                             "enum": ["oic.r.heatingzone", "oic.r.value.conditional"]
11680                                                         },
11681                                                         {
11682                                                             "enum": ["oic.r.heatingzone"]
11683                                                         }
11684                                                     ]
11685                                                 }
11686                                             }
11687                                         }
11688                                     }
11689                                 ]
11690                             },
11691                             "type": "object",
11692                             "allOf": [
11693                                 { "$ref": "oic.core.json#/definitions/oic.core" },
11694                                 { "$ref": "#/definitions/oic.r.heatingzonecollection" }
11695                             ]
11696                         }
11697                     }
11698
11699 example: /

```

```

11700     {
11701         "rt":      ["oic.r.heatingzonecollection","oic.wk.col"],
11702         "id":      "unique_example_id",
11703         "links": [
11704             { "href": "/myZone1ResURI", "rt": ["oic.r.heatingzone"], "if":
11705 ["oic.if.s","oic.if.baseline"], "eps": [{ "ep": "coaps://[fe80::b1d6]:1122"}] },
11706             { "href": "/myZone2ResURI", "rt": ["oic.r.heatingzone"], "if":
11707 ["oic.if.s","oic.if.baseline"], "eps": [{ "ep": "coaps://[fe80::b1d6]:1122"}] },
11708             { "href": "/myZone3ResURI", "rt": ["oic.r.heatingzone"], "if":
11709 ["oic.if.s","oic.if.baseline"], "eps": [{ "ep": "coaps://[fe80::b1d6]:1122"}] },
11710             { "href": "/myZone4ResURI", "rt": ["oic.r.heatingzone"], "if":
11711 ["oic.if.s","oic.if.baseline"], "eps": [{ "ep": "coaps://[fe80::b1d6]:1122"}] }
11712         ]
11713     }
11714

```

6.72.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema			
rts	array: see schema			
drel	string			When specified this is the default relationship to use when an OIC Link does not specify an explicit relationship with *rel* parameter
links	multiple types: see schema			
id	multiple types: see schema			ID for the collection. Can be an value that is unique to the use context or a UUIDv4
rts	multiple types: see schema			Defines the list of allowable resource types (for Target and anchors) in links included in the collection; new links being created can only be from this list
di	multiple types: see schema			The device ID which is an UUIDv4 string; used for backward compatibility with Spec A definition of /oic/res

6.72.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/HeatingZoneBaselineResURI		get			

6.72.7 Referenced JSON schemas

6.72.7.1 oic.collection-schema.json

```
{
  "$schema": "http://json-schema.org/draft-04/schema#",
  "description": "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights reserved.",
  "id": "https://www.openconnectivity.org/ocf-apis/core/schemas/oic.collection-schema.json#",
  "title": "Collection",
  "definitions": {
    "oic.collection.setoflinks": {
      "description": "A set (array) of simple or individual OIC Links. In addition to
properties required for an OIC Link, the identifier for that link in this set is also required",
      "type": "array",
      "items": {
        "$ref": "oic.oic-link-schema.json#/definitions/oic.oic-link"
      }
    },
    "oic.collection.alllinks": {
      "description": "All forms of links in a collection",
      "oneOf": [
        {
          "$ref": "#/definitions/oic.collection.setoflinks"
        }
      ]
    },
    "oic.collection": {
      "type": "object",
      "description": "A collection is a set (array) of tagged-link or set (array) of simple
links along with additional properties to describe the collection itself",
      "properties": {
        "id": {
          "anyOf": [
            {
              "type": "integer",
              "description": "A number that is unique to that collection; like an
ordinal number that is not repeated"
            },
            {
              "type": "string",
              "description": "A unique string that could be a hash or similarly
unique"
            }
          ],
          "$ref": "oic.types-schema.json#/definitions/uuid",
          "description": "A unique string that could be a UUIDv4"
        },
        "description": "ID for the collection. Can be an value that is unique to the
use context or a UUIDv4"
      },
      "di": {
        "$ref": "oic.types-schema.json#/definitions/uuid",
        "description": "The device ID which is an UUIDv4 string; used for backward
compatibility with Spec A definition of /oic/res"
      },
      "rts": {
        "$ref": "oic.core-schema.json#/definitions/oic.core/properties/rt",
        "description": "Defines the list of allowable resource types (for Target and
anchors) in links included in the collection; new links being created can only be from this
list"
      },
      "drel": {
        "type": "string",
        "description": "When specified this is the default relationship to use when an
OIC Link does not specify an explicit relationship with *rel* parameter"
      }
    }
  }
}
```



```

11781         "links": {
11782             "$ref": "#/definitions/oic.collection.alllinks"
11783         }
11784     }
11785 },
11786 "type": "object",
11787 "allOf": [
11788     {"$ref": "oic.core-schema.json#/definitions/oic.core"},
11789     {"$ref": "#/definitions/oic.collection"}
11790 ]
11791 }
11792
11793

```

11794 6.73 Selectable Levels

11795 6.73.1 Introduction

11796 This Resource provides a set of device defined 'levels' that can be selected for an operation. For
 11797 example where a humidifier has a discrete set that model different humidity levels that can be set.
 11798 availablelevels is an array of the levels that can be selected, these can be a number or an integer.
 11799 targetlevel is the level that has currently been selected and is written to in order to select a new
 11800 level. When retrieved the targetlevel provides the actual value that has been selected.

11801 6.73.2 Example URI

11802 /SelectableLevelsResURI

11803 6.73.3 Resource Type

11804 The resource type (rt) is defined as: oic.r.selectablelevels.

11805 6.73.4 RAML Definition

```

11806 #%RAML 0.8
11807 title: OICSelectableLevels
11808 version: v1.1.0-20160519
11809 traits:
11810   - interface :
11811       queryParameters:
11812         if:
11813             enum: ["oic.if.a", "oic.if.baseline"]
11814
11815 /SelectableLevelsResURI:
11816     description: |
11817         This Resource provides a set of device defined 'levels' that can be selected for an operation.
11818         For example where a humidifier has a discrete set that model different humidity levels that can
11819         be set.
11820         availablelevels is an array of the levels that can be selected, these can be a number or an
11821         integer.
11822         targetlevel is the level that has currently been selected and is written to in order to select
11823         a new level.
11824         When retrieved the targetlevel provides the actual value that has been selected.
11825
11826     is : ['interface']
11827     get:
11828         description: |
11829             Retrieves the current selectable levels.
11830
11831     responses :
11832         200:
11833             body:
11834                 application/json:
11835                 schema: /

```

```

11836         {
11837             "id":
11838 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.selectablelevels.json#",
11839             "$schema": "http://json-schema.org/draft-04/schema#",
11840             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
11841 rights reserved.",
11842             "title": "SelectableLevels",
11843             "definitions": {
11844                 "oic.r.selectablelevels": {
11845                     "type": "object",
11846                     "properties": {
11847                         "availablelevels": {
11848                             "type": "array",
11849                             "description": "Set of levels from which one can be selected",
11850                             "readOnly": true,
11851                             "items": {
11852                                 "anyOf": [
11853                                     {"type": "integer"},
11854                                     {"type": "number"}
11855                                 ]
11856                             }
11857                         },
11858                         "targetlevel": {
11859                             "anyOf": [
11860                                 {"type": "integer"},
11861                                 {"type": "number"}
11862                             ],
11863                             "description": "The target level from the available selectable set"
11864                         }
11865                     }
11866                 }
11867             },
11868             "type": "object",
11869             "allOf": [
11870                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
11871                 {"$ref": "#/definitions/oic.r.selectablelevels"}
11872             ],
11873             "required": ["availablelevels", "targetlevel"]
11874         }
11875
11876     example: /
11877     {
11878         "rt":          ["oic.r.selectablelevels"],
11879         "id":          "unique_example_id",
11880         "availablelevels": [0,2,4,6,8],
11881         "targetlevel": 2
11882     }
11883
11884     post:
11885         description: |
11886             Sets the current level from the set that is selectable
11887
11888         body:
11889             application/json:
11890
11891             schema: /
11892             {
11893                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.selectablelevels.json#",
11894                 "$schema": "http://json-schema.org/draft-04/schema#",
11895                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
11896 reserved.",
11897                 "title": "SelectableLevels",
11898                 "definitions": {
11899                     "oic.r.selectablelevels": {
11900                         "type": "object",
11901                         "properties": {
11902                             "targetlevel": {
11903                                 "type": ["integer", "number"],

```

```

11903         "description": "The target level from the available selectable set"
11904     }
11905 }
11906 },
11907 },
11908 "type": "object",
11909 "allOf": [
11910     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
11911     {"$ref": "#/definitions/oic.r.selectablelevels"}
11912 ],
11913 "required": ["targetlevel"]
11914 }
11915
11916 example: /
11917 {
11918     "targetlevel": 4
11919 }
11920
11921 responses :
11922 200:
11923     body:
11924         application/json:
11925             schema: /
11926                 {
11927                     "id":
11928 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.selectablelevels.json#",
11929                     "$schema": "http://json-schema.org/draft-04/schema#",
11930                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
11931 rights reserved.",
11932                     "title": "SelectableLevels",
11933                     "definitions": {
11934                         "oic.r.selectablelevels": {
11935                             "type": "object",
11936                             "properties": {
11937                                 "targetlevel": {
11938                                     "type": ["integer", "number"],
11939                                     "description": "The target level from the available selectable set"
11940                                 }
11941                             }
11942                         }
11943                     },
11944                     "type": "object",
11945                     "allOf": [
11946                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
11947                         {"$ref": "#/definitions/oic.r.selectablelevels"}
11948                     ],
11949                     "required": ["targetlevel"]
11950                 }
11951
11952 example: /
11953 {
11954     "targetlevel": 4
11955 }
11956
11957 403:
11958     description: |
11959         Generated by a Server when an attempt is made to update to a targetlevel that is not in
11960         the set of availablelevels
11961
11962     body:
11963         application/json:
11964             schema: /

```

```

11965     {
11966         "id":
11967         "http://openinterconnect.org/iotdatamodels/schemas/oic.r.selectablelevels.json#",
11968         "$schema": "http://json-schema.org/draft-04/schema#",
11969         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
11970 rights reserved.",
11971         "title": "SelectableLevels",
11972         "definitions": {
11973             "oic.r.selectablelevels": {
11974                 "type": "object",
11975                 "properties": {
11976                     "availablelevels": {
11977                         "type": "array",
11978                         "description": "Set of levels from which one can be selected",
11979                         "readOnly": true,
11980                         "items": {
11981                             "anyOf": [
11982                                 {"type": "integer"},
11983                                 {"type": "number"}
11984                             ]
11985                         }
11986                     },
11987                     "targetlevel": {
11988                         "anyOf": [
11989                             {"type": "integer"},
11990                             {"type": "number"}
11991                         ],
11992                         "description": "The target level from the available selectable set"
11993                     }
11994                 }
11995             }
11996         },
11997         "type": "object",
11998         "allOf": [
11999             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
12000             {"$ref": "#/definitions/oic.r.selectablelevels"}
12001         ],
12002         "required": ["availablelevels", "targetlevel"]
12003     }
12004
12005     example: /
12006     {
12007         "id": "unique_example_id",
12008         "availablelevels": [0,2,4,6,8],
12009         "targetlevel": 2
12010     }
12011

```

6.73.5 Property Definition

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

6.73.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/SelectableLevelsResURI		get	post		

6.74 Value Conditional

6.74.1 Introduction

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

6.74.2 Example URI

/ValueConditionalResURI

6.74.3 Resource Type

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

6.74.4 RAML Definition

```
##RAML 0.8
title: OICValueConditional
version: v1.1.0-20161031

traits:
  - interface :
      queryParameters:
        if:
          enum: ["oic.if.rw", "oic.if.baseline"]

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

  is : ['interface']
  get:
    responses :
      200:
        body:
          application/json:
```

```

12069         schema: /
12070         {
12071             "id":
12072 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.value.conditional.json#",
12073             "$schema": "http://json-schema.org/draft-04/schema#",
12074             "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
12075 reserved.",
12076             "title": "Value Conditional",
12077             "definitions": {
12078                 "oic.r.value.conditional": {
12079                     "type": "object",
12080                     "anyOf": [
12081                         {"required": ["threshold"]},
12082                         {"required": ["minnotifyperiod"]},
12083                         {"required": ["maxnotifyperiod"]}
12084                     ],
12085                     "properties": {
12086                         "threshold": {
12087                             "type": "number",
12088                             "minimum": 0,
12089                             "description": "Amount by which the measured value must change before a
12090 notification is sent."
12091                         },
12092                         "minnotifyperiod": {
12093                             "type": "integer",
12094                             "minimum": 0,
12095                             "description": "Minimum elapsed time in ms before a notification is sent."
12096                         },
12097                         "maxnotifyperiod": {
12098                             "type": "integer",
12099                             "minimum": 0,
12100                             "description": "Maximum elapsed time in ms before a notification must be
12101 sent."
12102                         }
12103                     }
12104                 },
12105             },
12106             "type": "object",
12107             "allOf": [
12108                 {"$ref": "oic.core.json#/definitions/oic.core"},
12109                 {"$ref": "#/definitions/oic.r.value.conditional"}
12110             ]
12111         }
12112
12113         example: /
12114         {
12115             "rt": ["oic.r.value.conditional"],
12116             "id": "unique_example_id",
12117             "threshold": 2,
12118             "minnotifyperiod": 2000,
12119             "maxnotifyperiod": 5000
12120         }
12121
12122     post:
12123         description: |
12124             body:
12125                 application/json:
12126                     schema: valueconditional
12127                     example: |
12128                         {
12129                             "threshold": 2,
12130                             "minnotifyperiod": 1500
12131                         }
12132
12133     responses :
12134         200:
12135             body:

```

```

12136     application/json:
12137         schema: /
12138             {
12139                 "id":
12140 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.value.conditional.json#",
12141                 "$schema": "http://json-schema.org/draft-04/schema#",
12142                 "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
12143 reserved.",
12144                 "title": "Value Conditional",
12145                 "definitions": {
12146                     "oic.r.value.conditional": {
12147                         "type": "object",
12148                         "anyOf": [
12149                             {"required": ["threshold"]},
12150                             {"required": ["minnotifyperiod"]},
12151                             {"required": ["maxnotifyperiod"]}
12152                         ],
12153                         "properties": {
12154                             "threshold": {
12155                                 "type": "number",
12156                                 "minimum": 0,
12157                                 "description": "Amount by which the measured value must change before a
12158 notification is sent."
12159                             },
12160                             "minnotifyperiod": {
12161                                 "type": "integer",
12162                                 "minimum": 0,
12163                                 "description": "Minimum elapsed time in ms before a notification is sent."
12164                             },
12165                             "maxnotifyperiod": {
12166                                 "type": "integer",
12167                                 "minimum": 0,
12168                                 "description": "Maximum elapsed time in ms before a notification must be
12169 sent."
12170                             }
12171                         }
12172                     }
12173                 },
12174                 "type": "object",
12175                 "allOf": [
12176                     {"$ref": "oic.core.json#/definitions/oic.core"},
12177                     {"$ref": "#/definitions/oic.r.value.conditional"}
12178                 ]
12179             }
12180
12181         example: /
12182             {
12183                 "threshold": 2,
12184                 "minnotifyperiod": 1500
12185             }
12186

```

6.74.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
threshold	number	yes		Amount by which the measured value must change before a notification is sent.
maxnotifyperiod	integer	yes		Maximum elapsed time in ms before a notification must be sent.

minnotifyperiod	integer	yes		Minimum elapsed time in ms before a notification is sent.
-----------------	---------	-----	--	---

6.74.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/ValueConditionalResURI		get	post		

6.75 Colour Space Coordinates

6.75.1 Introduction

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

6.75.2 Example URI

/example/ColourSpaceCoordinatesResURI

6.75.3 Resource Type

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

6.75.4 RAML Definition

```

#%RAML 0.8
title: OCFColourCSC
version: OCFv1.1.0-2017

traits:
- interface-a :
  queryParameters:
    if:
      enum: ["oic.if.a"]
- interface-all :
  queryParameters:
    if:
      enum: ["oic.if.a", "oic.if.baseline"]

/example/ColourSpaceCoordinatesResURI:

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

  get:
    description: |
      Provides the colour using colour space coordinates.

    is : ['interface-all']

    responses :
      200:
        body:
          application/json:
            schema: /

```



```

12232     {
12233         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.csc.json#",
12234         "$schema": "http://json-schema.org/draft-04/schema#",
12235         "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
12236 reserved.",
12237         "title": "Colour Space Coordinates",
12238         "definitions": {
12239             "oic.r.colour.csc": {
12240                 "type": "object",
12241                 "properties": {
12242                     "csc": {
12243                         "type": "array",
12244                         "description": "X and Y coordinates of the colour in CIE colour space",
12245                         "minItems": 2,
12246                         "maxItems": 2,
12247                         "items": {
12248                             "type": "number",
12249                             "minimum": 0,
12250                             "maximum": 1
12251                         }
12252                     }
12253                 }
12254             },
12255             "type": "object",
12256             "allOf": [
12257                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
12258                 { "$ref": "#/definitions/oic.r.colour.csc" }
12259             ],
12260             "required": [ "csc" ]
12261         }
12262     }
12263
12264
12265     example: /
12266     {
12267         "rt":          ["oic.r.colour.csc"],
12268         "id":          "unique_example_id",
12269         "csc":         [0.41,0.51]
12270     }
12271
12272     post:
12273         description: |
12274             Sets current colour space coordinates
12275
12276         is : ['interface-a']
12277     body:
12278         application/json:
12279             schema: /
12280             {
12281                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.csc.json#",
12282                 "$schema": "http://json-schema.org/draft-04/schema#",
12283                 "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
12284 reserved.",
12285                 "title": "Colour Space Coordinates",
12286                 "definitions": {
12287                     "oic.r.colour.csc": {
12288                         "type": "object",
12289                         "properties": {
12290                             "csc": {
12291                                 "type": "array",
12292                                 "description": "X and Y coordinates of the colour in CIE colour space",
12293                                 "minItems": 2,
12294                                 "maxItems": 2,
12295                                 "items": {
12296                                     "type": "number",
12297                                     "minimum": 0,
12298                                     "maximum": 1

```

```

12299         }
12300     }
12301 }
12302 }
12303 },
12304 "type": "object",
12305 "allOf": [
12306     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
12307     {"$ref": "#/definitions/oic.r.colour.csc"}
12308 ],
12309 "required": [ "csc" ]
12310 }
12311 }
12312
12313 example: /
12314 {
12315     "id":          "unique_example_id",
12316     "csc":         [0.40,0.70]
12317 }
12318
12319 responses :
12320 200:
12321     body:
12322         application/json:
12323             schema: /
12324                 {
12325                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.csc.json#",
12326                     "$schema": "http://json-schema.org/draft-04/schema#",
12327                     "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
12328 reserved.",
12329                     "title": "Colour Space Coordinates",
12330                     "definitions": {
12331                         "oic.r.colour.csc": {
12332                             "type": "object",
12333                             "properties": {
12334                                 "csc": {
12335                                     "type": "array",
12336                                     "description": "X and Y coordinates of the colour in CIE colour space",
12337                                     "minItems": 2,
12338                                     "maxItems": 2,
12339                                     "items": {
12340                                         "type": "number",
12341                                         "minimum": 0,
12342                                         "maximum": 1
12343                                     }
12344                                 }
12345                             }
12346                         }
12347                     },
12348                     "type": "object",
12349                     "allOf": [
12350                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
12351                         {"$ref": "#/definitions/oic.r.colour.csc"}
12352                     ],
12353                     "required": [ "csc" ]
12354                 }
12355             }
12356
12357 example: /
12358 {
12359     "id":          "unique_example_id",
12360     "csc":         [0.40,0.70]
12361 }
12362

```

12363 **6.75.5 Property Definition**

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

12364 **6.75.6 CRUDN behaviour**

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

12365 **6.76 Colour Temperature**

12366 **6.76.1 Introduction**

12367 This resource describes the colour using colour temperature conventions. ct is the Mired colour
12368 temperature. The equivalent value in Kelvin is obtained by $\text{Colour Temp(K)} = 1,000,000/\text{Colour}$
12369 Temp(Mired)

12370 **6.76.2 Example URI**

12371 /example/ColourTemperatureResURI

12372 **6.76.3 Resource Type**

12373 The resource type (rt) is defined as: oic.r.colour.colourtemperature.

12374 **6.76.4 RAML Definition**

12375 `##RAML 0.8`
12376 `title: OCFColourTemperature`
12377 `version: OCFv1.0-2017`
12378 `traits:`
12379 `- interface-a :`
12380 `queryParameters:`
12381 `if:`
12382 `enum: ["oic.if.a"]`
12383 `- interface-all :`
12384 `queryParameters:`
12385 `if:`
12386 `enum: ["oic.if.a", "oic.if.baseline"]`
12387
12388 `/example/ColourTemperatureResURI:`
12389 `description: |`
12390 `This resource describes the colour using colour temperature conventions.`
12391 `ct is the Mired colour temperature.`
12392 `The equivalent value in Kelvin is obtained by Colour Temp(K) = 1,000,000/Colour Temp(Mired)`
12393
12394 `get:`
12395 `description: |`
12396 `Provides the colour using colour temperature conventions.`
12397
12398 `is : ['interface-all']`
12399 `responses :`
12400 `200:`
12401 `body:`
12402 `application/json:`
12403 `schema: /`
12404 `{`
12405 `"id":`

```

12406 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.colourtemperature.json#",
12407     "$schema": "http://json-schema.org/draft-04/schema#",
12408     "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
12409 reserved.",
12410     "title": "Colour Temperature",
12411     "definitions": {
12412         "oic.r.colour.colourtemperature": {
12413             "type": "object",
12414             "properties": {
12415                 "ct": {
12416                     "type": "integer",
12417                     "description": "Mired colour temperature",
12418                     "minimum": 0
12419                 }
12420             }
12421         },
12422     },
12423     "type": "object",
12424     "allOf": [
12425         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
12426         {"$ref": "#/definitions/oic.r.colour.colourtemperature"}
12427     ],
12428     "required": [ "ct" ]
12429 }
12430
12431 example: /
12432 {
12433     "rt":          [ "oic.r.colour.colourtemperature" ],
12434     "id":          "unique_example_id",
12435     "ct":          457
12436 }
12437
12438 post:
12439     description: |
12440         Sets current colour temperature value
12441
12442     is : ['interface-a']
12443     body:
12444         application/json:
12445             schema: /
12446                 {
12447                     "id":
12448 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.colourtemperature.json#",
12449                     "$schema": "http://json-schema.org/draft-04/schema#",
12450                     "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
12451 reserved.",
12452                     "title": "Colour Temperature",
12453                     "definitions": {
12454                         "oic.r.colour.colourtemperature": {
12455                             "type": "object",
12456                             "properties": {
12457                                 "ct": {
12458                                     "type": "integer",
12459                                     "description": "Mired colour temperature",
12460                                     "minimum": 0
12461                                 }
12462                             }
12463                         }
12464                     },
12465                     "type": "object",
12466                     "allOf": [
12467                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
12468                         {"$ref": "#/definitions/oic.r.colour.colourtemperature"}
12469                     ],
12470                     "required": [ "ct" ]
12471                 }
12472

```

12473 example: /
12474 {
12475 "id": "unique_example_id",
12476 "ct": 457
12477 }
12478
12479 responses :
12480 200:
12481 body:
12482 application/json:
12483 schema: /
12484 {
12485 "id":
12486 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.colourtemperature.json#",
12487 "\$schema": "http://json-schema.org/draft-04/schema#",
12488 "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
12489 reserved.",
12490 "title": "Colour Temperature",
12491 "definitions": {
12492 "oic.r.colour.colourtemperature": {
12493 "type": "object",
12494 "properties": {
12495 "ct": {
12496 "type": "integer",
12497 "description": "Mired colour temperature",
12498 "minimum": 0
12499 }
12500 }
12501 }
12502 },
12503 "type": "object",
12504 "allOf": [
12505 {"\$ref": "oic.baseresource.json#/definitions/oic.r.baseresource"},
12506 {"\$ref": "#/definitions/oic.r.colour.colourtemperature"}
12507],
12508 "required": ["ct"]
12509 }
12510
12511 example: /
12512 {
12513 "id": "unique_example_id",
12514 "ct": 467
12515 }
12516

12517 **6.76.5 Property Definition**

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

12518 **6.76.6 CRUDN behaviour**

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

12519 **6.77 Colour Hue and Saturation**

12520 **6.77.1 Introduction**

12521 This resource describes the colour using hue-saturation conventions. hue is the hue angle, it is a
12522 number value as defined by the CIECAM02 model definition (see reference [CIE CIE159:2004]).
12523 A Device that does not support fractional hue angles can provide integer values. If precision (from
12524 oic.r.baseresource) is provided it applies to the hue angle. saturation is an integer value as defined
12525 by the CIECAM02 model definition (see reference [CIE CIE159:2004]). saturation can be

converted to a percentage by $\text{saturation}/\text{maximumsaturation} \times 100$; where maximumsaturation is 32767 if the Property itself is not present. maximumsaturation is the upper bound on the saturation supported by the Device. If not present the maximum value for saturation is 32767.

6.77.2 Example URI

/example/ColourHueSaturationResURI

6.77.3 Resource Type

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

6.77.4 RAML Definition

```
##RAML 0.8
title: OCFColourHueSaturation
version: v1.0-2017

traits:
  - interface-a :
    queryParameters:
      if:
        enum: ["oic.if.a"]
  - interface-all :
    queryParameters:
      if:
        enum: ["oic.if.a", "oic.if.baseline"]

/example/ColourHueSaturationResURI:
  description: |
    This resource describes the colour using hue-saturation conventions.
    hue is the hue angle, it is a number value as defined by the CIECAM02 model definition (see
    reference [CIE CIE159:2004]).
    A Device that does not support fractional hue angles can provide integer values.
    If precision (from oic.r.baseresource) is provided it applies to the hue angle.
    saturation is an integer value as defined by the CIECAM02 model definition (see reference [CIE
    CIE159:2004]).
    saturation can be converted to a percentage by  $\text{saturation}/\text{maximumsaturation} \times 100$ ; where
    maximumsaturation is 32767 if the Property itself is not present.
    maximumsaturation is the upper bound on the saturation supported by the Device.
    If not present the maximum value for saturation is 32767.

  get:
    description: |
      Provides the colour using hue and saturation conventions.

  is : ['interface-all']
  responses :
    200:
      body:
        application/json:
          schema: /
            {
              "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.hs.json#",
              "$schema": "http://json-schema.org/draft-04/schema#",
              "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
reserved.",
              "title": "Colour Hue and Saturation",
              "definitions": {
                "oic.r.colour.hs": {
                  "type": "object",
                  "properties": {
                    "hue": {
```

```

12582         "type": "number",
12583         "description": "Hue angle as defined by the CIECAM02 model definition",
12584         "minimum": 0.0,
12585         "maximum": 360.0
12586     },
12587     "saturation": {
12588         "type": "integer",
12589         "description": "Saturation as defined by the CIECAM02 model definition",
12590         "minimum": 0,
12591         "maximum": 32767
12592     },
12593     "maximumsaturation": {
12594         "type": "integer",
12595         "description": "Maximum supported value of Saturation for this Device",
12596         "readOnly": true,
12597         "minimum": 0,
12598         "maximum": 32767
12599     }
12600 }
12601 }
12602 },
12603 "type": "object",
12604 "allof": [
12605     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
12606     {"$ref": "#/definitions/oic.r.colour.hs"}
12607 ],
12608 "required": [ "hue", "saturation" ]
12609 }
12610 }
12611
12612 example: /
12613 {
12614     "rt":          ["oic.r.colour.hs"],
12615     "id":          "unique_example_id",
12616     "hue":         300.0,
12617     "saturation":  212,
12618     "maximumsaturation": 1000
12619 }
12620
12621 post:
12622     description: |
12623         Sets current colour hue and saturation values.
12624         At least one of hue or saturation shall be provided in the payload.
12625
12626 is : ['interface-a']
12627 body:
12628     application/json:
12629         schema: /
12630         {
12631             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.hs.json#",
12632             "$schema": "http://json-schema.org/draft-04/schema#",
12633             "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
12634 reserved.",
12635             "title": "Colour Hue and Saturation",
12636             "definitions": {
12637                 "oic.r.colour.hs": {
12638                     "type": "object",
12639                     "properties": {
12640                         "hue": {
12641                             "type": "number",
12642                             "description": "Hue angle as defined by the CIECAM02 model definition",
12643                             "minimum": 0.0,
12644                             "maximum": 360.0
12645                         },
12646                         "saturation": {
12647                             "type": "integer",
12648                             "description": "Saturation as defined by the CIECAM02 model definition",

```

```

12649         "minimum": 0,
12650         "maximum": 32767
12651     },
12652     "maximumsaturation": {
12653         "type": "integer",
12654         "description": "Maximum supported value of Saturation for this Device",
12655         "readOnly": true,
12656         "minimum": 0,
12657         "maximum": 32767
12658     }
12659 }
12660 }
12661 },
12662 "type": "object",
12663 "allOf": [
12664     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
12665     { "$ref": "#/definitions/oic.r.colour.hs" }
12666 ],
12667 "required": [ "hue", "saturation" ]
12668 }
12669 }
12670
12671 example: /
12672 {
12673     "id": "unique_example_id",
12674     "hue": 300.0,
12675     "saturation": 212
12676 }
12677
12678 responses :
12679 200:
12680     body:
12681         application/json:
12682             schema: /
12683             {
12684                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.hs.json#",
12685                 "$schema": "http://json-schema.org/draft-04/schema#",
12686                 "description": "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
12687 reserved.",
12688                 "title": "Colour Hue and Saturation",
12689                 "definitions": {
12690                     "oic.r.colour.hs": {
12691                         "type": "object",
12692                         "properties": {
12693                             "hue": {
12694                                 "type": "number",
12695                                 "description": "Hue angle as defined by the CIECAM02 model definition",
12696                                 "minimum": 0.0,
12697                                 "maximum": 360.0
12698                             },
12699                             "saturation": {
12700                                 "type": "integer",
12701                                 "description": "Saturation as defined by the CIECAM02 model definition",
12702                                 "minimum": 0,
12703                                 "maximum": 32767
12704                             },
12705                             "maximumsaturation": {
12706                                 "type": "integer",
12707                                 "description": "Maximum supported value of Saturation for this Device",
12708                                 "readOnly": true,
12709                                 "minimum": 0,
12710                                 "maximum": 32767
12711                             }
12712                         }
12713                     }
12714                 },
12715                 "type": "object",

```


12716 "allOf": [
12717 {"\$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
12718 {"\$ref": "#/definitions/oic.r.colour.hs"}
12719],
12720 "required": ["hue", "saturation"]
12721 }
12722 }
12723
12724 example: /
12725 {
12726 "id": "unique_example_id",
12727 "hue": 300.0,
12728 "saturation": 212
12729 }
12730

12731 **6.77.5 Property Definition**

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

12732 **6.77.6 CRUDN behaviour**

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

12733 **6.78 Battery Material**

12734 **6.78.1 Introduction**

12735 This resource describes the battery material represented as an enumerated set of strings.

12736 **6.78.2 Example URI**

12737 /BatteryMaterialResURI

12738 **6.78.3 Resource Type**

12739 The resource type (rt) is defined as: oic.r.batterymaterial.

12740 **6.78.4 RAML Definition**

12741 *##RAML 0.8*
12742 *title: BatteryMaterial*
12743 *version: v1.1.0-20170815*
12744 *traits:*
12745 *- interface :*
12746 *queryParameters:*
12747 *if:*
12748 *enum: ["oic.if.s", "oic.if.baseline"]*
12749
12750 */BatteryMaterialResURI:*
12751 *description: |*

```

12752         This resource describes the battery material represented as an enumerated set of strings.
12753
12754     is : ['interface']
12755     get:
12756         description: |
12757             Retrieves the battery material.
12758
12759     responses :
12760         200:
12761             body:
12762                 application/json:
12763                     schema: /
12764                         {
12765                             "id":
12766                             "http://openinterconnect.org/iotdatamodels/schemas/oic.r.batterymaterial.json#",
12767                             "$schema": "http://json-schema.org/draft-04/schema#",
12768                             "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
12769 reserved.",
12770                             "title": "BatteryMaterial",
12771                             "definitions": {
12772                                 "oic.r.batterymaterial": {
12773                                     "type": "object",
12774                                     "properties": {
12775                                         "material" : {
12776                                             "enum": [
12777                                                 "Alkaline",
12778                                                 "Aluminium Air",
12779                                                 "Aluminium Ion",
12780                                                 "Atomic Betavoltaics",
12781                                                 "Atomic Optoelectric Nuclear",
12782                                                 "Atomic Nuclear",
12783                                                 "Bunsen Cell",
12784                                                 "Chromic Acid Cell",
12785                                                 "Poggendorff Cell",
12786                                                 "Clark Cell",
12787                                                 "Daniell Cell",
12788                                                 "Dry Cell",
12789                                                 "Earth",
12790                                                 "Flow",
12791                                                 "Flow Vanadium Redox",
12792                                                 "Flow Zinc Bromine",
12793                                                 "Flow Zinc Cerium",
12794                                                 "Frog",
12795                                                 "Fuel",
12796                                                 "Galvanic Cell",
12797                                                 "Glass",
12798                                                 "Grove Cell",
12799                                                 "Lead Acid",
12800                                                 "Lead Acid Deep Cycle",
12801                                                 "Lead Acid VRLA",
12802                                                 "Lead Acid AGM",
12803                                                 "Lead Acid Gel",
12804                                                 "Leclanche Cell",
12805                                                 "Lemon Potato",
12806                                                 "Lithium",
12807                                                 "Lithium Air",
12808                                                 "Lithium Ion",
12809                                                 "Lithium Ion Cobalt Oxide (ICR)",
12810                                                 "Lithium Ion Manganese Oxide (IMR)",
12811                                                 "Lithium Ion Polymer",
12812                                                 "Lithium Iron Phosphate",
12813                                                 "Lithium Sulfur",
12814                                                 "Lithium Titanate",
12815                                                 "Lithium Ion Thin Film",
12816                                                 "Magnesium",
12817                                                 "Magnesium Ion",
12818                                                 "Mercury",

```

```
12819         "Molten Salt",
12820         "Nickel Cadmium",
12821         "Nickel Cadmium Vented Cell",
12822         "Nickel Hydrogen",
12823         "Nickel Iron ",
12824         "Nickel Metal Hydride",
12825         "Nickel Metal Hydride Low Self-Discharge",
12826         "Nickel Oxyhydroxide",
12827         "Nickel Oxyride",
12828         "Nickel Zinc",
12829         "Organic Radical",
12830         "Paper",
12831         "Polymer Based",
12832         "Polysulfide Bromide",
12833         "Potassium Ion",
12834         "Pulvermachers Chain",
12835         "Silicon Air",
12836         "Silver Calcium",
12837         "Silver Oxide",
12838         "Silver Zinc",
12839         "Sodium Ion",
12840         "Sodium Sulfur",
12841         "Solid State",
12842         "Sugar",
12843         "Super Iron",
12844         "UltraBattery",
12845         "Voltaic Pile",
12846         "Voltaic Pile Penny",
12847         "Voltaic Pile Trough",
12848         "Water Activated",
12849         "Weston Cell",
12850         "Zinc Air",
12851         "Zinc Carbon",
12852         "Zinc Chloride",
12853         "Zinc Ion",
12854         "Unknown"
12855     ],
12856     "description": "Battery construction material (type).",
12857     "readOnly": true
12858 }
12859 }
12860 }
12861 },
12862 "type": "object",
12863 "allOf": [
12864     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
12865     {"$ref": "#/definitions/oic.r.batterymaterial"}
12866 ],
12867 "required": [ "material" ]
12868 }
12869
12870 example: /
12871 {
12872     "rt": ["oic.r.batterymaterial"],
12873     "id": "unique_example_id",
12874     "material": "Alkaline"
12875 }
12876
```

12877 **6.78.5 Property Definition**

Property name	Value type	Mandatory	Access mode	Description
material	multiple types: see schema	yes	Read Only	Battery construction material (type).

12878 **6.78.6 CRUDN behaviour**

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

/BatteryMaterialResURI		get			
------------------------	--	-----	--	--	--

6.79 Brewing

6.79.1 Introduction

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

6.79.2 Example URI

/BrewingResURI

6.79.3 Resource Type

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

6.79.4 RAML Definition

```

#%RAML 0.8
title: Brewing
version: v1.1.0-20170815

traits:
- interface :
    queryParameters:
        if:
            enum: ["oic.if.rw", "oic.if.baseline"]

/BrewingResURI:

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

    is : ['interface']

    get:

        description: |
            Retrieves the state of brewing.

    responses :
        200:
            body:
                application/json:
                    schema: /
                        {
                            "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.brewing.json#",
                            "$schema": "http://json-schema.org/draft-04/schema#",
                            "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
reserved.",
                            "title": "Brewing",
                            "definitions": {
                                "oic.r.brewing": {
                                    "type": "object",
                                    "properties": {
                                        "amountrequested" : {
                                            "type": "integer",
                                            "description": "The amount requested in ml."
                                        },
                                    },
                                },
                                "strength" : {

```

```

12933         "type": "integer",
12934         "description": "The strength of a brewed drink."
12935     },
12936     "strengthrange": {
12937         "type": "array",
12938         "minItems": 2,
12939         "maxItems": 2,
12940         "readOnly": true,
12941         "items": {
12942             "type": "integer"
12943         }
12944     }
12945 }
12946 }
12947 },
12948 "type": "object",
12949 "allOf": [
12950     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
12951     {"$ref": "#/definitions/oic.r.brewing"}
12952 ],
12953 "required": [ "amountrequested" ]
12954 }
12955
12956 example: /
12957 {
12958     "rt":      ["oic.r.brewing"],
12959     "id":      "unique_example_id",
12960     "amountrequested": 120,
12961     "strength": 8,
12962     "strengthrange": [1,10]
12963 }
12964
12965 post:
12966     description: |
12967         Sets the brewing values
12968
12969     body:
12970         application/json:
12971             schema: /
12972             {
12973                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.brewing.json#",
12974                 "$schema": "http://json-schema.org/draft-04/schema#",
12975                 "description": "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
12976 reserved.",
12977                 "title": "Brewing",
12978                 "definitions": {
12979                     "oic.r.brewing": {
12980                         "type": "object",
12981                         "properties": {
12982                             "amountrequested": {
12983                                 "type": "integer",
12984                                 "description": "The amount requested in ml."
12985                             },
12986                             "strength": {
12987                                 "type": "integer",
12988                                 "description": "The strength of a brewed drink."
12989                             },
12990                             "strengthrange": {
12991                                 "type": "array",
12992                                 "minItems": 2,
12993                                 "maxItems": 2,
12994                                 "readOnly": true,
12995                                 "items": {
12996                                     "type": "integer"
12997                                 }
12998                             }
12999                         }
13000                     }
13001                 }
13002             }

```

```

13000     }
13001   },
13002   "type": "object",
13003   "allOf": [
13004     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
13005     { "$ref": "#/definitions/oic.r.brewing" }
13006   ],
13007   "required": [ "amountrequested" ]
13008 }
13009
13010 example: /
13011 {
13012   "id": "unique_example_id",
13013   "amountrequested": 120,
13014   "strength": 8
13015 }
13016
13017 responses :
13018 200:

```

13019 6.79.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
amountrequested	integer	yes		The amount requested in ml.
strength	integer			The strength of a brewed drink.
strengthrange	array: see schema		Read Only	

13020 6.79.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/BrewingResURI		get	post		

13021 6.80 Energy

13022 6.80.1 Introduction

13023 This resource describes the attributes associated with electrical energy. This can be used for either
 13024 rated (read-only), desired (read-write) or measured (read-only) energy. The voltage is in Volts (V),
 13025 current in Amps (A), and frequency in Hertz (Hz).

13026 6.80.2 Example URI

13027 /EnergyResURI

13028 6.80.3 Resource Type

13029 The resource type (rt) is defined as: oic.r.energy.electrical.

13030 6.80.4 RAML Definition

```

13031 #%RAML 0.8
13032 title: Energy
13033 version: v1.1.0-20170815
13034 traits:
13035   - interface-update :
13036     queryParameters:
13037       if:
13038         enum: ["oic.if.rw", "oic.if.baseline"]
13039   - interface-all :
13040     queryParameters:
13041       if:
13042         enum: ["oic.if.r", "oic.if.rw", "oic.if.s", "oic.if.baseline"]

```

```

13043
13044 /EnergyResURI:
13045     description: |
13046         This resource describes the attributes associated with electrical energy
13047         This can be used for either rated (read-only), desired (read-write) or measured (read-only)
13048 energy
13049         The voltage is in Volts (V), current in Amps (A), and frequency in Hertz (Hz).
13050
13051     get:
13052         description: |
13053             Retrieves the current energy.
13054
13055     is : ['interface-all']
13056     responses :
13057         200:
13058             body:
13059                 application/json:
13060                     schema: /
13061                         {
13062                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.json#",
13063                             "$schema": "http://json-schema.org/draft-04/schema#",
13064                             "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
13065 reserved.",
13066                             "title": "Electrical Energy",
13067                             "definitions": {
13068                                 "oic.r.energy.electrical": {
13069                                     "type": "object",
13070                                     "properties": {
13071                                         "voltage" : {
13072                                             "type": "number",
13073                                             "readOnly": true,
13074                                             "description": "The electric voltage in Volts (V).",
13075                                         },
13076                                         "desiredvoltage" : {
13077                                             "type": "number",
13078                                             "description": "The desired electric voltage in Volts (V).",
13079                                         },
13080                                         "current" : {
13081                                             "type": "number",
13082                                             "readOnly": true,
13083                                             "description": "The electric current in Amps (A).",
13084                                         },
13085                                         "desiredcurrent" : {
13086                                             "type": "number",
13087                                             "description": "The desired electric current in Amps (A).",
13088                                         },
13089                                         "frequency" : {
13090                                             "type": "number",
13091                                             "readOnly": true,
13092                                             "description": "The electric frequency in Hertz (Hz).",
13093                                         },
13094                                         "desiredfrequency" : {
13095                                             "type": "number",
13096                                             "description": "The desired electric frequency in Hertz (Hz).",
13097                                         }
13098                                     }
13099                                 }
13100                             },
13101                             "type": "object",
13102                             "allOf": [
13103                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
13104                                 { "$ref": "#/definitions/oic.r.energy.electrical" }
13105                             ],
13106                             "required": [ "voltage", "current", "frequency" ]

```

```

13107         }
13108
13109     example: /
13110     {
13111         "rt":      ["oic.r.energy.electrical"],
13112         "id":      "unique_example_id",
13113         "voltage": 120.0,
13114         "current": 5.0,
13115         "frequency": 60.0
13116     }
13117
13118 post:
13119     description: |
13120         Sets the desired energy values
13121
13122     is : ['interface-update']
13123
13124     body:
13125         application/json:
13126             schema: /
13127             {
13128                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy-Update.json#",
13129                 "$schema": "http://json-schema.org/draft-04/schema#",
13130                 "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
13131 reserved.",
13132                 "title": "Electrical Energy",
13133                 "definitions": {
13134                     "oic.r.energy.electrical": {
13135                         "type": "object",
13136                         "anyOf": [
13137                             {"required": ["desiredvoltage"]},
13138                             {"required": ["desiredcurrent"]},
13139                             {"required": ["desiredfrequency"]}
13140                         ],
13141                         "properties": {
13142                             "desiredvoltage" : {
13143                                 "type": "number",
13144                                 "description": "The desired electric voltage in Volts (V).",
13145                             },
13146                             "desiredcurrent" : {
13147                                 "type": "number",
13148                                 "description": "The desired electric current in Amps (A).",
13149                             },
13150                             "desiredfrequency" : {
13151                                 "type": "number",
13152                                 "description": "The desired electric frequency in Hertz (Hz).",
13153                             }
13154                         }
13155                     },
13156                     "type": "object",
13157                     "allOf": [
13158                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
13159                         {"$ref": "#/definitions/oic.r.energy.electrical"}
13160                     ]
13161                 }
13162
13163     example: /
13164     {
13165         "id":      "unique_example_id",
13166         "desiredvoltage": 130.0,
13167         "desiredcurrent": 6.0
13168     }
13169
13170 responses :

```


13171 200:

13172 **6.80.5 Property Definition**

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

13173 **6.80.6 CRUDN behaviour**

Resource	Create	Read	Update	Delete	Notify
/EnergyResURI		get	post		

13174 **6.81 Energy Generation**

13175 **6.81.1 Introduction**

13176 This resource describes the attributes associated with energy generation energygenerated is a
13177 number that provides the energy generated in Watt-hour(Wh).

13178 **6.81.2 Example URI**

13179 /EnergyGenerationResURI

13180 **6.81.3 Resource Type**

13181 The resource type (rt) is defined as: oic.r.energy.generation.

13182 **6.81.4 RAML Definition**

13183 `##RAML 0.8`

13184 `title: EnergyGeneration`

13185 `version: v1.1.0-20170815`

13186 `traits:`

13187 `- interface :`

13188 `queryParameters:`

13189 `if:`

13190 `enum: ["oic.if.s", "oic.if.baseline"]`

13191

13192 `/EnergyGenerationResURI:`

13193 `description: |`

13194 `This resource describes the attributes associated with energy generation`

13195 `energygenerated is a number that provides the energy generated in Watt-hour(Wh).`

13196

13197 `is : ['interface']`

13198 `get:`

```

13199     description: |
13200         Retrieves the current energy generation.
13201
13202     responses :
13203         200:
13204             body:
13205                 application/json:
13206                     schema: /
13207                         {
13208                             "id":
13209 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.generation.json#",
13210                             "$schema": "http://json-schema.org/draft-04/schema#",
13211                             "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
13212 reserved.",
13213                             "title": "EnergyGeneration",
13214                             "definitions": {
13215                                 "oic.r.energy.generation": {
13216                                     "type": "object",
13217                                     "properties": {
13218                                         "energygenerated" : {
13219                                             "type": "number",
13220                                             "description": "The energy generated in Watt-hour(Wh).",
13221                                             "readOnly": true
13222                                         }
13223                                     }
13224                                 }
13225                             },
13226                             "type": "object",
13227                             "allOf": [
13228                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
13229                                 {"$ref": "#/definitions/oic.r.energy.generation"}
13230                             ],
13231                             "required": [ "energygenerated" ]
13232                         }
13233
13234                     example: /
13235                         {
13236                             "rt":      ["oic.r.energy.generation"],
13237                             "id":      "unique_example_id",
13238                             "energygenerated": 3000.00
13239                         }
13240

```

6.81.5 Property Definition

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

6.81.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/EnergyGenerationResURI		get			

6.82 Foaming

6.82.1 Introduction

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

6.82.2 Example URI

/FoamingResURI

6.82.3 Resource Type

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

6.82.4 RAML Definition

```
13250 13250 6.82.3 Resource Type
13251 The resource type (rt) is defined as: oic.r.foaming.
13252 13252 6.82.4 RAML Definition
13253 13253 #RAML 0.8
13254 13254 title: Foaming
13255 13255 version: v1.1.0-20170815
13256 13256 traits:
13257 13257   - interface :
13258 13258     queryParameters:
13259 13259       if:
13260 13260         enum: ["oic.if.rw", "oic.if.baseline"]
13261
13262 13262 /FoamingResURI:
13263 13263   description: |
13264 13264     This resource describes the attributes associated with foaming
13265 13265     The foam strength of the liquid is represented as an integer.
13266 13266     The foam strength is an integer, the range of which may be enforced by the presence of a range
13267 13267     Property defined in the baseresource.
13268
13269 13269   is : ['interface']
13270
13270 13270   get:
13271 13271     description: |
13272 13272       Retrieves the state of foaming.
13273
13274 13274   responses :
13275 13275     200:
13276 13276       body:
13277 13277         application/json:
13278 13278           schema: /
13279 13279             {
13280 13280               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.foaming.json#",
13281 13281               "$schema": "http://json-schema.org/draft-04/schema#",
13282 13282               "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
13283 13283               reserved.",
13284 13284               "title": "Foaming",
13285 13285               "definitions": {
13286 13286                 "oic.r.foaming": {
13287 13287                   "type": "object",
13288 13288                   "properties": {
13289 13289                     "foamstrength" : {
13290 13290                       "type": "integer",
13291 13291                       "description": "The desired foaminess of the liquid."
13292 13292                     }
13293 13293                   }
13294 13294                 },
13295 13295               },
13296 13296               "type": "object",
13297 13297               "allOf": [
13298 13298                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
13299 13299                 { "$ref": "#/definitions/oic.r.foaming" }
13300 13300               ],
13301 13301               "required": [ "foamstrength" ]
13302 13302             }
13303
13304 13304   example: /
13305 13305     {
13306 13306       "rt":      ["oic.r.foaming"],
13307 13307       "id":      "unique_example_id",
13308 13308       "foamstrength": 50,
```

```

13309         "range": [0,100]
13310     }
13311
13312     post:
13313         description: |
13314             Sets foaming value
13315
13316     body:
13317         application/json:
13318             schema: /
13319                 {
13320                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.foaming.json#",
13321                     "$schema": "http://json-schema.org/draft-04/schema#",
13322                     "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
13323 reserved.",
13324                     "title": "Foaming",
13325                     "definitions": {
13326                         "oic.r.foaming": {
13327                             "type": "object",
13328                             "properties": {
13329                                 "foamstrength" : {
13330                                     "type": "integer",
13331                                     "description": "The desired foaminess of the liquid."
13332                                 }
13333                             }
13334                         },
13335                     },
13336                     "type": "object",
13337                     "allOf": [
13338                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
13339                         { "$ref": "#/definitions/oic.r.foaming" }
13340                     ],
13341                     "required": [ "foamstrength" ]
13342                 }
13343
13344             example: /
13345                 {
13346                     "id": "unique_example_id",
13347                     "foamstrength": 50
13348                 }
13349
13350     responses :
13351         200:
13352             body:
13353                 application/json:
13354                     schema: /
13355                         {
13356                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.foaming.json#",
13357                             "$schema": "http://json-schema.org/draft-04/schema#",
13358                             "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
13359 reserved.",
13360                             "title": "Foaming",
13361                             "definitions": {
13362                                 "oic.r.foaming": {
13363                                     "type": "object",
13364                                     "properties": {
13365                                         "foamstrength" : {
13366                                             "type": "integer",
13367                                             "description": "The desired foaminess of the liquid."
13368                                         }
13369                                     }
13370                                 },
13371                             },
13372                             "type": "object",

```

13373 "allOf": [
13374 {"\$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
13375 {"\$ref": "#/definitions/oic.r.foaming"}
13376],
13377 "required": ["foamstrength"]
13378 }
13379
13380 example: /
13381 {
13382 "id": "unique_example_id",
13383 "foamstrength": 50
13384 }
13385

13386 **6.82.5 Property Definition**

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

13387 **6.82.6 CRUDN behaviour**

Resource	Create	Read	Update	Delete	Notify
/FoamingResURI		get	post		

13388 **6.83 Grinder**

13389 **6.83.1 Introduction**

13390 This resource describes the attributes associated with a grinder. The coarseness of the grounds
13391 is an integer. The higher the value, the less coarse. remaining is a percentage that represents the
13392 unground material left.

13393 **6.83.2 Example URI**

13394 /GrinderResURI

13395 **6.83.3 Resource Type**

13396 The resource type (rt) is defined as: oic.r.grinder.

13397 **6.83.4 RAML Definition**

13398 `##RAML 0.8`
13399 `title: Grinder`
13400 `version: v1.1.0-20170815`
13401 `traits:`
13402 `- interface :`
13403 `queryParameters:`
13404 `if:`
13405 `enum: ["oic.if.rw", "oic.if.baseline"]`
13406
13407 `/GrinderResURI:`
13408 `description: |`
13409 `This resource describes the attributes associated with a grinder`
13410 `The coarseness of the grounds is an integer`
13411 `The higher the value, the less coarse`
13412 `remaining is a percentage that represents the unground material left.`
13413
13414 `is : ['interface']`
13415 `get:`
13416 `description: |`
13417 `Retrieves the state of a grinder.`
13418

```

13419     responses :
13420     200:
13421         body:
13422             application/json:
13423                 schema: /
13424                     {
13425                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.grinder.json#",
13426                         "$schema": "http://json-schema.org/draft-04/schema#",
13427                         "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
13428 reserved.",
13429                         "title": "Grinder",
13430                         "definitions": {
13431                             "oic.r.grinder": {
13432                                 "type": "object",
13433                                 "properties": {
13434                                     "coarseness" : {
13435                                         "type": "integer",
13436                                         "description": "The desired coarseness when grinding."
13437                                     },
13438                                     "remaining" : {
13439                                         "type": "integer",
13440                                         "description": "The percentage of unground material left.",
13441                                         "readOnly": true,
13442                                         "minimum": 0,
13443                                         "maximum": 100
13444                                     }
13445                                 }
13446                             },
13447                             "type": "object",
13448                             "allOf": [
13449                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
13450                                 { "$ref": "#/definitions/oic.r.grinder" }
13451                             ],
13452                             "required": ["coarseness"]
13453                         }
13454                     }
13455
13456                 example: /
13457                     {
13458                         "rt": ["oic.r.grinder"],
13459                         "id": "unique_example_id",
13460                         "coarseness": 10,
13461                         "remaining": 50
13462                     }
13463
13464     post:
13465         description: |
13466             Sets grinding values
13467
13468         body:
13469             application/json:
13470                 schema: /
13471                     {
13472                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.grinder-Update.json#",
13473                         "$schema": "http://json-schema.org/draft-04/schema#",
13474                         "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
13475 reserved.",
13476                         "title": "Grinder",
13477                         "definitions": {
13478                             "oic.r.grinder": {
13479                                 "type": "object",
13480                                 "properties": {
13481                                     "coarseness" : {
13482                                         "type": "integer",
13483                                         "description": "The desired coarseness when grinding."

```

```

13484         }
13485     }
13486 }
13487 },
13488 "type": "object",
13489 "allOf": [
13490     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
13491     {"$ref": "#/definitions/oic.r.grinder"}
13492 ],
13493 "required": [ "coarseness" ]
13494 }
13495
13496 example: /
13497 {
13498     "id": "unique_example_id",
13499     "coarseness": 10
13500 }
13501
13502 responses :
13503 200:
13504     body:
13505         application/json:
13506             schema: /
13507                 {
13508                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.grinder-
13509 Update.json#",
13510                     "$schema": "http://json-schema.org/draft-04/schema#",
13511                     "description": "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
13512 reserved.",
13513                     "title": "Grinder",
13514                     "definitions": {
13515                         "oic.r.grinder": {
13516                             "type": "object",
13517                             "properties": {
13518                                 "coarseness": {
13519                                     "type": "integer",
13520                                     "description": "The desired coarseness when grinding."
13521                                 }
13522                             }
13523                         }
13524                     },
13525                     "type": "object",
13526                     "allOf": [
13527                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
13528                         {"$ref": "#/definitions/oic.r.grinder"}
13529                     ],
13530                     "required": [ "coarseness" ]
13531                 }
13532
13533 example: /
13534 {
13535     "id": "unique_example_id",
13536     "coarseness": 10
13537 }
13538

```

6.83.5 Property Definition

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

6.83.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/GrinderResURI		get	post		

6.84 Liquid Level

6.84.1 Introduction

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

6.84.2 Example URI

/LiquidLevelResURI

6.84.3 Resource Type

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

6.84.4 RAML Definition

```
##RAML 0.8
title: OCFLiquidLevel
version: v1.1.0-20160519

traits:
  - interface :
      queryParameters:
        if:
          enum: ["oic.if.rw", "oic.if.r", "oic.if.baseline"]

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

  is : ['interface']
  get:
    description: |
      Retrieves the state of liquid level.

  responses :
    200:
      body:
        application/json:
          schema: /
            {
              "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.liquid.level.json#",
              "$schema": "http://json-schema.org/draft-04/schema#",
              "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
reserved.",
              "title": "Liquid Level",
              "definitions": {
                "oic.r.liquid.level": {
                  "type": "object",
                  "properties": {
                    "currentlevel" : {
                      "type": "integer",
                      "description": "The current level of the liquid in percentage.",
                      "readOnly": true,
                      "minimum": 0,
```



```

13592         "maximum": 100
13593     },
13594     "desiredlevel" : {
13595         "type": "integer",
13596         "description": "The desired level of the liquid in percentage.",
13597         "minimum": 0,
13598         "maximum": 100
13599     }
13600 }
13601 }
13602 },
13603 "type": "object",
13604 "allOf": [
13605     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
13606     {"$ref": "#/definitions/oic.r.liquid.level"}
13607 ],
13608 "required": [ "currentlevel" ]
13609 }
13610
13611 example: /
13612 {
13613     "rt":      ["oic.r.liquid.level"],
13614     "id":      "unique_example_id",
13615     "currentlevel": 60,
13616     "desiredlevel": 80
13617 }
13618
13619 post:
13620     description: |
13621         Sets liquid level values
13622
13623     body:
13624         application/json:
13625             schema: /
13626                 {
13627                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.liquid.level-
13628 Update.json#",
13629                     "$schema": "http://json-schema.org/draft-04/schema#",
13630                     "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
13631 reserved.",
13632                     "title": "Liquid Level",
13633                     "definitions": {
13634                         "oic.r.liquid.level": {
13635                             "type": "object",
13636                             "properties": {
13637                                 "desiredlevel" : {
13638                                     "type": "integer",
13639                                     "description": "The desired level of the liquid in percentage.",
13640                                     "minimum": 0,
13641                                     "maximum": 100
13642                                 }
13643                             }
13644                         }
13645                     },
13646                     "type": "object",
13647                     "allOf": [
13648                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
13649                         {"$ref": "#/definitions/oic.r.liquid.level"}
13650                     ],
13651                     "required": [ "desiredlevel" ]
13652                 }
13653
13654             example: /
13655                 {
13656                     "id":      "unique_example_id",
13657                     "desiredlevel": 80

```

```

13658     }
13659
13660     responses :
13661         200:
13662             body:
13663                 application/json:
13664                     schema: /
13665                         {
13666                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.liquid.level-
13667 Update.json#",
13668                             "$schema": "http://json-schema.org/draft-04/schema#",
13669                             "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
13670 reserved.",
13671                             "title": "Liquid Level",
13672                             "definitions": {
13673                                 "oic.r.liquid.level": {
13674                                     "type": "object",
13675                                     "properties": {
13676                                         "desiredlevel" : {
13677                                             "type": "integer",
13678                                             "description": "The desired level of the liquid in percentage.",
13679                                             "minimum": 0,
13680                                             "maximum": 100
13681                                         }
13682                                     }
13683                                 },
13684                             },
13685                             "type": "object",
13686                             "allOf": [
13687                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
13688                                 { "$ref": "#/definitions/oic.r.liquid.level" }
13689                             ],
13690                             "required": [ "desiredlevel" ]
13691                         }
13692
13693                     example: /
13694                         {
13695                             "id": "unique_example_id",
13696                             "desiredlevel": 80
13697                         }
13698

```

6.84.5 Property Definition

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

6.84.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/LiquidLevelResURI		get	post		

6.85 Vehicle Connector

6.85.1 Introduction

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

6.85.2 Example URI

/VehicleConnectorResURI

6.85.3 Resource Type

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

6.85.4 RAML Definition

```
13711 #%RAML 0.8
13712 title: VehicleConnector
13713 version: v1.1.0-20170815
13714 traits:
13715   - interface :
13716       queryParameters:
13717         if:
13718           enum: ["oic.if.s", "oic.if.baseline"]
13719
13720 /VehicleConnectorResURI:
13721   description: |
13722     This resource describes the attributes associated with an electric vehicle charging connector
13723     The connected state is a boolean indicating the status of the connector (False = disconnected,
13724     True = connected)
13725     The rated charging capacity and rated discharging capacity are in Amps (A).
13726
13727   is : ['interface']
13728   get:
13729     description: |
13730       Retrieves the state of the vehicle connector.
13731
13732   responses :
13733     200:
13734       body:
13735         application/json:
13736           schema: /
13737             {
13738               "id":
13739 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.vehicle.connector.json#",
13740               "$schema": "http://json-schema.org/draft-04/schema#",
13741               "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
13742 reserved.",
13743               "title": "VehicleConnector",
13744               "definitions": {
13745                 "oic.r.vehicle.connector": {
13746                   "type": "object",
13747                   "properties": {
13748                     "connected" : {
13749                       "type": "boolean",
13750                       "description": "The connection state.",
13751                       "readOnly": true
13752                     },
13753                     "ratedchargingcapacity" : {
13754                       "type": "number",
13755                       "description": "The rated charging capacity in Amps (A).",
13756                       "readOnly": true
13757                     },
13758                     "rateddischargingcapacity" : {
13759                       "type": "number",
13760                       "description": "The rated discharging capacity in Amps (A).",
13761                       "readOnly": true
13762                     }
13763                   }
13764                 }
```

13765 },
13766 "type": "object",
13767 "allOf": [
13768 { "\$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
13769 { "\$ref": "#/definitions/oic.r.vehicle.connector" }
13770],
13771 "required": ["connected"]
13772 }
13773
13774 example: /
13775 {
13776 "rt": ["oic.r.vehicle.connector"],
13777 "id": "unique_example_id",
13778 "connected": true,
13779 "ratedchargingcapacity": 20.0,
13780 "rateddischargingcapacity": 5.0
13781 }
13782

13783 **6.85.5 Property Definition**

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

13784 **6.85.6 CRUDN behaviour**

Resource	Create	Read	Update	Delete	Notify
/VehicleConnectorResURI		get			

Annex A Base Resource Schema

A.1 Base Resource Schema

A.1.1 Introduction

This is the base resource schema on which all other resources defined in this specification build. value is the sensed or actuated value of the Resource. precision is the accuracy granularity of the value. range is the range over which value is valid. step is the step function over the defined range if applicable (e.g. always step by '2').

A.1.2 Example URI

/BaseResourceSchemaResURI

A.1.3 Resource Type

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

A.1.4 RAML Definition

```

#%RAML 0.8
title: OICBaseResourceSchema
version: v1.1.0-20160519

traits:
  - interface-a :
    queryParameters:
      if:
        enum: ["oic.if.a"]
  - interface-baseline :
    queryParameters:
      if:
        enum: ["oic.if.baseline"]

/BaseResourceSchemaResURI:
  description: |
    This is the base resource schema on which all other resources defined in this specification
    build.
    value is the sensed or actuated value of the Resource.
    precision is the accuracy granularity of the value.
    range is the range over which value is valid.
    step is the step function over the defined range if applicable (e.g
    always step by '2').

  get:
    description: |
      retrieves the state of the resource.

  is : ['interface-baseline']

  responses :
    200:
      body:
        application/json:
          schema: /
            {
              "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.baseResource.json#",
              "$schema": "http://json-schema.org/draft-04/schema#",
              "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
              "title": "Base Resource",
              "definitions": {

```

```

13837     "oic.r.baseresource": {
13838         "allof": [
13839             {
13840                 "$ref": "oic.core.json#/definitions/oic.core"
13841             },
13842             {
13843                 "type": "object",
13844                 "properties": {
13845                     "value": {
13846                         "anyOf": [
13847                             {"type": "array"},
13848                             {"type": "string"},
13849                             {"type": "boolean"},
13850                             {"type": "integer"},
13851                             {"type": "number"},
13852                             {"type": "object"}
13853                         ],
13854                         "description": "The value sensed or actuated by this Resource"
13855                     },
13856                     "precision": {
13857                         "type": "number",
13858                         "readOnly": true,
13859                         "description": "Accuracy granularity of the exposed value"
13860                     },
13861                     "range": {
13862                         "type": "array",
13863                         "description": "The valid range for the value Property",
13864                         "readOnly": true,
13865                         "minItems": 2,
13866                         "maxItems": 2,
13867                         "items": {
13868                             "anyOf": [
13869                                 {"type": "number"},
13870                                 {"type": "integer"}
13871                             ]
13872                         }
13873                     },
13874                     "step": {
13875                         "description": "Step value across the defined range",
13876                         "readOnly": true,
13877                         "anyOf": [
13878                             {"type": "integer"},
13879                             {"type": "number"}
13880                         ]
13881                     }
13882                 }
13883             }
13884         ]
13885     },
13886     "type": "object",
13887     "allof": [
13888         {"$ref": "#/definitions/oic.r.baseresource"}
13889     ]
13890 }
13891
13892
13893 example: /
13894 {
13895     "rt" :           ["oic.baseresource"],
13896     "if":            ["oic.if.baseline"],
13897     "id":            "unique_example_id",
13898     "value":         10.5,
13899     "precision":     0.5,
13900     "range":         [0.0,100.0]
13901 }
13902
13903 post:
13904     description: |

```

```

13905         sets the read-write resource properties
13906
13907     is : ['interface-a']
13908     body:
13909         application/json:
13910             schema: /
13911                 {
13912                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.baseResource.json#",
13913                     "$schema": "http://json-schema.org/draft-04/schema#",
13914                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
13915 reserved.",
13916                     "title": "Base Resource",
13917                     "definitions": {
13918                         "oic.r.baseresource": {
13919                             "allOf": [
13920                                 {
13921                                     "$ref": "oic.core.json#/definitions/oic.core"
13922                                 },
13923                                 {
13924                                     "type": "object",
13925                                     "properties": {
13926                                         "value": {
13927                                             "anyOf": [
13928                                                 {"type": "array"},
13929                                                 {"type": "string"},
13930                                                 {"type": "boolean"},
13931                                                 {"type": "integer"},
13932                                                 {"type": "number"},
13933                                                 {"type": "object"}
13934                                             ],
13935                                             "description": "The value sensed or actuated by this Resource"
13936                                         },
13937                                         "precision": {
13938                                             "type": "number",
13939                                             "readOnly": true,
13940                                             "description": "Accuracy granularity of the exposed value"
13941                                         },
13942                                         "range": {
13943                                             "type": "array",
13944                                             "description": "The valid range for the value Property",
13945                                             "readOnly": true,
13946                                             "minItems": 2,
13947                                             "maxItems": 2,
13948                                             "items": {
13949                                                 "anyOf": [
13950                                                     {"type": "number"},
13951                                                     {"type": "integer"}
13952                                                 ]
13953                                             }
13954                                         },
13955                                         "step": {
13956                                             "description": "Step value across the defined range",
13957                                             "readOnly": true,
13958                                             "anyOf": [
13959                                                 {"type": "integer"},
13960                                                 {"type": "number"}
13961                                             ]
13962                                         }
13963                                     }
13964                                 }
13965                             ]
13966                         },
13967                     "type": "object",
13968                     "allOf": [
13969                         {"$ref": "#/definitions/oic.r.baseresource"}
13970                     ]
13971                 }
13972             }
13973

```

```

13974     example: /
13975         {
13976             "value": 20.5
13977         }
13978
13979     responses :
13980         200:
13981             body:
13982                 application/json:
13983                     schema: /
13984                         {
13985                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.baseResource.json#",
13986                             "$schema": "http://json-schema.org/draft-04/schema#",
13987                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
13988 rights reserved.",
13989                             "title": "Base Resource",
13990                             "definitions": {
13991                                 "oic.r.baseresource": {
13992                                     "allOf": [
13993                                         {
13994                                             "$ref": "oic.core.json#/definitions/oic.core"
13995                                         },
13996                                         {
13997                                             "type": "object",
13998                                             "properties": {
13999                                                 "value": {
14000                                                     "anyOf": [
14001                                                         {"type": "array"},
14002                                                         {"type": "string"},
14003                                                         {"type": "boolean"},
14004                                                         {"type": "integer"},
14005                                                         {"type": "number"},
14006                                                         {"type": "object"}
14007                                                     ],
14008                                                     "description": "The value sensed or actuated by this Resource"
14009                                                 },
14010                                                 "precision": {
14011                                                     "type": "number",
14012                                                     "readOnly": true,
14013                                                     "description": "Accuracy granularity of the exposed value"
14014                                                 },
14015                                                 "range": {
14016                                                     "type": "array",
14017                                                     "description": "The valid range for the value Property",
14018                                                     "readOnly": true,
14019                                                     "minItems": 2,
14020                                                     "maxItems": 2,
14021                                                     "items": {
14022                                                         "anyOf": [
14023                                                             {"type": "number"},
14024                                                             {"type": "integer"}
14025                                                         ]
14026                                                     }
14027                                                 },
14028                                                 "step": {
14029                                                     "description": "Step value across the defined range",
14030                                                     "readOnly": true,
14031                                                     "anyOf": [
14032                                                         {"type": "integer"},
14033                                                         {"type": "number"}
14034                                                     ]
14035                                                 }
14036                                             }
14037                                         }
14038                                     ]
14039                                 }
14040                             },
14041                             "type": "object",

```



```
14042         "allOf": [
14043             { "$ref": "#/definitions/oic.r.baseresource" }
14044         ]
14045     }
14046
14047     example: /
14048     {
14049         "value": 20.5
14050     }
14051
```

14052 **A.1.5 Property Definition**

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema		Read Only	Step value across the defined range
range	array: see schema		Read Only	The valid range for the value Property
precision	number		Read Only	Accuracy granularity of the exposed value
value	multiple types: see schema			The value sensed or actuated by this Resource
rt	array: see schema		Read Only	Resource Type
n	string		Read Only	Friendly name of the resource
id	string		Read Only	Instance ID of this specific resource
if	array: see schema		Read Only	The interface set supported by this resource

14053 **A.1.6 CRUDN behaviour**

Resource	Create	Read	Update	Delete	Notify
/BaseResourceSchemaResURI		get	post		

14054 **A.1.7 Referenced JSON schemas**

14055 **A.1.8 oic.core.json**

```
14056 {
14057     "id": "https://www.openconnectivity.org/ocf-apis/core/schemas/oic.core-schema.json#",
14058     "$schema": "http://json-schema.org/draft-04/schema#",
14059     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
14060 reserved.",
14061     "title": "Core",
14062     "definitions": {
14063         "oic.core": {
14064             "type": "object",
14065             "properties": {
14066                 "rt": {
14067                     "type": "array",
14068                     "items" : {
14069                         "type" : "string",
14070                         "maxLength": 64
14071                     },
14072                     "minItems" : 1,
```

```

14073         "readOnly": true,
14074         "description": "Resource Type"
14075     },
14076     "if": {
14077         "type": "array",
14078         "items": {
14079             "type" : "string",
14080             "enum" : ["oic.if.baseline", "oic.if.ll", "oic.if.b", "oic.if.lb", "oic.if.rw",
14081 "oic.if.r", "oic.if.a", "oic.if.s" ]
14082         },
14083         "minItems": 1,
14084         "readOnly": true,
14085         "description": "The interface set supported by this resource"
14086     },
14087     "n": {
14088         "type": "string",
14089         "maxLength": 64,
14090         "readOnly": true,
14091         "description": "Friendly name of the resource"
14092     },
14093     "id": {
14094         "type": "string",
14095         "maxLength": 64,
14096         "readOnly": true,
14097         "description": "Instance ID of this specific resource"
14098     }
14099 }
14100 }
14101 },
14102 "type": "object",
14103 "allof": [
14104     { "$ref": "#/definitions/oic.core" }
14105 ]
14106 }
14107

```

Annex B Swagger 2.0

B.1 Acceleration Sensor

B.1.1 Introduction

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

B.1.2 Example URI

/AccelerationResURI

B.1.3 Resource Type

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

B.1.4 Swagger2.0 Definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Acceleration Sensor",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/AccelerationResURI" : {
      "get": {
        "description": "This resource provides a measure of proper acceleration (g force) as
opposed to co-ordinate acceleration\n(which is dependent on the co-ordinate system and the
observer).\nThe value is a float which describes the acceleration experienced by the object in
\"g\".\n",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.sensor.acceleration"],
              "id": "unique_example_id",
              "acceleration": 0.5
            }
          },
          "schema": { "$ref": "#/definitions/acceleration" }
        }
      }
    }
  }
}
```

```

14169     }
14170   }
14171 }
14172 }
14173 },
14174 "parameters": {
14175   "interface" : {
14176     "in" : "query",
14177     "name" : "if",
14178     "type" : "string",
14179     "enum" : ["oic.if.s", "oic.if.baseline"]
14180   }
14181 },
14182 "definitions": {
14183   "acceleration" :
14184     {
14185     "properties": {
14186       "acceleration": {
14187         "description": "sensed acceleration experienced in 'g'.",
14188         "readOnly": true,
14189         "type": "number"
14190       },
14191       "id": {
14192         "description": "Instance ID of this specific resource",
14193         "maxLength": 64,
14194         "readOnly": true,
14195         "type": "string"
14196       },
14197       "if": {
14198         "description": "The interface set supported by this resource",
14199         "items": {
14200           "enum": [
14201             "oic.if.baseline",
14202             "oic.if.ll",
14203             "oic.if.b",
14204             "oic.if.lb",
14205             "oic.if.rw",
14206             "oic.if.r",
14207             "oic.if.a",
14208             "oic.if.s"
14209           ],
14210           "type": "string"
14211         },
14212         "minItems": 1,
14213         "readOnly": true,
14214         "type": "array"
14215       },
14216       "n": {
14217         "description": "Friendly name of the resource",
14218         "maxLength": 64,
14219         "readOnly": true,
14220         "type": "string"
14221       },
14222       "precision": {
14223         "description": "Accuracy granularity of the exposed value",
14224         "readOnly": true,
14225         "type": "number"
14226       },
14227       "range": {
14228         "description": "The valid range for the value Property",
14229         "items": {
14230           "anyOf": [
14231             {
14232               "type": "number"
14233             },
14234             {
14235               "type": "integer"
14236             }
14237           ]
14238         },
14239         "maxItems": 2,

```

```

14240         "minItems": 2,
14241         "readOnly": true,
14242         "type": "array"
14243     },
14244     "rt": {
14245         "description": "Resource Type",
14246         "items": {
14247             "maxLength": 64,
14248             "type": "string"
14249         },
14250         "minItems": 1,
14251         "readOnly": true,
14252         "type": "array"
14253     },
14254     "step": {
14255         "anyOf": [
14256             {
14257                 "type": "integer"
14258             },
14259             {
14260                 "type": "number"
14261             }
14262         ],
14263         "description": "Step value across the defined range",
14264         "readOnly": true
14265     },
14266     "value": {
14267         "anyOf": [
14268             {
14269                 "type": "array"
14270             },
14271             {
14272                 "type": "string"
14273             },
14274             {
14275                 "type": "boolean"
14276             },
14277             {
14278                 "type": "integer"
14279             },
14280             {
14281                 "type": "number"
14282             },
14283             {
14284                 "type": "object"
14285             }
14286         ],
14287         "description": "The value sensed or actuated by this Resource"
14288     }
14289 },
14290 "required": [
14291     "acceleration"
14292 ]
14293 }
14294 }
14295 }
14296 }
14297

```

B.1.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
id	string		Read Only	Instance ID of this specific resource
if	array: see schema		Read Only	The interface set supported by this resource

rt	array: see schema		Read Only	Resource Type
step	multiple types: see schema		Read Only	Step value across the defined range
precision	number		Read Only	Accuracy granularity of the exposed value
value	multiple types: see schema			The value sensed or actuated by this Resource
range	array: see schema		Read Only	The valid range for the value Property
acceleration	number	yes	Read Only	sensed acceleration experienced in 'g'.
n	string		Read Only	Friendly name of the resource

14299 B.1.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/AccelerationResURI		get			

14300 B.2 Activity Count

14301 B.2.1 Introduction

14302 This resource specifies an activity count.
14303 The resource can be readonly (oic.if.s interface) in which instance it represents a count.
14304 The resource can be readwrite (oic.if.a interface) in which instance it represents a goal or target
14305 for a count.
14306 The count property is an integer representing either the current count or goal value.
14307 Retrieves the current activity count.

14309 B.2.2 Example URI

14310 /ActivityCountResURI

14311 B.2.3 Resource Type

14312 The resource type (rt) is defined as: ['oic.r.sensor.activity.count'].

14313 B.2.4 Swagger2.0 Definition

```
14314 {
14315   "swagger": "2.0",
14316   "info": {
14317     "title": "Activity Count",
14318     "version": "v1.1.0-20160519",
14319     "license": {
14320       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
14321       "x-description": "Redistribution and use in source and binary forms, with or without
14322 modification, are permitted provided that the following conditions are met:\n
14323 1. Redistributions of source code must retain the above copyright notice, this list of conditions and
14324 the following disclaimer.\n
14325 2. Redistributions in binary form must reproduce the above
14326 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
14327 other materials provided with the distribution.\n\n
14328 THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
```

```

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14330 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
14331 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
14332 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n          HOWEVER CAUSED AND
14333 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
14334 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
14335 OF SUCH DAMAGE.\n"
14336 }
14337 },
14338 "schemes": ["http"],
14339 "consumes": ["application/json"],
14340 "produces": ["application/json"],
14341 "paths": {
14342   "/ActivityCountResURI" : {
14343     "get": {
14344       "description": "This resource specifies an activity count.\nThe resource can be readonly
14345 (oic.if.s interface) in which instance it represents a count.\nThe resource can be readwrite
14346 (oic.if.a interface) in which instance it represents a goal or target for a count.\nThe count
14347 property is an integer representing either the current count or goal value.\nRetrieves the current
14348 activity count.\n",
14349       "parameters": [
14350         {"$ref": "#/parameters/interface"}
14351       ],
14352       "responses": {
14353         "200": {
14354           "description": "",
14355           "x-example":
14356             {
14357               "rt": ["oic.r.sensor.activity.count"],
14358               "id": "unique_example_id",
14359               "count": 2500
14360             },
14361           "schema": { "$ref": "#/definitions/Count" }
14362         }
14363       }
14364     },
14365     "post": {
14366       "description": "Sets the count target\n",
14367       "parameters": [
14368         {"$ref": "#/parameters/interface"},
14369         {
14370           "name": "body",
14371           "in": "body",
14372           "required": true,
14373           "schema": { "$ref": "#/definitions/Count" },
14374           "x-example":
14375             {
14376               "id": "unique_example_id",
14377               "count": 5000
14378             }
14379         }
14380       ],
14381       "responses": {
14382         "200": {
14383           "description": "",
14384           "x-example":
14385             {
14386               "id": "unique_example_id",
14387               "count": 5000
14388             },
14389           "schema": { "$ref": "#/definitions/Count" }
14390         }
14391       }
14392     }
14393   }
14394 }
14395 },
14396 "parameters": {
14397   "interface" : {
14398     "in" : "query",

```

```

14400     "name" : "if",
14401     "type" : "string",
14402     "enum" : ["oic.if.s", "oic.if.a", "oic.if.baseline"]
14403 }
14404 },
14405 "definitions": {
14406     "Count" :
14407     {
14408         "properties": {
14409             "count": {
14410                 "description": "Current or Target count.",
14411                 "type": "integer"
14412             },
14413             "id": {
14414                 "description": "Instance ID of this specific resource",
14415                 "maxLength": 64,
14416                 "readOnly": true,
14417                 "type": "string"
14418             },
14419             "if": {
14420                 "description": "The interface set supported by this resource",
14421                 "items": {
14422                     "enum": [
14423                         "oic.if.baseline",
14424                         "oic.if.ll",
14425                         "oic.if.b",
14426                         "oic.if.lb",
14427                         "oic.if.rw",
14428                         "oic.if.r",
14429                         "oic.if.a",
14430                         "oic.if.s"
14431                     ],
14432                     "type": "string"
14433                 },
14434                 "minItems": 1,
14435                 "readOnly": true,
14436                 "type": "array"
14437             },
14438             "n": {
14439                 "description": "Friendly name of the resource",
14440                 "maxLength": 64,
14441                 "readOnly": true,
14442                 "type": "string"
14443             },
14444             "precision": {
14445                 "description": "Accuracy granularity of the exposed value",
14446                 "readOnly": true,
14447                 "type": "number"
14448             },
14449             "range": {
14450                 "description": "The valid range for the value Property",
14451                 "items": {
14452                     "anyOf": [
14453                         {
14454                             "type": "number"
14455                         },
14456                         {
14457                             "type": "integer"
14458                         }
14459                     ]
14460                 },
14461                 "maxItems": 2,
14462                 "minItems": 2,
14463                 "readOnly": true,
14464                 "type": "array"
14465             },
14466             "rt": {
14467                 "description": "Resource Type",
14468                 "items": {
14469                     "maxLength": 64,
14470                     "type": "string"

```



```

14471         },
14472         "minItems": 1,
14473         "readOnly": true,
14474         "type": "array"
14475     },
14476     "step": {
14477         "anyOf": [
14478             {
14479                 "type": "integer"
14480             },
14481             {
14482                 "type": "number"
14483             }
14484         ],
14485         "description": "Step value across the defined range",
14486         "readOnly": true
14487     },
14488     "value": {
14489         "anyOf": [
14490             {
14491                 "type": "array"
14492             },
14493             {
14494                 "type": "string"
14495             },
14496             {
14497                 "type": "boolean"
14498             },
14499             {
14500                 "type": "integer"
14501             },
14502             {
14503                 "type": "number"
14504             },
14505             {
14506                 "type": "object"
14507             }
14508         ],
14509         "description": "The value sensed or actuated by this Resource"
14510     }
14511 },
14512 "required": [
14513     "count"
14514 ]
14515 }
14516 }
14517 }
14518 }
14519

```

B.2.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
count	integer	yes		Current or Target count.
if	array: see schema		Read Only	The interface set supported by this resource
n	string		Read Only	Friendly name of the resource
value	multiple types: see schema			The value sensed or actuated by this Resource
id	string		Read Only	Instance ID of this specific resource

range	array: see schema		Read Only	The valid range for the value Property
step	multiple types: see schema		Read Only	Step value across the defined range
precision	number		Read Only	Accuracy granularity of the exposed value
rt	array: see schema		Read Only	Resource Type

14521 B.2.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/ActivityCountResURI		get	post		

14522 B.3 Air Flow

14523 B.3.1 Introduction

14524 This resource describes the properties associated with air flow.
 14525 The supporteddirections is the set of valid values for the direction property for a particular instance
 14526 of this resource type.
 14527 The direction is the directionality of the air flow if applicable, if supporteddirections is also present
 14528 it must be a value from that set.
 14529 Direction values are dependent on the capabilities of the unit.
 14530 The speed is an integer representing the current speed level for the unit.
 14531 The range (from oic.r.baseresource) is an array of the min,max values for the speed level. If not
 14532 present the range defaults to [0,100].
 14533 automode is the status of the automode feature; Off means automode is not enabled, On means
 14534 automode is active and the speed is automatically controlled by the device.
 14535 Retrieves the current air flow values.
 14536

14537 B.3.2 Example URI

14538 /AirFlowResURI

14539 B.3.3 Resource Type

14540 The resource type (rt) is defined as: ['oic.r.airflow'].

14541 B.3.4 Swagger2.0 Definition

```
14542 {
14543   "swagger": "2.0",
14544   "info": {
14545     "title": "Air Flow",
14546     "version": "v1.1.0-20160519",
14547     "license": {
14548       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
14549       "x-description": "Redistribution and use in source and binary forms, with or without
14550 modification, are permitted provided that the following conditions are met:\n      1.
14551 Redistributions of source code must retain the above copyright notice, this list of conditions and
14552 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
14553 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
14554 other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open
14555 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
14556 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
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14558 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
14559 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
14560 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
14561 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
```

```

14562 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
14563 OF SUCH DAMAGE.\n"
14564 }
14565 },
14566 "schemes": ["http"],
14567 "consumes": ["application/json"],
14568 "produces": ["application/json"],
14569 "paths": {
14570   "/AirFlowResURI" : {
14571     "get": {
14572       "description": "This resource describes the properties associated with air flow.\nThe
14573 supportedirections is the set of valid values for the direction property for a particular instance
14574 of this resource type.\nThe direction is the directionality of the air flow if applicable, if
14575 supporteddirections is also present it must be a value from that set.\nDirection values are
14576 dependent on the capabilities of the unit.\nThe speed is an integer representing the current speed
14577 level for the unit.\nThe range (from oic.r.baseresource) is an array of the min,max values for the
14578 speed level. If not present the range defaults to [0,100].\nautomode is the status of the automode
14579 feature; Off means automode is not enabled, On means automode is active and the speed is
14580 automatically controlled by the device.\nRetrieves the current air flow values.\n",
14581       "parameters": [
14582         { "$ref": "#/parameters/interface" }
14583       ],
14584       "responses": {
14585         "200": {
14586           "description": "",
14587           "x-example": {
14588             "rt": ["oic.r.airflow"],
14589             "id": "unique_example_id",
14590             "supporteddirections": ["left", "right", "centre"],
14591             "direction": "left",
14592             "speed": 5,
14593             "range": [1,7],
14594             "automode": "Off"
14595           }
14596         },
14597         "schema": { "$ref": "#/definitions/AirFlow" }
14598       }
14599     },
14600   },
14601 },
14602 "post": {
14603   "description": "Sets the current air flow values.\nOnly direction and speed may be set by
14604 an update operation.\n",
14605   "parameters": [
14606     { "$ref": "#/parameters/interface" },
14607     {
14608       "name": "body",
14609       "in": "body",
14610       "required": true,
14611       "schema": { "$ref": "#/definitions/AirFlow" },
14612       "x-example": {
14613         "id": "unique_example_id",
14614         "direction": "right",
14615         "speed": 3
14616       }
14617     }
14618   ],
14619   "responses": {
14620     "200": {
14621       "description": "",
14622       "x-example": {
14623         "id": "unique_example_id",
14624         "direction": "right",
14625         "speed": 3
14626       }
14627     },
14628     "schema": { "$ref": "#/definitions/AirFlow" }
14629   },
14630 },
14631 },
14632 "403": {

```

```

14633         "description" : "This response is generated by the OCF Server when the client
14634 sends:\n An update with an invalid property value for direction.\n An update with an out of range
14635 property value for speed.\nThe server may respond with the current resource representation.\n",
14636         "x-example":
14637         {
14638             "id": "unique_example_id",
14639             "supporteddirections": ["left","right","centre"],
14640             "direction": "right",
14641             "speed": 3
14642         },
14643         "schema": { "$ref": "#/definitions/AirFlow" }
14644     }
14645 }
14646 }
14647 }
14648 },
14649 {
14650     "parameters": {
14651         "interface" : {
14652             "in" : "query",
14653             "name" : "if",
14654             "type" : "string",
14655             "enum" : ["oic.if.a", "oic.if.baseline"]
14656         }
14657     },
14658     "definitions": {
14659         "AirFlow" :
14660         {
14661             "properties": {
14662                 "automode": {
14663                     "description": "Status of the automode feature, if on speed is set by the device",
14664                     "enum": [
14665                         "On",
14666                         "Off"
14667                     ]
14668                 },
14669                 "direction": {
14670                     "description": "Directionality of the air flow",
14671                     "type": "string"
14672                 },
14673                 "id": {
14674                     "description": "Instance ID of this specific resource",
14675                     "maxLength": 64,
14676                     "readOnly": true,
14677                     "type": "string"
14678                 },
14679                 "if": {
14680                     "description": "The interface set supported by this resource",
14681                     "items": {
14682                         "enum": [
14683                             "oic.if.baseline",
14684                             "oic.if.ll",
14685                             "oic.if.b",
14686                             "oic.if.lb",
14687                             "oic.if.rw",
14688                             "oic.if.r",
14689                             "oic.if.a",
14690                             "oic.if.s"
14691                         ],
14692                         "type": "string"
14693                     },
14694                     "minItems": 1,
14695                     "readOnly": true,
14696                     "type": "array"
14697                 },
14698                 "n": {
14699                     "description": "Friendly name of the resource",
14700                     "maxLength": 64,
14701                     "readOnly": true,
14702                     "type": "string"
14703                 }
14704             }
14705         }
14706     }
14707 }

```

```

14704     "precision": {
14705         "description": "Accuracy granularity of the exposed value",
14706         "readOnly": true,
14707         "type": "number"
14708     },
14709     "range": {
14710         "description": "The valid range for the value Property",
14711         "items": {
14712             "anyOf": [
14713                 {
14714                     "type": "number"
14715                 },
14716                 {
14717                     "type": "integer"
14718                 }
14719             ]
14720         },
14721         "maxItems": 2,
14722         "minItems": 2,
14723         "readOnly": true,
14724         "type": "array"
14725     },
14726     "rt": {
14727         "description": "Resource Type",
14728         "items": {
14729             "maxLength": 64,
14730             "type": "string"
14731         },
14732         "minItems": 1,
14733         "readOnly": true,
14734         "type": "array"
14735     },
14736     "speed": {
14737         "description": "Current speed level",
14738         "type": "integer"
14739     },
14740     "step": {
14741         "anyOf": [
14742             {
14743                 "type": "integer"
14744             },
14745             {
14746                 "type": "number"
14747             }
14748         ],
14749         "description": "Step value across the defined range",
14750         "readOnly": true
14751     },
14752     "supporteddirections": {
14753         "description": "Array of possible direction settings for this instance of the Resource
14754 Type",
14755         "items": {
14756             "minItems": 1,
14757             "type": "string",
14758             "uniqueItems": true
14759         },
14760         "readOnly": true,
14761         "type": "array"
14762     },
14763     "value": {
14764         "anyOf": [
14765             {
14766                 "type": "array"
14767             },
14768             {
14769                 "type": "string"
14770             },
14771             {
14772                 "type": "boolean"
14773             },
14774             {

```

```

14775         "type": "integer"
14776     },
14777     {
14778         "type": "number"
14779     },
14780     {
14781         "type": "object"
14782     }
14783 ],
14784 "description": "The value sensed or actuated by this Resource"
14785 },
14786 },
14787 "required": [
14788     "speed"
14789 ],
14790 "type": "object"
14791 }
14792 }
14793 }
14794 }
14795

```

B.3.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
precision	number		Read Only	Accuracy granularity of the exposed value
automode	multiple types: see schema			Status of the automode feature, if on speed is set by the device
rt	array: see schema		Read Only	Resource Type
step	multiple types: see schema		Read Only	Step value across the defined range
direction	string			Directionality of the air flow
n	string		Read Only	Friendly name of the resource
supporteddirections	array: see schema		Read Only	Array of possible direction settings for this instance of the Resource Type
if	array: see schema		Read Only	The interface set supported by this resource
speed	integer	yes		Current speed level
value	multiple types: see schema			The value sensed or actuated by this Resource
id	string		Read Only	Instance ID of this specific resource

range	array: see schema		Read Only	The valid range for the value Property
-------	-------------------	--	-----------	--

B.3.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/AirFlowResURI		get	post		

B.4 Air Flow Control

B.4.1 Introduction

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

B.4.2 Example URI

/AirFlowControlResURI

B.4.3 Resource Type

The resource type (rt) is defined as: ['oic.r.airflowcontrol'].

B.4.4 Swagger2.0 Definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Air Flow Control",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/AirFlowControlResURI": {
      "get": {
        "description": "This resource describes the attributes associated with control of air
flow,\nfor example as modelled by a Thermostat (fan), Room A/C or other device.\nThe resource is a
composite resource being made up as a collection of:\n AirFlow Resource\n BinarySwitch
Resource\nRetrieves the current air flow control values.\n",
        "parameters": [
          {
            "$ref": "#/parameters/interface-all"
          }
        ],
        "responses": {
```

```

14850     "200": {
14851         "description" : "",
14852         "x-example":
14853             {
14854                 "rt": ["oic.r.airflowcontrol"],
14855                 "id": "unique_example_id",
14856                 "airFlowControl": [
14857                     {
14858                         "href": "/BinarySwitchResURI",
14859                         "rel": "contains",
14860                         "rt": ["oic.r.switch.binary"],
14861                         "if": ["oic.if.a"],
14862                         "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
14863                     },
14864                     {
14865                         "href": "/AirFlowResURI",
14866                         "rel": "contains",
14867                         "rt": ["oic.r.airflow"],
14868                         "if": ["oic.if.a"],
14869                         "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
14870                     }
14871                 ]
14872             }
14873         ,
14874         "schema": { "$ref": "#/definitions/AirFlowControl" }
14875     }
14876 },
14877 "post": {
14878     "description": "Sets the current air flow control values using the batch interface\n",
14879     "parameters": [
14880         { "$ref": "#/parameters/interface-b" },
14881         {
14882             "name": "body",
14883             "in": "body",
14884             "required": true,
14885             "schema": { "$ref": "#/definitions/AirFlowControlBatch" },
14886             "x-example":
14887                 {
14888                     "id": "unique_example_id",
14889                     "airFlowControl": [
14890                         {
14891                             "id": "unique_example_id",
14892                             "value": true
14893                         },
14894                         {
14895                             "id": "unique_example_id",
14896                             "direction": "right",
14897                             "speed": 3
14898                         }
14899                     ]
14900                 }
14901         ]
14902     }
14903 },
14904 "responses": {
14905     "200": {
14906         "description" : "",
14907         "x-example":
14908             {
14909                 "id": "unique_example_id",
14910                 "airFlowControl": [
14911                     {
14912                         "id": "unique_example_id",
14913                         "value": true
14914                     },
14915                     {
14916                         "id": "unique_example_id",
14917                         "direction": "right",
14918                         "speed": 3
14919                     }
14920                 ]
14921             }
14922     }
14923 }

```



```

14921         }
14922     },
14923     "schema": { "$ref": "#/definitions/AirFlowControlBatch" }
14924 },
14925 "403": {
14926     "description": "This response is generated by the OIC Server when the client
14927 sends:\n An update with an invalid property value for direction.\n An update with an out of range
14928 property value for speed.\nThe server responds with the current resource representation.\n",
14929     "x-example":
14930     {
14931         "id": "unique_example_id",
14932         "airFlowControl": [
14933             {
14934                 "id": "unique_example_id",
14935                 "value": true
14936             },
14937             {
14938                 "id": "unique_example_id",
14939                 "direction": "right",
14940                 "speed": 3
14941             }
14942         ]
14943     }
14944 },
14945 "schema": { "$ref": "#/definitions/AirFlowControlBatch" }
14946 }
14947 }
14948 }
14949 },
14950 },
14951 "parameters": {
14952     "interface-b" : {
14953         "in" : "query",
14954         "name" : "if",
14955         "type" : "string",
14956         "enum" : ["oic.if.b"]
14957     },
14958     "interface-all" : {
14959         "in" : "query",
14960         "name" : "if",
14961         "type" : "string",
14962         "enum" : ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
14963     }
14964 },
14965 "definitions": {
14966     "AirFlowControl" :
14967     {
14968         "properties": {
14969             "airFlowControl": {
14970                 "items": {
14971                     "properties": {
14972                         "anchor": {
14973                             "description": "This is used to override the context URI e.g. override the URI of
14974 the containing collection",
14975                             "format": "uri",
14976                             "maxLength": 256,
14977                             "type": "string"
14978                         },
14979                         "di": {
14980                             "description": "Unique identifier for device (UUID)",
14981                             "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-
14982 F0-9]{12}$",
14983                             "type": "string"
14984                         },
14985                         "eps": {
14986                             "description": "the Endpoint information of the target Resource",
14987                             "items": {
14988                                 "properties": {
14989                                     "ep": {
14990                                         "description": "URI with Transport Protocol Suites + Endpoint Locator as
14991 specified in 10.2.1",

```

```

14992         "format": "uri",
14993         "type": "string"
14994     },
14995     "pri": {
14996         "description": "The priority among multiple Endpoints as specified in
14997 10.2.3",
14998         "minimum": 1,
14999         "type": "integer"
15000     }
15001 },
15002 "type": "object"
15003 },
15004 "type": "array"
15005 },
15006 "href": {
15007     "description": "This is the target URI, it can be specified as a Relative
15008 Reference or fully-qualified URI. Relative Reference should be used along with the di parameter to
15009 make it unique.",
15010     "format": "uri",
15011     "maxLength": 256,
15012     "type": "string"
15013 },
15014 "if": {
15015     "description": "The interface set supported by this resource",
15016     "items": {
15017         "enum": [
15018             "oic.if.baseline",
15019             "oic.if.ll",
15020             "oic.if.b",
15021             "oic.if.rw",
15022             "oic.if.r",
15023             "oic.if.a",
15024             "oic.if.s"
15025         ],
15026         "type": "string"
15027     },
15028     "minItems": 1,
15029     "type": "array"
15030 },
15031 "ins": {
15032     "description": "The instance identifier for this web link in an array of web
15033 links - used in collections",
15034     "oneOf": [
15035         {
15036             "description": "An ordinal number that is not repeated - must be unique in
15037 the collection context",
15038             "type": "integer"
15039         },
15040         {
15041             "description": "Any unique string including a URI",
15042             "format": "uri",
15043             "maxLength": 256,
15044             "type": "string"
15045         },
15046         {
15047             "description": "Unique identifier (UUID)",
15048             "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-
15049 fA-F0-9]{12}$",
15050             "type": "string"
15051         }
15052     ]
15053 },
15054 "p": {
15055     "description": "Specifies the framework policies on the Resource referenced by
15056 the target URI",
15057     "properties": {
15058         "bm": {
15059             "description": "Specifies the framework policies on the Resource referenced
15060 by the target URI for e.g. observable and discoverable",
15061             "type": "integer"
15062         }
15063     }
15064 }

```

```

15063         },
15064         "required": [
15065             "bm"
15066         ],
15067         "type": "object"
15068     },
15069     "rel": {
15070         "description": "The relation of the target URI referenced by the link to the
15071 context URI",
15072         "oneOf": [
15073             {
15074                 "default": [
15075                     "hosts"
15076                 ],
15077                 "items": {
15078                     "maxLength": 64,
15079                     "type": "string"
15080                 },
15081                 "minItems": 1,
15082                 "type": "array"
15083             },
15084             {
15085                 "default": "hosts",
15086                 "maxLength": 64,
15087                 "type": "string"
15088             }
15089         ]
15090     },
15091     "rt": {
15092         "description": "Resource Type",
15093         "items": {
15094             "maxLength": 64,
15095             "type": "string"
15096         },
15097         "minItems": 1,
15098         "type": "array"
15099     },
15100     "title": {
15101         "description": "A title for the link relation. Can be used by the UI to provide a
15102 context",
15103         "maxLength": 64,
15104         "type": "string"
15105     },
15106     "type": {
15107         "default": "application/cbor",
15108         "description": "A hint at the representation of the resource referenced by the
15109 target URI. This represents the media types that are used for both accepting and emitting",
15110         "items": {
15111             "maxLength": 64,
15112             "type": "string"
15113         },
15114         "minItems": 1,
15115         "type": "array"
15116     }
15117 },
15118 "required": [
15119     "href",
15120     "rt",
15121     "if"
15122 ],
15123 "type": "object"
15124 },
15125 "maxItems": 2,
15126 "minItems": 2,
15127 "type": "array"
15128 },
15129 "id": {
15130     "description": "Instance ID of this specific resource",
15131     "maxLength": 64,
15132     "readOnly": true,
15133     "type": "string"

```

```

15134 },
15135 "if": {
15136   "description": "The interface set supported by this resource",
15137   "items": {
15138     "enum": [
15139       "oic.if.baseline",
15140       "oic.if.ll",
15141       "oic.if.b",
15142       "oic.if.lb",
15143       "oic.if.rw",
15144       "oic.if.r",
15145       "oic.if.a",
15146       "oic.if.s"
15147     ],
15148     "type": "string"
15149   },
15150   "minItems": 1,
15151   "readOnly": true,
15152   "type": "array"
15153 },
15154 "n": {
15155   "description": "Friendly name of the resource",
15156   "maxLength": 64,
15157   "readOnly": true,
15158   "type": "string"
15159 },
15160 "precision": {
15161   "description": "Accuracy granularity of the exposed value",
15162   "readOnly": true,
15163   "type": "number"
15164 },
15165 "range": {
15166   "description": "The valid range for the value Property",
15167   "items": {
15168     "anyOf": [
15169       {
15170         "type": "number"
15171       },
15172       {
15173         "type": "integer"
15174       }
15175     ]
15176   },
15177   "maxItems": 2,
15178   "minItems": 2,
15179   "readOnly": true,
15180   "type": "array"
15181 },
15182 "rt": {
15183   "description": "Resource Type",
15184   "items": {
15185     "maxLength": 64,
15186     "type": "string"
15187   },
15188   "minItems": 1,
15189   "readOnly": true,
15190   "type": "array"
15191 },
15192 "step": {
15193   "anyOf": [
15194     {
15195       "type": "integer"
15196     },
15197     {
15198       "type": "number"
15199     }
15200   ],
15201   "description": "Step value across the defined range",
15202   "readOnly": true
15203 },
15204 "value": {

```

```

15205         "anyOf": [
15206             {
15207                 "type": "array"
15208             },
15209             {
15210                 "type": "string"
15211             },
15212             {
15213                 "type": "boolean"
15214             },
15215             {
15216                 "type": "integer"
15217             },
15218             {
15219                 "type": "number"
15220             },
15221             {
15222                 "type": "object"
15223             }
15224         ],
15225         "description": "The value sensed or actuated by this Resource"
15226     },
15227 },
15228 "type": "object"
15229 }
15230
15231 ,
15232 "AirFlowControlBatch" :
15233 {
15234     "properties": {
15235         "airFlowControl": {
15236             "items": {
15237                 "anyOf": [
15238                     {
15239                         "properties": {
15240                             "value": {
15241                                 "description": "Status of the switch",
15242                                 "type": "boolean"
15243                             }
15244                         },
15245                         "type": "object"
15246                     },
15247                     {
15248                         "properties": {
15249                             "automode": {
15250                                 "description": "Status of the automode feature, if on speed is set by the
15251 device",
15252                                 "enum": [
15253                                     "On",
15254                                     "Off"
15255                                 ]
15256                             },
15257                             "direction": {
15258                                 "description": "Directionality of the air flow",
15259                                 "type": "string"
15260                             },
15261                             "speed": {
15262                                 "description": "Current speed level",
15263                                 "type": "integer"
15264                             },
15265                             "supporteddirections": {
15266                                 "description": "Array of possible direction settings for this instance of the
15267 Resource Type",
15268                                 "items": {
15269                                     "minItems": 1,
15270                                     "type": "string",
15271                                     "uniqueItems": true
15272                                 },
15273                                 "readOnly": true,
15274                                 "type": "array"
15275                             }
15276                         }
15277                     }
15278                 ]
15279             }
15280         }
15281     }
15282 }

```

```

15276         },
15277         "type": "object"
15278     }
15279 ]
15280 },
15281 "type": "array"
15282 },
15283 "id": {
15284     "description": "Instance ID of this specific resource",
15285     "maxLength": 64,
15286     "readOnly": true,
15287     "type": "string"
15288 },
15289 "if": {
15290     "description": "The interface set supported by this resource",
15291     "items": {
15292         "enum": [
15293             "oic.if.baseline",
15294             "oic.if.ll",
15295             "oic.if.b",
15296             "oic.if.lb",
15297             "oic.if.rw",
15298             "oic.if.r",
15299             "oic.if.a",
15300             "oic.if.s"
15301         ],
15302         "type": "string"
15303     },
15304     "minItems": 1,
15305     "readOnly": true,
15306     "type": "array"
15307 },
15308 "n": {
15309     "description": "Friendly name of the resource",
15310     "maxLength": 64,
15311     "readOnly": true,
15312     "type": "string"
15313 },
15314 "precision": {
15315     "description": "Accuracy granularity of the exposed value",
15316     "readOnly": true,
15317     "type": "number"
15318 },
15319 "range": {
15320     "description": "The valid range for the value Property",
15321     "items": {
15322         "anyOf": [
15323             {
15324                 "type": "number"
15325             },
15326             {
15327                 "type": "integer"
15328             }
15329         ]
15330     },
15331     "maxItems": 2,
15332     "minItems": 2,
15333     "readOnly": true,
15334     "type": "array"
15335 },
15336 "rt": {
15337     "description": "Resource Type",
15338     "items": {
15339         "maxLength": 64,
15340         "type": "string"
15341     },
15342     "minItems": 1,
15343     "readOnly": true,
15344     "type": "array"
15345 },
15346 "step": {

```

```

15347         "anyOf": [
15348             {
15349                 "type": "integer"
15350             },
15351             {
15352                 "type": "number"
15353             }
15354         ],
15355         "description": "Step value across the defined range",
15356         "readOnly": true
15357     },
15358     "value": {
15359         "anyOf": [
15360             {
15361                 "type": "array"
15362             },
15363             {
15364                 "type": "string"
15365             },
15366             {
15367                 "type": "boolean"
15368             },
15369             {
15370                 "type": "integer"
15371             },
15372             {
15373                 "type": "number"
15374             },
15375             {
15376                 "type": "object"
15377             }
15378         ],
15379         "description": "The value sensed or actuated by this Resource"
15380     }
15381 },
15382 "required": [
15383     "airFlowControl"
15384 ],
15385 "type": "object"
15386 }
15387 }
15388 }
15389 }
15390

```

B.4.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema		Read Only	The interface set supported by this resource
n	string		Read Only	Friendly name of the resource
id	string		Read Only	Instance ID of this specific resource
precision	number		Read Only	Accuracy granularity of the exposed value
airFlowControl	array: see schema	yes		
rt	array: see schema		Read Only	Resource Type
range	array: see schema		Read Only	The valid range for the value Property

step	multiple types: see schema		Read Only	Step value across the defined range
value	multiple types: see schema			The value sensed or actuated by this Resource
if	array: see schema	yes	Read Only	The interface set supported by this resource
n	string		Read Only	Friendly name of the resource
id	string		Read Only	Instance ID of this specific resource
precision	number		Read Only	Accuracy granularity of the exposed value
airFlowControl	array: see schema			
rt	array: see schema	yes	Read Only	Resource Type
range	array: see schema		Read Only	The valid range for the value Property
step	multiple types: see schema		Read Only	Step value across the defined range
value	multiple types: see schema			The value sensed or actuated by this Resource

15392 B.4.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/AirFlowControlResURI		get	post		

15393 B.5 Air Quality

15394 B.5.1 Introduction

15395 This resource describes a qualitative or measured contaminant that can be used to infer Air Quality.
15396 Measured is the actual sensed value with units per contaminant type as described below.
15397 Qualitative is a representative value within the range provided where the minium value is minimum
15398 contamination and maximum value is maximum contamination for the specific contaminant.
15399 The valueType indicates a qualitative or measured reading within the contaminantvalue Property.
15400 contaminantvalue contains the actual measured or qualitative level.
15401 range contains the allowed range for the value that is being reported (from oic.r.baseresource).
15402 If valueType is 'Measured' then the units for the contaminant types are as follows:
15403 Methanal (also known as Formaldehyde): CH₂O (ug/m³),
15404 Carbon Dioxide: CO₂ (ppm),
15405 Carbon Monoxide: CO (ppm),
15406 Particulate Matter (less than 2.5 microns in diameter): PM_{2.5} (ug/m³),
15407 Particulate Matter (less than 10 microns in diameter): PM₁₀ (ug/m³),
15408 Volatile Organic Compounds: VOC (ug/m³)

15409 Retrieves the current air quality.
15410

15411 B.5.2 Example URI

15412 /AirQualityResURI

15413 B.5.3 Resource Type

15414 The resource type (rt) is defined as: ['oic.r.airquality'].

15415 B.5.4 Swagger2.0 Definition

```
15416 {  
15417   "swagger": "2.0",  
15418   "info": {  
15419     "title": "Air Quality",  
15420     "version": "v1.1.0-20160519",  
15421     "license": {  
15422       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
15423       "x-description": "Redistribution and use in source and binary forms, with or without  
15424 modification, are permitted provided that the following conditions are met:\n      1.  
15425 Redistributions of source code must retain the above copyright notice, this list of conditions and  
15426 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
15427 copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
15428 other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open  
15429 Connectivity Foundation, INC. \n      \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT  
15430 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR  
15431 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity  
15432 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,  
15433 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS  
15434 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND  
15435 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR  
15436 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY  
15437 OF SUCH DAMAGE.\n    \"  
15438   },  
15439 },  
15440   "schemes": ["http"],  
15441   "consumes": ["application/json"],  
15442   "produces": ["application/json"],  
15443   "paths": {  
15444     "/AirQualityResURI" : {  
15445       "get": {  
15446         "description": "This resource describes a qualitative or measured contaminant that can be  
15447 used to infer Air Quality.\nMeasured is the actual sensed value with units per contaminant type as  
15448 described below.\nQualitative is a representative value within the range provided where the minium  
15449 value is minimum contamination and maximum value is maximum contamination for the specific  
15450 contaminant.\nThe valueType indicates a qualitative or measured reading within the contaminantvalue  
15451 Property.\ncontaminantvalue contains the actual measured or qualitative level.\nrange contains the  
15452 allowed range for the value that is being reported (from oic.r.baseresource).\nIf valueType is  
15453 'Measured' then the units for the contaminant types are as follows:\nMethanal (also known as  
15454 Formaldehyde): CH2O (ug/m^3),\nCarbon Dioxide: CO2 (ppm),\nCarbon Monoxide: CO (ppm),\n15455 Particulate Matter (less than 2.5 microns in diameter): PM2.5 (ug/m^3),\nParticulate Matter (less  
15456 than 10 microns in diameter): PM10 (ug/m^3),\nVolatile Organic Compounds: VOC (ug/m^3)\nRetrieves  
15457 the current air quality.\n",  
15458         "parameters": [  
15459           { "$ref": "#/parameters/interface" }  
15460         ],  
15461         "responses": {  
15462           "200": {  
15463             "description": "",  
15464             "x-example":  
15465               {  
15466                 "rt": ["oic.r.airquality"],  
15467                 "id": "unique_example_id",  
15468                 "contaminanttype": "CO",  
15469                 "valuetype": "Measured",  
15470                 "contaminantvalue": 10,  
15471                 "range": [0,500]  
15472               },  
15473             },  
15474           "schema": { "$ref": "#/definitions/AirQuality" }  
15475         }  
15476       }  
15477     }  
15478   }  
15479 }
```

```

15475     }
15476   }
15477 }
15478 }
15479 },
15480 "parameters": {
15481   "interface" : {
15482     "in" : "query",
15483     "name" : "if",
15484     "type" : "string",
15485     "enum" : ["oic.if.s", "oic.if.baseline"]
15486   }
15487 },
15488 "definitions": {
15489   "AirQuality" :
15490     {
15491     "properties": {
15492       "contaminanttype": {
15493         "description": "The contaminant being measured.",
15494         "enum": [
15495           "CH2O",
15496           "CO2",
15497           "CO",
15498           "PM2.5",
15499           "PM10",
15500           "VOC",
15501           "Smoke",
15502           "Odor",
15503           "AirPollution"
15504         ],
15505         "readOnly": true
15506       },
15507       "contaminantvalue": {
15508         "description": "The measured or qualitative value for the contaminant.",
15509         "readOnly": true,
15510         "type": "integer"
15511       },
15512       "id": {
15513         "description": "Instance ID of this specific resource",
15514         "maxLength": 64,
15515         "readOnly": true,
15516         "type": "string"
15517       },
15518       "if": {
15519         "description": "The interface set supported by this resource",
15520         "items": {
15521           "enum": [
15522             "oic.if.baseline",
15523             "oic.if.ll",
15524             "oic.if.b",
15525             "oic.if.lb",
15526             "oic.if.rw",
15527             "oic.if.r",
15528             "oic.if.a",
15529             "oic.if.s"
15530           ],
15531           "type": "string"
15532         },
15533         "minItems": 1,
15534         "readOnly": true,
15535         "type": "array"
15536       },
15537       "n": {
15538         "description": "Friendly name of the resource",
15539         "maxLength": 64,
15540         "readOnly": true,
15541         "type": "string"
15542       },
15543       "precision": {
15544         "description": "Accuracy granularity of the exposed value",
15545         "readOnly": true,

```

```

15546         "type": "number"
15547     },
15548     "range": {
15549         "description": "The valid range for the value Property",
15550         "items": {
15551             "anyOf": [
15552                 {
15553                     "type": "number"
15554                 },
15555                 {
15556                     "type": "integer"
15557                 }
15558             ]
15559         },
15560         "maxItems": 2,
15561         "minItems": 2,
15562         "readOnly": true,
15563         "type": "array"
15564     },
15565     "rt": {
15566         "description": "Resource Type",
15567         "items": {
15568             "maxLength": 64,
15569             "type": "string"
15570         },
15571         "minItems": 1,
15572         "readOnly": true,
15573         "type": "array"
15574     },
15575     "step": {
15576         "anyOf": [
15577             {
15578                 "type": "integer"
15579             },
15580             {
15581                 "type": "number"
15582             }
15583         ],
15584         "description": "Step value across the defined range",
15585         "readOnly": true
15586     },
15587     "value": {
15588         "anyOf": [
15589             {
15590                 "type": "array"
15591             },
15592             {
15593                 "type": "string"
15594             },
15595             {
15596                 "type": "boolean"
15597             },
15598             {
15599                 "type": "integer"
15600             },
15601             {
15602                 "type": "number"
15603             },
15604             {
15605                 "type": "object"
15606             }
15607         ],
15608         "description": "The value sensed or actuated by this Resource"
15609     },
15610     "valuetype": {
15611         "description": "Indicates whether the provided value is qualitative or measured.",
15612         "enum": [
15613             "Qualitative",
15614             "Measured"
15615         ],
15616         "readOnly": true

```

```

15617     }
15618   },
15619   "required": [
15620     "contaminantvalue",
15621     "contaminanttype",
15622     "valuetype",
15623     "range"
15624   ],
15625   "type": "object"
15626 }
15627
15628 }
15629 }
15630

```

B.5.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
value	multiple types: see schema			The value sensed or actuated by this Resource
if	array: see schema		Read Only	The interface set supported by this resource
contaminantvalue	integer	yes	Read Only	The measured or qualitative value for the contaminant.
precision	number		Read Only	Accuracy granularity of the exposed value
n	string		Read Only	Friendly name of the resource
range	array: see schema	yes	Read Only	The valid range for the value Property
valuetype	multiple types: see schema	yes	Read Only	Indicates whether the provided value is qualitative or measured.
contaminanttype	multiple types: see schema	yes	Read Only	The contaminant being measured.
id	string		Read Only	Instance ID of this specific resource
step	multiple types: see schema		Read Only	Step value across the defined range
rt	array: see schema		Read Only	Resource Type

B.5.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/AirQualityResURI		get			

B.6 Air Quality Collection

B.6.1 Introduction

This resource describes a sensor that provides the qualitative or measured Air Quality. The resource is a collection of instances of oic.r.airquality detailing the individual exposed contaminant measures

There is one collection entry per contaminant type supported by the device. A device must expose at least one measured or qualitative value. Retrieves the current air quality.

B.6.2 Example URI

/AirQualityBaselineResURI

B.6.3 Resource Type

The resource type (rt) is defined as: ['oic.r.airqualitycollection', 'oic.wk.col'].

B.6.4 Swagger2.0 Definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Air Quality Collection",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/AirQualityLLResURI" : {
      "get": {
        "description": "This resource describes a sensor that provides the qualitative or measured
Air Quality.\nThe resource is a collection of instances of oic.r.airquality detailing the
individual exposed contaminant measures\nThere is one collection entry per contaminant type
supported by the device. A device must expose at least one measured or qualitative
value.\nRetrieves the current air quality.\n",
        "parameters": [
          {
            "$ref": "#/parameters/interface-11"
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": [
              {
                "href": "/myCOMeasureResURI", "rt": ["oic.r.airquality"], "if":
["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
              {
                "href": "/myCO2ResURI", "rt": ["oic.r.airquality"], "if":
["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
            ]
          }
        }
      }
    }
  }
}
```

```

15695         ,
15696         "schema": { "$ref": "#/definitions/AirQuality-11" }
15697     }
15698 }
15699 },
15700 },
15701 "/AirQualityBaselineResURI" : {
15702     "get": {
15703         "description": "This resource describes a sensor that provides the qualitative or measured
15704 Air Quality.\nThe resource is a collection of instances of oic.r.airquality detailing the
15705 individual exposed contaminant measures\nThere is one collection entry per contaminant type
15706 supported by the device. A device must expose at least one measured or qualitative
15707 value.\nRetrieves the current air quality.\n",
15708         "parameters": [
15709             { "$ref": "#/parameters/interface-baseline" }
15710         ],
15711         "responses": {
15712             "200": {
15713                 "description": "",
15714                 "x-example":
15715                 {
15716                     "rt": [ "oic.r.airqualitycollection", "oic.wk.col" ],
15717                     "if": [ "oic.if.baseline", "oic.if.11" ],
15718                     "id": "unique_example_id",
15719                     "links": [
15720                         { "href": "/myCOMeasureResURI", "rt": [ "oic.r.airquality" ], "if":
15721 [ "oic.if.s", "oic.if.baseline" ], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] },
15722                         { "href": "/myCO2ResURI", "rt": [ "oic.r.airquality" ], "if":
15723 [ "oic.if.s", "oic.if.baseline" ], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] }
15724                     ]
15725                 }
15726             },
15727             "schema": { "$ref": "#/definitions/AirQuality" }
15728         }
15729     }
15730 }
15731 },
15732 },
15733 "parameters": {
15734     "interface-11" : {
15735         "in" : "query",
15736         "name" : "if",
15737         "type" : "string",
15738         "enum" : [ "oic.if.11" ]
15739     },
15740     "interface-baseline" : {
15741         "in" : "query",
15742         "name" : "if",
15743         "type" : "string",
15744         "enum" : [ "oic.if.baseline" ]
15745     },
15746     "interface-all" : {
15747         "in" : "query",
15748         "name" : "if",
15749         "type" : "string",
15750         "enum" : [ "oic.if.11", "oic.if.baseline" ]
15751     }
15752 },
15753 "definitions": {
15754     "AirQuality-11" :
15755     {
15756         "description": "All forms of links in a collection",
15757         "oneOf": [
15758             {
15759                 "description": "A set (array) of simple or individual OIC Links. In addition to
15760 properties required for an OIC Link, the identifier for that link in this set is also required",
15761                 "items": {
15762                     "properties": {
15763                         "anchor": {
15764                             "description": "This is used to override the context URI e.g. override the URI of
15765 the containing collection",

```

```

15766         "format": "uri",
15767         "maxLength": 256,
15768         "type": "string"
15769     },
15770     "di": {
15771         "description": "Unique identifier for device (UUID)",
15772         "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-
15773 F0-9]{12}$",
15774         "type": "string"
15775     },
15776     "eps": {
15777         "description": "the Endpoint information of the target Resource",
15778         "items": {
15779             "properties": {
15780                 "ep": {
15781                     "description": "URI with Transport Protocol Suites + Endpoint Locator as
15782 specified in 10.2.1",
15783                     "format": "uri",
15784                     "type": "string"
15785                 },
15786                 "pri": {
15787                     "description": "The priority among multiple Endpoints as specified in
15788 10.2.3",
15789                     "minimum": 1,
15790                     "type": "integer"
15791                 }
15792             },
15793             "type": "object"
15794         },
15795         "type": "array"
15796     },
15797     "href": {
15798         "description": "This is the target URI, it can be specified as a Relative
15799 Reference or fully-qualified URI. Relative Reference should be used along with the di parameter to
15800 make it unique.",
15801         "format": "uri",
15802         "maxLength": 256,
15803         "type": "string"
15804     },
15805     "if": {
15806         "description": "The interface set supported by this resource",
15807         "items": {
15808             "enum": [
15809                 "oic.if.baseline",
15810                 "oic.if.ll",
15811                 "oic.if.b",
15812                 "oic.if.rw",
15813                 "oic.if.r",
15814                 "oic.if.a",
15815                 "oic.if.s"
15816             ],
15817             "type": "string"
15818         },
15819         "minItems": 1,
15820         "type": "array"
15821     },
15822     "ins": {
15823         "description": "The instance identifier for this web link in an array of web
15824 links - used in collections",
15825         "oneOf": [
15826             {
15827                 "description": "An ordinal number that is not repeated - must be unique in
15828 the collection context",
15829                 "type": "integer"
15830             },
15831             {
15832                 "description": "Any unique string including a URI",
15833                 "format": "uri",
15834                 "maxLength": 256,
15835                 "type": "string"
15836             }
15837         ]
15838     }
15839 }

```

```

15837         {
15838             "description": "Unique identifier (UUID)",
15839             "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-
15840 fA-F0-9]{12}$",
15841             "type": "string"
15842         }
15843     ],
15844 },
15845 "p": {
15846     "description": "Specifies the framework policies on the Resource referenced by
15847 the target URI",
15848     "properties": {
15849         "bm": {
15850             "description": "Specifies the framework policies on the Resource referenced
15851 by the target URI for e.g. observable and discoverable",
15852             "type": "integer"
15853         }
15854     },
15855     "required": [
15856         "bm"
15857     ],
15858     "type": "object"
15859 },
15860 "rel": {
15861     "description": "The relation of the target URI referenced by the link to the
15862 context URI",
15863     "oneOf": [
15864         {
15865             "default": [
15866                 "hosts"
15867             ],
15868             "items": {
15869                 "maxLength": 64,
15870                 "type": "string"
15871             },
15872             "minItems": 1,
15873             "type": "array"
15874         },
15875         {
15876             "default": "hosts",
15877             "maxLength": 64,
15878             "type": "string"
15879         }
15880     ]
15881 },
15882 "rt": {
15883     "description": "Resource Type",
15884     "items": {
15885         "maxLength": 64,
15886         "type": "string"
15887     },
15888     "minItems": 1,
15889     "type": "array"
15890 },
15891 "title": {
15892     "description": "A title for the link relation. Can be used by the UI to provide a
15893 context",
15894     "maxLength": 64,
15895     "type": "string"
15896 },
15897 "type": {
15898     "default": "application/cbor",
15899     "description": "A hint at the representation of the resource referenced by the
15900 target URI. This represents the media types that are used for both accepting and emitting",
15901     "items": {
15902         "maxLength": 64,
15903         "type": "string"
15904     },
15905     "minItems": 1,
15906     "type": "array"
15907 }

```



```

15908         },
15909         "required": [
15910             "href",
15911             "rt",
15912             "if"
15913         ],
15914         "type": "object"
15915     },
15916     "type": "array"
15917 }
15918 ]
15919 }
15920
15921 ,
15922 "AirQuality" :
15923 {
15924     "description": "A collection is a set (array) of tagged-link or set (array) of simple links
15925 along with additional properties to describe the collection itself",
15926     "properties": {
15927         "di": {
15928             "description": "The device ID which is an UUIDv4 string; used for backward
15929 compatibility with Spec A definition of /oic/res",
15930             "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
15931 9]{12}$",
15932             "type": "string"
15933         },
15934         "drel": {
15935             "description": "When specified this is the default relationship to use when an OIC Link
15936 does not specify an explicit relationship with *rel* parameter",
15937             "type": "string"
15938         },
15939         "id": {
15940             "anyOf": [
15941                 {
15942                     "description": "A number that is unique to that collection; like an ordinal number
15943 that is not repeated",
15944                     "type": "integer"
15945                 },
15946                 {
15947                     "description": "A unique string that could be a hash or similarly unique",
15948                     "type": "string"
15949                 },
15950                 {
15951                     "description": "A unique string that could be a UUIDv4",
15952                     "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
15953 9]{12}$",
15954                     "type": "string"
15955                 }
15956             ],
15957             "description": "ID for the collection. Can be an value that is unique to the use
15958 context or a UUIDv4"
15959         },
15960         "links": {
15961             "description": "All forms of links in a collection",
15962             "oneOf": [
15963                 {
15964                     "description": "A set (array) of simple or individual OIC Links. In addition to
15965 properties required for an OIC Link, the identifier for that link in this set is also required",
15966                     "items": {
15967                         "properties": {
15968                             "anchor": {
15969                                 "description": "This is used to override the context URI e.g. override the
15970 URI of the containing collection",
15971                                 "format": "uri",
15972                                 "maxLength": 256,
15973                                 "type": "string"
15974                             },
15975                             "di": {
15976                                 "description": "Unique identifier for device (UUID)",
15977                                 "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-
15978 fA-F0-9]{12}$",

```

```

15979         "type": "string"
15980     },
15981     "eps": {
15982         "description": "the Endpoint information of the target Resource",
15983         "items": {
15984             "properties": {
15985                 "ep": {
15986                     "description": "URI with Transport Protocol Suites + Endpoint Locator
15987 as specified in 10.2.1",
15988                     "format": "uri",
15989                     "type": "string"
15990                 },
15991                 "pri": {
15992                     "description": "The priority among multiple Endpoints as specified in
15993 10.2.3",
15994                     "minimum": 1,
15995                     "type": "integer"
15996                 }
15997             },
15998             "type": "object"
15999         },
16000         "type": "array"
16001     },
16002     "href": {
16003         "description": "This is the target URI, it can be specified as a Relative
16004 Reference or fully-qualified URI. Relative Reference should be used along with the di parameter to
16005 make it unique.",
16006         "format": "uri",
16007         "maxLength": 256,
16008         "type": "string"
16009     },
16010     "if": {
16011         "description": "The interface set supported by this resource",
16012         "items": {
16013             "enum": [
16014                 "oic.if.baseline",
16015                 "oic.if.ll",
16016                 "oic.if.b",
16017                 "oic.if.rw",
16018                 "oic.if.r",
16019                 "oic.if.a",
16020                 "oic.if.s"
16021             ],
16022             "type": "string"
16023         },
16024         "minItems": 1,
16025         "type": "array"
16026     },
16027     "ins": {
16028         "description": "The instance identifier for this web link in an array of web
16029 links - used in collections",
16030         "oneOf": [
16031             {
16032                 "description": "An ordinal number that is not repeated - must be unique
16033 in the collection context",
16034                 "type": "integer"
16035             },
16036             {
16037                 "description": "Any unique string including a URI",
16038                 "format": "uri",
16039                 "maxLength": 256,
16040                 "type": "string"
16041             },
16042             {
16043                 "description": "Unique identifier (UUID)",
16044                 "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-
16045 [a-fA-F0-9]{12}$",
16046                 "type": "string"
16047             }
16048         ]
16049     },

```

```

16050         "p": {
16051             "description": "Specifies the framework policies on the Resource referenced
16052 by the target URI",
16053             "properties": {
16054                 "bm": {
16055                     "description": "Specifies the framework policies on the Resource
16056 referenced by the target URI for e.g. observable and discoverable",
16057                     "type": "integer"
16058                 }
16059             },
16060             "required": [
16061                 "bm"
16062             ],
16063             "type": "object"
16064         },
16065         "rel": {
16066             "description": "The relation of the target URI referenced by the link to the
16067 context URI",
16068             "oneOf": [
16069                 {
16070                     "default": [
16071                         "hosts"
16072                     ],
16073                     "items": {
16074                         "maxLength": 64,
16075                         "type": "string"
16076                     },
16077                     "minItems": 1,
16078                     "type": "array"
16079                 },
16080                 {
16081                     "default": "hosts",
16082                     "maxLength": 64,
16083                     "type": "string"
16084                 }
16085             ]
16086         },
16087         "rt": {
16088             "description": "Resource Type",
16089             "items": {
16090                 "maxLength": 64,
16091                 "type": "string"
16092             },
16093             "minItems": 1,
16094             "type": "array"
16095         },
16096         "title": {
16097             "description": "A title for the link relation. Can be used by the UI to
16098 provide a context",
16099             "maxLength": 64,
16100             "type": "string"
16101         },
16102         "type": {
16103             "default": "application/cbor",
16104             "description": "A hint at the representation of the resource referenced by
16105 the target URI. This represents the media types that are used for both accepting and emitting",
16106             "items": {
16107                 "maxLength": 64,
16108                 "type": "string"
16109             },
16110             "minItems": 1,
16111             "type": "array"
16112         }
16113     },
16114     "required": [
16115         "href",
16116         "rt",
16117         "if"
16118     ],
16119     "type": "object"
16120 },

```

```

16121         "type": "array"
16122     }
16123 ]
16124 },
16125 "rt": {
16126     "items": {
16127         "enum": [
16128             "oic.r.airqualitycollection",
16129             "oic.wk.col"
16130         ]
16131     },
16132     "maxItems": 2,
16133     "minItems": 2,
16134     "type": "array",
16135     "uniqueItems": true
16136 },
16137 "rts": {
16138     "description": "Defines the list of allowable resource types (for Target and anchors)
in links included in the collection; new links being created can only be from this list",
16139     "items": {
16140         "anyOf": [
16141             {
16142                 "enum": [
16143                     "oic.r.airquality",
16144                     "oic.r.value.conditional"
16145                 ]
16146             },
16147             {
16148                 "enum": [
16149                     "oic.r.airquality"
16150                 ]
16151             }
16152         ]
16153     },
16154     "maxLength": 64,
16155     "type": "string"
16156 },
16157     "maxItems": 2,
16158     "minItems": 1,
16159     "readOnly": true,
16160     "type": "array",
16161     "uniqueItems": true
16162 },
16163 },
16164 "type": "object"
16165 }
16166 }
16167 }
16168 }
16169

```

B.6.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
rts	array: see schema		Read Only	Defines the list of allowable resource types (for Target and anchors) in links included in the collection; new links being created can only be from this list
rt	array: see schema	yes		
links	multiple types: see schema			All forms of links in a collection

drel	string			When specified this is the default relationship to use when an OIC Link does not specify an explicit relationship with *rel* parameter
di	string			The device ID which is an UUIDv4 string; used for backward compatibility with Spec A definition of /oic/res
id	multiple types: see schema			ID for the collection. Can be an value that is unique to the use context or a UUIDv4
rt	array: see schema	yes		Resource Type
eps	array: see schema			the Endpoint information of the target Resource
anchor	string			This is used to override the context URI e.g. override the URI of the containing collection
rel	multiple types: see schema			The relation of the target URI referenced by the link to the context URI
title	string			A title for the link relation. Can be used by the UI to provide a context
type	array: see schema			A hint at the representation of the resource referenced by the target URI. This represents the media types that are used for both accepting and emitting

href	string	yes		This is the target URI, it can be specified as a Relative Reference or fully-qualified URI. Relative Reference should be used along with the di parameter to make it unique.
p	object: see schema			Specifies the framework policies on the Resource referenced by the target URI
di	string			Unique identifier for device (UUID)
ins	multiple types: see schema			The instance identifier for this web link in an array of web links - used in collections
if	array: see schema	yes		The interface set supported by this resource

16171 B.6.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/AirQualityBaselineResURI		get			

16172 B.7 Altimeter

16173 B.7.1 Introduction

16174 This resource describes the properties associated with altimeter.
16175 Altimeter is a height of the position (metres).
16176 Retrieves the current the height of the position (metres).
16177

16178 B.7.2 Example URI

16179 /AltimeterResURI

16180 B.7.3 Resource Type

16181 The resource type (rt) is defined as: ['oic.r.altimeter'].

16182 B.7.4 Swagger2.0 Definition

```

16183 {
16184   "swagger": "2.0",
16185   "info": {
16186     "title": "Altimeter",
16187     "version": "v1.1.0-20160519",
16188     "license": {
16189       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
16190       "x-description": "Redistribution and use in source and binary forms, with or without
16191 modification, are permitted provided that the following conditions are met:\n      1.
```

```

16192 Redistributions of source code must retain the above copyright notice, this list of conditions and
16193 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
16194 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
16195 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
16196 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
16197 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
16198 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
16199 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
16200 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
16201 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
16202 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
16203 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
16204 OF SUCH DAMAGE.\n"
16205 }
16206 },
16207 "schemes": ["http"],
16208 "consumes": ["application/json"],
16209 "produces": ["application/json"],
16210 "paths": {
16211     "/AltimeterResURI" : {
16212         "get": {
16213             "description": "This resource describes the properties associated with
16214 altimeter.\nAltimeter is a height of the position (metres).\nRetrieves the current the height of
16215 the position (metres).\n",
16216             "parameters": [
16217                 {"$ref": "#/parameters/interface"}
16218             ],
16219             "responses": {
16220                 "200": {
16221                     "description": "",
16222                     "x-example":
16223                         {
16224                             "rt": ["oic.r.altimeter"],
16225                             "id": "unique_example_id",
16226                             "alt": 1500.0
16227                         }
16228                     ,
16229                     "schema": { "$ref": "#/definitions/Altimeter" }
16230                 }
16231             }
16232         }
16233     }
16234 },
16235 "parameters": {
16236     "interface" : {
16237         "in" : "query",
16238         "name" : "if",
16239         "type" : "string",
16240         "enum" : ["oic.if.s", "oic.if.baseline"]
16241     }
16242 },
16243 "definitions": {
16244     "Altimeter" :
16245     {
16246         "properties": {
16247             "alt": {
16248                 "description": "The current height of the position (metres)",
16249                 "minimum": 0,
16250                 "readOnly": true,
16251                 "type": "number"
16252             },
16253             "id": {
16254                 "description": "Instance ID of this specific resource",
16255                 "maxLength": 64,
16256                 "readOnly": true,
16257                 "type": "string"
16258             },
16259             "if": {
16260                 "description": "The interface set supported by this resource",
16261                 "items": {
16262                     "enum": [

```

```

16263         "oic.if.baseline",
16264         "oic.if.ll",
16265         "oic.if.b",
16266         "oic.if.lb",
16267         "oic.if.rw",
16268         "oic.if.r",
16269         "oic.if.a",
16270         "oic.if.s"
16271     ],
16272     "type": "string"
16273 },
16274 "minItems": 1,
16275 "readOnly": true,
16276 "type": "array"
16277 },
16278 "n": {
16279     "description": "Friendly name of the resource",
16280     "maxLength": 64,
16281     "readOnly": true,
16282     "type": "string"
16283 },
16284 "precision": {
16285     "description": "Accuracy granularity of the exposed value",
16286     "readOnly": true,
16287     "type": "number"
16288 },
16289 "range": {
16290     "description": "The valid range for the value Property",
16291     "items": {
16292         "anyOf": [
16293             {
16294                 "type": "number"
16295             },
16296             {
16297                 "type": "integer"
16298             }
16299         ]
16300     },
16301     "maxItems": 2,
16302     "minItems": 2,
16303     "readOnly": true,
16304     "type": "array"
16305 },
16306 "rt": {
16307     "description": "Resource Type",
16308     "items": {
16309         "maxLength": 64,
16310         "type": "string"
16311     },
16312     "minItems": 1,
16313     "readOnly": true,
16314     "type": "array"
16315 },
16316 "step": {
16317     "anyOf": [
16318         {
16319             "type": "integer"
16320         },
16321         {
16322             "type": "number"
16323         }
16324     ],
16325     "description": "Step value across the defined range",
16326     "readOnly": true
16327 },
16328 "value": {
16329     "anyOf": [
16330         {
16331             "type": "array"
16332         },
16333         {

```



```

16334         "type": "string"
16335     },
16336     {
16337         "type": "boolean"
16338     },
16339     {
16340         "type": "integer"
16341     },
16342     {
16343         "type": "number"
16344     },
16345     {
16346         "type": "object"
16347     }
16348 ],
16349 "description": "The value sensed or actuated by this Resource"
16350 },
16351 },
16352 "required": [
16353     "alt"
16354 ],
16355 "type": "object"
16356 }
16357 }
16358 }
16359 }
16360

```

B.7.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema		Read Only	Step value across the defined range
n	string		Read Only	Friendly name of the resource
precision	number		Read Only	Accuracy granularity of the exposed value
alt	number	yes	Read Only	The current height of the position (metres)
if	array: see schema		Read Only	The interface set supported by this resource
value	multiple types: see schema			The value sensed or actuated by this Resource
range	array: see schema		Read Only	The valid range for the value Property
rt	array: see schema		Read Only	Resource Type
id	string		Read Only	Instance ID of this specific resource

B.7.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/AltimeterResURI		get			

B.8 Atmospheric Pressure Sensor

B.8.1 Introduction

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

B.8.2 Example URI

/AtmosphericPressureResURI

B.8.3 Resource Type

The resource type (rt) is defined as: ['oic.r.sensor.atmosphericpressure'].

B.8.4 Swagger2.0 Definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Atmospheric Pressure Sensor",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
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WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/AtmosphericPressureResURI" : {
      "get": {
        "description": "This resource provides a measurement of Mean Sea Level Pressure experienced
at the measuring point expressed in millibars.\nThe value is float which describes the atmospheric
pressure in hPa (hectoPascals).\nNote that hPa and the also commonly used unit of millibars (mbar)
are numerically equivalent.\n",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.sensor.atmosphericpressure"],
              "id": "unique_example_id",
              "atmosphericPressure": 1000.4
            }
          },
          "schema": { "$ref": "#/definitions/atmosphericPressure" }
        }
      }
    }
  }
}
```

```

16426     }
16427 },
16428 "parameters": {
16429     "interface" : {
16430         "in" : "query",
16431         "name" : "if",
16432         "type" : "string",
16433         "enum" : ["oic.if.s", "oic.if.baseline"]
16434     }
16435 },
16436 "definitions": {
16437     "atmosphericPressure" :
16438     {
16439         "properties": {
16440             "atmosphericPressure": {
16441                 "description": "Current atmospheric pressure in hPa.",
16442                 "readOnly": true,
16443                 "type": "number"
16444             },
16445             "id": {
16446                 "description": "Instance ID of this specific resource",
16447                 "maxLength": 64,
16448                 "readOnly": true,
16449                 "type": "string"
16450             },
16451             "if": {
16452                 "description": "The interface set supported by this resource",
16453                 "items": {
16454                     "enum": [
16455                         "oic.if.baseline",
16456                         "oic.if.ll",
16457                         "oic.if.b",
16458                         "oic.if.lb",
16459                         "oic.if.rw",
16460                         "oic.if.r",
16461                         "oic.if.a",
16462                         "oic.if.s"
16463                     ],
16464                     "type": "string"
16465                 },
16466                 "minItems": 1,
16467                 "readOnly": true,
16468                 "type": "array"
16469             },
16470             "n": {
16471                 "description": "Friendly name of the resource",
16472                 "maxLength": 64,
16473                 "readOnly": true,
16474                 "type": "string"
16475             },
16476             "precision": {
16477                 "description": "Accuracy granularity of the exposed value",
16478                 "readOnly": true,
16479                 "type": "number"
16480             },
16481             "range": {
16482                 "description": "The valid range for the value Property",
16483                 "items": {
16484                     "anyOf": [
16485                         {
16486                             "type": "number"
16487                         },
16488                         {
16489                             "type": "integer"
16490                         }
16491                     ]
16492                 },
16493                 "maxItems": 2,
16494                 "minItems": 2,
16495                 "readOnly": true,
16496                 "type": "array"

```

```

16497     },
16498     "rt": {
16499         "description": "Resource Type",
16500         "items": {
16501             "maxLength": 64,
16502             "type": "string"
16503         },
16504         "minItems": 1,
16505         "readOnly": true,
16506         "type": "array"
16507     },
16508     "step": {
16509         "anyOf": [
16510             {
16511                 "type": "integer"
16512             },
16513             {
16514                 "type": "number"
16515             }
16516         ],
16517         "description": "Step value across the defined range",
16518         "readOnly": true
16519     },
16520     "value": {
16521         "anyOf": [
16522             {
16523                 "type": "array"
16524             },
16525             {
16526                 "type": "string"
16527             },
16528             {
16529                 "type": "boolean"
16530             },
16531             {
16532                 "type": "integer"
16533             },
16534             {
16535                 "type": "number"
16536             },
16537             {
16538                 "type": "object"
16539             }
16540         ],
16541         "description": "The value sensed or actuated by this Resource"
16542     }
16543 },
16544 "required": [
16545     "atmosphericPressure"
16546 ]
16547 }
16548
16549 }
16550 }
16551

```

B.8.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
value	multiple types: see schema			The value sensed or actuated by this Resource
if	array: see schema		Read Only	The interface set supported by this resource
rt	array: see schema		Read Only	Resource Type

step	multiple types: see schema		Read Only	Step value across the defined range
n	string		Read Only	Friendly name of the resource
id	string		Read Only	Instance ID of this specific resource
range	array: see schema		Read Only	The valid range for the value Property
precision	number		Read Only	Accuracy granularity of the exposed value
atmosphericPressure	number	yes	Read Only	Current atmospheric pressure in hPa.

16553 B.8.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/AtmosphericPressureResURI		get			

16554 B.9 Audio Controls

16555 B.9.1 Introduction

16556 This resource defines basic audio control functions.
 16557 The volume is an integer containing a percentage [0,100].
 16558 A volume of 0 (zero) means no sound produced.
 16559 A volume of 100 means maximum sound production.
 16560 The mute control is implemented as a boolean.
 16561 A mute value of true means that the device is muted (no audio).
 16562 A mute value of false means that the device is not muted (audio).
 16563

16564 B.9.2 Example URI

16565 /AudioResURI

16566 B.9.3 Resource Type

16567 The resource type (rt) is defined as: ['oic.r.audio'].

16568 B.9.4 Swagger2.0 Definition

```
16569 {
16570   "swagger": "2.0",
16571   "info": {
16572     "title": "Audio Controls",
16573     "version": "v1.1.0-20160519",
16574     "license": {
16575       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
16576       "x-description": "Redistribution and use in source and binary forms, with or without
16577 modification, are permitted provided that the following conditions are met:\n      1.
16578 Redistributions of source code must retain the above copyright notice, this list of conditions and
16579 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
16580 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
16581 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
16582 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
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```

```

16586 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
16587 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n          HOWEVER CAUSED AND
16588 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
16589 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
16590 OF SUCH DAMAGE.\n"
16591     }
16592   },
16593   "schemes": ["http"],
16594   "consumes": ["application/json"],
16595   "produces": ["application/json"],
16596   "paths": {
16597     "/AudioResURI" : {
16598       "get": {
16599         "description": "This resource defines basic audio control functions.\nThe volume is an
16600 integer containing a percentage [0,100].\nA volume of 0 (zero) means no sound produced.\nA volume
16601 of 100 means maximum sound production.\nThe mute control is implemented as a boolean.\nA mute value
16602 of true means that the device is muted (no audio).\nA mute value of false means that the device is
16603 not muted (audio).\n",
16604         "parameters": [
16605           { "$ref": "#/parameters/interface" }
16606         ],
16607         "responses": {
16608           "200": {
16609             "description": "",
16610             "x-example": {
16611               "rt": ["oic.r.audio"],
16612               "id": "unique_example_id",
16613               "volume": 50,
16614               "mute": false
16615             }
16616           },
16617           "schema": { "$ref": "#/definitions/Audio" }
16618         }
16619       }
16620     },
16621     "post": {
16622       "description": "",
16623       "parameters": [
16624         { "$ref": "#/parameters/interface" },
16625         {
16626           "name": "body",
16627           "in": "body",
16628           "required": true,
16629           "schema": { "$ref": "#/definitions/Audio" },
16630           "x-example": {
16631             "id": "unique_example_id",
16632             "volume": 75,
16633             "mute": false
16634           }
16635         }
16636       ],
16637       "responses": {
16638         "200": {
16639           "description": "",
16640           "x-example": {
16641             "id": "unique_example_id",
16642             "volume": 75,
16643             "mute": false
16644           },
16645           "schema": { "$ref": "#/definitions/Audio" }
16646         }
16647       }
16648     }
16649   },
16650   "parameters": {
16651     "interface" : {

```

```

16657     "in" : "query",
16658     "name" : "if",
16659     "type" : "string",
16660     "enum" : ["oic.if.a", "oic.if.baseline"]
16661   }
16662 },
16663 "definitions": {
16664   "Audio" :
16665     {
16666       "properties": {
16667         "id": {
16668           "description": "Instance ID of this specific resource",
16669           "maxLength": 64,
16670           "readOnly": true,
16671           "type": "string"
16672         },
16673         "if": {
16674           "description": "The interface set supported by this resource",
16675           "items": {
16676             "enum": [
16677               "oic.if.baseline",
16678               "oic.if.ll",
16679               "oic.if.b",
16680               "oic.if.lb",
16681               "oic.if.rw",
16682               "oic.if.x",
16683               "oic.if.a",
16684               "oic.if.s"
16685             ],
16686             "type": "string"
16687           },
16688           "minItems": 1,
16689           "readOnly": true,
16690           "type": "array"
16691         },
16692         "mute": {
16693           "description": "Mute setting of an audio rendering device",
16694           "type": "boolean"
16695         },
16696         "n": {
16697           "description": "Friendly name of the resource",
16698           "maxLength": 64,
16699           "readOnly": true,
16700           "type": "string"
16701         },
16702         "precision": {
16703           "description": "Accuracy granularity of the exposed value",
16704           "readOnly": true,
16705           "type": "number"
16706         },
16707         "range": {
16708           "description": "The valid range for the value Property",
16709           "items": {
16710             "anyOf": [
16711               {
16712                 "type": "number"
16713               },
16714               {
16715                 "type": "integer"
16716               }
16717             ]
16718           },
16719           "maxItems": 2,
16720           "minItems": 2,
16721           "readOnly": true,
16722           "type": "array"
16723         },
16724         "rt": {
16725           "description": "Resource Type",
16726           "items": {
16727             "maxLength": 64,

```

```

16728         "type": "string"
16729     },
16730     "minItems": 1,
16731     "readOnly": true,
16732     "type": "array"
16733 },
16734 "step": {
16735     "anyOf": [
16736         {
16737             "type": "integer"
16738         },
16739         {
16740             "type": "number"
16741         }
16742     ],
16743     "description": "Step value across the defined range",
16744     "readOnly": true
16745 },
16746 "value": {
16747     "anyOf": [
16748         {
16749             "type": "array"
16750         },
16751         {
16752             "type": "string"
16753         },
16754         {
16755             "type": "boolean"
16756         },
16757         {
16758             "type": "integer"
16759         },
16760         {
16761             "type": "number"
16762         },
16763         {
16764             "type": "object"
16765         }
16766     ],
16767     "description": "The value sensed or actuated by this Resource"
16768 },
16769 "volume": {
16770     "description": "Volume setting of an audio rendering device.",
16771     "maximum": 100,
16772     "minimum": 0,
16773     "type": "integer"
16774 },
16775 },
16776 "required": [
16777     "volume",
16778     "mute"
16779 ],
16780 "type": "object"
16781 }
16782 }
16783 }
16784 }
16785

```

B.9.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
value	multiple types: see schema			The value sensed or actuated by this Resource
range	array: see schema		Read Only	The valid range for the value Property

precision	number		Read Only	Accuracy granularity of the exposed value
rt	array: see schema		Read Only	Resource Type
step	multiple types: see schema		Read Only	Step value across the defined range
if	array: see schema		Read Only	The interface set supported by this resource
n	string		Read Only	Friendly name of the resource
volume	integer	yes		Volume setting of an audio rendering device.
mute	boolean	yes		Mute setting of an audio rendering device
id	string		Read Only	Instance ID of this specific resource

16787 B.9.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/AudioResURI		get	post		

16788 B.10 Auto Focus

16789 B.10.1 Introduction

16790 This resource describes an auto focus on/off feature.
16791 The value is a boolean.
16792 An AutoFocus value of 'true' means that the switch is on.
16793 An AutoFocus value of 'false' means that the switch is off.
16794 Note that when Pan Tilt Zoom (see 'Pan Tilt Zoom' Resource definition) is used the autofocus
16795 works only in the selected area.
16796

16797 B.10.2 Example URI

16798 /AutoFocusResURI

16799 B.10.3 Resource Type

16800 The resource type (rt) is defined as: ['oic.r.autofocus'].

16801 B.10.4 Swagger2.0 Definition

```

16802 {
16803   "swagger": "2.0",
16804   "info": {
16805     "title": "Auto Focus",
16806     "version": "v1.1.0-20160519",
16807     "license": {
16808       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
16809       "x-description": "Redistribution and use in source and binary forms, with or without
16810 modification, are permitted provided that the following conditions are met:\n      1.
16811 Redistributions of source code must retain the above copyright notice, this list of conditions and
16812 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
16813 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
16814 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
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```

```

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16818 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
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16821 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
16822 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
16823 OF SUCH DAMAGE.\n"
16824 }
16825 },
16826 "schemes": ["http"],
16827 "consumes": ["application/json"],
16828 "produces": ["application/json"],
16829 "paths": {
16830     "/AutoFocusResURI" : {
16831         "get": {
16832             "description": "This resource describes an auto focus on/off feature.\nThe value is a
16833 boolean.\nAn AutoFocus value of 'true' means that the switch is on.\nAn AutoFocus value of 'false'
16834 means that the switch is off.\nNote that when Pan Tilt Zoom (see 'Pan Tilt Zoom' Resource
16835 definition) is used the autofocus works only in the selected area.\n",
16836             "parameters": [
16837                 { "$ref": "#/parameters/interface" }
16838             ],
16839             "responses": {
16840                 "200": {
16841                     "description": "",
16842                     "x-example":
16843                     {
16844                         "rt": ["oic.r.autofocus"],
16845                         "id": "unique_example_id",
16846                         "autoFocus": false
16847                     },
16848                     "schema": { "$ref": "#/definitions/AutoFocus" }
16849                 }
16850             }
16851         },
16852         "post": {
16853             "description": "",
16854             "parameters": [
16855                 { "$ref": "#/parameters/interface" },
16856                 {
16857                     "name": "body",
16858                     "in": "body",
16859                     "required": true,
16860                     "schema": { "$ref": "#/definitions/AutoFocus" },
16861                     "x-example":
16862                     {
16863                         "id": "unique_example_id",
16864                         "autoFocus": true
16865                     }
16866                 }
16867             ],
16868             "responses": {
16869                 "200": {
16870                     "description": "",
16871                     "x-example":
16872                     {
16873                         "id": "unique_example_id",
16874                         "autoFocus": true
16875                     },
16876                     "schema": { "$ref": "#/definitions/AutoFocus" }
16877                 }
16878             }
16879         }
16880     }
16881 },
16882 },
16883 },
16884 "parameters": {
16885     "interface" : {
16886         "in" : "query",

```

```

16887     "name" : "if",
16888     "type" : "string",
16889     "enum" : ["oic.if.a", "oic.if.baseline"]
16890 }
16891 },
16892 "definitions": {
16893     "AutoFocus" :
16894     {
16895         "properties": {
16896             "autoFocus": {
16897                 "description": "Status of the Auto Focus",
16898                 "type": "boolean"
16899             },
16900             "id": {
16901                 "description": "Instance ID of this specific resource",
16902                 "maxLength": 64,
16903                 "readOnly": true,
16904                 "type": "string"
16905             },
16906             "if": {
16907                 "description": "The interface set supported by this resource",
16908                 "items": {
16909                     "enum": [
16910                         "oic.if.baseline",
16911                         "oic.if.ll",
16912                         "oic.if.b",
16913                         "oic.if.lb",
16914                         "oic.if.rw",
16915                         "oic.if.r",
16916                         "oic.if.a",
16917                         "oic.if.s"
16918                     ],
16919                     "type": "string"
16920                 },
16921                 "minItems": 1,
16922                 "readOnly": true,
16923                 "type": "array"
16924             },
16925             "n": {
16926                 "description": "Friendly name of the resource",
16927                 "maxLength": 64,
16928                 "readOnly": true,
16929                 "type": "string"
16930             },
16931             "precision": {
16932                 "description": "Accuracy granularity of the exposed value",
16933                 "readOnly": true,
16934                 "type": "number"
16935             },
16936             "range": {
16937                 "description": "The valid range for the value Property",
16938                 "items": {
16939                     "anyOf": [
16940                         {
16941                             "type": "number"
16942                         },
16943                         {
16944                             "type": "integer"
16945                         }
16946                     ]
16947                 },
16948                 "maxItems": 2,
16949                 "minItems": 2,
16950                 "readOnly": true,
16951                 "type": "array"
16952             },
16953             "rt": {
16954                 "description": "Resource Type",
16955                 "items": {
16956                     "maxLength": 64,
16957                     "type": "string"

```

```

16958         },
16959         "minItems": 1,
16960         "readOnly": true,
16961         "type": "array"
16962     },
16963     "step": {
16964         "anyOf": [
16965             {
16966                 "type": "integer"
16967             },
16968             {
16969                 "type": "number"
16970             }
16971         ],
16972         "description": "Step value across the defined range",
16973         "readOnly": true
16974     },
16975     "value": {
16976         "anyOf": [
16977             {
16978                 "type": "array"
16979             },
16980             {
16981                 "type": "string"
16982             },
16983             {
16984                 "type": "boolean"
16985             },
16986             {
16987                 "type": "integer"
16988             },
16989             {
16990                 "type": "number"
16991             },
16992             {
16993                 "type": "object"
16994             }
16995         ],
16996         "description": "The value sensed or actuated by this Resource"
16997     }
16998 },
16999 "required": [
17000     "autoFocus"
17001 ],
17002 "type": "object"
17003 }
17004 }
17005 }
17006 }
17007

```

B.10.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
autoFocus	boolean	yes		Status of the Auto Focus
rt	array: see schema		Read Only	Resource Type
precision	number		Read Only	Accuracy granularity of the exposed value
range	array: see schema		Read Only	The valid range for the value Property
step	multiple types: see schema		Read Only	Step value across the defined range

n	string		Read Only	Friendly name of the resource
id	string		Read Only	Instance ID of this specific resource
value	multiple types: see schema			The value sensed or actuated by this Resource
if	array: see schema		Read Only	The interface set supported by this resource

17009 B.10.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/AutoFocusResURI		get	post		

17010 B.11 Automatic Document Feeder

17011 B.11.1 Introduction

17012 This resource describes the state of an automatic document feeder, typically used with a scanner.
 17013 The states are read only.
 17014 The adfStates is an array of the possible operational states.
 17015 adfProcessing is the OK state, other states are errors or require 'user attention'.
 17016 The currentAdfState is the current value of the ADF state on the device.
 17017 Retrieves the current automatic document feeder state.
 17018

17019 B.11.2 Example URI

17020 /AutomaticDocumentFeederResURI

17021 B.11.3 Resource Type

17022 The resource type (rt) is defined as: ['oic.r.automaticdocumentfeeder'].

17023 B.11.4 Swagger2.0 Definition

```

17024 {
17025   "swagger": "2.0",
17026   "info": {
17027     "title": "Automatic Document Feeder",
17028     "version": "v1.1.0-20160519",
17029     "license": {
17030       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
17031       "x-description": "Redistribution and use in source and binary forms, with or without
17032 modification, are permitted provided that the following conditions are met:\n      1.
17033 Redistributions of source code must retain the above copyright notice, this list of conditions and
17034 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
17035 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
17036 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
17037 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
17038 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
17039 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
17040 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
17041 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
17042 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
17043 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
17044 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
17045 OF SUCH DAMAGE.\n"
17046     }
17047   },
17048   "schemes": ["http"],
17049   "consumes": ["application/json"],

```

```

17050     "produces": ["application/json"],
17051     "paths": {
17052         "/AutomaticDocumentFeederResURI" : {
17053             "get": {
17054                 "description": "This resource describes the state of an automatic document feeder,
17055 typically used with a scanner.\n\nThe states are read only.\n\nThe adfStates is an array of the
17056 possible operational states.\n\nadfProcessing is the OK state, other states are errors or require
17057 'user attention'.\n\nThe currentAdfState is the current value of the ADF state on the
17058 device.\n\nRetrieves the current automatic document feeder state.\n",
17059                 "parameters": [
17060                     { "$ref": "#/parameters/interface" }
17061                 ],
17062                 "responses": {
17063                     "200": {
17064                         "description": "",
17065                         "x-example":
17066                         {
17067                             "rt": ["oic.r.automaticdocumentfeeder"],
17068                             "id": "unique_example_id",
17069                             "adfStates": ["adfProcessing", "adfEmpty", "adfJam", "adfLoaded",
17070 "adfMispick", "adfHatchOpen", "adfDuplexPageTooShort", "adfDuplexPageTooLong",
17071 "adfMultipickDetected", "adfInputTrayFailed", "adfInputTrayOverloaded"],
17072                             "currentAdfState": "adfProcessing"
17073                         }
17074                     },
17075                     "schema": { "$ref": "#/definitions/AutomaticDocumentFeeder" }
17076                 }
17077             }
17078         }
17079     },
17080     "parameters": {
17081         "interface" : {
17082             "in" : "query",
17083             "name" : "if",
17084             "type" : "string",
17085             "enum" : ["oic.if.s", "oic.if.baseline"]
17086         }
17087     },
17088     "definitions": {
17089         "AutomaticDocumentFeeder" :
17090         {
17091             "properties": {
17092                 "adfStates": {
17093                     "description": "array of the possible adf states.",
17094                     "items": {
17095                         "type": "string"
17096                     },
17097                     "readOnly": true,
17098                     "type": "array"
17099                 },
17100                 "currentAdfState": {
17101                     "description": "Current adf state.",
17102                     "readOnly": true,
17103                     "type": "string"
17104                 },
17105                 "id": {
17106                     "description": "Instance ID of this specific resource",
17107                     "maxLength": 64,
17108                     "readOnly": true,
17109                     "type": "string"
17110                 },
17111                 "if": {
17112                     "description": "The interface set supported by this resource",
17113                     "items": {
17114                         "enum": [
17115                             "oic.if.baseline",
17116                             "oic.if.ll",
17117                             "oic.if.b",
17118                             "oic.if.lb",
17119                             "oic.if.rw",

```

```

17121         "oic.if.r",
17122         "oic.if.a",
17123         "oic.if.s"
17124     ],
17125     "type": "string"
17126 },
17127     "minItems": 1,
17128     "readOnly": true,
17129     "type": "array"
17130 },
17131     "n": {
17132         "description": "Friendly name of the resource",
17133         "maxLength": 64,
17134         "readOnly": true,
17135         "type": "string"
17136     },
17137     "precision": {
17138         "description": "Accuracy granularity of the exposed value",
17139         "readOnly": true,
17140         "type": "number"
17141     },
17142     "range": {
17143         "description": "The valid range for the value Property",
17144         "items": {
17145             "anyOf": [
17146                 {
17147                     "type": "number"
17148                 },
17149                 {
17150                     "type": "integer"
17151                 }
17152             ]
17153         },
17154         "maxItems": 2,
17155         "minItems": 2,
17156         "readOnly": true,
17157         "type": "array"
17158     },
17159     "rt": {
17160         "description": "Resource Type",
17161         "items": {
17162             "maxLength": 64,
17163             "type": "string"
17164         },
17165         "minItems": 1,
17166         "readOnly": true,
17167         "type": "array"
17168     },
17169     "step": {
17170         "anyOf": [
17171             {
17172                 "type": "integer"
17173             },
17174             {
17175                 "type": "number"
17176             }
17177         ],
17178         "description": "Step value across the defined range",
17179         "readOnly": true
17180     },
17181     "value": {
17182         "anyOf": [
17183             {
17184                 "type": "array"
17185             },
17186             {
17187                 "type": "string"
17188             },
17189             {
17190                 "type": "boolean"
17191             }

```

```

17192         {
17193             "type": "integer"
17194         },
17195         {
17196             "type": "number"
17197         },
17198         {
17199             "type": "object"
17200         }
17201     ],
17202     "description": "The value sensed or actuated by this Resource"
17203 },
17204 },
17205 "required": [
17206     "adfStates",
17207     "currentAdfState"
17208 ],
17209 "type": "object"
17210 }
17211 }
17212 }
17213 }
17214

```

B.11.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
value	multiple types: see schema			The value sensed or actuated by this Resource
step	multiple types: see schema		Read Only	Step value across the defined range
adfStates	array: see schema	yes	Read Only	array of the possible adf states.
currentAdfState	string	yes	Read Only	Current adf state.
range	array: see schema		Read Only	The valid range for the value Property
if	array: see schema		Read Only	The interface set supported by this resource
id	string		Read Only	Instance ID of this specific resource
n	string		Read Only	Friendly name of the resource
rt	array: see schema		Read Only	Resource Type
precision	number		Read Only	Accuracy granularity of the exposed value

B.11.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/AutomaticDocumentFeederResURI		get			

B.12 Base Resource Schema

B.12.1 Introduction

This is the base resource schema on which all other resources defined in this specification build. value is the sensed or actuated value of the Resource. precision is the accuracy granularity of the value. range is the range over which value is valid. step is the step function over the defined range if applicable (e.g. always step by '2'). retrieves the state of the resource.

B.12.2 Example URI

/BaseResourceSchemaResURI

B.12.3 Resource Type

The resource type (rt) is defined as: ['oic.baseresource'].

B.12.4 Swagger2.0 Definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Base Resource Schema",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    },
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/BaseResourceSchemaResURI" : {
      "get": {
        "description": "This is the base resource schema on which all other resources defined in
this specification build.\nvalue is the sensed or actuated value of the Resource.\nprecision is the
accuracy granularity of the value.\nrange is the range over which value is valid.\nstep is the step
function over the defined range if applicable (e.g. always step by '2').\nretrieves the state of
the resource.",
        "parameters": [
          {"$ref": "#/parameters/interface-baseline"}
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt" : ["oic.baseresource"],
              "if": ["oic.if.baseline"],
              "id": "unique_example_id",
              "value": 10.5,
              "precision": 0.5,
              "range": [0.0,100.0]
            }
          }
        }
      }
    }
  }
}
```

```

17279         }
17280     },
17281     "schema": { "$ref": "#/definitions/base" }
17282 }
17283 },
17284 },
17285 "post": {
17286     "description": "sets the read-write resource properties",
17287     "parameters": [
17288         { "$ref": "#/parameters/interface-a" },
17289         {
17290             "name": "body",
17291             "in": "body",
17292             "required": true,
17293             "schema": { "$ref": "#/definitions/base" },
17294             "x-example":
17295                 {
17296                     "value": 20.5
17297                 }
17298         }
17299     ],
17300     "responses": {
17301         "200": {
17302             "description": "",
17303             "x-example":
17304                 {
17305                     "value": 20.5
17306                 }
17307         },
17308         "schema": { "$ref": "#/definitions/base" }
17309     }
17310 }
17311 }
17312 },
17313 },
17314 "parameters": {
17315     "interface-a" : {
17316         "in" : "query",
17317         "name" : "if",
17318         "type" : "string",
17319         "enum" : ["oic.if.a"]
17320     },
17321     "interface-baseline" : {
17322         "in" : "query",
17323         "name" : "if",
17324         "type" : "string",
17325         "enum" : ["oic.if.baseline"]
17326     }
17327 },
17328 "definitions": {
17329     "base" :
17330     {
17331         "properties": {
17332             "id": {
17333                 "description": "Instance ID of this specific resource",
17334                 "maxLength": 64,
17335                 "readOnly": true,
17336                 "type": "string"
17337             },
17338             "if": {
17339                 "description": "The interface set supported by this resource",
17340                 "items": {
17341                     "enum": [
17342                         "oic.if.baseline",
17343                         "oic.if.ll",
17344                         "oic.if.b",
17345                         "oic.if.lb",
17346                         "oic.if.rw",
17347                         "oic.if.x",
17348                         "oic.if.a",
17349                         "oic.if.s"

```

```

17350         ],
17351         "type": "string"
17352     },
17353     "minItems": 1,
17354     "readOnly": true,
17355     "type": "array"
17356 },
17357 "n": {
17358     "description": "Friendly name of the resource",
17359     "maxLength": 64,
17360     "readOnly": true,
17361     "type": "string"
17362 },
17363 "precision": {
17364     "description": "Accuracy granularity of the exposed value",
17365     "readOnly": true,
17366     "type": "number"
17367 },
17368 "range": {
17369     "description": "The valid range for the value Property",
17370     "items": {
17371         "anyOf": [
17372             {
17373                 "type": "number"
17374             },
17375             {
17376                 "type": "integer"
17377             }
17378         ]
17379     },
17380     "maxItems": 2,
17381     "minItems": 2,
17382     "readOnly": true,
17383     "type": "array"
17384 },
17385 "rt": {
17386     "description": "Resource Type",
17387     "items": {
17388         "maxLength": 64,
17389         "type": "string"
17390     },
17391     "minItems": 1,
17392     "readOnly": true,
17393     "type": "array"
17394 },
17395 "step": {
17396     "anyOf": [
17397         {
17398             "type": "integer"
17399         },
17400         {
17401             "type": "number"
17402         }
17403     ],
17404     "description": "Step value across the defined range",
17405     "readOnly": true
17406 },
17407 "value": {
17408     "anyOf": [
17409         {
17410             "type": "array"
17411         },
17412         {
17413             "type": "string"
17414         },
17415         {
17416             "type": "boolean"
17417         },
17418         {
17419             "type": "integer"
17420         }

```

```
17421      {
17422          "type": "number"
17423      },
17424      {
17425          "type": "object"
17426      }
17427  ],
17428  "description": "The value sensed or actuated by this Resource"
17429  },
17430  },
17431  "type": "object"
17432  }
17433  }
17434  }
17435  }
17436  }
```

17437 **B.12.5 Property Definition**

Property name	Value type	Mandatory	Access mode	Description
n	string		Read Only	Friendly name of the resource
if	array: see schema		Read Only	The interface set supported by this resource
value	multiple types: see schema			The value sensed or actuated by this Resource
rt	array: see schema		Read Only	Resource Type
id	string		Read Only	Instance ID of this specific resource
precision	number		Read Only	Accuracy granularity of the exposed value
step	multiple types: see schema		Read Only	Step value across the defined range
range	array: see schema		Read Only	The valid range for the value Property

17438 **B.12.6 CRUDN behaviour**

Resource	Create	Read	Update	Delete	Notify
/BaseResourceSchemaResURI		get	post		

17439 **B.13 Battery**

17440 **B.13.1 Introduction**

17441 This resource describes the attributes associated with a battery. The charge is an integer showing
17442 the current battery charge level as a percentage in the range 0 (fully discharged) to 100 (fully
17443 charged). The capacity represents the total capacity of battery in Amp Hours (Ah). The charging
17444 status and discharging status are represented by boolean values set to "True" indicating enabled
17445 and "False" indicating disabled. Low battery status is represented by a boolean value set to "True"
17446 indicating low charge level and "False" indicating otherwise, based upon the battery threshold
17447 represented as a percentage.
17448 Retrieves the state of the battery.
17449

B.13.2 Example URI

/BatteryResURI

B.13.3 Resource Type

The resource type (rt) is defined as: ['oic.r.energy.battery'].

B.13.4 Swagger2.0 Definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Battery",
    "version": "v1.2.0-20170814",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/BatteryResURI" : {
      "get": {
        "description": "This resource describes the attributes associated with a battery. The
charge is an integer showing the current battery charge level as a percentage in the range 0 (fully
discharged) to 100 (fully charged). The capacity represents the total capacity of battery in Amp
Hours (Ah). The charging status and discharging status are represented by boolean values set to
\\"True\\" indicating enabled and \\"False\\" indicating disabled. Low battery status is represented by
a boolean value set to \\"True\\" indicating low charge level and \\"False\\" indicating otherwise,
based upon the battery threshold represented as a percentage.\nRetrieves the state of the
battery.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.energy.battery"],
              "id": "unique_example_id",
              "charge": 50,
              "capacity": 3000,
              "charging": true,
              "discharging": false,
              "lowbattery": false,
              "batterythreshold": 20
            }
          }
        },
        "schema": { "$ref": "#/definitions/Battery" }
      }
    },
    "post": {
      "description": "Sets current battery values\n",

```

```

17517     "parameters": [
17518         { "$ref": "#/parameters/interface" },
17519         {
17520             "name": "body",
17521             "in": "body",
17522             "required": true,
17523             "schema": { "$ref": "#/definitions/BatteryUpdate" },
17524             "x-example":
17525                 {
17526                     "id": "unique_example_id",
17527                     "batterythreshold": 20
17528                 }
17529         },
17530     ],
17531     "responses": {
17532         "200": {
17533             "description": "",
17534             "x-example":
17535                 {
17536                     "id": "unique_example_id",
17537                     "batterythreshold": 20
17538                 },
17539             "schema": { "$ref": "#/definitions/BatteryUpdate" }
17540         }
17541     }
17542 },
17543 },
17544 },
17545 },
17546 "parameters": {
17547     "interface": {
17548         "in": "query",
17549         "name": "if",
17550         "type": "string",
17551         "enum": ["oic.if.rw", "oic.if.baseline"]
17552     }
17553 },
17554 "definitions": {
17555     "Battery": {
17556         {
17557             "properties": {
17558                 "batterythreshold": {
17559                     "description": "The threshold percentage for the low battery warning.",
17560                     "maximum": 100,
17561                     "minimum": 0,
17562                     "type": "integer"
17563                 },
17564                 "capacity": {
17565                     "description": "The total capacity in Amp-hours (Ah).",
17566                     "readOnly": true,
17567                     "type": "number"
17568                 },
17569                 "charge": {
17570                     "description": "The current charge percentage.",
17571                     "maximum": 100,
17572                     "minimum": 0,
17573                     "readOnly": true,
17574                     "type": "integer"
17575                 },
17576                 "charging": {
17577                     "description": "The status of charging.",
17578                     "readOnly": true,
17579                     "type": "boolean"
17580                 },
17581                 "discharging": {
17582                     "description": "The status of discharging.",
17583                     "readOnly": true,
17584                     "type": "boolean"
17585                 },
17586                 "id": {
17587                     "description": "Instance ID of this specific resource",

```

```

17588         "maxLength": 64,
17589         "readOnly": true,
17590         "type": "string"
17591     },
17592     "if": {
17593         "description": "The interface set supported by this resource",
17594         "items": {
17595             "enum": [
17596                 "oic.if.baseline",
17597                 "oic.if.ll",
17598                 "oic.if.b",
17599                 "oic.if.lb",
17600                 "oic.if.rw",
17601                 "oic.if.r",
17602                 "oic.if.a",
17603                 "oic.if.s"
17604             ],
17605             "type": "string"
17606         },
17607         "minItems": 1,
17608         "readOnly": true,
17609         "type": "array"
17610     },
17611     "lowbattery": {
17612         "description": "The status of the low battery warning based upon the defined
17613 threshold.",
17614         "readOnly": true,
17615         "type": "boolean"
17616     },
17617     "n": {
17618         "description": "Friendly name of the resource",
17619         "maxLength": 64,
17620         "readOnly": true,
17621         "type": "string"
17622     },
17623     "precision": {
17624         "description": "Accuracy granularity of the exposed value",
17625         "readOnly": true,
17626         "type": "number"
17627     },
17628     "range": {
17629         "description": "The valid range for the value Property",
17630         "items": {
17631             "anyOf": [
17632                 {
17633                     "type": "number"
17634                 },
17635                 {
17636                     "type": "integer"
17637                 }
17638             ]
17639         },
17640         "maxItems": 2,
17641         "minItems": 2,
17642         "readOnly": true,
17643         "type": "array"
17644     },
17645     "rt": {
17646         "description": "Resource Type",
17647         "items": {
17648             "maxLength": 64,
17649             "type": "string"
17650         },
17651         "minItems": 1,
17652         "readOnly": true,
17653         "type": "array"
17654     },
17655     "step": {
17656         "anyOf": [
17657             {
17658                 "type": "integer"

```

```

17659         },
17660         {
17661             "type": "number"
17662         }
17663     ],
17664     "description": "Step value across the defined range",
17665     "readOnly": true
17666 },
17667 "value": {
17668     "anyOf": [
17669         {
17670             "type": "array"
17671         },
17672         {
17673             "type": "string"
17674         },
17675         {
17676             "type": "boolean"
17677         },
17678         {
17679             "type": "integer"
17680         },
17681         {
17682             "type": "number"
17683         },
17684         {
17685             "type": "object"
17686         }
17687     ],
17688     "description": "The value sensed or actuated by this Resource"
17689 },
17690 ],
17691 "required": [
17692     "charge"
17693 ],
17694 "type": "object"
17695 }
17696
17697 ,
17698 "BatteryUpdate" :
17699 {
17700     "properties": {
17701         "batterythreshold": {
17702             "description": "The threshold percentage for the low battery warning.",
17703             "maximum": 100,
17704             "minimum": 0,
17705             "type": "integer"
17706         },
17707         "id": {
17708             "description": "Instance ID of this specific resource",
17709             "maxLength": 64,
17710             "readOnly": true,
17711             "type": "string"
17712         },
17713         "if": {
17714             "description": "The interface set supported by this resource",
17715             "items": {
17716                 "enum": [
17717                     "oic.if.baseline",
17718                     "oic.if.ll",
17719                     "oic.if.b",
17720                     "oic.if.lb",
17721                     "oic.if.rw",
17722                     "oic.if.r",
17723                     "oic.if.a",
17724                     "oic.if.s"
17725                 ],
17726                 "type": "string"
17727             },
17728             "minItems": 1,
17729             "readOnly": true,

```



```

17730         "type": "array"
17731     },
17732     "n": {
17733         "description": "Friendly name of the resource",
17734         "maxLength": 64,
17735         "readOnly": true,
17736         "type": "string"
17737     },
17738     "precision": {
17739         "description": "Accuracy granularity of the exposed value",
17740         "readOnly": true,
17741         "type": "number"
17742     },
17743     "range": {
17744         "description": "The valid range for the value Property",
17745         "items": {
17746             "anyOf": [
17747                 {
17748                     "type": "number"
17749                 },
17750                 {
17751                     "type": "integer"
17752                 }
17753             ]
17754         },
17755         "maxItems": 2,
17756         "minItems": 2,
17757         "readOnly": true,
17758         "type": "array"
17759     },
17760     "rt": {
17761         "description": "Resource Type",
17762         "items": {
17763             "maxLength": 64,
17764             "type": "string"
17765         },
17766         "minItems": 1,
17767         "readOnly": true,
17768         "type": "array"
17769     },
17770     "step": {
17771         "anyOf": [
17772             {
17773                 "type": "integer"
17774             },
17775             {
17776                 "type": "number"
17777             }
17778         ],
17779         "description": "Step value across the defined range",
17780         "readOnly": true
17781     },
17782     "value": {
17783         "anyOf": [
17784             {
17785                 "type": "array"
17786             },
17787             {
17788                 "type": "string"
17789             },
17790             {
17791                 "type": "boolean"
17792             },
17793             {
17794                 "type": "integer"
17795             },
17796             {
17797                 "type": "number"
17798             },
17799             {
17800                 "type": "object"

```

```

17801         }
17802     ],
17803     "description": "The value sensed or actuated by this Resource"
17804 },
17805 },
17806 "required": [
17807     "batterythreshold"
17808 ],
17809 "type": "object"
17810 }
17811 }
17812 }
17813 }
17814

```

B.13.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
lowbattery	boolean		Read Only	The status of the low battery warning based upon the defined threshold.
discharging	boolean		Read Only	The status of discharging.
value	multiple types: see schema			The value sensed or actuated by this Resource
batterythreshold	integer			The threshold percentage for the low battery warning.
step	multiple types: see schema		Read Only	Step value across the defined range
range	array: see schema		Read Only	The valid range for the value Property
precision	number		Read Only	Accuracy granularity of the exposed value
charge	integer	yes	Read Only	The current charge percentage.
capacity	number		Read Only	The total capacity in Amp-hours (Ah).
id	string		Read Only	Instance ID of this specific resource
rt	array: see schema		Read Only	Resource Type
n	string		Read Only	Friendly name of the resource
if	array: see schema		Read Only	The interface set supported by this resource

charging	boolean		Read Only	The status of charging.
value	multiple types: see schema			The value sensed or actuated by this Resource
step	multiple types: see schema		Read Only	Step value across the defined range
range	array: see schema		Read Only	The valid range for the value Property
precision	number		Read Only	Accuracy granularity of the exposed value
batterythreshold	integer	yes		The threshold percentage for the low battery warning.
id	string		Read Only	Instance ID of this specific resource
n	string		Read Only	Friendly name of the resource
if	array: see schema		Read Only	The interface set supported by this resource
rt	array: see schema		Read Only	Resource Type

17816 B.13.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/BatteryResURI		get	post		

17817 B.14 Battery Material

17818 B.14.1 Introduction

17819 This resource describes the battery material represented as an enumerated set of strings.
 17820 Retrieves the battery material.
 17821

17822 B.14.2 Example URI

17823 /BatteryMaterialResURI

17824 B.14.3 Resource Type

17825 The resource type (rt) is defined as: ['oic.r.batterymaterial'].

17826 B.14.4 Swagger2.0 Definition

```

17827 {
17828   "swagger": "2.0",
17829   "info": {
17830     "title": "Battery Material",
17831     "version": "v1.1.0-20170815",
17832     "license": {
17833       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
17834       "x-description": "Redistribution and use in source and binary forms, with or without
17835       modification, are permitted provided that the following conditions are met:\n      1.
17836       Redistributions of source code must retain the above copyright notice, this list of conditions and
```

```

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ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    },
    "schemes": ["http"],
    "consumes": ["application/json"],
    "produces": ["application/json"],
    "paths": {
        "/BatteryMaterialResURI" : {
            "get": {
                "description": "This resource describes the battery material represented as an enumerated
set of strings.\nRetrieves the battery material.\n",
                "parameters": [
                    { "$ref": "#/parameters/interface" }
                ],
                "responses": {
                    "200": {
                        "description": "",
                        "x-example":
                        {
                            "rt": ["oic.r.batterymaterial"],
                            "id": "unique_example_id",
                            "material": "Alkaline"
                        },
                        "schema": { "$ref": "#/definitions/BatteryMaterial" }
                    }
                }
            }
        }
    },
    "parameters": {
        "interface" : {
            "in" : "query",
            "name" : "if",
            "type" : "string",
            "enum" : ["oic.if.s", "oic.if.baseline"]
        }
    },
    "definitions": {
        "BatteryMaterial" :
        {
            "properties": {
                "id": {
                    "description": "Instance ID of this specific resource",
                    "maxLength": 64,
                    "readOnly": true,
                    "type": "string"
                },
                "if": {
                    "description": "The interface set supported by this resource",
                    "items": {
                        "enum": [
                            "oic.if.baseline",
                            "oic.if.ll",
                            "oic.if.b",
                            "oic.if.lb",
                            "oic.if.rw",
                            "oic.if.x",
                            "oic.if.a",
                            "oic.if.s"
                        ]
                    }
                }
            }
        }
    }
}

```

```

17908         ],
17909         "type": "string"
17910     },
17911     "minItems": 1,
17912     "readOnly": true,
17913     "type": "array"
17914 },
17915 "material": {
17916     "description": "Battery construction material (type).",
17917     "enum": [
17918         "Alkaline",
17919         "Aluminium Air",
17920         "Aluminium Ion",
17921         "Atomic Betavoltaics",
17922         "Atomic Optoelectric Nuclear",
17923         "Atomic Nuclear",
17924         "Bunsen Cell",
17925         "Chromic Acid Cell",
17926         "Poggendorff Cell",
17927         "Clark Cell",
17928         "Daniell Cell",
17929         "Dry Cell",
17930         "Earth",
17931         "Flow",
17932         "Flow Vanadium Redox",
17933         "Flow Zinc Bromine",
17934         "Flow Zinc Cerium",
17935         "Frog",
17936         "Fuel",
17937         "Galvanic Cell",
17938         "Glass",
17939         "Grove Cell",
17940         "Lead Acid",
17941         "Lead Acid Deep Cycle",
17942         "Lead Acid VRLA",
17943         "Lead Acid AGM",
17944         "Lead Acid Gel",
17945         "Leclanche Cell",
17946         "Lemon Potato",
17947         "Lithium",
17948         "Lithium Air",
17949         "Lithium Ion",
17950         "Lithium Ion Cobalt Oxide (ICR)",
17951         "Lithium Ion Manganese Oxide (IMR)",
17952         "Lithium Ion Polymer",
17953         "Lithium Iron Phosphate",
17954         "Lithium Sulfur",
17955         "Lithium Titanate",
17956         "Lithium Ion Thin Film",
17957         "Magnesium",
17958         "Magnesium Ion",
17959         "Mercury",
17960         "Molten Salt",
17961         "Nickel Cadmium",
17962         "Nickel Cadmium Vented Cell",
17963         "Nickel Hydrogen",
17964         "Nickel Iron ",
17965         "Nickel Metal Hydride",
17966         "Nickel Metal Hydride Low Self-Discharge",
17967         "Nickel Oxyhydroxide",
17968         "Nickel Oxyride",
17969         "Nickel Zinc",
17970         "Organic Radical",
17971         "Paper",
17972         "Polymer Based",
17973         "Polysulfide Bromide",
17974         "Potassium Ion",
17975         "Pulvermachers Chain",
17976         "Silicon Air",
17977         "Silver Calcium",
17978         "Silver Oxide",

```

```

17979         "Silver Zinc",
17980         "Sodium Ion",
17981         "Sodium Sulfur",
17982         "Solid State",
17983         "Sugar",
17984         "Super Iron",
17985         "UltraBattery",
17986         "Voltaic Pile",
17987         "Voltaic Pile Penny",
17988         "Voltaic Pile Trough",
17989         "Water Activated",
17990         "Weston Cell",
17991         "Zinc Air",
17992         "Zinc Carbon",
17993         "Zinc Chloride",
17994         "Zinc Ion",
17995         "Unknown"
17996     ],
17997     "readOnly": true
17998 },
17999 "n": {
18000     "description": "Friendly name of the resource",
18001     "maxLength": 64,
18002     "readOnly": true,
18003     "type": "string"
18004 },
18005 "precision": {
18006     "description": "Accuracy granularity of the exposed value",
18007     "readOnly": true,
18008     "type": "number"
18009 },
18010 "range": {
18011     "description": "The valid range for the value Property",
18012     "items": {
18013         "anyOf": [
18014             {
18015                 "type": "number"
18016             },
18017             {
18018                 "type": "integer"
18019             }
18020         ]
18021     },
18022     "maxItems": 2,
18023     "minItems": 2,
18024     "readOnly": true,
18025     "type": "array"
18026 },
18027 "rt": {
18028     "description": "Resource Type",
18029     "items": {
18030         "maxLength": 64,
18031         "type": "string"
18032     },
18033     "minItems": 1,
18034     "readOnly": true,
18035     "type": "array"
18036 },
18037 "step": {
18038     "anyOf": [
18039         {
18040             "type": "integer"
18041         },
18042         {
18043             "type": "number"
18044         }
18045     ],
18046     "description": "Step value across the defined range",
18047     "readOnly": true
18048 },
18049 "value": {

```

```

18050         "anyOf": [
18051             {
18052                 "type": "array"
18053             },
18054             {
18055                 "type": "string"
18056             },
18057             {
18058                 "type": "boolean"
18059             },
18060             {
18061                 "type": "integer"
18062             },
18063             {
18064                 "type": "number"
18065             },
18066             {
18067                 "type": "object"
18068             }
18069         ],
18070         "description": "The value sensed or actuated by this Resource"
18071     },
18072 },
18073 "required": [
18074     "material"
18075 ],
18076 "type": "object"
18077 }
18078 }
18079 }
18080 }
18081

```

B.14.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
range	array: see schema		Read Only	The valid range for the value Property
id	string		Read Only	Instance ID of this specific resource
rt	array: see schema		Read Only	Resource Type
step	multiple types: see schema		Read Only	Step value across the defined range
n	string		Read Only	Friendly name of the resource
material	multiple types: see schema	yes	Read Only	Battery construction material (type).
value	multiple types: see schema			The value sensed or actuated by this Resource
if	array: see schema		Read Only	The interface set supported by this resource
precision	number		Read Only	Accuracy granularity of the exposed value

18083 **B.14.6 CRUDN behaviour**

Resource	Create	Read	Update	Delete	Notify
/BatteryMaterialResURI		get			

18084 **B.15 Binary Switch**

18085 **B.15.1 Introduction**

18086 This resource describes a binary switch (on/off).
18087 The value is a boolean.
18088 A value of 'true' means that the switch is on.
18089 A value of 'false' means that the switch is off.
18090

18091 **B.15.2 Example URI**

18092 /BinarySwitchResURI

18093 **B.15.3 Resource Type**

18094 The resource type (rt) is defined as: ['oic.r.switch.binary'].

18095 **B.15.4 Swagger2.0 Definition**

```
18096 {
18097   "swagger": "2.0",
18098   "info": {
18099     "title": "Binary Switch",
18100     "version": "v1.1.0-20160519",
18101     "license": {
18102       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
18103       "x-description": "Redistribution and use in source and binary forms, with or without
18104 modification, are permitted provided that the following conditions are met:\n      1.
18105 Redistributions of source code must retain the above copyright notice, this list of conditions and
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18115 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
18116 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
18117 OF SUCH DAMAGE.\n"
18118     },
18119   },
18120   "schemes": ["http"],
18121   "consumes": ["application/json"],
18122   "produces": ["application/json"],
18123   "paths": {
18124     "/BinarySwitchResURI" : {
18125       "get": {
18126         "description": "This resource describes a binary switch (on/off).\nThe value is a
18127 boolean.\nA value of 'true' means that the switch is on.\nA value of 'false' means that the switch
18128 is off.\n",
18129         "parameters": [
18130           { "$ref": "#/parameters/interface" }
18131         ],
18132         "responses": {
18133           "200": {
18134             "description": "",
18135             "x-example":
18136               {
18137                 "rt": ["oic.r.switch.binary"],
18138                 "id": "unique_example_id",
18139                 "value": false
18140               }
18141           }
18142         }
18143       }
18144     }
18145   }
18146 }
```



```

18141         '
18142         "schema": { "$ref": "#/definitions/BinarySwitch" }
18143     }
18144 }
18145 },
18146 "post": {
18147     "description": "",
18148     "parameters": [
18149         { "$ref": "#/parameters/interface" },
18150         {
18151             "name": "body",
18152             "in": "body",
18153             "required": true,
18154             "schema": { "$ref": "#/definitions/BinarySwitch" },
18155             "x-example":
18156                 {
18157                     "id": "unique_example_id",
18158                     "value": true
18159                 }
18160         ],
18161     "responses": {
18162         "200": {
18163             "description": "",
18164             "x-example":
18165                 {
18166                     "id": "unique_example_id",
18167                     "value": true
18168                 },
18169             '
18170             "schema": { "$ref": "#/definitions/BinarySwitch" }
18171         }
18172     }
18173 }
18174 }
18175 },
18176 "parameters": {
18177     "interface": {
18178         "in": "query",
18179         "name": "if",
18180         "type": "string",
18181         "enum": ["oic.if.a", "oic.if.baseline"]
18182     }
18183 },
18184 "definitions": {
18185     "BinarySwitch": {
18186         "properties": {
18187             "id": {
18188                 "description": "Instance ID of this specific resource",
18189                 "maxLength": 64,
18190                 "readOnly": true,
18191                 "type": "string"
18192             },
18193             "if": {
18194                 "description": "The interface set supported by this resource",
18195                 "items": {
18196                     "enum": [
18197                         "oic.if.baseline",
18198                         "oic.if.ll",
18199                         "oic.if.b",
18200                         "oic.if.lb",
18201                         "oic.if.rw",
18202                         "oic.if.r",
18203                         "oic.if.a",
18204                         "oic.if.s"
18205                     ],
18206                     "type": "string"
18207                 },
18208                 "minItems": 1,
18209                 "readOnly": true,

```

```

18212         "type": "array"
18213     },
18214     "n": {
18215         "description": "Friendly name of the resource",
18216         "maxLength": 64,
18217         "readOnly": true,
18218         "type": "string"
18219     },
18220     "precision": {
18221         "description": "Accuracy granularity of the exposed value",
18222         "readOnly": true,
18223         "type": "number"
18224     },
18225     "range": {
18226         "description": "The valid range for the value Property",
18227         "items": {
18228             "anyOf": [
18229                 {
18230                     "type": "number"
18231                 },
18232                 {
18233                     "type": "integer"
18234                 }
18235             ]
18236         },
18237         "maxItems": 2,
18238         "minItems": 2,
18239         "readOnly": true,
18240         "type": "array"
18241     },
18242     "rt": {
18243         "description": "Resource Type",
18244         "items": {
18245             "maxLength": 64,
18246             "type": "string"
18247         },
18248         "minItems": 1,
18249         "readOnly": true,
18250         "type": "array"
18251     },
18252     "step": {
18253         "anyOf": [
18254             {
18255                 "type": "integer"
18256             },
18257             {
18258                 "type": "number"
18259             }
18260         ],
18261         "description": "Step value across the defined range",
18262         "readOnly": true
18263     },
18264     "value": {
18265         "description": "Status of the switch",
18266         "type": "boolean"
18267     }
18268 },
18269 "required": [
18270     "value"
18271 ],
18272 "type": "object"
18273 }
18274
18275 }
18276 }
18277

```

B.15.5 Property Definition

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

range	array: see schema		Read Only	The valid range for the value Property
value	boolean	yes		Status of the switch
n	string		Read Only	Friendly name of the resource
precision	number		Read Only	Accuracy granularity of the exposed value
if	array: see schema		Read Only	The interface set supported by this resource
id	string		Read Only	Instance ID of this specific resource
step	multiple types: see schema		Read Only	Step value across the defined range
rt	array: see schema		Read Only	Resource Type

18279 B.15.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/BinarySwitchResURI		get	post		

18280 B.16 Brewing

18281 B.16.1 Introduction

18282 This resource describes the attributes associated with brewing. This resource is used for
 18283 configuration only. Operation is handled independently of this resource. The amount requested is
 18284 in ml. The strength of a brewed drink is an integer, the range of which may be enforced by the
 18285 presence of a strengthrange Property.
 18286 Retrieves the state of brewing.

18288 B.16.2 Example URI

18289 /BrewingResURI

18290 B.16.3 Resource Type

18291 The resource type (rt) is defined as: ['oic.r.brewing'].

18292 B.16.4 Swagger2.0 Definition

```

18293 {
18294   "swagger": "2.0",
18295   "info": {
18296     "title": "Brewing",
18297     "version": "v1.1.0-20170815",
18298     "license": {
18299       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
18300       "x-description": "Redistribution and use in source and binary forms, with or without
18301 modification, are permitted provided that the following conditions are met:\n      1.
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```

```

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18313 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
18314 OF SUCH DAMAGE.\n"
18315 }
18316 },
18317 "schemes": ["http"],
18318 "consumes": ["application/json"],
18319 "produces": ["application/json"],
18320 "paths": {
18321   "/BrewingResURI" : {
18322     "get": {
18323       "description": "This resource describes the attributes associated with brewing. This
18324 resource is used for configuration only. Operation is handled independently of this resource. The
18325 amount requested is in ml. The strength of a brewed drink is an integer, the range of which may be
18326 enforced by the presence of a strengthrange Property.\nRetrieves the state of brewing.\n",
18327       "parameters": [
18328         { "$ref": "#/parameters/interface" }
18329       ],
18330       "responses": {
18331         "200": {
18332           "description": "",
18333           "x-example":
18334             {
18335               "rt": ["oic.r.brewing"],
18336               "id": "unique_example_id",
18337               "amountrequested": 120,
18338               "strength": 8,
18339               "strengthrange": [1,10]
18340             }
18341           ,
18342           "schema": { "$ref": "#/definitions/Brewing" }
18343         }
18344       }
18345     },
18346     "post": {
18347       "description": "Sets the brewing values\n",
18348       "parameters": [
18349         { "$ref": "#/parameters/interface" },
18350         {
18351           "name": "body",
18352           "in": "body",
18353           "required": true,
18354           "schema": { "$ref": "#/definitions/Brewing" },
18355           "x-example":
18356             {
18357               "id": "unique_example_id",
18358               "amountrequested": 120,
18359               "strength": 8
18360             }
18361         }
18362       ],
18363       "responses": {
18364         "200": {
18365           "description": "",
18366           "x-example":
18367             {
18368               "id": "unique_example_id",
18369               "amountrequested": 120,
18370               "strength": 8
18371             }
18372         }
18373       }
18374     }
18375   }
18376 },
18377 "parameters": {
18378   "interface" : {
18379     "in" : "query",

```

```

18380     "name" : "if",
18381     "type" : "string",
18382     "enum" : ["oic.if.rw", "oic.if.baseline"]
18383   }
18384 },
18385 "definitions": {
18386   "Brewing" :
18387   {
18388     "properties": {
18389       "amountrequested": {
18390         "description": "The amount requested in ml.",
18391         "type": "integer"
18392       },
18393       "id": {
18394         "description": "Instance ID of this specific resource",
18395         "maxLength": 64,
18396         "readOnly": true,
18397         "type": "string"
18398       },
18399       "if": {
18400         "description": "The interface set supported by this resource",
18401         "items": {
18402           "enum": [
18403             "oic.if.baseline",
18404             "oic.if.ll",
18405             "oic.if.b",
18406             "oic.if.lb",
18407             "oic.if.rw",
18408             "oic.if.r",
18409             "oic.if.a",
18410             "oic.if.s"
18411           ],
18412           "type": "string"
18413         },
18414         "minItems": 1,
18415         "readOnly": true,
18416         "type": "array"
18417       },
18418       "n": {
18419         "description": "Friendly name of the resource",
18420         "maxLength": 64,
18421         "readOnly": true,
18422         "type": "string"
18423       },
18424       "precision": {
18425         "description": "Accuracy granularity of the exposed value",
18426         "readOnly": true,
18427         "type": "number"
18428       },
18429       "range": {
18430         "description": "The valid range for the value Property",
18431         "items": {
18432           "anyOf": [
18433             {
18434               "type": "number"
18435             },
18436             {
18437               "type": "integer"
18438             }
18439           ]
18440         },
18441         "maxItems": 2,
18442         "minItems": 2,
18443         "readOnly": true,
18444         "type": "array"
18445       },
18446       "rt": {
18447         "description": "Resource Type",
18448         "items": {
18449           "maxLength": 64,
18450           "type": "string"

```

```

18451         },
18452         "minItems": 1,
18453         "readOnly": true,
18454         "type": "array"
18455     },
18456     "step": {
18457         "anyOf": [
18458             {
18459                 "type": "integer"
18460             },
18461             {
18462                 "type": "number"
18463             }
18464         ],
18465         "description": "Step value across the defined range",
18466         "readOnly": true
18467     },
18468     "strength": {
18469         "description": "The strength of a brewed drink.",
18470         "type": "integer"
18471     },
18472     "strengthrange": {
18473         "items": {
18474             "type": "integer"
18475         },
18476         "maxItems": 2,
18477         "minItems": 2,
18478         "readOnly": true,
18479         "type": "array"
18480     },
18481     "value": {
18482         "anyOf": [
18483             {
18484                 "type": "array"
18485             },
18486             {
18487                 "type": "string"
18488             },
18489             {
18490                 "type": "boolean"
18491             },
18492             {
18493                 "type": "integer"
18494             },
18495             {
18496                 "type": "number"
18497             },
18498             {
18499                 "type": "object"
18500             }
18501         ],
18502         "description": "The value sensed or actuated by this Resource"
18503     },
18504 },
18505 "required": [
18506     "amountrequested"
18507 ],
18508 "type": "object"
18509 }
18510 }
18511 }
18512 }
18513

```

B.16.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema		Read Only	The interface set supported by this resource

n	string		Read Only	Friendly name of the resource
amountrequested	integer	yes		The amount requested in ml.
value	multiple types: see schema			The value sensed or actuated by this Resource
strength	integer			The strength of a brewed drink.
strengthrange	array: see schema		Read Only	
id	string		Read Only	Instance ID of this specific resource
rt	array: see schema		Read Only	Resource Type
range	array: see schema		Read Only	The valid range for the value Property
step	multiple types: see schema		Read Only	Step value across the defined range
precision	number		Read Only	Accuracy granularity of the exposed value

18515 B.16.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/BrewingResURI		get	post		

18516 B.17 Brightness

18517 B.17.1 Introduction

18518 This resource describes the brightness of a light or lamp.
18519 brightness is an integer showing the current brightness level as a quantized representation in the
18520 range 0-100.

18521 A brightness of 0 is the minimum for the resource.
18522 A brightness of 100 is the maximum for the resource.
18523 Retrieves the current brightness level.

18524

18525 B.17.2 Example URI

18526 /BrightnessResURI

18527 B.17.3 Resource Type

18528 The resource type (rt) is defined as: ['oic.r.light.brightness'].

18529 B.17.4 Swagger2.0 Definition

```

18530 {
18531   "swagger": "2.0",
18532   "info": {
18533     "title": "Brightness",
18534     "version": "v1.1.0-20160519",
18535     "license": {
18536       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
18537       "x-description": "Redistribution and use in source and binary forms, with or without
```

```

18538 modification, are permitted provided that the following conditions are met:\n          1.
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18549 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
18550 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
18551 OF SUCH DAMAGE.\n"
18552 }
18553 },
18554 "schemes": ["http"],
18555 "consumes": ["application/json"],
18556 "produces": ["application/json"],
18557 "paths": {
18558   "/BrightnessResURI" : {
18559     "get": {
18560       "description": "This resource describes the brightness of a light or lamp.\nbrightness is
18561 an integer showing the current brightness level as a quantized representation in the range 0-
18562 100.\nA brightness of 0 is the minimum for the resource.\nA brightness of 100 is the maximum for
18563 the resource.\nRetrieves the current brightness level.\n",
18564       "parameters": [
18565         { "$ref": "#/parameters/interface" }
18566       ],
18567       "responses": {
18568         "200": {
18569           "description": "",
18570           "x-example":
18571             {
18572               "rt": ["oic.r.light.brightness"],
18573               "id": "unique_example_id",
18574               "brightness": 50
18575             },
18576           "schema": { "$ref": "#/definitions/Brightness" }
18577         }
18578       }
18579     },
18580     "post": {
18581       "description": "Sets the desired brightness level.\n",
18582       "parameters": [
18583         { "$ref": "#/parameters/interface" },
18584         {
18585           "name": "body",
18586           "in": "body",
18587           "required": true,
18588           "schema": { "$ref": "#/definitions/Brightness" },
18589           "x-example":
18590             {
18591               "id": "unique_example_id",
18592               "brightness": 10
18593             }
18594         }
18595       ],
18596       "responses": {
18597         "200": {
18598           "description": "Indicates that the brightness was changed.\nThe new brightness level
18599 is provided in the response.\n",
18600           "x-example":
18601             {
18602               "id": "unique_example_id",
18603               "brightness": 10
18604             },
18605           "schema": { "$ref": "#/definitions/Brightness" }
18606         }
18607       }
18608     }
18609   }
18610 }

```



```

18609     }
18610   }
18611 }
18612 },
18613 "parameters": {
18614   "interface": {
18615     "in": "query",
18616     "name": "if",
18617     "type": "string",
18618     "enum": ["oic.if.a", "oic.if.baseline"]
18619   }
18620 },
18621 "definitions": {
18622   "Brightness": {
18623     {
18624       "properties": {
18625         "brightness": {
18626           "description": "Quantized representation in the range 0-100 of the current sensed or
18627 set value for Brightness",
18628           "maximum": 100,
18629           "minimum": 0,
18630           "type": "integer"
18631         },
18632         "id": {
18633           "description": "Instance ID of this specific resource",
18634           "maxLength": 64,
18635           "readOnly": true,
18636           "type": "string"
18637         },
18638         "if": {
18639           "description": "The interface set supported by this resource",
18640           "items": {
18641             "enum": [
18642               "oic.if.baseline",
18643               "oic.if.ll",
18644               "oic.if.b",
18645               "oic.if.lb",
18646               "oic.if.rw",
18647               "oic.if.r",
18648               "oic.if.a",
18649               "oic.if.s"
18650             ],
18651             "type": "string"
18652           },
18653           "minItems": 1,
18654           "readOnly": true,
18655           "type": "array"
18656         },
18657         "n": {
18658           "description": "Friendly name of the resource",
18659           "maxLength": 64,
18660           "readOnly": true,
18661           "type": "string"
18662         },
18663         "precision": {
18664           "description": "Accuracy granularity of the exposed value",
18665           "readOnly": true,
18666           "type": "number"
18667         },
18668         "range": {
18669           "description": "The valid range for the value Property",
18670           "items": {
18671             "anyOf": [
18672               {
18673                 "type": "number"
18674               },
18675               {
18676                 "type": "integer"
18677               }
18678             ]
18679           },

```

```

18680         "maxItems": 2,
18681         "minItems": 2,
18682         "readOnly": true,
18683         "type": "array"
18684     },
18685     "rt": {
18686         "description": "Resource Type",
18687         "items": {
18688             "maxLength": 64,
18689             "type": "string"
18690         },
18691         "minItems": 1,
18692         "readOnly": true,
18693         "type": "array"
18694     },
18695     "step": {
18696         "anyOf": [
18697             {
18698                 "type": "integer"
18699             },
18700             {
18701                 "type": "number"
18702             }
18703         ],
18704         "description": "Step value across the defined range",
18705         "readOnly": true
18706     },
18707     "value": {
18708         "anyOf": [
18709             {
18710                 "type": "array"
18711             },
18712             {
18713                 "type": "string"
18714             },
18715             {
18716                 "type": "boolean"
18717             },
18718             {
18719                 "type": "integer"
18720             },
18721             {
18722                 "type": "number"
18723             },
18724             {
18725                 "type": "object"
18726             }
18727         ],
18728         "description": "The value sensed or actuated by this Resource"
18729     }
18730 },
18731 "required": [
18732     "brightness"
18733 ],
18734 "type": "object"
18735 }
18736
18737 }
18738 }
18739

```

B.17.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema		Read Only	Resource Type
step	multiple types: see schema		Read Only	Step value across the defined range

id	string		Read Only	Instance ID of this specific resource
range	array: see schema		Read Only	The valid range for the value Property
brightness	integer	yes		Quantized representation in the range 0-100 of the current sensed or set value for Brightness
precision	number		Read Only	Accuracy granularity of the exposed value
if	array: see schema		Read Only	The interface set supported by this resource
value	multiple types: see schema			The value sensed or actuated by this Resource
n	string		Read Only	Friendly name of the resource

B.17.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/BrightnessResURI		get	post		

B.18 Button Switch

B.18.1 Introduction

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

B.18.2 Example URI

/ButtonResURI

B.18.3 Resource Type

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

B.18.4 Swagger2.0 Definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Button Switch",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n
1. Redistributions of source code must retain the above copyright notice, this list of conditions and
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```

```

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ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    },
    "schemes": ["http"],
    "consumes": ["application/json"],
    "produces": ["application/json"],
    "paths": {
        "/ButtonResURI" : {
            "get": {
                "description": "This resource describes the operation of a button style switch.\nThe value
is a boolean.\nA value of 'true' means that the button is being pushed/pressed.\nA value of 'false'
means that the button is not being pushed/pressed.\n",
                "parameters": [
                    { "$ref": "#/parameters/interface" }
                ],
                "responses": {
                    "200": {
                        "description" : "",
                        "x-example": {
                            "rt": ["oic.r.button"],
                            "id": "unique_example_id",
                            "value": true
                        }
                    },
                    "schema": { "$ref": "#/definitions/Button" }
                }
            }
        }
    }
},
"parameters": {
    "interface" : {
        "in" : "query",
        "name" : "if",
        "type" : "string",
        "enum" : ["oic.if.s", "oic.if.baseline"]
    }
},
"definitions": {
    "Button" : {
        "properties": {
            "id": {
                "description": "Instance ID of this specific resource",
                "maxLength": 64,
                "readOnly": true,
                "type": "string"
            },
            "if": {
                "description": "The interface set supported by this resource",
                "items": {
                    "enum": [
                        "oic.if.baseline",
                        "oic.if.ll",
                        "oic.if.b",
                        "oic.if.lb",
                        "oic.if.rw",
                        "oic.if.r",
                        "oic.if.a",
                        "oic.if.s"
                    ]
                }
            }
        }
    }
}

```

```

18837         "type": "string"
18838     },
18839     "minItems": 1,
18840     "readOnly": true,
18841     "type": "array"
18842 },
18843 "n": {
18844     "description": "Friendly name of the resource",
18845     "maxLength": 64,
18846     "readOnly": true,
18847     "type": "string"
18848 },
18849 "precision": {
18850     "description": "Accuracy granularity of the exposed value",
18851     "readOnly": true,
18852     "type": "number"
18853 },
18854 "range": {
18855     "description": "The valid range for the value Property",
18856     "items": {
18857         "anyOf": [
18858             {
18859                 "type": "number"
18860             },
18861             {
18862                 "type": "integer"
18863             }
18864         ]
18865     },
18866     "maxItems": 2,
18867     "minItems": 2,
18868     "readOnly": true,
18869     "type": "array"
18870 },
18871 "rt": {
18872     "description": "Resource Type",
18873     "items": {
18874         "maxLength": 64,
18875         "type": "string"
18876     },
18877     "minItems": 1,
18878     "readOnly": true,
18879     "type": "array"
18880 },
18881 "step": {
18882     "anyOf": [
18883         {
18884             "type": "integer"
18885         },
18886         {
18887             "type": "number"
18888         }
18889     ],
18890     "description": "Step value across the defined range",
18891     "readOnly": true
18892 },
18893 "value": {
18894     "description": "Status of the button",
18895     "readOnly": true,
18896     "type": "boolean"
18897 }
18898 },
18899 "required": [
18900     "value"
18901 ]
18902 }
18903 }
18904 }
18905 }
18906

```

18907 **B.18.5 Property Definition**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema		Read Only	Resource Type
precision	number		Read Only	Accuracy granularity of the exposed value
if	array: see schema		Read Only	The interface set supported by this resource
value	boolean	yes	Read Only	Status of the button
step	multiple types: see schema		Read Only	Step value across the defined range
n	string		Read Only	Friendly name of the resource
range	array: see schema		Read Only	The valid range for the value Property
id	string		Read Only	Instance ID of this specific resource

18908 **B.18.6 CRUDN behaviour**

Resource	Create	Read	Update	Delete	Notify
/ButtonResURI		get			

18909 **B.19 Carbon Dioxide Sensor**

18910 **B.19.1 Introduction**

18911 This resource describes whether carbon dioxide has been sensed or not.
18912 The value is a boolean.
18913 A value of 'true' means that carbon dioxide has been detected.
18914 A value of 'false' means that carbon dioxide has not been detected.
18915

18916 **B.19.2 Example URI**

18917 /CarbonDioxideResURI

18918 **B.19.3 Resource Type**

18919 The resource type (rt) is defined as: ['oic.r.sensor.carbondioxide'].

18920 **B.19.4 Swagger2.0 Definition**

```
18921 {  
18922   "swagger": "2.0",  
18923   "info": {  
18924     "title": "Carbon Dioxide Sensor",  
18925     "version": "v1.1.0-20160519",  
18926     "license": {  
18927       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
18928       "x-description": "Redistribution and use in source and binary forms, with or without  
18929 modification, are permitted provided that the following conditions are met:\n      1.  
18930 Redistributions of source code must retain the above copyright notice, this list of conditions and  
18931 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
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18933 other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open  
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18940 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
18941 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
18942 OF SUCH DAMAGE.\n"
18943 }
18944 },
18945 "schemes": ["http"],
18946 "consumes": ["application/json"],
18947 "produces": ["application/json"],
18948 "paths": {
18949     "/CarbonDioxideResURI" : {
18950         "get": {
18951             "description": "This resource describes whether carbon dioxide has been sensed or not.\nThe
18952 value is a boolean.\nA value of 'true' means that carbon dioxide has been detected.\nA value of
18953 'false' means that carbon dioxide has not been detected.\n",
18954             "parameters": [
18955                 {"$ref": "#/parameters/interface"}
18956             ],
18957             "responses": {
18958                 "200": {
18959                     "description": "",
18960                     "x-example": {
18961                         "rt": ["oic.r.sensor.carbondioxide"],
18962                         "id": "unique_example_id",
18963                         "value": true
18964                     }
18965                 },
18966                 "schema": { "$ref": "#/definitions/CO2" }
18967             }
18968         }
18969     }
18970 },
18971 },
18972 },
18973 "parameters": {
18974     "interface" : {
18975         "in" : "query",
18976         "name" : "if",
18977         "type" : "string",
18978         "enum" : ["oic.if.s", "oic.if.baseline"]
18979     }
18980 },
18981 "definitions": {
18982     "CO2" : {
18983         "properties": {
18984             "id": {
18985                 "description": "Instance ID of this specific resource",
18986                 "maxLength": 64,
18987                 "readOnly": true,
18988                 "type": "string"
18989             },
18990             "if": {
18991                 "description": "The interface set supported by this resource",
18992                 "items": {
18993                     "enum": [
18994                         "oic.if.baseline",
18995                         "oic.if.ll",
18996                         "oic.if.b",
18997                         "oic.if.lb",
18998                         "oic.if.rw",
18999                         "oic.if.r",
19000                         "oic.if.a",
19001                         "oic.if.s"
19002                     ],
19003                     "type": "string"
19004                 }
19005             }
19006         }
19007     }
19008 }

```

```

19006         "minItems": 1,
19007         "readOnly": true,
19008         "type": "array"
19009     },
19010     "n": {
19011         "description": "Friendly name of the resource",
19012         "maxLength": 64,
19013         "readOnly": true,
19014         "type": "string"
19015     },
19016     "precision": {
19017         "description": "Accuracy granularity of the exposed value",
19018         "readOnly": true,
19019         "type": "number"
19020     },
19021     "range": {
19022         "description": "The valid range for the value Property",
19023         "items": {
19024             "anyOf": [
19025                 {
19026                     "type": "number"
19027                 },
19028                 {
19029                     "type": "integer"
19030                 }
19031             ]
19032         },
19033         "maxItems": 2,
19034         "minItems": 2,
19035         "readOnly": true,
19036         "type": "array"
19037     },
19038     "rt": {
19039         "description": "Resource Type",
19040         "items": {
19041             "maxLength": 64,
19042             "type": "string"
19043         },
19044         "minItems": 1,
19045         "readOnly": true,
19046         "type": "array"
19047     },
19048     "step": {
19049         "anyOf": [
19050             {
19051                 "type": "integer"
19052             },
19053             {
19054                 "type": "number"
19055             }
19056         ],
19057         "description": "Step value across the defined range",
19058         "readOnly": true
19059     },
19060     "value": {
19061         "description": "true = sensed, false = not sensed.",
19062         "readOnly": true,
19063         "type": "boolean"
19064     }
19065 },
19066 "required": [
19067     "value"
19068 ],
19069 "type": "object"
19070 }
19071 }
19072 }
19073 }
19074

```


19075 **B.19.5 Property Definition**

Property name	Value type	Mandatory	Access mode	Description
range	array: see schema		Read Only	The valid range for the value Property
step	multiple types: see schema		Read Only	Step value across the defined range
rt	array: see schema		Read Only	Resource Type
if	array: see schema		Read Only	The interface set supported by this resource
precision	number		Read Only	Accuracy granularity of the exposed value
n	string		Read Only	Friendly name of the resource
value	boolean	yes	Read Only	true = sensed, false = not sensed.
id	string		Read Only	Instance ID of this specific resource

19076 **B.19.6 CRUDN behaviour**

Resource	Create	Read	Update	Delete	Notify
/CarbonDioxideResURI		get			

19077 **B.20 Carbon Monoxide Sensor**

19078 **B.20.1 Introduction**

19079 This resource describes whether carbon monoxide has been sensed or not.
19080 The value is a boolean.
19081 A value of 'true' means that carbon monoxide has been detected.
19082 A value of 'false' means that carbon monoxide has not been detected.
19083

19084 **B.20.2 Example URI**

19085 /CarbonMonoxideResURI

19086 **B.20.3 Resource Type**

19087 The resource type (rt) is defined as: ['oic.r.sensor.carbonmonoxide'].

19088 **B.20.4 Swagger2.0 Definition**

```
19089 {  
19090   "swagger": "2.0",  
19091   "info": {  
19092     "title": "Carbon Monoxide Sensor",  
19093     "version": "v1.1.0-20160519",  
19094     "license": {  
19095       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
19096       "x-description": "Redistribution and use in source and binary forms, with or without  
19097 modification, are permitted provided that the following conditions are met:\n      1.  
19098 Redistributions of source code must retain the above copyright notice, this list of conditions and  
19099 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
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```

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19109 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
19110 OF SUCH DAMAGE.\n"
19111     }
19112   },
19113   "schemes": ["http"],
19114   "consumes": ["application/json"],
19115   "produces": ["application/json"],
19116   "paths": {
19117     "/CarbonMonoxideResURI" : {
19118       "get": {
19119         "description": "This resource describes whether carbon monoxide has been sensed or
19120 not.\nThe value is a boolean.\nA value of 'true' means that carbon monoxide has been detected.\nA
19121 value of 'false' means that carbon monoxide has not been detected.\n",
19122         "parameters": [
19123           { "$ref": "#/parameters/interface" }
19124         ],
19125         "responses": {
19126           "200": {
19127             "description": "",
19128             "x-example":
19129               {
19130                 "rt": ["oic.r.sensor.carbonmonoxide"],
19131                 "id": "unique_example_id",
19132                 "value": true
19133               },
19134             "schema": { "$ref": "#/definitions/CO" }
19135           }
19136         }
19137       }
19138     }
19139   },
19140   },
19141   "parameters": {
19142     "interface" : {
19143       "in" : "query",
19144       "name" : "if",
19145       "type" : "string",
19146       "enum" : ["oic.if.s", "oic.if.baseline"]
19147     }
19148   },
19149   "definitions": {
19150     "CO" :
19151       {
19152         "properties": {
19153           "id": {
19154             "description": "Instance ID of this specific resource",
19155             "maxLength": 64,
19156             "readOnly": true,
19157             "type": "string"
19158           },
19159           "if": {
19160             "description": "The interface set supported by this resource",
19161             "items": {
19162               "enum": [
19163                 "oic.if.baseline",
19164                 "oic.if.ll",
19165                 "oic.if.b",
19166                 "oic.if.lb",
19167                 "oic.if.rw",
19168                 "oic.if.x",
19169                 "oic.if.a",
19170                 "oic.if.s"
19171               ],
19172               "type": "string"
19173             }
19174           }
19175         }
19176       }
19177   }
19178 }

```

```

19173         },
19174         "minItems": 1,
19175         "readOnly": true,
19176         "type": "array"
19177     },
19178     "n": {
19179         "description": "Friendly name of the resource",
19180         "maxLength": 64,
19181         "readOnly": true,
19182         "type": "string"
19183     },
19184     "precision": {
19185         "description": "Accuracy granularity of the exposed value",
19186         "readOnly": true,
19187         "type": "number"
19188     },
19189     "range": {
19190         "description": "The valid range for the value Property",
19191         "items": {
19192             "anyOf": [
19193                 {
19194                     "type": "number"
19195                 },
19196                 {
19197                     "type": "integer"
19198                 }
19199             ]
19200         },
19201         "maxItems": 2,
19202         "minItems": 2,
19203         "readOnly": true,
19204         "type": "array"
19205     },
19206     "rt": {
19207         "description": "Resource Type",
19208         "items": {
19209             "maxLength": 64,
19210             "type": "string"
19211         },
19212         "minItems": 1,
19213         "readOnly": true,
19214         "type": "array"
19215     },
19216     "step": {
19217         "anyOf": [
19218             {
19219                 "type": "integer"
19220             },
19221             {
19222                 "type": "number"
19223             }
19224         ],
19225         "description": "Step value across the defined range",
19226         "readOnly": true
19227     },
19228     "value": {
19229         "description": "true = sensed, false = not sensed.",
19230         "readOnly": true,
19231         "type": "boolean"
19232     }
19233 },
19234 "required": [
19235     "value"
19236 ],
19237 "type": "object"
19238 }
19239
19240 }
19241 }
19242

```

19243 **B.20.5 Property Definition**

Property name	Value type	Mandatory	Access mode	Description
n	string		Read Only	Friendly name of the resource
range	array: see schema		Read Only	The valid range for the value Property
id	string		Read Only	Instance ID of this specific resource
if	array: see schema		Read Only	The interface set supported by this resource
step	multiple types: see schema		Read Only	Step value across the defined range
value	boolean	yes	Read Only	true = sensed, false = not sensed.
precision	number		Read Only	Accuracy granularity of the exposed value
rt	array: see schema		Read Only	Resource Type

19244 **B.20.6 CRUDN behaviour**

Resource	Create	Read	Update	Delete	Notify
/CarbonMonoxideResURI		get			

19245 **B.21 Clock**

19246 **B.21.1 Introduction**

19247 This resource describes the properties associated with clock and time.
19248 Clock is a time information.
19249 Datetime is using ISO 8601 datetime format (e.g: "2007-04-05T14:30Z") (Time+Date+Timezone)
19250 Countdown is the desired total seconds for countdown.
19251 Retrieves the current datetime data.
19252

19253 **B.21.2 Example URI**

19254 /ClockResURI

19255 **B.21.3 Resource Type**

19256 The resource type (rt) is defined as: ['oic.r.clock'].

19257 **B.21.4 Swagger2.0 Definition**

```
19258 {  
19259   "swagger": "2.0",  
19260   "info": {  
19261     "title": "Clock",  
19262     "version": "v1.1.0-20160519",  
19263     "license": {  
19264       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
19265       "x-description": "Redistribution and use in source and binary forms, with or without  
19266 modification, are permitted provided that the following conditions are met:\n      1.  
19267 Redistributions of source code must retain the above copyright notice, this list of conditions and  
19268 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
19269 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
```

```

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ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    },
    "schemes": ["http"],
    "consumes": ["application/json"],
    "produces": ["application/json"],
    "paths": {
        "/ClockResURI" : {
            "get": {
                "description": "This resource describes the properties associated with clock and
time.\nClock is a time information.\nDatetime is using ISO 8601 datetime format (e.g: \"2007-04-
05T14:30Z\") (Time+Date+Timezone)\nCountdown is the desired total seconds for countdown.\nRetrieves
the current datetime data.\n",
                "parameters": [
                    { "$ref": "#/parameters/interface" }
                ],
                "responses": {
                    "200": {
                        "description": "",
                        "x-example": {
                            "rt": ["oic.r.clock"],
                            "id": "unique_example_id",
                            "datetime": "2015-11-05T14:30Z",
                            "countdown": 0.0
                        }
                    },
                    "schema": { "$ref": "#/definitions/Clock" }
                }
            },
            "post": {
                "description": "Sets the desired datetime.\n",
                "parameters": [
                    { "$ref": "#/parameters/interface" },
                    {
                        "name": "body",
                        "in": "body",
                        "required": true,
                        "schema": { "$ref": "#/definitions/Clock" },
                        "x-example": {
                            "id": "unique_example_id",
                            "datetime": "2015-11-05T14:30Z",
                            "countdown": 0.0
                        }
                    }
                ],
                "responses": {
                    "200": {
                        "description": "Indicates that the datetime value was successfully changed.\nThe new
datetime value is provided in the response.\n",
                        "x-example": {
                            "id": "unique_example_id",
                            "datetime": "2015-11-05T14:30Z",
                            "countdown": 0.0
                        },
                        "schema": { "$ref": "#/definitions/Clock" }
                    },
                    "403": {

```

```

19341         "description" : "Indicates that OIC client sent an invalid property value to the
19342 server.\nThe server responds with the required input representation.\n",
19343         "x-example":
19344         {
19345             "id": "unique_example_id",
19346             "datetime": "2015-11-05T14:30Z",
19347             "countdown": 0.0
19348         }
19349     ,
19350     "schema": { "$ref": "#/definitions/Clock" }
19351 }
19352 }
19353 }
19354 }
19355 },
19356 "parameters": {
19357     "interface" : {
19358         "in" : "query",
19359         "name" : "if",
19360         "type" : "string",
19361         "enum" : ["oic.if.a", "oic.if.baseline"]
19362     }
19363 },
19364 "definitions": {
19365     "Clock" :
19366     {
19367         "properties": {
19368             "countdown": {
19369                 "description": "Desired total seconds for countdown",
19370                 "minimum": 0,
19371                 "type": "number"
19372             },
19373             "datetime": {
19374                 "description": "Using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z, 2007-04-
19375 05T14:30+09:00)",
19376                 "type": "string"
19377             },
19378             "id": {
19379                 "description": "Instance ID of this specific resource",
19380                 "maxLength": 64,
19381                 "readOnly": true,
19382                 "type": "string"
19383             },
19384             "if": {
19385                 "description": "The interface set supported by this resource",
19386                 "items": {
19387                     "enum": [
19388                         "oic.if.baseline",
19389                         "oic.if.ll",
19390                         "oic.if.b",
19391                         "oic.if.lb",
19392                         "oic.if.rw",
19393                         "oic.if.r",
19394                         "oic.if.a",
19395                         "oic.if.s"
19396                     ],
19397                     "type": "string"
19398                 },
19399                 "minItems": 1,
19400                 "readOnly": true,
19401                 "type": "array"
19402             },
19403             "n": {
19404                 "description": "Friendly name of the resource",
19405                 "maxLength": 64,
19406                 "readOnly": true,
19407                 "type": "string"
19408             },
19409             "precision": {
19410                 "description": "Accuracy granularity of the exposed value",
19411                 "readOnly": true,

```

```

19412         "type": "number"
19413     },
19414     "range": {
19415         "description": "The valid range for the value Property",
19416         "items": {
19417             "anyOf": [
19418                 {
19419                     "type": "number"
19420                 },
19421                 {
19422                     "type": "integer"
19423                 }
19424             ]
19425         },
19426         "maxItems": 2,
19427         "minItems": 2,
19428         "readOnly": true,
19429         "type": "array"
19430     },
19431     "rt": {
19432         "description": "Resource Type",
19433         "items": {
19434             "maxLength": 64,
19435             "type": "string"
19436         },
19437         "minItems": 1,
19438         "readOnly": true,
19439         "type": "array"
19440     },
19441     "step": {
19442         "anyOf": [
19443             {
19444                 "type": "integer"
19445             },
19446             {
19447                 "type": "number"
19448             }
19449         ],
19450         "description": "Step value across the defined range",
19451         "readOnly": true
19452     },
19453     "value": {
19454         "anyOf": [
19455             {
19456                 "type": "array"
19457             },
19458             {
19459                 "type": "string"
19460             },
19461             {
19462                 "type": "boolean"
19463             },
19464             {
19465                 "type": "integer"
19466             },
19467             {
19468                 "type": "number"
19469             },
19470             {
19471                 "type": "object"
19472             }
19473         ],
19474         "description": "The value sensed or actuated by this Resource"
19475     }
19476 },
19477 "required": [
19478     "datetime"
19479 ],
19480 "type": "object"
19481 }
19482

```

19483 }
19484 }
19485

19486 **B.21.5 Property Definition**

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema		Read Only	The interface set supported by this resource
datetime	string	yes		Using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z, 2007-04-05T14:30+09:00)
rt	array: see schema		Read Only	Resource Type
id	string		Read Only	Instance ID of this specific resource
step	multiple types: see schema		Read Only	Step value across the defined range
countdown	number			Desired total seconds for countdown
precision	number		Read Only	Accuracy granularity of the exposed value
range	array: see schema		Read Only	The valid range for the value Property
value	multiple types: see schema			The value sensed or actuated by this Resource
n	string		Read Only	Friendly name of the resource

19487 **B.21.6 CRUDN behaviour**

Resource	Create	Read	Update	Delete	Notify
/ClockResURI		get	post		

19488 **B.22 Auto White Balance**

19489 **B.22.1 Introduction**

19490 This resource describes an auto balance on/off feature.
19491 The value is a boolean.
19492 An AutoWhiteBalance value of 'true' means that the switch is on.
19493 An AutoWhiteBalance value of 'false' means that the switch is off.
19494

19495 **B.22.2 Example URI**

19496 /AutoWhiteBalanceResURI

B.22.3 Resource Type

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

B.22.4 Swagger2.0 Definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Auto White Balance",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
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OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/AutoWhiteBalanceResURI" : {
      "get": {
        "description": "This resource describes an auto balance on/off feature.\nThe value is a
boolean.\nAn AutoWhiteBalance value of 'true' means that the switch is on.\nAn AutoWhiteBalance
value of 'false' means that the switch is off.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.colour.autowhitebalance"],
              "id": "unique_example_id",
              "autoWhiteBalance": false
            }
          },
          "schema": { "$ref": "#/definitions/AutoWhiteBalance" }
        }
      },
      "post": {
        "description": "",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/AutoWhiteBalance" },
            "x-example": {
              "id": "unique_example_id",
              "autoWhiteBalance": true
            }
          }
        ]
      }
    }
  }
}
```

```

19566     "responses": {
19567         "200": {
19568             "description" : "",
19569             "x-example":
19570                 {
19571                     "id": "unique_example_id",
19572                     "autoWhiteBalance": true
19573                 }
19574             ,
19575             "schema": { "$ref": "#/definitions/AutoWhiteBalance" }
19576         }
19577     }
19578 },
19579 },
19580 },
19581 "parameters": {
19582     "interface" : {
19583         "in" : "query",
19584         "name" : "if",
19585         "type" : "string",
19586         "enum" : ["oic.if.a", "oic.if.baseline"]
19587     }
19588 },
19589 "definitions": {
19590     "AutoWhiteBalance" :
19591         {
19592             "properties": {
19593                 "autoWhiteBalance": {
19594                     "description": "Status of the Auto White balance",
19595                     "type": "boolean"
19596                 },
19597                 "id": {
19598                     "description": "Instance ID of this specific resource",
19599                     "maxLength": 64,
19600                     "readOnly": true,
19601                     "type": "string"
19602                 },
19603                 "if": {
19604                     "description": "The interface set supported by this resource",
19605                     "items": {
19606                         "enum": [
19607                             "oic.if.baseline",
19608                             "oic.if.ll",
19609                             "oic.if.b",
19610                             "oic.if.lb",
19611                             "oic.if.rw",
19612                             "oic.if.x",
19613                             "oic.if.a",
19614                             "oic.if.s"
19615                         ],
19616                         "type": "string"
19617                     },
19618                     "minItems": 1,
19619                     "readOnly": true,
19620                     "type": "array"
19621                 },
19622                 "n": {
19623                     "description": "Friendly name of the resource",
19624                     "maxLength": 64,
19625                     "readOnly": true,
19626                     "type": "string"
19627                 },
19628                 "precision": {
19629                     "description": "Accuracy granularity of the exposed value",
19630                     "readOnly": true,
19631                     "type": "number"
19632                 },
19633                 "range": {
19634                     "description": "The valid range for the value Property",
19635                     "items": {
19636                         "anyOf": [

```

```

19637         {
19638             "type": "number"
19639         },
19640         {
19641             "type": "integer"
19642         }
19643     ],
19644 },
19645 "maxItems": 2,
19646 "minItems": 2,
19647 "readOnly": true,
19648 "type": "array"
19649 },
19650 "rt": {
19651     "description": "Resource Type",
19652     "items": {
19653         "maxLength": 64,
19654         "type": "string"
19655     },
19656     "minItems": 1,
19657     "readOnly": true,
19658     "type": "array"
19659 },
19660 "step": {
19661     "anyOf": [
19662         {
19663             "type": "integer"
19664         },
19665         {
19666             "type": "number"
19667         }
19668     ],
19669     "description": "Step value across the defined range",
19670     "readOnly": true
19671 },
19672 "value": {
19673     "anyOf": [
19674         {
19675             "type": "array"
19676         },
19677         {
19678             "type": "string"
19679         },
19680         {
19681             "type": "boolean"
19682         },
19683         {
19684             "type": "integer"
19685         },
19686         {
19687             "type": "number"
19688         },
19689         {
19690             "type": "object"
19691         }
19692     ],
19693     "description": "The value sensed or actuated by this Resource"
19694 }
19695 },
19696 "required": [
19697     "autoWhiteBalance"
19698 ],
19699 "type": "object"
19700 }
19701 }
19702 }
19703 }
19704

```

19705 **B.22.5 Property Definition**

Property name	Value type	Mandatory	Access mode	Description
value	multiple types: see schema			The value sensed or actuated by this Resource
if	array: see schema		Read Only	The interface set supported by this resource
n	string		Read Only	Friendly name of the resource
step	multiple types: see schema		Read Only	Step value across the defined range
id	string		Read Only	Instance ID of this specific resource
autoWhiteBalance	boolean	yes		Status of the Auto White balance
rt	array: see schema		Read Only	Resource Type
precision	number		Read Only	Accuracy granularity of the exposed value
range	array: see schema		Read Only	The valid range for the value Property

19706 **B.22.6 CRUDN behaviour**

Resource	Create	Read	Update	Delete	Notify
/AutoWhiteBalanceResURI		get	post		

19707 **B.23 Colour Saturation**

19708 **B.23.1 Introduction**

19709 This resource describes a Colour saturation value.
19710 The value is an integer.
19711 A coloursaturation has a range of [0,100].
19712 A coloursaturation value of 0 means producing black and white images.
19713 A coloursaturation value of 50 means producing device specific normal colour images.
19714 A coloursaturation value of 100 means producing device very full colour images.
19715

19716 **B.23.2 Example URI**

19717 /ColourSaturationResURI

19718 **B.23.3 Resource Type**

19719 The resource type (rt) is defined as: ['oic.r.colour.saturation'].

19720 **B.23.4 Swagger2.0 Definition**

19721 {
19722 "swagger": "2.0",
19723 "info": {
19724 "title": "Colour Saturation",
19725 "version": "v1.1.0-20160519",

```

19726     "license": {
19727         "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
19728         "x-description": "Redistribution and use in source and binary forms, with or without
19729 modification, are permitted provided that the following conditions are met:\n      1.
19730 Redistributions of source code must retain the above copyright notice, this list of conditions and
19731 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
19732 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
19733 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
19734 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
19735 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
19736 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
19737 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
19738 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
19739 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND
19740 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
19741 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
19742 OF SUCH DAMAGE.\n"
19743     },
19744 },
19745 "schemes": ["http"],
19746 "consumes": ["application/json"],
19747 "produces": ["application/json"],
19748 "paths": {
19749     "/ColourSaturationResURI" : {
19750         "get": {
19751             "description": "This resource describes a Colour saturation value.\nThe value is an
19752 integer.\nA coloursaturation has a range of [0,100].\nA coloursaturation value of 0 means producing
19753 black and white images.\nA coloursaturation value of 50 means producing device specific normal
19754 colour images.\nA coloursaturation value of 100 means producing device very full colour images.\n",
19755             "parameters": [
19756                 { "$ref": "#/parameters/interface" }
19757             ],
19758             "responses": {
19759                 "200": {
19760                     "description": "",
19761                     "x-example": {
19762                         {
19763                             "rt": ["oic.r.colour.saturation"],
19764                             "id": "unique_example_id",
19765                             "colourSaturation": 50
19766                         }
19767                     },
19768                     "schema": { "$ref": "#/definitions/Saturation" }
19769                 }
19770             }
19771         },
19772         "post": {
19773             "description": "",
19774             "parameters": [
19775                 { "$ref": "#/parameters/interface" },
19776                 {
19777                     "name": "body",
19778                     "in": "body",
19779                     "required": true,
19780                     "schema": { "$ref": "#/definitions/Saturation" },
19781                     "x-example": {
19782                         {
19783                             "id": "unique_example_id",
19784                             "colourSaturation": 60
19785                         }
19786                     }
19787                 }
19788             ],
19789             "responses": {
19790                 "200": {
19791                     "description": "",
19792                     "x-example": {
19793                         {
19794                             "id": "unique_example_id",
19795                             "colourSaturation": 60
19796                         }
19797                     },

```

```

19797         "schema": { "$ref": "#/definitions/Saturation" }
19798     }
19799 }
19800 }
19801 }
19802 },
19803 "parameters": {
19804     "interface" : {
19805         "in" : "query",
19806         "name" : "if",
19807         "type" : "string",
19808         "enum" : ["oic.if.a", "oic.if.baseline"]
19809     }
19810 },
19811 "definitions": {
19812     "Saturation" :
19813     {
19814         "properties": {
19815             "colourSaturation": {
19816                 "description": "The colour saturation value",
19817                 "maximum": 100,
19818                 "minimum": 0,
19819                 "type": "integer"
19820             },
19821             "id": {
19822                 "description": "Instance ID of this specific resource",
19823                 "maxLength": 64,
19824                 "readOnly": true,
19825                 "type": "string"
19826             },
19827             "if": {
19828                 "description": "The interface set supported by this resource",
19829                 "items": {
19830                     "enum": [
19831                         "oic.if.baseline",
19832                         "oic.if.ll",
19833                         "oic.if.b",
19834                         "oic.if.lb",
19835                         "oic.if.rw",
19836                         "oic.if.r",
19837                         "oic.if.a",
19838                         "oic.if.s"
19839                     ],
19840                     "type": "string"
19841                 },
19842                 "minItems": 1,
19843                 "readOnly": true,
19844                 "type": "array"
19845             },
19846             "n": {
19847                 "description": "Friendly name of the resource",
19848                 "maxLength": 64,
19849                 "readOnly": true,
19850                 "type": "string"
19851             },
19852             "precision": {
19853                 "description": "Accuracy granularity of the exposed value",
19854                 "readOnly": true,
19855                 "type": "number"
19856             },
19857             "range": {
19858                 "description": "The valid range for the value Property",
19859                 "items": {
19860                     "anyOf": [
19861                         {
19862                             "type": "number"
19863                         },
19864                         {
19865                             "type": "integer"
19866                         }
19867                     ]

```

```

19868         },
19869         "maxItems": 2,
19870         "minItems": 2,
19871         "readOnly": true,
19872         "type": "array"
19873     },
19874     "rt": {
19875         "description": "Resource Type",
19876         "items": {
19877             "maxLength": 64,
19878             "type": "string"
19879         },
19880         "minItems": 1,
19881         "readOnly": true,
19882         "type": "array"
19883     },
19884     "step": {
19885         "anyOf": [
19886             {
19887                 "type": "integer"
19888             },
19889             {
19890                 "type": "number"
19891             }
19892         ],
19893         "description": "Step value across the defined range",
19894         "readOnly": true
19895     },
19896     "value": {
19897         "anyOf": [
19898             {
19899                 "type": "array"
19900             },
19901             {
19902                 "type": "string"
19903             },
19904             {
19905                 "type": "boolean"
19906             },
19907             {
19908                 "type": "integer"
19909             },
19910             {
19911                 "type": "number"
19912             },
19913             {
19914                 "type": "object"
19915             }
19916         ],
19917         "description": "The value sensed or actuated by this Resource"
19918     }
19919 },
19920 "required": [
19921     "colourSaturation"
19922 ],
19923 "type": "object"
19924 }
19925 }
19926 }
19927 }
19928

```

B.23.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
colourSaturation	integer	yes		The colour saturation value
range	array: see schema		Read Only	The valid range for the value Property

rt	array: see schema		Read Only	Resource Type
precision	number		Read Only	Accuracy granularity of the exposed value
if	array: see schema		Read Only	The interface set supported by this resource
value	multiple types: see schema			The value sensed or actuated by this Resource
id	string		Read Only	Instance ID of this specific resource
step	multiple types: see schema		Read Only	Step value across the defined range
n	string		Read Only	Friendly name of the resource

19930 B.23.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/ColourSaturationResURI		get	post		

19931 B.24 Colour Chroma

19932 B.24.1 Introduction

19933 This resource describes the colour using chroma conventions.
19934 Properties are hue, saturation, csc, and ct.
19935 hue is the hue angle, it is an integer value as defined by the CIECAM02 model definition (see
19936 reference [CIE CIE159:2004]).
19937 saturation is an integer value as defined by the CIECAM02 model definition (see reference [CIE
19938 CIE159:2004]).
19939 maximumsaturation is the upper bound on the saturation supported by the Device.
19940 If not present the maximum value for saturation is 32767.
19941 csc is the colour space coordinates in CIE colour space.
19942 The first item in the array is the X coordinate.
19943 The second item in the array is the Y coordinate.
19944 ct is the Mired colour temperature.
19945 Provides the colour using chroma conventions.

19946

19947 B.24.2 Example URI

19948 /example/ColourChromaResURI

19949 B.24.3 Resource Type

19950 The resource type (rt) is defined as: ['oic.r.colour.chroma'].

19951 B.24.4 Swagger2.0 Definition

```

19952 {
19953   "swagger": "2.0",
19954   "info": {
19955     "title": "Colour Chroma",
19956     "version": "v1.1.0-20160519",
19957     "license": {
19958       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",

```



```

19959         "x-description": "Redistribution and use in source and binary forms, with or without
19960 modification, are permitted provided that the following conditions are met:\n        1.
19961 Redistributions of source code must retain the above copyright notice, this list of conditions and
19962 the following disclaimer.\n        2. Redistributions in binary form must reproduce the above
19963 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
19964 other materials provided with the distribution.\n\n        THIS SOFTWARE IS PROVIDED BY THE Open
19965 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
19966 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
19967 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n        IN NO EVENT SHALL THE Open Connectivity
19968 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
19969 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
19970 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n        HOWEVER CAUSED AND
19971 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
19972 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
19973 OF SUCH DAMAGE.\n"
19974     }
19975 },
19976 "schemes": ["http"],
19977 "consumes": ["application/json"],
19978 "produces": ["application/json"],
19979 "paths": {
19980     "/example/ColourChromaResURI" : {
19981         "get": {
19982             "description": "This resource describes the colour using chroma conventions.\nProperties
19983 are hue, saturation, csc, and ct.\nhue is the hue angle, it is an integer value as defined by the
19984 CIECAM02 model definition (see reference [CIE CIE159:2004]).\nsaturation is an integer value as
19985 defined by the CIECAM02 model definition (see reference [CIE CIE159:2004]).\nmaximumsaturation is
19986 the upper bound on the saturation supported by the Device.\n    If not present the maximum value
19987 for saturation is 32767.\ncsc is the colour space coordinates in CIE colour space.\n    The first
19988 item in the array is the X coordinate.\n    The second item in the array is the Y coordinate.\nct is
19989 the Mired colour temperature.\nProvides the colour using chroma conventions.\n",
19990             "parameters": [
19991                 {"$ref": "#/parameters/interface"}
19992             ],
19993             "responses": {
19994                 "200": {
19995                     "description": "",
19996                     "x-example": {
19997                         {
19998                             "rt": ["oic.r.colour.chroma"],
19999                             "id": "unique_example_id",
20000                             "hue": 256.0,
20001                             "saturation": 212,
20002                             "maximumsaturation": 1000,
20003                             "csc": [0.41,0.51],
20004                             "ct": 457
20005                         }
20006                     },
20007                     "schema": { "$ref": "#/definitions/ColourChroma" }
20008                 }
20009             }
20010         },
20011         "post": {
20012             "description": "Sets current colour chroma values\n",
20013             "parameters": [
20014                 {"$ref": "#/parameters/interface"},
20015                 {
20016                     "name": "body",
20017                     "in": "body",
20018                     "required": true,
20019                     "schema": { "$ref": "#/definitions/ColourChroma" },
20020                     "x-example": {
20021                         {
20022                             "id": "unique_example_id",
20023                             "hue": 300.0,
20024                             "saturation": 212,
20025                             "csc": [0.41,0.51],
20026                             "ct": 457
20027                         }
20028                     }
20029                 }
20030             ]
20031         }
20032     }
20033 }

```

```

20030     "responses": {
20031         "200": {
20032             "description" : "",
20033             "x-example":
20034                 {
20035                     "id": "unique_example_id",
20036                     "hue": 300.0,
20037                     "saturation": 212,
20038                     "csc": [0.41,0.51],
20039                     "ct": 467
20040                 },
20041             ,
20042             "schema": { "$ref": "#/definitions/ColourChroma" }
20043         }
20044     }
20045 }
20046 },
20047 {
20048     "parameters": {
20049         "interface" : {
20050             "in" : "query",
20051             "name" : "if",
20052             "type" : "string",
20053             "enum" : ["oic.if.a", "oic.if.baseline"]
20054         }
20055     },
20056     "definitions": {
20057         "ColourChroma" :
20058             {
20059                 "properties": {
20060                     "csc": {
20061                         "description": "X and Y coordinates of the colour in CIE colour space",
20062                         "items": {
20063                             "maximum": 1,
20064                             "minimum": 0,
20065                             "type": "number"
20066                         },
20067                         "maxItems": 2,
20068                         "minItems": 2,
20069                         "type": "array"
20070                     },
20071                     "ct": {
20072                         "description": "Mired colour temperature",
20073                         "minimum": 0,
20074                         "type": "integer"
20075                     },
20076                     "hue": {
20077                         "description": "Hue angle as defined by the CIECAM02 model definition",
20078                         "maximum": 360,
20079                         "minimum": 0,
20080                         "type": "number"
20081                     },
20082                     "id": {
20083                         "description": "Instance ID of this specific resource",
20084                         "maxLength": 64,
20085                         "readOnly": true,
20086                         "type": "string"
20087                     },
20088                     "if": {
20089                         "description": "The interface set supported by this resource",
20090                         "items": {
20091                             "enum": [
20092                                 "oic.if.baseline",
20093                                 "oic.if.ll",
20094                                 "oic.if.b",
20095                                 "oic.if.lb",
20096                                 "oic.if.rw",
20097                                 "oic.if.r",
20098                                 "oic.if.a",
20099                                 "oic.if.s"
20100                             ],

```

```

20101         "type": "string"
20102     },
20103     "minItems": 1,
20104     "readOnly": true,
20105     "type": "array"
20106 },
20107 "maximumsaturation": {
20108     "description": "Maximum supported value of Saturation for this Device",
20109     "maximum": 32767,
20110     "minimum": 0,
20111     "readOnly": true,
20112     "type": "integer"
20113 },
20114 "n": {
20115     "description": "Friendly name of the resource",
20116     "maxLength": 64,
20117     "readOnly": true,
20118     "type": "string"
20119 },
20120 "precision": {
20121     "description": "Accuracy granularity of the exposed value",
20122     "readOnly": true,
20123     "type": "number"
20124 },
20125 "range": {
20126     "description": "The valid range for the value Property",
20127     "items": {
20128         "anyOf": [
20129             {
20130                 "type": "number"
20131             },
20132             {
20133                 "type": "integer"
20134             }
20135         ]
20136     },
20137     "maxItems": 2,
20138     "minItems": 2,
20139     "readOnly": true,
20140     "type": "array"
20141 },
20142 "rt": {
20143     "description": "Resource Type",
20144     "items": {
20145         "maxLength": 64,
20146         "type": "string"
20147     },
20148     "minItems": 1,
20149     "readOnly": true,
20150     "type": "array"
20151 },
20152 "saturation": {
20153     "description": "Saturation as defined by the CIECAM02 model definition",
20154     "maximum": 32767,
20155     "minimum": 0,
20156     "type": "integer"
20157 },
20158 "step": {
20159     "anyOf": [
20160         {
20161             "type": "integer"
20162         },
20163         {
20164             "type": "number"
20165         }
20166     ],
20167     "description": "Step value across the defined range",
20168     "readOnly": true
20169 },
20170 "value": {
20171     "anyOf": [

```

```

20172     {
20173         "type": "array"
20174     },
20175     {
20176         "type": "string"
20177     },
20178     {
20179         "type": "boolean"
20180     },
20181     {
20182         "type": "integer"
20183     },
20184     {
20185         "type": "number"
20186     },
20187     {
20188         "type": "object"
20189     }
20190 ],
20191 "description": "The value sensed or actuated by this Resource"
20192 },
20193 },
20194 "required": [
20195     "hue",
20196     "saturation",
20197     "csc"
20198 ],
20199 "type": "object"
20200 }
20201 }
20202 }
20203 }
20204

```

B.24.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema		Read Only	Resource Type
ct	integer			Mired colour temperature
hue	number	yes		Hue angle as defined by the CIECAM02 model definition
value	multiple types: see schema			The value sensed or actuated by this Resource
csc	array: see schema	yes		X and Y coordinates of the colour in CIE colour space
n	string		Read Only	Friendly name of the resource
maximumsaturation	integer		Read Only	Maximum supported value of Saturation for this Device
precision	number		Read Only	Accuracy granularity of the exposed value

step	multiple types: see schema		Read Only	Step value across the defined range
if	array: see schema		Read Only	The interface set supported by this resource
id	string		Read Only	Instance ID of this specific resource
range	array: see schema		Read Only	The valid range for the value Property
saturation	integer	yes		Saturation as defined by the CIECAM02 model definition

20206 B.24.6 CRUDN behaviour

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

20207 B.25 Colour Space Coordinates

20208 B.25.1 Introduction

20209 This resource describes the colour using colour space co-ordinates.
 20210 csc is the colour space coordinates in CIE colour space.
 20211 The first item in the array is the X coordinate.
 20212 The second item in the array is the Y coordinate.
 20213 If precision (from oic.r.baseresource) is provided it applies to both the X and Y coordinates.
 20214 Provides the colour using colour space coordinates.
 20215

20216 B.25.2 Example URI

20217 /example/ColourSpaceCoordinatesResURI

20218 B.25.3 Resource Type

20219 The resource type (rt) is defined as: ['oic.r.colour.csc'].

20220 B.25.4 Swagger2.0 Definition

```

20221 {
20222   "swagger": "2.0",
20223   "info": {
20224     "title": "Colour Space Coordinates",
20225     "version": "OCFv1.1.0-2017",
20226     "license": {
20227       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
20228       "x-description": "Redistribution and use in source and binary forms, with or without
20229 modification, are permitted provided that the following conditions are met:\n
20230 1. Redistributions of source code must retain the above copyright notice, this list of conditions and
20231 the following disclaimer.\n
20232 2. Redistributions in binary form must reproduce the above
20233 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
20234 other materials provided with the distribution.\n\n
20235 THIS SOFTWARE IS PROVIDED BY THE Open
20236 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
20237 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
20238 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n
20239 IN NO EVENT SHALL THE Open Connectivity
20240 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
20241 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n
HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY

```

```

20242 OF SUCH DAMAGE.\n"
20243     }
20244 },
20245 "schemes": ["http"],
20246 "consumes": ["application/json"],
20247 "produces": ["application/json"],
20248 "paths": {
20249     "/example/ColourSpaceCoordinatesResURI" : {
20250         "get": {
20251             "description": "This resource describes the colour using colour space co-ordinates.\nncsc is
20252 the colour space coordinates in CIE colour space.\n The first item in the array is the X
20253 coordinate.\n The second item in the array is the Y coordinate.\n If precision (from
20254 oic.r.baseresource) is provided it applies to both the X and Y coordinates.\nProvides the colour
20255 using colour space coordinates.\n",
20256             "parameters": [
20257                 { "$ref": "#/parameters/interface-all" }
20258             ],
20259             "responses": {
20260                 "200": {
20261                     "description": "",
20262                     "x-example":
20263                         {
20264                             "rt": ["oic.r.colour.csc"],
20265                             "id": "unique_example_id",
20266                             "csc": [0.41,0.51]
20267                         }
20268                     ,
20269                     "schema": { "$ref": "#/definitions/ColourCSC" }
20270                 }
20271             }
20272         },
20273         "post": {
20274             "description": "Sets current colour space coordinates\n",
20275             "parameters": [
20276                 { "$ref": "#/parameters/interface-a" },
20277                 {
20278                     "name": "body",
20279                     "in": "body",
20280                     "required": true,
20281                     "schema": { "$ref": "#/definitions/ColourCSC" },
20282                     "x-example":
20283                         {
20284                             "id": "unique_example_id",
20285                             "csc": [0.40,0.70]
20286                         }
20287                 }
20288             ],
20289             "responses": {
20290                 "200": {
20291                     "description": "",
20292                     "x-example":
20293                         {
20294                             "id": "unique_example_id",
20295                             "csc": [0.40,0.70]
20296                         }
20297                     ,
20298                     "schema": { "$ref": "#/definitions/ColourCSC" }
20299                 }
20300             }
20301         }
20302     }
20303 },
20304 "parameters": {
20305     "interface-a" : {
20306         "in" : "query",
20307         "name" : "if",
20308         "type" : "string",
20309         "enum" : ["oic.if.a"]
20310     },
20311     "interface-all" : {
20312         "in" : "query",

```

```

20313     "name" : "if",
20314     "type" : "string",
20315     "enum" : ["oic.if.a", "oic.if.baseline"]
20316   }
20317 },
20318 "definitions": {
20319   "ColourCSC" :
20320   {
20321     "properties": {
20322       "csc": {
20323         "description": "X and Y coordinates of the colour in CIE colour space",
20324         "items": {
20325           "maximum": 1,
20326           "minimum": 0,
20327           "type": "number"
20328         },
20329         "maxItems": 2,
20330         "minItems": 2,
20331         "type": "array"
20332       },
20333       "id": {
20334         "description": "Instance ID of this specific resource",
20335         "maxLength": 64,
20336         "readOnly": true,
20337         "type": "string"
20338       },
20339       "if": {
20340         "description": "The interface set supported by this resource",
20341         "items": {
20342           "enum": [
20343             "oic.if.baseline",
20344             "oic.if.ll",
20345             "oic.if.b",
20346             "oic.if.lb",
20347             "oic.if.rw",
20348             "oic.if.r",
20349             "oic.if.a",
20350             "oic.if.s"
20351           ],
20352           "type": "string"
20353         },
20354         "minItems": 1,
20355         "readOnly": true,
20356         "type": "array"
20357       },
20358       "n": {
20359         "description": "Friendly name of the resource",
20360         "maxLength": 64,
20361         "readOnly": true,
20362         "type": "string"
20363       },
20364       "precision": {
20365         "description": "Accuracy granularity of the exposed value",
20366         "readOnly": true,
20367         "type": "number"
20368       },
20369       "range": {
20370         "description": "The valid range for the value Property",
20371         "items": {
20372           "anyOf": [
20373             {
20374               "type": "number"
20375             },
20376             {
20377               "type": "integer"
20378             }
20379           ]
20380         },
20381         "maxItems": 2,
20382         "minItems": 2,
20383         "readOnly": true,

```

```

20384         "type": "array"
20385     },
20386     "rt": {
20387         "description": "Resource Type",
20388         "items": {
20389             "maxLength": 64,
20390             "type": "string"
20391         },
20392         "minItems": 1,
20393         "readOnly": true,
20394         "type": "array"
20395     },
20396     "step": {
20397         "anyOf": [
20398             {
20399                 "type": "integer"
20400             },
20401             {
20402                 "type": "number"
20403             }
20404         ],
20405         "description": "Step value across the defined range",
20406         "readOnly": true
20407     },
20408     "value": {
20409         "anyOf": [
20410             {
20411                 "type": "array"
20412             },
20413             {
20414                 "type": "string"
20415             },
20416             {
20417                 "type": "boolean"
20418             },
20419             {
20420                 "type": "integer"
20421             },
20422             {
20423                 "type": "number"
20424             },
20425             {
20426                 "type": "object"
20427             }
20428         ],
20429         "description": "The value sensed or actuated by this Resource"
20430     }
20431 },
20432 "required": [
20433     "csc"
20434 ],
20435 "type": "object"
20436 }
20437 }
20438 }
20439 }
20440

```

B.25.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
n	string		Read Only	Friendly name of the resource
csc	array: see schema	yes		X and Y coordinates of the colour in CIE colour space
value	multiple types: see schema			The value sensed or

				actuated by this Resource
if	array: see schema		Read Only	The interface set supported by this resource
range	array: see schema		Read Only	The valid range for the value Property
rt	array: see schema		Read Only	Resource Type
id	string		Read Only	Instance ID of this specific resource
precision	number		Read Only	Accuracy granularity of the exposed value
step	multiple types: see schema		Read Only	Step value across the defined range

20442 B.25.6 CRUDN behaviour

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

20443 B.26 Colour Temperature

20444 B.26.1 Introduction

20445 This resource describes the colour using colour temperature conventions.
 20446 ct is the Mired colour temperature.
 20447 The equivalent value in Kelvin is obtained by $\text{Colour Temp(K)} = 1,000,000/\text{Colour Temp(Mired)}$
 20448 Provides the colour using colour temperature conventions.
 20449

20450 B.26.2 Example URI

20451 /example/ColourTemperatureResURI

20452 B.26.3 Resource Type

20453 The resource type (rt) is defined as: ['oic.r.colour.colourtemperature'].

20454 B.26.4 Swagger2.0 Definition

```

20455 {
20456   "swagger": "2.0",
20457   "info": {
20458     "title": "Colour Temperature",
20459     "version": "OCFv1.0-2017",
20460     "license": {
20461       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
20462       "x-description": "Redistribution and use in source and binary forms, with or without
20463 modification, are permitted provided that the following conditions are met:\n      1.
20464 Redistributions of source code must retain the above copyright notice, this list of conditions and
20465 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
20466 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
20467 other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open
20468 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
20469 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
20470 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
20471 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
20472 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
20473 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
20474 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
```

```

20475 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
20476 OF SUCH DAMAGE.\n"
20477 }
20478 },
20479 "schemes": ["http"],
20480 "consumes": ["application/json"],
20481 "produces": ["application/json"],
20482 "paths": {
20483   "/example/ColourTemperatureResURI" : {
20484     "get": {
20485       "description": "This resource describes the colour using colour temperature
20486 conventions.\nct is the Mired colour temperature.\nThe equivalent value in Kelvin is obtained by
20487 Colour Temp(K) = 1,000,000/Colour Temp(Mired)\nProvides the colour using colour temperature
20488 conventions.\n",
20489       "parameters": [
20490         { "$ref": "#/parameters/interface-all" }
20491       ],
20492       "responses": {
20493         "200": {
20494           "description": "",
20495           "x-example":
20496             {
20497               "rt": ["oic.r.colour.colourtemperature"],
20498               "id": "unique_example_id",
20499               "ct": 457
20500             }
20501           ,
20502           "schema": { "$ref": "#/definitions/ColourTemp" }
20503         }
20504       }
20505     },
20506     "post": {
20507       "description": "Sets current colour temperature value\n",
20508       "parameters": [
20509         { "$ref": "#/parameters/interface-a" },
20510         {
20511           "name": "body",
20512           "in": "body",
20513           "required": true,
20514           "schema": { "$ref": "#/definitions/ColourTemp" },
20515           "x-example":
20516             {
20517               "id": "unique_example_id",
20518               "ct": 457
20519             }
20520         }
20521       ],
20522       "responses": {
20523         "200": {
20524           "description": "",
20525           "x-example":
20526             {
20527               "id": "unique_example_id",
20528               "ct": 467
20529             }
20530           ,
20531           "schema": { "$ref": "#/definitions/ColourTemp" }
20532         }
20533       }
20534     }
20535   }
20536 },
20537 "parameters": {
20538   "interface-a" : {
20539     "in" : "query",
20540     "name" : "if",
20541     "type" : "string",
20542     "enum" : ["oic.if.a"]
20543   },
20544   "interface-all" : {
20545     "in" : "query",

```

```

20546     "name" : "if",
20547     "type" : "string",
20548     "enum" : ["oic.if.a", "oic.if.baseline"]
20549   }
20550 },
20551 "definitions": {
20552   "ColourTemp" :
20553     {
20554       "properties": {
20555         "ct": {
20556           "description": "Mired colour temperature",
20557           "minimum": 0,
20558           "type": "integer"
20559         },
20560         "id": {
20561           "description": "Instance ID of this specific resource",
20562           "maxLength": 64,
20563           "readOnly": true,
20564           "type": "string"
20565         },
20566         "if": {
20567           "description": "The interface set supported by this resource",
20568           "items": {
20569             "enum": [
20570               "oic.if.baseline",
20571               "oic.if.ll",
20572               "oic.if.b",
20573               "oic.if.lb",
20574               "oic.if.rw",
20575               "oic.if.r",
20576               "oic.if.a",
20577               "oic.if.s"
20578             ],
20579             "type": "string"
20580           },
20581           "minItems": 1,
20582           "readOnly": true,
20583           "type": "array"
20584         },
20585         "n": {
20586           "description": "Friendly name of the resource",
20587           "maxLength": 64,
20588           "readOnly": true,
20589           "type": "string"
20590         },
20591         "precision": {
20592           "description": "Accuracy granularity of the exposed value",
20593           "readOnly": true,
20594           "type": "number"
20595         },
20596         "range": {
20597           "description": "The valid range for the value Property",
20598           "items": {
20599             "anyOf": [
20600               {
20601                 "type": "number"
20602               },
20603               {
20604                 "type": "integer"
20605               }
20606             ]
20607           },
20608           "maxItems": 2,
20609           "minItems": 2,
20610           "readOnly": true,
20611           "type": "array"
20612         },
20613         "rt": {
20614           "description": "Resource Type",
20615           "items": {
20616             "maxLength": 64,

```

```

20617         "type": "string"
20618     },
20619     "minItems": 1,
20620     "readOnly": true,
20621     "type": "array"
20622 },
20623 "step": {
20624     "anyOf": [
20625         {
20626             "type": "integer"
20627         },
20628         {
20629             "type": "number"
20630         }
20631     ],
20632     "description": "Step value across the defined range",
20633     "readOnly": true
20634 },
20635 "value": {
20636     "anyOf": [
20637         {
20638             "type": "array"
20639         },
20640         {
20641             "type": "string"
20642         },
20643         {
20644             "type": "boolean"
20645         },
20646         {
20647             "type": "integer"
20648         },
20649         {
20650             "type": "number"
20651         },
20652         {
20653             "type": "object"
20654         }
20655     ],
20656     "description": "The value sensed or actuated by this Resource"
20657 },
20658 ],
20659 "required": [
20660     "ct"
20661 ],
20662 "type": "object"
20663 }
20664 }
20665 }
20666 }
20667

```

B.26.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
range	array: see schema		Read Only	The valid range for the value Property
value	multiple types: see schema			The value sensed or actuated by this Resource
rt	array: see schema		Read Only	Resource Type
n	string		Read Only	Friendly name of the resource

if	array: see schema		Read Only	The interface set supported by this resource
ct	integer	yes		Mired colour temperature
step	multiple types: see schema		Read Only	Step value across the defined range
id	string		Read Only	Instance ID of this specific resource
precision	number		Read Only	Accuracy granularity of the exposed value

20669 B.26.6 CRUDN behaviour

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

20670 B.27 Colour Hue and Saturation

20671 B.27.1 Introduction

20672 This resource describes the colour using hue-saturation conventions.
20673 hue is the hue angle, it is a number value as defined by the CIECAM02 model definition (see
20674 reference [CIE CIE159:2004]).
20675 A Device that does not support fractional hue angles can provide integer values.
20676 If precision (from oic.r.baseresource) is provided it applies to the hue angle.
20677 saturation is an integer value as defined by the CIECAM02 model definition (see reference [CIE
20678 CIE159:2004]).
20679 saturation can be converted to a percentage by saturation/maximumsaturation X 100; where
20680 maximumsaturation is 32767 if the Property itself is not present.
20681 maximumsaturation is the upper bound on the saturation supported by the Device.
20682 If not present the maximum value for saturation is 32767.
20683 Provides the colour using hue and saturation conventions.

20685 B.27.2 Example URI

20686 /example/ColourHueSaturationResURI

20687 B.27.3 Resource Type

20688 The resource type (rt) is defined as: ['oic.r.colour.hs'].

20689 B.27.4 Swagger2.0 Definition

```

20690 {
20691   "swagger": "2.0",
20692   "info": {
20693     "title": "Colour Hue and Saturation",
20694     "version": "v1.0-2017",
20695     "license": {
20696       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
20697       "x-description": "Redistribution and use in source and binary forms, with or without
20698 modification, are permitted provided that the following conditions are met:\n      1.
20699 Redistributions of source code must retain the above copyright notice, this list of conditions and
20700 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
20701 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
20702 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
20703 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
20704 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
20705 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity

```

```

20706 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
20707 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
20708 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n          HOWEVER CAUSED AND
20709 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
20710 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
20711 OF SUCH DAMAGE.\n"
20712 }
20713 },
20714 "schemes": ["http"],
20715 "consumes": ["application/json"],
20716 "produces": ["application/json"],
20717 "paths": {
20718   "/example/ColourHueSaturationResURI" : {
20719     "get": {
20720       "description": "This resource describes the colour using hue-saturation conventions.\nhue
20721 is the hue angle, it is a number value as defined by the CIECAM02 model definition (see reference
20722 [CIE CIE159:2004]).\n A Device that does not support fractional hue angles can provide integer
20723 values.\n If precision (from oic.r.baseresource) is provided it applies to the hue
20724 angle.\nsaturation is an integer value as defined by the CIECAM02 model definition (see reference
20725 [CIE CIE159:2004]).\n saturation can be converted to a percentage by saturation/maximalsaturation
20726 X 100; where maximalsaturation is 32767 if the Property itself is not present.\nmaximalsaturation
20727 is the upper bound on the saturation supported by the Device.\n If not present the maximum value
20728 for saturation is 32767.\nProvides the colour using hue and saturation conventions.\n",
20729     "parameters": [
20730       { "$ref": "#/parameters/interface-all" }
20731     ],
20732     "responses": {
20733       "200": {
20734         "description": "",
20735         "x-example": {
20736           "rt": ["oic.r.colour.hs"],
20737           "id": "unique_example_id",
20738           "hue": 300.0,
20739           "saturation": 212,
20740           "maximalsaturation": 1000
20741         }
20742       },
20743       "schema": { "$ref": "#/definitions/ColourHS" }
20744     }
20745   }
20746 },
20747 },
20748 "post": {
20749   "description": "Sets current colour hue and saturation values.\nAt least one of hue or
20750 saturation shall be provided in the payload.\n",
20751   "parameters": [
20752     { "$ref": "#/parameters/interface-a" },
20753     {
20754       "name": "body",
20755       "in": "body",
20756       "required": true,
20757       "schema": { "$ref": "#/definitions/ColourHS" },
20758       "x-example": {
20759         "id": "unique_example_id",
20760         "hue": 300.0,
20761         "saturation": 212
20762       }
20763     }
20764   ],
20765   "responses": {
20766     "200": {
20767       "description": "",
20768       "x-example": {
20769         "id": "unique_example_id",
20770         "hue": 300.0,
20771         "saturation": 212
20772       },
20773       "schema": { "$ref": "#/definitions/ColourHS" }
20774     }
20775   }
20776 }

```

```

20777     }
20778   }
20779 }
20780 }
20781 },
20782 "parameters": {
20783   "interface-a" : {
20784     "in" : "query",
20785     "name" : "if",
20786     "type" : "string",
20787     "enum" : ["oic.if.a"]
20788   },
20789   "interface-all" : {
20790     "in" : "query",
20791     "name" : "if",
20792     "type" : "string",
20793     "enum" : ["oic.if.a", "oic.if.baseline"]
20794   }
20795 },
20796 "definitions": {
20797   "ColourHS" :
20798     {
20799     "properties": {
20800       "hue": {
20801         "description": "Hue angle as defined by the CIECAM02 model definition",
20802         "maximum": 360,
20803         "minimum": 0,
20804         "type": "number"
20805       },
20806       "id": {
20807         "description": "Instance ID of this specific resource",
20808         "maxLength": 64,
20809         "readOnly": true,
20810         "type": "string"
20811       },
20812       "if": {
20813         "description": "The interface set supported by this resource",
20814         "items": {
20815           "enum": [
20816             "oic.if.baseline",
20817             "oic.if.ll",
20818             "oic.if.b",
20819             "oic.if.lb",
20820             "oic.if.rw",
20821             "oic.if.r",
20822             "oic.if.a",
20823             "oic.if.s"
20824           ],
20825           "type": "string"
20826         },
20827         "minItems": 1,
20828         "readOnly": true,
20829         "type": "array"
20830       },
20831       "maximumsaturation": {
20832         "description": "Maximum supported value of Saturation for this Device",
20833         "maximum": 32767,
20834         "minimum": 0,
20835         "readOnly": true,
20836         "type": "integer"
20837       },
20838       "n": {
20839         "description": "Friendly name of the resource",
20840         "maxLength": 64,
20841         "readOnly": true,
20842         "type": "string"
20843       },
20844       "precision": {
20845         "description": "Accuracy granularity of the exposed value",
20846         "readOnly": true,
20847         "type": "number"

```

```

20848 },
20849 "range": {
20850   "description": "The valid range for the value Property",
20851   "items": {
20852     "anyOf": [
20853       {
20854         "type": "number"
20855       },
20856       {
20857         "type": "integer"
20858       }
20859     ]
20860   },
20861   "maxItems": 2,
20862   "minItems": 2,
20863   "readOnly": true,
20864   "type": "array"
20865 },
20866 "rt": {
20867   "description": "Resource Type",
20868   "items": {
20869     "maxLength": 64,
20870     "type": "string"
20871   },
20872   "minItems": 1,
20873   "readOnly": true,
20874   "type": "array"
20875 },
20876 "saturation": {
20877   "description": "Saturation as defined by the CIECAM02 model definition",
20878   "maximum": 32767,
20879   "minimum": 0,
20880   "type": "integer"
20881 },
20882 "step": {
20883   "anyOf": [
20884     {
20885       "type": "integer"
20886     },
20887     {
20888       "type": "number"
20889     }
20890   ],
20891   "description": "Step value across the defined range",
20892   "readOnly": true
20893 },
20894 "value": {
20895   "anyOf": [
20896     {
20897       "type": "array"
20898     },
20899     {
20900       "type": "string"
20901     },
20902     {
20903       "type": "boolean"
20904     },
20905     {
20906       "type": "integer"
20907     },
20908     {
20909       "type": "number"
20910     },
20911     {
20912       "type": "object"
20913     }
20914   ],
20915   "description": "The value sensed or actuated by this Resource"
20916 }
20917 },
20918 "required": [

```



```

20919         "hue",
20920         "saturation"
20921     ],
20922     "type": "object"
20923 }
20924 }
20925 }
20926 }
20927

```

20928 B.27.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
range	array: see schema		Read Only	The valid range for the value Property
id	string		Read Only	Instance ID of this specific resource
n	string		Read Only	Friendly name of the resource
value	multiple types: see schema			The value sensed or actuated by this Resource
precision	number		Read Only	Accuracy granularity of the exposed value
saturation	integer	yes		Saturation as defined by the CIECAM02 model definition
maximumsaturation	integer		Read Only	Maximum supported value of Saturation for this Device
if	array: see schema		Read Only	The interface set supported by this resource
rt	array: see schema		Read Only	Resource Type
hue	number	yes		Hue angle as defined by the CIECAM02 model definition
step	multiple types: see schema		Read Only	Step value across the defined range

20929 B.27.6 CRUDN behaviour

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

20930 B.28 Colour RGB

20931 B.28.1 Introduction

20932 This resource specifies the actual colour in the RGB space represented as an array of integers.
 20933 Each colour value is described with a Red, Green, Blue component.

20934 These colour values are encoded as an array of integer values ([R,G,B]).
20935 The minimum and maximum colour value per component may be described by range (from
20936 oic.r.baseresource).
20937 When range (from oic.r.baseresource) is omitted, then the range is [0,255].
20938 Retrieves the current colour in RGB.
20939 Value is an array of integer values in the order R,G,B.
20940

20941 **B.28.2 Example URI**

20942 /ColourRGBResURI

20943 **B.28.3 Resource Type**

20944 The resource type (rt) is defined as: ['oic.r.colour.rgb'].

20945 **B.28.4 Swagger2.0 Definition**

```
20946 {  
20947   "swagger": "2.0",  
20948   "info": {  
20949     "title": "Colour RGB",  
20950     "version": "v1.1.0-20160519",  
20951     "license": {  
20952       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
20953       "x-description": "Redistribution and use in source and binary forms, with or without  
20954 modification, are permitted provided that the following conditions are met:\n      1.  
20955 Redistributions of source code must retain the above copyright notice, this list of conditions and  
20956 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
20957 copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
20958 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open  
20959 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT  
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20962 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,  
20963 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS  
20964 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND  
20965 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR  
20966 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY  
20967 OF SUCH DAMAGE.\n"}  
20968   },  
20969   },  
20970   "schemes": ["http"],  
20971   "consumes": ["application/json"],  
20972   "produces": ["application/json"],  
20973   "paths": {  
20974     "/ColourRGBResURI" : {  
20975       "get": {  
20976         "description": "This resource specifies the actual colour in the RGB space represented as  
20977 an array of integers.\nEach colour value is described with a Red, Green, Blue component.\nThese  
20978 colour values are encoded as an array of integer values ([R,G,B]).\nThe minimum and maximum colour  
20979 value per component may be described by range (from oic.r.baseresource).\nWhen range (from  
20980 oic.r.baseresource) is omitted, then the range is [0,255].\nRetrieves the current colour in  
20981 RGB.\nValue is an array of integer values in the order R,G,B.\n",  
20982         "parameters": [  
20983           {"$ref": "#/parameters/interface"}  
20984         ],  
20985         "responses": {  
20986           "200": {  
20987             "description": "",  
20988             "x-example":  
20989               {  
20990                 "rt": ["oic.r.colour.rgb"],  
20991                 "id": "unique_example_id",  
20992                 "rgbValue": [255,255,255],  
20993                 "range": [0,255]  
20994               }  
20995             ,  
20996             "schema": { "$ref": "#/definitions/ColourRGB" }  
20997           }  
20998         }  
20999       }  
30000     }  
30001   }  
30002 }
```

```

20998     }
20999   },
21000   "post": {
21001     "description": "Sets the current colourRGB value\n",
21002     "parameters": [
21003       { "$ref": "#/parameters/interface" },
21004       {
21005         "name": "body",
21006         "in": "body",
21007         "required": true,
21008         "schema": { "$ref": "#/definitions/ColourRGB" },
21009         "x-example":
21010           {
21011             "id": "unique_example_id",
21012             "rgbValue": [255,0,0]
21013           }
21014       },
21015     ],
21016     "responses": {
21017       "200": {
21018         "description": "",
21019         "x-example":
21020           {
21021             "id": "unique_example_id",
21022             "rgbValue": [255,0,0]
21023           },
21024         "schema": { "$ref": "#/definitions/ColourRGB" }
21025       }
21026     },
21027   },
21028 },
21029 },
21030 },
21031 "parameters": {
21032   "interface": {
21033     "in": "query",
21034     "name": "if",
21035     "type": "string",
21036     "enum": ["oic.if.a", "oic.if.baseline"]
21037   }
21038 },
21039 "definitions": {
21040   "ColourRGB": {
21041     {
21042       "properties": {
21043         "id": {
21044           "description": "Instance ID of this specific resource",
21045           "maxLength": 64,
21046           "readOnly": true,
21047           "type": "string"
21048         },
21049         "if": {
21050           "description": "The interface set supported by this resource",
21051           "items": {
21052             "enum": [
21053               "oic.if.baseline",
21054               "oic.if.ll",
21055               "oic.if.b",
21056               "oic.if.lb",
21057               "oic.if.rw",
21058               "oic.if.x",
21059               "oic.if.a",
21060               "oic.if.s"
21061             ],
21062             "type": "string"
21063           },
21064           "minItems": 1,
21065           "readOnly": true,
21066           "type": "array"
21067         }
21068       },

```

```

21069         "description": "Friendly name of the resource",
21070         "maxLength": 64,
21071         "readOnly": true,
21072         "type": "string"
21073     },
21074     "precision": {
21075         "description": "Accuracy granularity of the exposed value",
21076         "readOnly": true,
21077         "type": "number"
21078     },
21079     "range": {
21080         "description": "The valid range for the value Property",
21081         "items": {
21082             "anyOf": [
21083                 {
21084                     "type": "number"
21085                 },
21086                 {
21087                     "type": "integer"
21088                 }
21089             ]
21090         },
21091         "maxItems": 2,
21092         "minItems": 2,
21093         "readOnly": true,
21094         "type": "array"
21095     },
21096     "rgbValue": {
21097         "description": "RGB value; the first item is the R, second the G, third the B.",
21098         "items": {
21099             "type": "integer"
21100         },
21101         "maxItems": 3,
21102         "minItems": 3,
21103         "type": "array"
21104     },
21105     "rt": {
21106         "description": "Resource Type",
21107         "items": {
21108             "maxLength": 64,
21109             "type": "string"
21110         },
21111         "minItems": 1,
21112         "readOnly": true,
21113         "type": "array"
21114     },
21115     "step": {
21116         "anyOf": [
21117             {
21118                 "type": "integer"
21119             },
21120             {
21121                 "type": "number"
21122             }
21123         ],
21124         "description": "Step value across the defined range",
21125         "readOnly": true
21126     },
21127     "value": {
21128         "anyOf": [
21129             {
21130                 "type": "array"
21131             },
21132             {
21133                 "type": "string"
21134             },
21135             {
21136                 "type": "boolean"
21137             },
21138             {
21139                 "type": "integer"

```

```

21140         },
21141         {
21142             "type": "number"
21143         },
21144         {
21145             "type": "object"
21146         }
21147     ],
21148     "description": "The value sensed or actuated by this Resource"
21149 },
21150 },
21151 "required": [
21152     "rgbValue"
21153 ],
21154 "type": "object"
21155 }
21156 }
21157 }
21158 }
21159

```

21160 B.28.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
n	string		Read Only	Friendly name of the resource
id	string		Read Only	Instance ID of this specific resource
value	multiple types: see schema			The value sensed or actuated by this Resource
range	array: see schema		Read Only	The valid range for the value Property
step	multiple types: see schema		Read Only	Step value across the defined range
rt	array: see schema		Read Only	Resource Type
rgbValue	array: see schema	yes		RGB value; the first item is the R, second the G, third the B.
precision	number		Read Only	Accuracy granularity of the exposed value
if	array: see schema		Read Only	The interface set supported by this resource

21161 B.28.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/ColourRGBResURI		get	post		

21162 B.29 Consumable

21163 B.29.1 Introduction

21164 This resource specifies a thing that can be consumed such as filter material, printer toner etc
21165 The type is an enumeration defining the thing being consumed as defined by the Smart Home
21166 Device Specification
21167 The remaining is an integer capturing the percentatge remaining life
21168 The orderpercentage is an integer capturing the percentage life at which replacement or
21169 replenishment is recommended by the manufacturer
21170 The url is a string containing a URL at which further information may be obtained with respect to
21171 the consumable
21172

21173 B.29.2 Example URI

21174 /ConsumableResURI

21175 B.29.3 Resource Type

21176 The resource type (rt) is defined as: ['oic.r.consumable'].

21177 B.29.4 Swagger2.0 Definition

```
21178 {
21179   "swagger": "2.0",
21180   "info": {
21181     "title": "Consumable",
21182     "version": "OCF-v1.0.0-20160620",
21183     "license": {
21184       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
21185       "x-description": "Redistribution and use in source and binary forms, with or without
21186 modification, are permitted provided that the following conditions are met:\n      1.
21187 Redistributions of source code must retain the above copyright notice, this list of conditions and
21188 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
21189 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
21190 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
21191 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
21192 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
21193 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
21194 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
21195 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
21196 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
21197 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
21198 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
21199 OF SUCH DAMAGE.\n"
21200     }
21201   },
21202   "schemes": ["http"],
21203   "consumes": ["application/json"],
21204   "produces": ["application/json"],
21205   "paths": {
21206     "/ConsumableResURI" : {
21207       "get": {
21208         "description": "This resource specifies a thing that can be consumed such as filter
21209 material, printer toner etc\nThe type is an enumeration defining the thing being consumed as
21210 defined by the Smart Home Device Specification\nThe remaining is an integer capturing the
21211 percentatge remaining life\nThe orderpercentage is an integer capturing the percentage life at
21212 which replacement or replenishment is recommended by the manufacturer\nThe url is a string
21213 containing a URL at which further information may be obtained with respect to the consumable\n",
21214         "parameters": [
21215           { "$ref": "#/parameters/interface" }
21216         ],
21217         "responses": {
21218           "200": {
21219             "description": "",
21220             "x-example": {
21221               "rt": ["oic.r.consumable"],
21222               "id": "unique_example_id",
21223
```

```

21224         "typeofconsumable": "tonerBlack",
21225         "remaining": 20,
21226         "orderpercentage": 10,
21227         "url": "http://myreorderURL"
21228     }
21229     ,
21230     "schema": { "$ref": "#/definitions/consumable" }
21231 }
21232 }
21233 }
21234 }
21235 },
21236 "parameters": {
21237     "interface" : {
21238         "in" : "query",
21239         "name" : "if",
21240         "type" : "string",
21241         "enum" : ["oic.if.s", "oic.if.baseline"]
21242     }
21243 },
21244 "definitions": {
21245     "consumable" :
21246     {
21247         "properties": {
21248             "id": {
21249                 "description": "Instance ID of this specific resource",
21250                 "maxLength": 64,
21251                 "readOnly": true,
21252                 "type": "string"
21253             },
21254             "if": {
21255                 "description": "The interface set supported by this resource",
21256                 "items": {
21257                     "enum": [
21258                         "oic.if.baseline",
21259                         "oic.if.ll",
21260                         "oic.if.b",
21261                         "oic.if.lb",
21262                         "oic.if.rw",
21263                         "oic.if.r",
21264                         "oic.if.a",
21265                         "oic.if.s"
21266                     ],
21267                     "type": "string"
21268                 },
21269                 "minItems": 1,
21270                 "readOnly": true,
21271                 "type": "array"
21272             },
21273             "n": {
21274                 "description": "Friendly name of the resource",
21275                 "maxLength": 64,
21276                 "readOnly": true,
21277                 "type": "string"
21278             },
21279             "orderpercentage": {
21280                 "description": "Percentage at which re-ordering is recommended by the manufacturer",
21281                 "maximum": 100,
21282                 "minimum": 0,
21283                 "readOnly": true,
21284                 "type": "integer"
21285             },
21286             "precision": {
21287                 "description": "Accuracy granularity of the exposed value",
21288                 "readOnly": true,
21289                 "type": "number"
21290             },
21291             "range": {
21292                 "description": "The valid range for the value Property",
21293                 "items": {
21294                     "anyOf": [

```

```

21295         {
21296             "type": "number"
21297         },
21298         {
21299             "type": "integer"
21300         }
21301     ],
21302 },
21303 "maxItems": 2,
21304 "minItems": 2,
21305 "readOnly": true,
21306 "type": "array"
21307 },
21308 "remaining": {
21309     "description": "Percentage remaining lifespan.",
21310     "maximum": 100,
21311     "minimum": 0,
21312     "readOnly": true,
21313     "type": "integer"
21314 },
21315 "rt": {
21316     "description": "Resource Type",
21317     "items": {
21318         "maxLength": 64,
21319         "type": "string"
21320     },
21321     "minItems": 1,
21322     "readOnly": true,
21323     "type": "array"
21324 },
21325 "step": {
21326     "anyOf": [
21327         {
21328             "type": "integer"
21329         },
21330         {
21331             "type": "number"
21332         }
21333     ],
21334     "description": "Step value across the defined range",
21335     "readOnly": true
21336 },
21337 "typeofconsumable": {
21338     "description": "Thing that is being consumed.",
21339     "readOnly": true,
21340     "type": "string"
21341 },
21342 "url": {
21343     "description": "URL at which additional ordering information may be found.",
21344     "format": "uri",
21345     "readOnly": true,
21346     "type": "string"
21347 },
21348 "value": {
21349     "anyOf": [
21350         {
21351             "type": "array"
21352         },
21353         {
21354             "type": "string"
21355         },
21356         {
21357             "type": "boolean"
21358         },
21359         {
21360             "type": "integer"
21361         },
21362         {
21363             "type": "number"
21364         },
21365         {

```



```

21366         "type": "object"
21367     }
21368 },
21369     "description": "The value sensed or actuated by this Resource"
21370 },
21371 },
21372     "required": [
21373         "typeofconsumable",
21374         "remaining"
21375     ],
21376     "type": "object"
21377 }
21378 }
21379 }
21380 }
21381

```

B.29.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
value	multiple types: see schema			The value sensed or actuated by this Resource
rt	array: see schema		Read Only	Resource Type
range	array: see schema		Read Only	The valid range for the value Property
remaining	integer	yes	Read Only	Percentage remaining lifespan.
step	multiple types: see schema		Read Only	Step value across the defined range
id	string		Read Only	Instance ID of this specific resource
precision	number		Read Only	Accuracy granularity of the exposed value
if	array: see schema		Read Only	The interface set supported by this resource
typeofconsumable	string	yes	Read Only	Thing that is being consumed.
orderpercentage	integer		Read Only	Percentage at which re-ordering is recommended by the manufacturer
n	string		Read Only	Friendly name of the resource
url	string		Read Only	URL at which additional ordering information may be found.

21383 B.29.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/ConsumableResURI		get			

21384 B.30 Consumables

21385 B.30.1 Introduction

21386 This resource specifies things that can be consumed such as filter material, printer toner etc
 21387 The resource is a collection of instances of oic.r.consumable detailing the individual consumed
 21388 items

21389 supportedconsumables is the set of consumable types that this instance of the Resource supports
 21390

21391 B.30.2 Example URI

21392 /ConsumablesBaselineResURI

21393 B.30.3 Resource Type

21394 The resource type (rt) is defined as: ['oic.r.consumablecollection', 'oic.wk.col'].

21395 B.30.4 Swagger2.0 Definition

```

21396 {
21397   "swagger": "2.0",
21398   "info": {
21399     "title": "Consumables",
21400     "version": "OCF-v1.0.0-20160620",
21401     "license": {
21402       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
21403       "x-description": "Redistribution and use in source and binary forms, with or without
21404 modification, are permitted provided that the following conditions are met:\n      1.
21405 Redistributions of source code must retain the above copyright notice, this list of conditions and
21406 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
21407 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
21408 other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open
21409 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
21410 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
21411 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
21412 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
21413 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
21414 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
21415 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
21416 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
21417 OF SUCH DAMAGE.\n"
21418     }
21419   },
21420   "schemes": ["http"],
21421   "consumes": ["application/json"],
21422   "produces": ["application/json"],
21423   "paths": {
21424     "/ConsumablesLLResURI" : {
21425       "get": {
21426         "description": "This resource specifies things that can be consumed such as filter
21427 material, printer toner etc\nThe resource is a collection of instances of oic.r.consumable
21428 detailing the individual consumed items\nsupportedconsumables is the set of consumable types that
21429 this instance of the Resource supports\n",
21430         "parameters": [
21431           {"$ref": "#/parameters/interface-11"}
21432         ],
21433         "responses": {
21434           "200": {
21435             "description": "",
21436             "x-example":
21437               [
21438                 {"href": "/myTonerBlackResURI", "rt": ["oic.r.consumable"], "if":
21439 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122}]},
21440                 {"href": "/myTonerCyanResURI", "rt": ["oic.r.consumable"], "if":

```

```

21441 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
21442         {"href": "/myTonerMagentaResURI", "rt": ["oic.r.consumable"], "if":
21443 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
21444         {"href": "/myTonerYellowResURI", "rt": ["oic.r.consumable"], "if":
21445 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
21446     ]
21447     ,
21448     "schema": { "$ref": "#/definitions/consumables-11" }
21449 }
21450 }
21451 }
21452 },
21453 "/ConsumablesBaselineResURI" : {
21454     "get": {
21455         "description": "This resource specifies things that can be consumed such as filter
21456 material, printer toner etc\nThe resource is a collection of instances of oic.r.consumable
21457 detailing the individual consumed items\nsupportedconsumables is the set of consumable types that
21458 this instance of the Resource supports\n",
21459         "parameters": [
21460             {"$ref": "#/parameters/interface-baseline"}
21461         ],
21462         "responses": {
21463             "200": {
21464                 "description": "",
21465                 "x-example":
21466                 {
21467                     "rt": ["oic.r.consumablecollection","oic.wk.col"],
21468                     "id": "unique_example_id",
21469                     "rts": ["oic.r.consumable","oic.r.value.conditional"],
21470                     "supportedconsumables": ["tonerBlack","tonerCyan","tonerMagenta","tonerYellow"],
21471                     "links": [
21472                         {"href": "/myTonerBlackResURI", "rt": ["oic.r.consumable"], "if":
21473 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
21474                         {"href": "/myTonerCyanResURI", "rt": ["oic.r.consumable"], "if":
21475 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
21476                         {"href": "/myTonerMagentaResURI", "rt": ["oic.r.consumable"], "if":
21477 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
21478                         {"href": "/myTonerYellowResURI", "rt": ["oic.r.consumable"], "if":
21479 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
21480                     ]
21481                 }
21482             },
21483             "schema": { "$ref": "#/definitions/consumables" }
21484         }
21485     }
21486 }
21487 }
21488 },
21489 "parameters": {
21490     "interface-11" : {
21491         "in" : "query",
21492         "name" : "if",
21493         "type" : "string",
21494         "enum" : ["oic.if.11"]
21495     },
21496     "interface-baseline" : {
21497         "in" : "query",
21498         "name" : "if",
21499         "type" : "string",
21500         "enum" : ["oic.if.baseline"]
21501     },
21502     "interface-all" : {
21503         "in" : "query",
21504         "name" : "if",
21505         "type" : "string",
21506         "enum" : ["oic.if.11", "oic.if.baseline"]
21507     }
21508 },
21509 "definitions": {
21510     "consumables-11" :
21511     {

```

```

21512         "description": "All forms of links in a collection",
21513         "oneOf": [
21514             {
21515                 "description": "A set (array) of simple or individual OIC Links. In addition to
21516 properties required for an OIC Link, the identifier for that link in this set is also required",
21517                 "items": {
21518                     "properties": {
21519                         "anchor": {
21520                             "description": "This is used to override the context URI e.g. override the URI of
21521 the containing collection",
21522                             "format": "uri",
21523                             "maxLength": 256,
21524                             "type": "string"
21525                         },
21526                         "di": {
21527                             "description": "Unique identifier for device (UUID)",
21528                             "pattern": "[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-
21529 F0-9]{12}$",
21530                             "type": "string"
21531                         },
21532                         "eps": {
21533                             "description": "the Endpoint information of the target Resource",
21534                             "items": {
21535                                 "properties": {
21536                                     "ep": {
21537                                         "description": "URI with Transport Protocol Suites + Endpoint Locator as
21538 specified in 10.2.1",
21539                                         "format": "uri",
21540                                         "type": "string"
21541                                     },
21542                                     "pri": {
21543                                         "description": "The priority among multiple Endpoints as specified in
21544 10.2.3",
21545                                         "minimum": 1,
21546                                         "type": "integer"
21547                                     }
21548                                 },
21549                                 "type": "object"
21550                             },
21551                             "type": "array"
21552                         },
21553                         "href": {
21554                             "description": "This is the target URI, it can be specified as a Relative
21555 Reference or fully-qualified URI. Relative Reference should be used along with the di parameter to
21556 make it unique.",
21557                             "format": "uri",
21558                             "maxLength": 256,
21559                             "type": "string"
21560                         },
21561                         "if": {
21562                             "description": "The interface set supported by this resource",
21563                             "items": {
21564                                 "enum": [
21565                                     "oic.if.baseline",
21566                                     "oic.if.ll",
21567                                     "oic.if.b",
21568                                     "oic.if.rw",
21569                                     "oic.if.r",
21570                                     "oic.if.a",
21571                                     "oic.if.s"
21572                                 ],
21573                                 "type": "string"
21574                             },
21575                             "minItems": 1,
21576                             "type": "array"
21577                         },
21578                         "ins": {
21579                             "description": "The instance identifier for this web link in an array of web
21580 links - used in collections",
21581                             "oneOf": [
21582                                 {

```

```

21583         "description": "An ordinal number that is not repeated - must be unique in
21584 the collection context",
21585         "type": "integer"
21586     },
21587     {
21588         "description": "Any unique string including a URI",
21589         "format": "uri",
21590         "maxLength": 256,
21591         "type": "string"
21592     },
21593     {
21594         "description": "Unique identifier (UUID)",
21595         "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-
21596 fA-F0-9]{12}$",
21597         "type": "string"
21598     }
21599 ]
21600 },
21601 "p": {
21602     "description": "Specifies the framework policies on the Resource referenced by
21603 the target URI",
21604     "properties": {
21605         "bm": {
21606             "description": "Specifies the framework policies on the Resource referenced
21607 by the target URI for e.g. observable and discoverable",
21608             "type": "integer"
21609         }
21610     },
21611     "required": [
21612         "bm"
21613     ],
21614     "type": "object"
21615 },
21616 "rel": {
21617     "description": "The relation of the target URI referenced by the link to the
21618 context URI",
21619     "oneOf": [
21620         {
21621             "default": [
21622                 "hosts"
21623             ],
21624             "items": {
21625                 "maxLength": 64,
21626                 "type": "string"
21627             },
21628             "minItems": 1,
21629             "type": "array"
21630         },
21631         {
21632             "default": "hosts",
21633             "maxLength": 64,
21634             "type": "string"
21635         }
21636     ]
21637 },
21638 "rt": {
21639     "description": "Resource Type",
21640     "items": {
21641         "maxLength": 64,
21642         "type": "string"
21643     },
21644     "minItems": 1,
21645     "type": "array"
21646 },
21647 "title": {
21648     "description": "A title for the link relation. Can be used by the UI to provide a
21649 context",
21650     "maxLength": 64,
21651     "type": "string"
21652 },
21653 "type": {

```

```

21654         "default": "application/cbor",
21655         "description": "A hint at the representation of the resource referenced by the
21656 target URI. This represents the media types that are used for both accepting and emitting",
21657         "items": {
21658             "maxLength": 64,
21659             "type": "string"
21660         },
21661         "minItems": 1,
21662         "type": "array"
21663     },
21664     },
21665     "required": [
21666         "href",
21667         "rt",
21668         "if"
21669     ],
21670     "type": "object"
21671 },
21672 "type": "array"
21673 }
21674 ]
21675 }
21676
21677 ,
21678 "consumables" :
21679 {
21680     "description": "A collection is a set (array) of tagged-link or set (array) of simple links
21681 along with additional properties to describe the collection itself",
21682     "properties": {
21683         "di": {
21684             "description": "The device ID which is an UUIDv4 string; used for backward
21685 compatibility with Spec A definition of /oic/res",
21686             "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
21687 9]{12}$",
21688             "type": "string"
21689         },
21690         "drel": {
21691             "description": "When specified this is the default relationship to use when an OIC Link
21692 does not specify an explicit relationship with *rel* parameter",
21693             "type": "string"
21694         },
21695         "id": {
21696             "anyOf": [
21697                 {
21698                     "description": "A number that is unique to that collection; like an ordinal number
21699 that is not repeated",
21700                     "type": "integer"
21701                 },
21702                 {
21703                     "description": "A unique string that could be a hash or similarly unique",
21704                     "type": "string"
21705                 },
21706                 {
21707                     "description": "A unique string that could be a UUIDv4",
21708                     "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
21709 9]{12}$",
21710                     "type": "string"
21711                 }
21712             ],
21713             "description": "ID for the collection. Can be an value that is unique to the use
21714 context or a UUIDv4"
21715         },
21716         "links": {
21717             "description": "All forms of links in a collection",
21718             "oneOf": [
21719                 {
21720                     "description": "A set (array) of simple or individual OIC Links. In addition to
21721 properties required for an OIC Link, the identifier for that link in this set is also required",
21722                     "items": {
21723                         "properties": {
21724                             "anchor": {

```

```

21725         "description": "This is used to override the context URI e.g. override the
21726 URI of the containing collection",
21727         "format": "uri",
21728         "maxLength": 256,
21729         "type": "string"
21730     },
21731     "di": {
21732         "description": "Unique identifier for device (UUID)",
21733         "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-
21734 fA-F0-9]{12}$",
21735         "type": "string"
21736     },
21737     "eps": {
21738         "description": "the Endpoint information of the target Resource",
21739         "items": {
21740             "properties": {
21741                 "ep": {
21742                     "description": "URI with Transport Protocol Suites + Endpoint Locator
21743 as specified in 10.2.1",
21744                     "format": "uri",
21745                     "type": "string"
21746                 },
21747                 "pri": {
21748                     "description": "The priority among multiple Endpoints as specified in
21749 10.2.3",
21750                     "minimum": 1,
21751                     "type": "integer"
21752                 }
21753             },
21754             "type": "object"
21755         },
21756         "type": "array"
21757     },
21758     "href": {
21759         "description": "This is the target URI, it can be specified as a Relative
21760 Reference or fully-qualified URI. Relative Reference should be used along with the di parameter to
21761 make it unique.",
21762         "format": "uri",
21763         "maxLength": 256,
21764         "type": "string"
21765     },
21766     "if": {
21767         "description": "The interface set supported by this resource",
21768         "items": {
21769             "enum": [
21770                 "oic.if.baseline",
21771                 "oic.if.ll",
21772                 "oic.if.b",
21773                 "oic.if.rw",
21774                 "oic.if.r",
21775                 "oic.if.a",
21776                 "oic.if.s"
21777             ],
21778             "type": "string"
21779         },
21780         "minItems": 1,
21781         "type": "array"
21782     },
21783     "ins": {
21784         "description": "The instance identifier for this web link in an array of web
21785 links - used in collections",
21786         "oneOf": [
21787             {
21788                 "description": "An ordinal number that is not repeated - must be unique
21789 in the collection context",
21790                 "type": "integer"
21791             },
21792             {
21793                 "description": "Any unique string including a URI",
21794                 "format": "uri",
21795                 "maxLength": 256,

```

```

21796         "type": "string"
21797     },
21798     {
21799         "description": "Unique identifier (UUID)",
21800         "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-
21801 [a-fA-F0-9]{12}$",
21802         "type": "string"
21803     }
21804 ]
21805 },
21806 "p": {
21807     "description": "Specifies the framework policies on the Resource referenced
21808 by the target URI",
21809     "properties": {
21810         "bm": {
21811             "description": "Specifies the framework policies on the Resource
21812 referenced by the target URI for e.g. observable and discoverable",
21813             "type": "integer"
21814         }
21815     },
21816     "required": [
21817         "bm"
21818     ],
21819     "type": "object"
21820 },
21821 "rel": {
21822     "description": "The relation of the target URI referenced by the link to the
21823 context URI",
21824     "oneOf": [
21825         {
21826             "default": [
21827                 "hosts"
21828             ],
21829             "items": {
21830                 "maxLength": 64,
21831                 "type": "string"
21832             },
21833             "minItems": 1,
21834             "type": "array"
21835         },
21836         {
21837             "default": "hosts",
21838             "maxLength": 64,
21839             "type": "string"
21840         }
21841     ]
21842 },
21843 "rt": {
21844     "description": "Resource Type",
21845     "items": {
21846         "maxLength": 64,
21847         "type": "string"
21848     },
21849     "minItems": 1,
21850     "type": "array"
21851 },
21852 "title": {
21853     "description": "A title for the link relation. Can be used by the UI to
21854 provide a context",
21855     "maxLength": 64,
21856     "type": "string"
21857 },
21858 "type": {
21859     "default": "application/cbor",
21860     "description": "A hint at the representation of the resource referenced by
21861 the target URI. This represents the media types that are used for both accepting and emitting",
21862     "items": {
21863         "maxLength": 64,
21864         "type": "string"
21865     },
21866     "minItems": 1,

```



```

21867         "type": "array"
21868     },
21869     "required": [
21870         "href",
21871         "rt",
21872         "if"
21873     ],
21874     "type": "object"
21875 },
21876 "type": "array"
21877 }
21878 ]
21879 },
21880 "rt": {
21881     "items": {
21882         "enum": [
21883             "oic.r.consumablecollection",
21884             "oic.wk.col"
21885         ]
21886     },
21887     "maxItems": 2,
21888     "minItems": 2,
21889     "type": "array",
21890     "uniqueItems": true
21891 },
21892 "rts": {
21893     "description": "Defines the list of allowable resource types (for Target and anchors)
21894 in links included in the collection; new links being created can only be from this list",
21895     "items": {
21896         "anyOf": [
21897             {
21898                 "enum": [
21899                     "oic.r.consumable",
21900                     "oic.r.value.conditional"
21901                 ]
21902             },
21903             {
21904                 "enum": [
21905                     "oic.r.consumable"
21906                 ]
21907             }
21908         ],
21909         "maxLength": 64,
21910         "type": "string"
21911     },
21912     "maxItems": 2,
21913     "minItems": 1,
21914     "readOnly": true,
21915     "type": "array",
21916     "uniqueItems": true
21917 },
21918 "supportedconsumables": {
21919     "description": "Array of possible consumables the device measures.",
21920     "items": {
21921         "type": "string"
21922     },
21923     "readOnly": true,
21924     "type": "array"
21925 },
21926 },
21927 },
21928 "type": "object"
21929 }
21930 }
21931 }
21932 }
21933

```

B.30.5 Property Definition

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

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

				fully-qualified URI. Relative Reference should be used along with the di parameter to make it unique.
links	multiple types: see schema			All forms of links in a collection
rt	array: see schema	yes		
rts	array: see schema		Read Only	Defines the list of allowable resource types (for Target and anchors) in links included in the collection; new links being created can only be from this list
id	multiple types: see schema			ID for the collection. Can be an value that is unique to the use context or a UUIDv4
supportedconsumables	array: see schema		Read Only	Array of possible consumables the device measures.
drel	string			When specified this is the default relationship to use when an OIC Link does not specify an explicit relationship with *rel* parameter
di	string			The device ID which is an UUIDv4 string; used for backward compatibility with Spec A definition of /oic/res

21935

B.30.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/ConsumablesBaselineResURI		get			

B.31 Contact Sensor

B.31.1 Introduction

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

B.31.2 Example URI

/ContactResURI

B.31.3 Resource Type

The resource type (rt) is defined as: ['oic.r.sensor.contact'].

B.31.4 Swagger2.0 Definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Contact Sensor",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/ContactResURI": {
      "get": {
        "description": "This resource describes whether a contact sensor has been tripped or
not.\nTypical use case is in Security Systems detecting window or door open.\nThe value is a
boolean.\nA value of 'true' means that contact has been broken (open).\nA value of 'false' means
that contact is in place (closed).\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.sensor.contact"],
              "id": "unique_example_id",
              "value": true
            },
            "schema": { "$ref": "#/definitions/Contact" }
          }
        }
      }
    }
  }
}
```

```

21998     }
21999   }
22000 }
22001 },
22002 "parameters": {
22003   "interface": {
22004     "in": "query",
22005     "name": "if",
22006     "type": "string",
22007     "enum": ["oic.if.s", "oic.if.baseline"]
22008   }
22009 },
22010 "definitions": {
22011   "Contact": {
22012     {
22013       "properties": {
22014         "id": {
22015           "description": "Instance ID of this specific resource",
22016           "maxLength": 64,
22017           "readOnly": true,
22018           "type": "string"
22019         },
22020         "if": {
22021           "description": "The interface set supported by this resource",
22022           "items": {
22023             "enum": [
22024               "oic.if.baseline",
22025               "oic.if.ll",
22026               "oic.if.b",
22027               "oic.if.lb",
22028               "oic.if.rw",
22029               "oic.if.r",
22030               "oic.if.a",
22031               "oic.if.s"
22032             ],
22033             "type": "string"
22034           },
22035           "minItems": 1,
22036           "readOnly": true,
22037           "type": "array"
22038         },
22039         "n": {
22040           "description": "Friendly name of the resource",
22041           "maxLength": 64,
22042           "readOnly": true,
22043           "type": "string"
22044         },
22045         "precision": {
22046           "description": "Accuracy granularity of the exposed value",
22047           "readOnly": true,
22048           "type": "number"
22049         },
22050         "range": {
22051           "description": "The valid range for the value Property",
22052           "items": {
22053             "anyOf": [
22054               {
22055                 "type": "number"
22056               },
22057               {
22058                 "type": "integer"
22059               }
22060             ]
22061           },
22062           "maxItems": 2,
22063           "minItems": 2,
22064           "readOnly": true,
22065           "type": "array"
22066         },
22067         "rt": {
22068           "description": "Resource Type",

```

```

22069         "items": {
22070             "maxLength": 64,
22071             "type": "string"
22072         },
22073         "minItems": 1,
22074         "readOnly": true,
22075         "type": "array"
22076     },
22077     "step": {
22078         "anyOf": [
22079             {
22080                 "type": "integer"
22081             },
22082             {
22083                 "type": "number"
22084             }
22085         ],
22086         "description": "Step value across the defined range",
22087         "readOnly": true
22088     },
22089     "value": {
22090         "description": "true = sensed, false = not sensed.",
22091         "readOnly": true,
22092         "type": "boolean"
22093     }
22094 },
22095 "required": [
22096     "value"
22097 ],
22098 "type": "object"
22099 }
22100
22101 }
22102 }
22103

```

22104 B.31.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
n	string		Read Only	Friendly name of the resource
range	array: schema see		Read Only	The valid range for the value Property
value	boolean	yes	Read Only	true = sensed, false = not sensed.
if	array: schema see		Read Only	The interface set supported by this resource
rt	array: schema see		Read Only	Resource Type
precision	number		Read Only	Accuracy granularity of the exposed value
step	multiple types: see schema		Read Only	Step value across the defined range
id	string		Read Only	Instance ID of this specific resource

22105 B.31.6 CRUDN behaviour

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

/ContactResURI		get			
----------------	--	-----	--	--	--

22106 B.32 Delay Defrost

22107 B.32.1 Introduction

22108 This resource describes the delay defrost function as defined by the US Energy Star Specifications.
 22109 See Energy Star Refrigerator Requirements Version 5 Section 4)G
 22110 (<https://www.energystar.gov/sites/default/files/specs//private/ENERGY%20STAR%20Final%20Version%205.0%20Residential%20Refrigerators%20and%20Freezers%20Program%20Requirements.pdf>)
 22111

22112 The status is a boolean indicating whether the function is on, if off then defrost is scheduled as
 22113 part of normal device operation.
 22114 startTime, from oir.r.time.period (mandatory) is an ISO8601 encoded start time for the interval in
 22115 which defrost shall not occur.
 22116 stopTime, from oic.r.time.period is an ISO8601 encoded stop time for the interval in which defrost
 22117 shall not occur.
 22118 interval, from oic.r.time.period with additional range restrictions is the time in minutes of the period
 22119 that starts at starttime (if not present the default is 240).
 22120 stopTime and interval are mutually exclusive; they cannot both be present in a Resource instance
 22121
 22122 Retrieves the current Delay Defrost function status
 22123

22124 B.32.2 Example URI

22125 /DelayDefrostResURI

22126 B.32.3 Resource Type

22127 The resource type (rt) is defined as: ['oic.r.delaydefrost'].

22128 B.32.4 Swagger2.0 Definition

```

22129 {
22130   "swagger": "2.0",
22131   "info": {
22132     "title": "Delay Defrost",
22133     "version": "OCF_v1.0.0-2016____",
22134     "license": {
22135       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
22136       "x-description": "Redistribution and use in source and binary forms, with or without
22137 modification, are permitted provided that the following conditions are met:\n      1.
22138 Redistributions of source code must retain the above copyright notice, this list of conditions and
22139 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
22140 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
22141 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
22142 Connectivity Foundation, INC. \n\"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
22143 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
22144 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
22145 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
22146 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
22147 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
22148 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
22149 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
22150 OF SUCH DAMAGE.\n"
22151     }
22152   },
22153   "schemes": ["http"],
22154   "consumes": ["application/json"],
22155   "produces": ["application/json"],
22156   "paths": {
22157     "/DelayDefrostResURI" : {
22158       "get": {
22159         "description": "This resource describes the delay defrost function as defined by the US
22160 Energy Star Specifications.\nSee Energy Star Refrigerator Requirements Version 5 Section
22161 4)G\n(https://www.energystar.gov/sites/default/files/specs//private/ENERGY%20STAR%20Final%20Version%205.0%20Residential%20Refrigerators%20and%20Freezers%20Program%20Requirements.pdf)\nThe status is
  
```

```

22163 a boolean indicating whether the function is on, if off then defrost is scheduled as part of normal
22164 device operation.\nstartTime, from oic.r.time.period (mandatory) is an ISO8601 encoded start time
22165 for the interval in which defrost shall not occur.\nstopTime, from oic.r.time.period is an ISO8601
22166 encoded stop time for the interval in which defrost shall not occur.\ninterval, from
22167 oic.r.time.period with additional range restrictions is the time in minutes of the period that
22168 starts at starttime (if not present the default is 240).\nstopTime and interval are mutually
22169 exclusive; they cannot both be present in a Resource instance\nRetrieves the current Delay Defrost
22170 function status\n",
22171     "parameters": [
22172         { "$ref": "#/parameters/interface" }
22173     ],
22174     "responses": {
22175         "200": {
22176             "description": "",
22177             "x-example": {
22178                 "rt": [ "oic.r.delaydefrost" ],
22179                 "id": "unique_example_id",
22180                 "startTime": "06:00Z",
22181                 "status": false
22182             }
22183         },
22184         "schema": { "$ref": "#/definitions/DelayDefrost" }
22185     }
22186 },
22187 },
22188 "post": {
22189     "description": "Activates the desired Delay Defrost functions\n",
22190     "parameters": [
22191         { "$ref": "#/parameters/interface" },
22192         {
22193             "name": "body",
22194             "in": "body",
22195             "required": true,
22196             "schema": { "$ref": "#/definitions/DelayDefrost" },
22197             "x-example": {
22198                 "id": "unique_example_id",
22199                 "status": true,
22200                 "startTime": "06:00Z",
22201                 "interval": 180
22202             }
22203         }
22204     ],
22205     "responses": {
22206         "200": {
22207             "description": "Indicates that the DelayDefrost function was changed.\nThe new
22208 representation may be provided in the response.\n",
22209             "x-example": {
22210                 "id": "unique_example_id",
22211                 "status": true,
22212                 "startTime": "06:00Z",
22213                 "interval": 180
22214             }
22215         },
22216         "schema": { "$ref": "#/definitions/DelayDefrost" }
22217     },
22218     "403": {
22219         "description": "Indicates the update to the time properties was rejected.\nReasons
22220 for rejection:\n invalid time entry\nThe current unchanged representation may be provided in the
22221 response.\n",
22222         "x-example": {
22223             "id": "unique_example_id",
22224             "status": true,
22225             "startTime": "06:00Z",
22226             "interval": 180
22227         },
22228         "schema": { "$ref": "#/definitions/DelayDefrost" }
22229     }
22230 }

```



```

22234     }
22235   }
22236 }
22237 }
22238 },
22239 "parameters": {
22240   "interface" : {
22241     "in" : "query",
22242     "name" : "if",
22243     "type" : "string",
22244     "enum" : ["oic.if.a", "oic.if.baseline"]
22245   }
22246 },
22247 "definitions": {
22248   "DelayDefrost" :
22249     {
22250     "properties": {
22251       "id": {
22252         "description": "Instance ID of this specific resource",
22253         "maxLength": 64,
22254         "readOnly": true,
22255         "type": "string"
22256       },
22257       "if": {
22258         "description": "The interface set supported by this resource",
22259         "items": {
22260           "enum": [
22261             "oic.if.baseline",
22262             "oic.if.ll",
22263             "oic.if.b",
22264             "oic.if.lb",
22265             "oic.if.rw",
22266             "oic.if.r",
22267             "oic.if.a",
22268             "oic.if.s"
22269           ],
22270           "type": "string"
22271         },
22272         "minItems": 1,
22273         "readOnly": true,
22274         "type": "array"
22275       },
22276       "interval": {
22277         "default": 240,
22278         "description": "Defrost interval as defined by Energy Star",
22279         "maximum": 1440,
22280         "minimum": 1,
22281         "type": "integer"
22282       },
22283       "n": {
22284         "description": "Friendly name of the resource",
22285         "maxLength": 64,
22286         "readOnly": true,
22287         "type": "string"
22288       },
22289       "precision": {
22290         "description": "Accuracy granularity of the exposed value",
22291         "readOnly": true,
22292         "type": "number"
22293       },
22294       "range": {
22295         "description": "The valid range for the value Property",
22296         "items": {
22297           "anyOf": [
22298             {
22299               "type": "number"
2300             },
2301             {
2302               "type": "integer"
2303             }
2304           ]

```

```

22305         },
22306         "maxItems": 2,
22307         "minItems": 2,
22308         "readOnly": true,
22309         "type": "array"
22310     },
22311     "rt": {
22312         "description": "Resource Type",
22313         "items": {
22314             "maxLength": 64,
22315             "type": "string"
22316         },
22317         "minItems": 1,
22318         "readOnly": true,
22319         "type": "array"
22320     },
22321     "startTime": {
22322         "description": "Start time for the time period",
22323         "type": "string"
22324     },
22325     "status": {
22326         "description": "Indicates whether any supported delay defrost function is active",
22327         "type": "boolean"
22328     },
22329     "step": {
22330         "anyOf": [
22331             {
22332                 "type": "integer"
22333             },
22334             {
22335                 "type": "number"
22336             }
22337         ],
22338         "description": "Step value across the defined range",
22339         "readOnly": true
22340     },
22341     "stopTime": {
22342         "description": "Stop time for the time period, if present interval cannot be present",
22343         "type": "string"
22344     },
22345     "value": {
22346         "anyOf": [
22347             {
22348                 "type": "array"
22349             },
22350             {
22351                 "type": "string"
22352             },
22353             {
22354                 "type": "boolean"
22355             },
22356             {
22357                 "type": "integer"
22358             },
22359             {
22360                 "type": "number"
22361             },
22362             {
22363                 "type": "object"
22364             }
22365         ],
22366         "description": "The value sensed or actuated by this Resource"
22367     }
22368 },
22369 "required": [
22370     "startTime",
22371     "status"
22372 ],
22373 "type": "object"
22374 }
22375

```

22376 }
 22377 }
 22378 }

22379 B.32.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema		Read Only	Resource Type
precision	number		Read Only	Accuracy granularity of the exposed value
if	array: see schema		Read Only	The interface set supported by this resource
range	array: see schema		Read Only	The valid range for the value Property
value	multiple types: see schema			The value sensed or actuated by this Resource
step	multiple types: see schema		Read Only	Step value across the defined range
n	string		Read Only	Friendly name of the resource
id	string		Read Only	Instance ID of this specific resource
startTime	string	yes		Start time for the time period
status	boolean	yes		Indicates whether any supported delay defrost function is active
interval	integer			Defrost interval as defined by Energy Star
stopTime	string			Stop time for the time period, if present interval cannot be present

22380 B.32.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/DelayDefrostResURI		get	post		

22381 B.33 Dimming

22382 B.33.1 Introduction

22383 This resource describes a dimming function.
 22384 The value is an integer showing the current dimming level.
 22385 If step (from oic.r.baseresource) is present then it represents the increment between dimmer
 22386 values.

22387 When range (from oic.r.baseresource) is omitted, then the range is [0,100].
22388 A value of 0 means total dimming; a value of 100 means no dimming.
22389 Retrieves the current dimming level.
22390

22391 **B.33.2 Example URI**

22392 /DimmingResURI

22393 **B.33.3 Resource Type**

22394 The resource type (rt) is defined as: ['oic.r.light.dimming'].

22395 **B.33.4 Swagger2.0 Definition**

```
22396 {  
22397   "swagger": "2.0",  
22398   "info": {  
22399     "title": "Dimming",  
22400     "version": "v1.1.0-20160519",  
22401     "license": {  
22402       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
22403       "x-description": "Redistribution and use in source and binary forms, with or without  
22404 modification, are permitted provided that the following conditions are met:\n      1.  
22405 Redistributions of source code must retain the above copyright notice, this list of conditions and  
22406 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
22407 copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
22408 other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open  
22409 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT  
22410 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR  
22411 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity  
22412 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,  
22413 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS  
22414 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND  
22415 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR  
22416 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY  
22417 OF SUCH DAMAGE.\n    }  
22418   },  
22419   "schemes": ["http"],  
22420   "consumes": ["application/json"],  
22421   "produces": ["application/json"],  
22422   "paths": {  
22423     "/DimmingResURI" : {  
22424       "get": {  
22425         "description": "This resource describes a dimming function.\nThe value is an integer  
22426 showing the current dimming level.\nIf step (from oic.r.baseresource) is present then it represents  
22427 the increment between dimmer values.\nWhen range (from oic.r.baseresource) is omitted, then the  
22428 range is [0,100].\nA value of 0 means total dimming; a value of 100 means no dimming.\nRetrieves  
22429 the current dimming level.\n",  
22430         "parameters": [  
22431           {  
22432             "$ref": "#/parameters/interface"  
22433           }  
22434         ],  
22435         "responses": {  
22436           "200": {  
22437             "description": "",  
22438             "x-example": {  
22439               "rt": ["oic.r.light.dimming"],  
22440               "id": "unique_example_id",  
22441               "dimmingSetting": 30,  
22442               "step": 5,  
22443               "range": [0,100]  
22444             }  
22445           },  
22446           "schema": {  
22447             "$ref": "#/definitions/Dimming"  
22448           }  
22449         }  
22450       },  
22451       "post": {  
22452         "description": "Sets the desired dimming level.\n",
```

```

22452     "parameters": [
22453         { "$ref": "#/parameters/interface" },
22454         {
22455             "name": "body",
22456             "in": "body",
22457             "required": true,
22458             "schema": { "$ref": "#/definitions/Dimming" },
22459             "x-example":
22460                 {
22461                     "id": "unique_example_id",
22462                     "dimmingSetting": 40
22463                 }
22464         },
22465     ],
22466     "responses": {
22467         "200": {
22468             "description": "Indicates that the dimming was changed.\n\nThe new dimming level is
22469 provided in the response.\n",
22470             "x-example":
22471                 {
22472                     "id": "unique_example_id",
22473                     "dimmingSetting": 40
22474                 },
22475             "schema": { "$ref": "#/definitions/Dimming" }
22476         },
22477         "403": {
22478             "description": "This response is generated by the OIC Server when the client
22479 sends:\n\n An update with an out of range property value for dimmingSetting.\n\nThe server responds
22480 with the current resource representation.\n",
22481             "x-example":
22482                 {
22483                     "id": "unique_example_id",
22484                     "dimmingSetting": 40
22485                 },
22486             "schema": { "$ref": "#/definitions/Dimming" }
22487         }
22488     }
22489 }
22490 }
22491 }
22492 }
22493 },
22494 "parameters": {
22495     "interface": {
22496         "in": "query",
22497         "name": "if",
22498         "type": "string",
22499         "enum": ["oic.if.a", "oic.if.baseline"]
22500     }
22501 },
22502 "definitions": {
22503     "Dimming": {
22504         {
22505             "properties": {
22506                 "dimmingSetting": {
22507                     "description": "Current dimming value",
22508                     "type": "integer"
22509                 },
22510                 "id": {
22511                     "description": "Instance ID of this specific resource",
22512                     "maxLength": 64,
22513                     "readOnly": true,
22514                     "type": "string"
22515                 },
22516                 "if": {
22517                     "description": "The interface set supported by this resource",
22518                     "items": {
22519                         "enum": [
22520                             "oic.if.baseline",
22521                             "oic.if.ll",
22522                             "oic.if.b",

```

```

22523         "oic.if.lb",
22524         "oic.if.rw",
22525         "oic.if.r",
22526         "oic.if.a",
22527         "oic.if.s"
22528     ],
22529     "type": "string"
22530 },
22531 "minItems": 1,
22532 "readOnly": true,
22533 "type": "array"
22534 },
22535 "n": {
22536     "description": "Friendly name of the resource",
22537     "maxLength": 64,
22538     "readOnly": true,
22539     "type": "string"
22540 },
22541 "precision": {
22542     "description": "Accuracy granularity of the exposed value",
22543     "readOnly": true,
22544     "type": "number"
22545 },
22546 "range": {
22547     "description": "The valid range for the value Property",
22548     "items": {
22549         "anyOf": [
22550             {
22551                 "type": "number"
22552             },
22553             {
22554                 "type": "integer"
22555             }
22556         ]
22557     },
22558     "maxItems": 2,
22559     "minItems": 2,
22560     "readOnly": true,
22561     "type": "array"
22562 },
22563 "rt": {
22564     "description": "Resource Type",
22565     "items": {
22566         "maxLength": 64,
22567         "type": "string"
22568     },
22569     "minItems": 1,
22570     "readOnly": true,
22571     "type": "array"
22572 },
22573 "step": {
22574     "anyOf": [
22575         {
22576             "type": "integer"
22577         },
22578         {
22579             "type": "number"
22580         }
22581     ],
22582     "description": "Step value across the defined range",
22583     "readOnly": true
22584 },
22585 "value": {
22586     "anyOf": [
22587         {
22588             "type": "array"
22589         },
22590         {
22591             "type": "string"
22592         },
22593         {

```

```

22594         "type": "boolean"
22595     },
22596     {
22597         "type": "integer"
22598     },
22599     {
22600         "type": "number"
22601     },
22602     {
22603         "type": "object"
22604     }
22605 ],
22606 "description": "The value sensed or actuated by this Resource"
22607 },
22608 },
22609 "required": [
22610     "dimmingSetting"
22611 ],
22612 "type": "object"
22613 }
22614 }
22615 }
22616 }
22617

```

B.33.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
value	multiple types: see schema			The value sensed or actuated by this Resource
step	multiple types: see schema		Read Only	Step value across the defined range
rt	array: see schema		Read Only	Resource Type
precision	number		Read Only	Accuracy granularity of the exposed value
id	string		Read Only	Instance ID of this specific resource
n	string		Read Only	Friendly name of the resource
dimmingSetting	integer	yes		Current dimming value
if	array: see schema		Read Only	The interface set supported by this resource
range	array: see schema		Read Only	The valid range for the value Property

B.33.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/DimmingResURI		get	post		

22620 **B.34 Door**

22621 **B.34.1 Introduction**

22622 This resource describes the open state of the door.
22623 A door is modelled by means of openState (Open/Closed), openDuration (ISO 8601 Time), and
22624 openAlarm (boolean).
22625 For openState, the value 'Open' indicates the door is open.
22626 The value 'Closed' indicates the door is closed.
22627 The type of openDuration is an ISO 8601 Time encoded string.
22628 The openAlarm value 'true' indicates that the open alarm is active.
22629 The openAlarm value 'false' indicates that open alarm is not active.
22630 retrieves the state of the Door.

22631 **B.34.2 Example URI**

22632 /DoorResURI

22633 **B.34.3 Resource Type**

22634 The resource type (rt) is defined as: ['oic.r.door'].

22635 **B.34.4 Swagger2.0 Definition**

```
22636 {  
22637   "swagger": "2.0",  
22638   "info": {  
22639     "title": "Door",  
22640     "version": "v1.1.0-20160519",  
22641     "license": {  
22642       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
22643       "x-description": "Redistribution and use in source and binary forms, with or without  
22644 modification, are permitted provided that the following conditions are met:\n      1.  
22645 Redistributions of source code must retain the above copyright notice, this list of conditions and  
22646 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
22647 copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
22648 other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open  
22649 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT  
22650 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR  
22651 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity  
22652 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,  
22653 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS  
22654 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND  
22655 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR  
22656 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY  
22657 OF SUCH DAMAGE.\n    }  
22658   },  
22659   "schemes": ["http"],  
22660   "consumes": ["application/json"],  
22661   "produces": ["application/json"],  
22662   "paths": {  
22663     "/DoorResURI" : {  
22664       "get": {  
22665         "description": "This resource describes the open state of the door.\n      A door is modelled by  
22666 means of openState (Open/Closed), openDuration (ISO 8601 Time), and openAlarm (boolean).\n      For  
22667 openState, the value 'Open' indicates the door is open.\n      The value 'Closed' indicates the door is  
22668 closed.\n      The type of openDuration is an ISO 8601 Time encoded string.\n      The openAlarm value 'true'  
22669 indicates that the open alarm is active.\n      The openAlarm value 'false' indicates that open alarm is  
22670 not active.\n      retrieves the state of the Door.",  
22671         "parameters": [  
22672           { "$ref": "#/parameters/interface-all" }  
22673         ],  
22674         "responses": {  
22675           "200": {  
22676             "description": "",  
22677             "x-example":  
22678               {  
22679                 "rt" :           ["oic.r.door"],  
22680                 "id" :           "unique_example_id",  
22681
```



```

22682         "openState": "Open",
22683         "openDuration": "P0Y0M0DT2H25M5S",
22684         "openAlarm": true
22685     }
22686     ,
22687     "schema": { "$ref": "#/definitions/Door" }
22688 }
22689 },
22690 ],
22691 "post": {
22692     "description": "Sets the current Door properties.\nThe only property that can be set as
22693 part of an update operation is\n the openAlarm.\nThis can be made active (true) or inactive
22694 (false)\n",
22695     "parameters": [
22696         { "$ref": "#/parameters/interface-actuator" },
22697         {
22698             "name": "body",
22699             "in": "body",
22700             "required": true,
22701             "schema": { "$ref": "#/definitions/DoorUpdate" },
22702             "x-example":
22703                 {
22704                     "id": "unique_example_id",
22705                     "openAlarm": false
22706                 }
22707         }
22708     ],
22709     "responses": {
22710         "200": {
22711             "description": "",
22712             "x-example":
22713                 {
22714                     "id": "unique_example_id",
22715                     "openAlarm": false
22716                 }
22717             ,
22718             "schema": { "$ref": "#/definitions/DoorUpdate" }
22719         }
22720     }
22721 }
22722 },
22723 },
22724 "parameters": {
22725     "interface-actuator" : {
22726         "in" : "query",
22727         "name" : "if",
22728         "type" : "string",
22729         "enum" : ["oic.if.a", "oic.if.baseline"]
22730     },
22731     "interface-all" : {
22732         "in" : "query",
22733         "name" : "if",
22734         "type" : "string",
22735         "enum" : ["oic.if.a", "oic.if.s", "oic.if.baseline"]
22736     }
22737 },
22738 "definitions": {
22739     "Door" :
22740     {
22741         "properties": {
22742             "id": {
22743                 "description": "Instance ID of this specific resource",
22744                 "maxLength": 64,
22745                 "readOnly": true,
22746                 "type": "string"
22747             },
22748             "if": {
22749                 "description": "The interface set supported by this resource",
22750                 "items": {
22751                     "enum": [
22752                         "oic.if.baseline",

```

```

22753         "oic.if.ll",
22754         "oic.if.b",
22755         "oic.if.lb",
22756         "oic.if.rw",
22757         "oic.if.r",
22758         "oic.if.a",
22759         "oic.if.s"
22760     ],
22761     "type": "string"
22762 },
22763     "minItems": 1,
22764     "readOnly": true,
22765     "type": "array"
22766 },
22767     "n": {
22768         "description": "Friendly name of the resource",
22769         "maxLength": 64,
22770         "readOnly": true,
22771         "type": "string"
22772     },
22773     "openAlarm": {
22774         "description": "The state of the door open alarm",
22775         "type": "boolean"
22776     },
22777     "openDuration": {
22778         "description": "The time duration the door has been open",
22779         "readOnly": true,
22780         "type": "string"
22781     },
22782     "openState": {
22783         "description": "The state of the door (open or closed)",
22784         "enum": [
22785             "Open",
22786             "Closed"
22787         ],
22788         "readOnly": true
22789     },
22790     "precision": {
22791         "description": "Accuracy granularity of the exposed value",
22792         "readOnly": true,
22793         "type": "number"
22794     },
22795     "range": {
22796         "description": "The valid range for the value Property",
22797         "items": {
22798             "anyOf": [
22799                 {
22800                     "type": "number"
22801                 },
22802                 {
22803                     "type": "integer"
22804                 }
22805             ]
22806         },
22807         "maxItems": 2,
22808         "minItems": 2,
22809         "readOnly": true,
22810         "type": "array"
22811     },
22812     "rt": {
22813         "description": "Resource Type",
22814         "items": {
22815             "maxLength": 64,
22816             "type": "string"
22817         },
22818         "minItems": 1,
22819         "readOnly": true,
22820         "type": "array"
22821     },
22822     "step": {
22823         "anyOf": [

```

```

22824         {
22825             "type": "integer"
22826         },
22827         {
22828             "type": "number"
22829         }
22830     ],
22831     "description": "Step value across the defined range",
22832     "readOnly": true
22833 },
22834 "value": {
22835     "anyOf": [
22836         {
22837             "type": "array"
22838         },
22839         {
22840             "type": "string"
22841         },
22842         {
22843             "type": "boolean"
22844         },
22845         {
22846             "type": "integer"
22847         },
22848         {
22849             "type": "number"
22850         },
22851         {
22852             "type": "object"
22853         }
22854     ],
22855     "description": "The value sensed or actuated by this Resource"
22856 },
22857 },
22858 "required": [
22859     "openState"
22860 ],
22861 "type": "object"
22862 }
22863
22864 ,
22865 "DoorUpdate" :
22866 {
22867     "properties": {
22868         "id": {
22869             "description": "Instance ID of this specific resource",
22870             "maxLength": 64,
22871             "readOnly": true,
22872             "type": "string"
22873         },
22874         "if": {
22875             "description": "The interface set supported by this resource",
22876             "items": {
22877                 "enum": [
22878                     "oic.if.baseline",
22879                     "oic.if.ll",
22880                     "oic.if.b",
22881                     "oic.if.lb",
22882                     "oic.if.rw",
22883                     "oic.if.r",
22884                     "oic.if.a",
22885                     "oic.if.s"
22886                 ],
22887                 "type": "string"
22888             },
22889             "minItems": 1,
22890             "readOnly": true,
22891             "type": "array"
22892         },
22893         "n": {
22894             "description": "Friendly name of the resource",

```

```

22895         "maxLength": 64,
22896         "readOnly": true,
22897         "type": "string"
22898     },
22899     "openAlarm": {
22900         "description": "The state of the door open alarm",
22901         "type": "boolean"
22902     },
22903     "precision": {
22904         "description": "Accuracy granularity of the exposed value",
22905         "readOnly": true,
22906         "type": "number"
22907     },
22908     "range": {
22909         "description": "The valid range for the value Property",
22910         "items": {
22911             "anyOf": [
22912                 {
22913                     "type": "number"
22914                 },
22915                 {
22916                     "type": "integer"
22917                 }
22918             ]
22919         },
22920         "maxItems": 2,
22921         "minItems": 2,
22922         "readOnly": true,
22923         "type": "array"
22924     },
22925     "rt": {
22926         "description": "Resource Type",
22927         "items": {
22928             "maxLength": 64,
22929             "type": "string"
22930         },
22931         "minItems": 1,
22932         "readOnly": true,
22933         "type": "array"
22934     },
22935     "step": {
22936         "anyOf": [
22937             {
22938                 "type": "integer"
22939             },
22940             {
22941                 "type": "number"
22942             }
22943         ],
22944         "description": "Step value across the defined range",
22945         "readOnly": true
22946     },
22947     "value": {
22948         "anyOf": [
22949             {
22950                 "type": "array"
22951             },
22952             {
22953                 "type": "string"
22954             },
22955             {
22956                 "type": "boolean"
22957             },
22958             {
22959                 "type": "integer"
22960             },
22961             {
22962                 "type": "number"
22963             },
22964             {
22965                 "type": "object"

```

```

22966     }
22967     },
22968     "description": "The value sensed or actuated by this Resource"
22969   },
22970 },
22971 "type": "object"
22972 }
22973 }
22974 }
22975 }
22976

```

B.34.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
id	string		Read Only	Instance ID of this specific resource
range	array: see schema		Read Only	The valid range for the value Property
value	multiple types: see schema			The value sensed or actuated by this Resource
n	string		Read Only	Friendly name of the resource
rt	array: see schema		Read Only	Resource Type
step	multiple types: see schema		Read Only	Step value across the defined range
openAlarm	boolean			The state of the door open alarm
precision	number		Read Only	Accuracy granularity of the exposed value
if	array: see schema		Read Only	The interface set supported by this resource
openState	multiple types: see schema	yes	Read Only	The state of the door (open or closed)
openDuration	string		Read Only	The time duration the door has been open
id	string		Read Only	Instance ID of this specific resource
range	array: see schema		Read Only	The valid range for the value Property
n	string		Read Only	Friendly name of the resource
step	multiple types: see schema		Read Only	Step value across the defined range
openAlarm	boolean			The state of the door open alarm

precision	number		Read Only	Accuracy granularity of the exposed value
if	array: see schema		Read Only	The interface set supported by this resource
rt	array: see schema		Read Only	Resource Type
value	multiple types: see schema			The value sensed or actuated by this Resource

22978 B.34.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/DoorResURI		get	post		

22979 B.35 Demand Response Load Control (DRLC).

22980 B.35.1 Introduction

22981 This resource describes any to be applied or currently being applied DRLC signal.
 22982 The DRType is the ApplianceLoadReductionType defined in Zigbee/HA Smart Energy Profile 2.0.
 22983 Start is a string containing an ISO8601 encoded start time.
 22984 The duration value is in minutes.
 22985 Override indicates whether the consumer has overridden the request (true) or not (false).
 22986 Provides the current DRLC action that is being applied.
 22987

22988 B.35.2 Example URI

22989 /DRLCResURI

22990 B.35.3 Resource Type

22991 The resource type (rt) is defined as: ['oic.r.energy.drlc'].

22992 B.35.4 Swagger2.0 Definition

```

22993 {
22994   "swagger": "2.0",
22995   "info": {
22996     "title": "Demand Response Load Control (DRLC).",
22997     "version": "v1.1.0-20160519",
22998     "license": {
22999       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
23000       "x-description": "Redistribution and use in source and binary forms, with or without
23001 modification, are permitted provided that the following conditions are met:\n      1.
23002 Redistributions of source code must retain the above copyright notice, this list of conditions and
23003 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
23004 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
23005 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
23006 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
23007 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
23008 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
23009 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
23010 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
23011 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
23012 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
23013 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
23014 OF SUCH DAMAGE.\n"
23015     }
23016   },
23017   "schemes": ["http"],
23018   "consumes": ["application/json"],
  
```

```

23019     "produces": ["application/json"],
23020     "paths": {
23021         "/DRLCResURI" : {
23022             "get": {
23023                 "description": "This resource describes any to be applied or currently being applied DRLC
23024 signal.\n\nThe DRType is the ApplianceLoadReductionType defined in Zigbee/HA Smart Energy Profile
23025 2.0.\n\nStart is a string containing an ISO8601 encoded start time.\n\nThe duration value is in
23026 minutes.\n\nOverride indicates whether the consumer has overridden the request (true) or not
23027 (false).\n\nProvides the current DRLC action that is being applied.\n",
23028                 "parameters": [
23029                     { "$ref": "#/parameters/interface" }
23030                 ],
23031                 "responses": {
23032                     "200": {
23033                         "description": "",
23034                         "x-example":
23035                         {
23036                             "rt": ["oic.r.energy.drlc"],
23037                             "id": "unique_example_id",
23038                             "DRType": 1,
23039                             "start": "2015-01-09T16:45Z",
23040                             "duration": 10,
23041                             "override": false
23042                         }
23043                     },
23044                     "schema": { "$ref": "#/definitions/DRLC" }
23045                 }
23046             },
23047             "put": {
23048                 "description": "Provides the DRLC action to be applied to the device or updates an existing
23049 action.\n",
23050                 "parameters": [
23051                     { "$ref": "#/parameters/interface" },
23052                     {
23053                         "name": "body",
23054                         "in": "body",
23055                         "required": true,
23056                         "schema": { "$ref": "#/definitions/DRLC" },
23057                         "x-example":
23058                         {
23059                             "rt": ["oic.r.energy.drlc"],
23060                             "id": "unique_example_id",
23061                             "DRType": 1,
23062                             "start": "2015-01-09T16:45Z",
23063                             "duration": 10
23064                         }
23065                     }
23066                 ],
23067                 "responses": {
23068                     "200": {
23069                         "description": "Indicates that the target DRLC resource was changed.\n\nThe new
23070 resource attributes are provided in the response.\n",
23071                         "x-example":
23072                         {
23073                             "DRType": 1,
23074                             "id": "unique_example_id",
23075                             "start": "2015-01-09T17:00Z",
23076                             "duration": 15,
23077                             "override": false
23078                         }
23079                     },
23080                     "schema": { "$ref": "#/definitions/DRLC" }
23081                 },
23082                     "201": {
23083                         "description": "Indicates successful creation of the DRLC resource with the
23084 attributes provided.\n\nThe response includes the URI of the created resource.\n",
23085                         "x-example":
23086                         {
23087                             "ResURI": "/MyDevice/MyDRLCURI"
23088                         }
23089                     }

```

```

23090         ,
23091         "schema": { "$ref": "#/definitions/CreateResponse" }
23092     }
23093 }
23094 }
23095 }
23096 },
23097 "parameters": {
23098     "interface" : {
23099         "in" : "query",
23100         "name" : "if",
23101         "type" : "string",
23102         "enum" : ["oic.if.b", "oic.if.baseline"]
23103     }
23104 },
23105 "definitions": {
23106     "DRLC" :
23107     {
23108         "properties": {
23109             "DRType": {
23110                 "description": "The to be applied demand-response type",
23111                 "type": "integer"
23112             },
23113             "duration": {
23114                 "description": "The duration of the to be applied DR type",
23115                 "type": "integer"
23116             },
23117             "id": {
23118                 "description": "Instance ID of this specific resource",
23119                 "maxLength": 64,
23120                 "readOnly": true,
23121                 "type": "string"
23122             },
23123             "if": {
23124                 "description": "The interface set supported by this resource",
23125                 "items": {
23126                     "enum": [
23127                         "oic.if.baseline",
23128                         "oic.if.ll",
23129                         "oic.if.b",
23130                         "oic.if.lb",
23131                         "oic.if.rw",
23132                         "oic.if.r",
23133                         "oic.if.a",
23134                         "oic.if.s"
23135                     ],
23136                     "type": "string"
23137                 },
23138                 "minItems": 1,
23139                 "readOnly": true,
23140                 "type": "array"
23141             },
23142             "n": {
23143                 "description": "Friendly name of the resource",
23144                 "maxLength": 64,
23145                 "readOnly": true,
23146                 "type": "string"
23147             },
23148             "override": {
23149                 "description": "Whether the consumer has overridden the application of DR",
23150                 "type": "boolean"
23151             },
23152             "precision": {
23153                 "description": "Accuracy granularity of the exposed value",
23154                 "readOnly": true,
23155                 "type": "number"
23156             },
23157             "range": {
23158                 "description": "The valid range for the value Property",
23159                 "items": {
23160                     "anyOf": [

```



```

23161         {
23162             "type": "number"
23163         },
23164         {
23165             "type": "integer"
23166         }
23167     ],
23168 },
23169 "maxItems": 2,
23170 "minItems": 2,
23171 "readOnly": true,
23172 "type": "array"
23173 },
23174 "rt": {
23175     "description": "Resource Type",
23176     "items": {
23177         "maxLength": 64,
23178         "type": "string"
23179     },
23180     "minItems": 1,
23181     "readOnly": true,
23182     "type": "array"
23183 },
23184 "start": {
23185     "description": "The start time for the application of DR",
23186     "type": "string"
23187 },
23188 "step": {
23189     "anyOf": [
23190         {
23191             "type": "integer"
23192         },
23193         {
23194             "type": "number"
23195         }
23196     ],
23197     "description": "Step value across the defined range",
23198     "readOnly": true
23199 },
23200 "value": {
23201     "anyOf": [
23202         {
23203             "type": "array"
23204         },
23205         {
23206             "type": "string"
23207         },
23208         {
23209             "type": "boolean"
23210         },
23211         {
23212             "type": "integer"
23213         },
23214         {
23215             "type": "number"
23216         },
23217         {
23218             "type": "object"
23219         }
23220     ],
23221     "description": "The value sensed or actuated by this Resource"
23222 }
23223 },
23224 "required": [
23225     "DRType"
23226 ],
23227 "type": "object"
23228 }
23229
23230 ,
23231 "CreateResponse" :

```

```

23232     {
23233     "properties": {
23234       "ResURI": {
23235         "type": "string"
23236       }
23237     },
23238     "type": "object"
23239   }
23240 }
23241 }
23242 }
23243

```

B.35.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
ResURI	string			
value	multiple types: see schema			The value sensed or actuated by this Resource
start	string			The start time for the application of DR
duration	integer			The duration of the to be applied DR type
override	boolean			Whether the consumer has overridden the application of DR
range	array: see schema		Read Only	The valid range for the value Property
rt	array: see schema		Read Only	Resource Type
step	multiple types: see schema		Read Only	Step value across the defined range
if	array: see schema		Read Only	The interface set supported by this resource
precision	number		Read Only	Accuracy granularity of the exposed value
DRType	integer	yes		The to be applied demand-response type
n	string		Read Only	Friendly name of the resource
id	string		Read Only	Instance ID of this specific resource

B.35.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/DRLCResURI	put	get			

23246 **B.36 Eco Mode**

23247 **B.36.1 Introduction**

23248 This resource specifies the supported and currently active Eco Mode of a Device
23249 The Resource uses the existing schema for Mode (oic.r.mode) with a restriction that the population
23250 of supportedmodes and modes Properties is restricted to the set of values given below:
23251 "disabled","enabled","notsupported"
23252 The adminforced Property indicates that the value has been set by another party (e.g. via some
23253 offboard Smart Energy interaction)
23254

23255 **B.36.2 Example URI**

23256 /EcomodeResURI

23257 **B.36.3 Resource Type**

23258 The resource type (rt) is defined as: ['oic.r.ecomode'].

23259 **B.36.4 Swagger2.0 Definition**

```
23260 {  
23261   "swagger": "2.0",  
23262   "info": {  
23263     "title": "Eco Mode",  
23264     "version": "OCF-v1.0.0-20160620",  
23265     "license": {  
23266       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
23267       "x-description": "Redistribution and use in source and binary forms, with or without  
23268 modification, are permitted provided that the following conditions are met:\n      1.  
23269 Redistributions of source code must retain the above copyright notice, this list of conditions and  
23270 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
23271 copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
23272 other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open  
23273 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT  
23274 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR  
23275 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity  
23276 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,  
23277 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS  
23278 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND  
23279 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR  
23280 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY  
23281 OF SUCH DAMAGE.\n    }  
23282   },  
23283   "schemes": ["http"],  
23284   "consumes": ["application/json"],  
23285   "produces": ["application/json"],  
23286   "paths": {  
23287     "/EcomodeResURI" : {  
23288       "get": {  
23289         "description": "This resource specifies the supported and currently active Eco Mode of a  
23290 Device\nThe Resource uses the existing schema for Mode (oic.r.mode) with a restriction that the  
23291 population of supportedmodes and modes Properties is restricted to the set of values given  
23292 below:\n\"disabled\", \"enabled\", \"notsupported\"\n\nThe adminforced Property indicates that the  
23293 value has been set by another party (e.g. via some offboard Smart Energy interaction)\n",  
23294       "parameters": [  
23295         {  
23296           "$ref": "#/parameters/interface"  
23297         }  
23298       ],  
23299       "responses": {  
23300         "200": {  
23301           "description": "",  
23302           "x-example":  
23303             {  
23304               "rt": ["oic.r.ecomode"],  
23305               "unique_example_id":  
23306                 ["disabled", "enabled"],  
23307               "supportedModes": ["disabled"],  
23308               "modes": ["disabled"],  
23309               "adminforced": false
```

```

23308         }
23309     },
23310     "schema": { "$ref": "#/definitions/ecomode" }
23311 }
23312 },
23313 },
23314 "post": {
23315     "description": "",
23316     "parameters": [
23317         { "$ref": "#/parameters/interface" },
23318         {
23319             "name": "body",
23320             "in": "body",
23321             "required": true,
23322             "schema": { "$ref": "#/definitions/ecomode-update" },
23323             "x-example":
23324                 {
23325                     "id": "unique_example_id",
23326                     "modes": ["enabled"]
23327                 }
23328         }
23329     ],
23330     "responses": {
23331         "200": {
23332             "description": "",
23333             "x-example":
23334                 {
23335                     "id": "unique_example_id",
23336                     "modes": ["enabled"]
23337                 }
23338             ,
23339             "schema": { "$ref": "#/definitions/ecomode-update" }
23340         }
23341     }
23342 },
23343 },
23344 },
23345 "parameters": {
23346     "interface": {
23347         "in": "query",
23348         "name": "if",
23349         "type": "string",
23350         "enum": ["oic.if.a", "oic.if.baseline"]
23351     }
23352 },
23353 "definitions": {
23354     "ecomode":
23355         {
23356             "properties": {
23357                 "adminforced": {
23358                     "description": "Indicator that the current mode of operation has been forced by admin
action.",
23359                     "readOnly": true,
23360                     "type": "boolean"
23361                 },
23362             },
23363             "id": {
23364                 "description": "Instance ID of this specific resource",
23365                 "maxLength": 64,
23366                 "readOnly": true,
23367                 "type": "string"
23368             },
23369             "if": {
23370                 "description": "The interface set supported by this resource",
23371                 "items": {
23372                     "enum": [
23373                         "oic.if.baseline",
23374                         "oic.if.ll",
23375                         "oic.if.b",
23376                         "oic.if.lb",
23377                         "oic.if.rw",
23378                         "oic.if.r",

```

```

23379         "oic.if.a",
23380         "oic.if.s"
23381     ],
23382     "type": "string"
23383 },
23384     "minItems": 1,
23385     "readOnly": true,
23386     "type": "array"
23387 },
23388     "modes": {
23389         "description": "Array of the currently active mode(s)",
23390         "items": {
23391             "type": "string"
23392         },
23393         "type": "array"
23394     },
23395     "n": {
23396         "description": "Friendly name of the resource",
23397         "maxLength": 64,
23398         "readOnly": true,
23399         "type": "string"
23400     },
23401     "precision": {
23402         "description": "Accuracy granularity of the exposed value",
23403         "readOnly": true,
23404         "type": "number"
23405     },
23406     "range": {
23407         "description": "The valid range for the value Property",
23408         "items": {
23409             "anyOf": [
23410                 {
23411                     "type": "number"
23412                 },
23413                 {
23414                     "type": "integer"
23415                 }
23416             ]
23417         },
23418         "maxItems": 2,
23419         "minItems": 2,
23420         "readOnly": true,
23421         "type": "array"
23422     },
23423     "rt": {
23424         "description": "Resource Type",
23425         "items": {
23426             "maxLength": 64,
23427             "type": "string"
23428         },
23429         "minItems": 1,
23430         "readOnly": true,
23431         "type": "array"
23432     },
23433     "step": {
23434         "anyOf": [
23435             {
23436                 "type": "integer"
23437             },
23438             {
23439                 "type": "number"
23440             }
23441         ],
23442         "description": "Step value across the defined range",
23443         "readOnly": true
23444     },
23445     "supportedModes": {
23446         "description": "Array of possible modes the device supports.",
23447         "items": {
23448             "type": "string"
23449         },

```

```

23450         "readOnly": true,
23451         "type": "array"
23452     },
23453     "value": {
23454         "anyOf": [
23455             {
23456                 "type": "array"
23457             },
23458             {
23459                 "type": "string"
23460             },
23461             {
23462                 "type": "boolean"
23463             },
23464             {
23465                 "type": "integer"
23466             },
23467             {
23468                 "type": "number"
23469             },
23470             {
23471                 "type": "object"
23472             }
23473         ],
23474         "description": "The value sensed or actuated by this Resource"
23475     }
23476 },
23477 "required": [
23478     "supportedModes",
23479     "modes"
23480 ],
23481 "type": "object"
23482 }
23483
23484 ,
23485 "ecomode-update" :
23486 {
23487     "properties": {
23488         "id": {
23489             "description": "Instance ID of this specific resource",
23490             "maxLength": 64,
23491             "readOnly": true,
23492             "type": "string"
23493         },
23494         "if": {
23495             "description": "The interface set supported by this resource",
23496             "items": {
23497                 "enum": [
23498                     "oic.if.baseline",
23499                     "oic.if.ll",
23500                     "oic.if.b",
23501                     "oic.if.lb",
23502                     "oic.if.rw",
23503                     "oic.if.r",
23504                     "oic.if.a",
23505                     "oic.if.s"
23506                 ],
23507                 "type": "string"
23508             },
23509             "minItems": 1,
23510             "readOnly": true,
23511             "type": "array"
23512         },
23513         "modes": {
23514             "description": "Desired mode",
23515             "items": {
23516                 "type": "string"
23517             },
23518             "type": "array"
23519         },
23520         "n": {

```

```

23521         "description": "Friendly name of the resource",
23522         "maxLength": 64,
23523         "readOnly": true,
23524         "type": "string"
23525     },
23526     "precision": {
23527         "description": "Accuracy granularity of the exposed value",
23528         "readOnly": true,
23529         "type": "number"
23530     },
23531     "range": {
23532         "description": "The valid range for the value Property",
23533         "items": {
23534             "anyOf": [
23535                 {
23536                     "type": "number"
23537                 },
23538                 {
23539                     "type": "integer"
23540                 }
23541             ]
23542         },
23543         "maxItems": 2,
23544         "minItems": 2,
23545         "readOnly": true,
23546         "type": "array"
23547     },
23548     "rt": {
23549         "description": "Resource Type",
23550         "items": {
23551             "maxLength": 64,
23552             "type": "string"
23553         },
23554         "minItems": 1,
23555         "readOnly": true,
23556         "type": "array"
23557     },
23558     "step": {
23559         "anyOf": [
23560             {
23561                 "type": "integer"
23562             },
23563             {
23564                 "type": "number"
23565             }
23566         ],
23567         "description": "Step value across the defined range",
23568         "readOnly": true
23569     },
23570     "value": {
23571         "anyOf": [
23572             {
23573                 "type": "array"
23574             },
23575             {
23576                 "type": "string"
23577             },
23578             {
23579                 "type": "boolean"
23580             },
23581             {
23582                 "type": "integer"
23583             },
23584             {
23585                 "type": "number"
23586             },
23587             {
23588                 "type": "object"
23589             }
23590         ],
23591         "description": "The value sensed or actuated by this Resource"

```

```

23592     }
23593   },
23594   "required": [
23595     "modes"
23596   ],
23597   "type": "object"
23598 }
23599 }
23600 }
23601 }
23602

```

B.36.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema		Read Only	Resource Type
adminforced	boolean		Read Only	Indicator that the current mode of operation has been forced by admin action.
range	array: see schema		Read Only	The valid range for the value Property
precision	number		Read Only	Accuracy granularity of the exposed value
value	multiple types: see schema			The value sensed or actuated by this Resource
n	string		Read Only	Friendly name of the resource
id	string		Read Only	Instance ID of this specific resource
modes	array: see schema	yes		Array of the currently active mode(s)
if	array: see schema		Read Only	The interface set supported by this resource
supportedModes	array: see schema	yes	Read Only	Array of possible modes the device supports.
step	multiple types: see schema		Read Only	Step value across the defined range
id	string		Read Only	Instance ID of this specific resource
range	array: see schema		Read Only	The valid range for the value Property
precision	number		Read Only	Accuracy granularity of the exposed value

value	multiple types: see schema			The value sensed or actuated by this Resource
n	string		Read Only	Friendly name of the resource
rt	array: see schema		Read Only	Resource Type
modes	array: see schema	yes		Desired mode
if	array: see schema		Read Only	The interface set supported by this resource
step	multiple types: see schema		Read Only	Step value across the defined range

23604 B.36.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/EcomodeResURI		get	post		

23605 B.37 Energy

23606 B.37.1 Introduction

23607 This resource describes the attributes associated with electrical energy. This can be used for either
 23608 rated (read-only), desired (read-write) or measured (read-only) energy. The voltage is in Volts (V),
 23609 current in Amps (A), and frequency in Hertz (Hz).
 23610 Retrieves the current energy.
 23611

23612 B.37.2 Example URI

23613 /EnergyResURI

23614 B.37.3 Resource Type

23615 The resource type (rt) is defined as: ['oic.r.energy.electrical'].

23616 B.37.4 Swagger2.0 Definition

```

23617 {
23618   "swagger": "2.0",
23619   "info": {
23620     "title": "Energy",
23621     "version": "v1.1.0-20170815",
23622     "license": {
23623       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
23624       "x-description": "Redistribution and use in source and binary forms, with or without
23625 modification, are permitted provided that the following conditions are met:\n      1.
23626 Redistributions of source code must retain the above copyright notice, this list of conditions and
23627 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
23628 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
23629 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
23630 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
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23632 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
23633 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
23634 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
23635 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
23636 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
23637 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
23638 OF SUCH DAMAGE.\n"
23639   }
23640 },
  
```

```

23641 "schemes": ["http"],
23642 "consumes": ["application/json"],
23643 "produces": ["application/json"],
23644 "paths": {
23645   "/EnergyResURI" : {
23646     "get": {
23647       "description": "This resource describes the attributes associated with electrical energy.
23648 This can be used for either rated (read-only), desired (read-write) or measured (read-only) energy.
23649 The voltage is in Volts (V), current in Amps (A), and frequency in Hertz (Hz).\nRetrieves the
23650 current energy.\n",
23651       "parameters": [
23652         { "$ref": "#/parameters/interface-all" }
23653       ],
23654       "responses": {
23655         "200": {
23656           "description": "",
23657           "x-example":
23658             {
23659               "rt": ["oic.r.energy.electrical"],
23660               "id": "unique_example_id",
23661               "voltage": 120.0,
23662               "current": 5.0,
23663               "frequency": 60.0
23664             }
23665           ,
23666           "schema": { "$ref": "#/definitions/Energy" }
23667         }
23668       }
23669     },
23670     "post": {
23671       "description": "Sets the desired energy values\n",
23672       "parameters": [
23673         { "$ref": "#/parameters/interface-update" },
23674         {
23675           "name": "body",
23676           "in": "body",
23677           "required": true,
23678           "schema": { "$ref": "#/definitions/EnergyUpdate" },
23679           "x-example":
23680             {
23681               "id": "unique_example_id",
23682               "desiredvoltage": 130.0,
23683               "desiredcurrent": 6.0
23684             }
23685         }
23686       ],
23687       "responses": {
23688         "200": {
23689           "description": "",
23690           "x-example":
23691             {
23692               "id": "unique_example_id",
23693               "desiredvoltage": 130.0,
23694               "desiredcurrent": 6.0
23695             }
23696         }
23697       }
23698     }
23699   }
23700 },
23701 "parameters": {
23702   "interface-update" : {
23703     "in" : "query",
23704     "name" : "if",
23705     "type" : "string",
23706     "enum" : ["oic.if.rw", "oic.if.baseline"]
23707   },
23708   "interface-all" : {
23709     "in" : "query",
23710     "name" : "if",
23711     "type" : "string",

```

```

23712         "enum" : ["oic.if.r", "oic.if.rw", "oic.if.s", "oic.if.baseline"]
23713     }
23714 },
23715 "definitions": {
23716     "Energy" :
23717     {
23718         "properties": {
23719             "current": {
23720                 "description": "The electric current in Amps (A).",
23721                 "readOnly": true,
23722                 "type": "number"
23723             },
23724             "desiredcurrent": {
23725                 "description": "The desired electric current in Amps (A).",
23726                 "type": "number"
23727             },
23728             "desiredfrequency": {
23729                 "description": "The desired electric frequency in Hertz (Hz).",
23730                 "type": "number"
23731             },
23732             "desiredvoltage": {
23733                 "description": "The desired electric voltage in Volts (V).",
23734                 "type": "number"
23735             },
23736             "frequency": {
23737                 "description": "The electric frequency in Hertz (Hz).",
23738                 "readOnly": true,
23739                 "type": "number"
23740             },
23741             "id": {
23742                 "description": "Instance ID of this specific resource",
23743                 "maxLength": 64,
23744                 "readOnly": true,
23745                 "type": "string"
23746             },
23747             "if": {
23748                 "description": "The interface set supported by this resource",
23749                 "items": {
23750                     "enum": [
23751                         "oic.if.baseline",
23752                         "oic.if.ll",
23753                         "oic.if.b",
23754                         "oic.if.lb",
23755                         "oic.if.rw",
23756                         "oic.if.r",
23757                         "oic.if.a",
23758                         "oic.if.s"
23759                     ],
23760                     "type": "string"
23761                 },
23762                 "minItems": 1,
23763                 "readOnly": true,
23764                 "type": "array"
23765             },
23766             "n": {
23767                 "description": "Friendly name of the resource",
23768                 "maxLength": 64,
23769                 "readOnly": true,
23770                 "type": "string"
23771             },
23772             "precision": {
23773                 "description": "Accuracy granularity of the exposed value",
23774                 "readOnly": true,
23775                 "type": "number"
23776             },
23777             "range": {
23778                 "description": "The valid range for the value Property",
23779                 "items": {
23780                     "anyOf": [
23781                         {
23782                             "type": "number"

```

```

23783         },
23784         {
23785             "type": "integer"
23786         }
23787     ]
23788 },
23789 "maxItems": 2,
23790 "minItems": 2,
23791 "readOnly": true,
23792 "type": "array"
23793 },
23794 "rt": {
23795     "description": "Resource Type",
23796     "items": {
23797         "maxLength": 64,
23798         "type": "string"
23799     },
23800     "minItems": 1,
23801     "readOnly": true,
23802     "type": "array"
23803 },
23804 "step": {
23805     "anyOf": [
23806         {
23807             "type": "integer"
23808         },
23809         {
23810             "type": "number"
23811         }
23812     ],
23813     "description": "Step value across the defined range",
23814     "readOnly": true
23815 },
23816 "value": {
23817     "anyOf": [
23818         {
23819             "type": "array"
23820         },
23821         {
23822             "type": "string"
23823         },
23824         {
23825             "type": "boolean"
23826         },
23827         {
23828             "type": "integer"
23829         },
23830         {
23831             "type": "number"
23832         },
23833         {
23834             "type": "object"
23835         }
23836     ],
23837     "description": "The value sensed or actuated by this Resource"
23838 },
23839 "voltage": {
23840     "description": "The electric voltage in Volts (V).",
23841     "readOnly": true,
23842     "type": "number"
23843 },
23844 },
23845 "required": [
23846     "voltage",
23847     "current",
23848     "frequency"
23849 ],
23850 "type": "object"
23851 }
23852
23853

```

```

23854 "EnergyUpdate" :
23855 {
23856   "anyOf": [
23857     {
23858       "required": [
23859         "desiredvoltage"
23860       ]
23861     },
23862     {
23863       "required": [
23864         "desiredcurrent"
23865       ]
23866     },
23867     {
23868       "required": [
23869         "desiredfrequency"
23870       ]
23871     }
23872   ],
23873   "properties": {
23874     "desiredcurrent": {
23875       "description": "The desired electric current in Amps (A).",
23876       "type": "number"
23877     },
23878     "desiredfrequency": {
23879       "description": "The desired electric frequency in Hertz (Hz).",
23880       "type": "number"
23881     },
23882     "desiredvoltage": {
23883       "description": "The desired electric voltage in Volts (V).",
23884       "type": "number"
23885     },
23886     "id": {
23887       "description": "Instance ID of this specific resource",
23888       "maxLength": 64,
23889       "readOnly": true,
23890       "type": "string"
23891     },
23892     "if": {
23893       "description": "The interface set supported by this resource",
23894       "items": {
23895         "enum": [
23896           "oic.if.baseline",
23897           "oic.if.ll",
23898           "oic.if.b",
23899           "oic.if.lb",
23900           "oic.if.rw",
23901           "oic.if.r",
23902           "oic.if.a",
23903           "oic.if.s"
23904         ],
23905         "type": "string"
23906       },
23907       "minItems": 1,
23908       "readOnly": true,
23909       "type": "array"
23910     },
23911     "n": {
23912       "description": "Friendly name of the resource",
23913       "maxLength": 64,
23914       "readOnly": true,
23915       "type": "string"
23916     },
23917     "precision": {
23918       "description": "Accuracy granularity of the exposed value",
23919       "readOnly": true,
23920       "type": "number"
23921     },
23922     "range": {
23923       "description": "The valid range for the value Property",
23924       "items": {

```

```

23925         "anyOf": [
23926             {
23927                 "type": "number"
23928             },
23929             {
23930                 "type": "integer"
23931             }
23932         ],
23933     },
23934     "maxItems": 2,
23935     "minItems": 2,
23936     "readOnly": true,
23937     "type": "array"
23938 },
23939 "rt": {
23940     "description": "Resource Type",
23941     "items": {
23942         "maxLength": 64,
23943         "type": "string"
23944     },
23945     "minItems": 1,
23946     "readOnly": true,
23947     "type": "array"
23948 },
23949 "step": {
23950     "anyOf": [
23951         {
23952             "type": "integer"
23953         },
23954         {
23955             "type": "number"
23956         }
23957     ],
23958     "description": "Step value across the defined range",
23959     "readOnly": true
23960 },
23961 "value": {
23962     "anyOf": [
23963         {
23964             "type": "array"
23965         },
23966         {
23967             "type": "string"
23968         },
23969         {
23970             "type": "boolean"
23971         },
23972         {
23973             "type": "integer"
23974         },
23975         {
23976             "type": "number"
23977         },
23978         {
23979             "type": "object"
23980         }
23981     ],
23982     "description": "The value sensed or actuated by this Resource"
23983 },
23984 },
23985 "type": "object"
23986 }
23987 }
23988 }
23989 }
23990

```

23991 B.37.5 Property Definition

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

n	string		Read Only	Friendly name of the resource
if	array: see schema		Read Only	The interface set supported by this resource
range	array: see schema		Read Only	The valid range for the value Property
precision	number		Read Only	Accuracy granularity of the exposed value
rt	array: see schema		Read Only	Resource Type
desiredcurrent	number			The desired electric current in Amps (A).
desiredfrequency	number			The desired electric frequency in Hertz (Hz).
frequency	number	yes	Read Only	The electric frequency in Hertz (Hz).
desiredvoltage	number			The desired electric voltage in Volts (V).
value	multiple types: see schema			The value sensed or actuated by this Resource
id	string		Read Only	Instance ID of this specific resource
step	multiple types: see schema		Read Only	Step value across the defined range
voltage	number	yes	Read Only	The electric voltage in Volts (V).
current	number	yes	Read Only	The electric current in Amps (A).
n	string		Read Only	Friendly name of the resource
desiredvoltage	number			The desired electric voltage in Volts (V).
if	array: see schema		Read Only	The interface set supported by this resource
id	string		Read Only	Instance ID of this specific resource
value	multiple types: see schema			The value sensed or

				actuated by this Resource
step	multiple types: see schema		Read Only	Step value across the defined range
precision	number		Read Only	Accuracy granularity of the exposed value
range	array: see schema		Read Only	The valid range for the value Property
rt	array: see schema		Read Only	Resource Type
desiredcurrent	number			The desired electric current in Amps (A).
desiredfrequency	number	yes		The desired electric frequency in Hertz (Hz).

23992 B.37.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/EnergyResURI		get	post		

23993 B.38 Energy Consumption

23994 B.38.1 Introduction

23995 This resource describes the energy consumed by the device since power up (the energy value is
23996 in Watt Hours [Wh])
23997 and the instantaneous power draw of the device (the power value is in Watts [W]) at the time the
23998 resource was queried.
23999 The power value is in Watts [W].
24000 The energy value is in Watt Hours [Wh].
24001 Provides the current power draw and cumulative energy usage.
24002

24003 B.38.2 Example URI

24004 /EnergyConsumptionResURI

24005 B.38.3 Resource Type

24006 The resource type (rt) is defined as: ['oic.r.energy.consumption'].

24007 B.38.4 Swagger2.0 Definition

```

24008 {
24009   "swagger": "2.0",
24010   "info": {
24011     "title": "Energy Consumption",
24012     "version": "v1.1.0-20160519",
24013     "license": {
24014       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
24015       "x-description": "Redistribution and use in source and binary forms, with or without
24016 modification, are permitted provided that the following conditions are met:\n      1.
24017 Redistributions of source code must retain the above copyright notice, this list of conditions and
24018 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
24019 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
24020 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
24021 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
24022 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
```



```

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24027 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
24028 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
24029 OF SUCH DAMAGE.\n"
24030     }
24031   },
24032   "schemes": ["http"],
24033   "consumes": ["application/json"],
24034   "produces": ["application/json"],
24035   "paths": {
24036     "/EnergyConsumptionResURI" : {
24037       "get": {
24038         "description": "This resource describes the energy consumed by the device since power up
24039 (the energy value is in Watt Hours [Wh]) \nand the instantaneous power draw of the device (the
24040 power value is in Watts [W]) at the time the resource was queried.\nThe power value is in Watts
24041 [W].\nThe energy value is in Watt Hours [Wh].\nProvides the current power draw and cumulative
24042 energy usage.\n",
24043         "parameters": [
24044           { "$ref": "#/parameters/interface" }
24045         ],
24046         "responses": {
24047           "200": {
24048             "description": "",
24049             "x-example":
24050               {
24051                 "rt": ["oic.r.energy.consumption"],
24052                 "id": "unique_example_id",
24053                 "power": 2000.1,
24054                 "energy": 3500.4
24055               },
24056             ,
24057             "schema": { "$ref": "#/definitions/Consumption" }
24058           }
24059         }
24060       }
24061     }
24062   },
24063   "parameters": {
24064     "interface" : {
24065       "in" : "query",
24066       "name" : "if",
24067       "type" : "string",
24068       "enum" : ["oic.if.s", "oic.if.baseline"]
24069     }
24070   },
24071   "definitions": {
24072     "Consumption" :
24073       {
24074         "properties": {
24075           "energy": {
24076             "description": "Energy consumed",
24077             "readOnly": true,
24078             "type": "number"
24079           },
24080           "id": {
24081             "description": "Instance ID of this specific resource",
24082             "maxLength": 64,
24083             "readOnly": true,
24084             "type": "string"
24085           },
24086           "if": {
24087             "description": "The interface set supported by this resource",
24088             "items": {
24089               "enum": [
24090                 "oic.if.baseline",
24091                 "oic.if.ll",
24092                 "oic.if.b",
24093                 "oic.if.lb",

```

```

24094         "oic.if.rw",
24095         "oic.if.r",
24096         "oic.if.a",
24097         "oic.if.s"
24098     ],
24099     "type": "string"
24100 },
24101 "minItems": 1,
24102 "readOnly": true,
24103 "type": "array"
24104 },
24105 "n": {
24106     "description": "Friendly name of the resource",
24107     "maxLength": 64,
24108     "readOnly": true,
24109     "type": "string"
24110 },
24111 "power": {
24112     "description": "Instantaneous Power",
24113     "readOnly": true,
24114     "type": "number"
24115 },
24116 "precision": {
24117     "description": "Accuracy granularity of the exposed value",
24118     "readOnly": true,
24119     "type": "number"
24120 },
24121 "range": {
24122     "description": "The valid range for the value Property",
24123     "items": {
24124         "anyOf": [
24125             {
24126                 "type": "number"
24127             },
24128             {
24129                 "type": "integer"
24130             }
24131         ]
24132     },
24133     "maxItems": 2,
24134     "minItems": 2,
24135     "readOnly": true,
24136     "type": "array"
24137 },
24138 "rt": {
24139     "description": "Resource Type",
24140     "items": {
24141         "maxLength": 64,
24142         "type": "string"
24143     },
24144     "minItems": 1,
24145     "readOnly": true,
24146     "type": "array"
24147 },
24148 "step": {
24149     "anyOf": [
24150         {
24151             "type": "integer"
24152         },
24153         {
24154             "type": "number"
24155         }
24156     ],
24157     "description": "Step value across the defined range",
24158     "readOnly": true
24159 },
24160 "value": {
24161     "anyOf": [
24162         {
24163             "type": "array"
24164         },

```

```

24165         {
24166             "type": "string"
24167         },
24168         {
24169             "type": "boolean"
24170         },
24171         {
24172             "type": "integer"
24173         },
24174         {
24175             "type": "number"
24176         },
24177         {
24178             "type": "object"
24179         }
24180     ],
24181     "description": "The value sensed or actuated by this Resource"
24182 },
24183 },
24184 "required": [
24185     "power",
24186     "energy"
24187 ],
24188 "type": "object"
24189 }
24190 }
24191 }
24192 }
24193

```

24194 B.38.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
n	string		Read Only	Friendly name of the resource
value	multiple types: see schema			The value sensed or actuated by this Resource
precision	number		Read Only	Accuracy granularity of the exposed value
id	string		Read Only	Instance ID of this specific resource
if	array: see schema		Read Only	The interface set supported by this resource
step	multiple types: see schema		Read Only	Step value across the defined range
energy	number	yes	Read Only	Energy consumed
range	array: see schema		Read Only	The valid range for the value Property
power	number	yes	Read Only	Instantaneous Power
rt	array: see schema		Read Only	Resource Type

24195 B.38.6 CRUDN behaviour

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

/EnergyConsumptionResURI		get			
--------------------------	--	-----	--	--	--

24196 B.39 Energy Generation

24197 B.39.1 Introduction

24198 This resource describes the attributes associated with energy generation
 24199 energygenerated is a number that provides the energy generated in Watt-hour(Wh).
 24200 Retrieves the current energy generation.
 24201

24202 B.39.2 Example URI

24203 /EnergyGenerationResURI

24204 B.39.3 Resource Type

24205 The resource type (rt) is defined as: ['oic.r.energy.generation'].

24206 B.39.4 Swagger2.0 Definition

```

24207 {
24208   "swagger": "2.0",
24209   "info": {
24210     "title": "Energy Generation",
24211     "version": "v1.1.0-20170815",
24212     "license": {
24213       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
24214       "x-description": "Redistribution and use in source and binary forms, with or without
24215 modification, are permitted provided that the following conditions are met:\n      1.
24216 Redistributions of source code must retain the above copyright notice, this list of conditions and
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24219 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
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24226 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
24227 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
24228 OF SUCH DAMAGE.\n"
24229     },
24230   },
24231   "schemes": ["http"],
24232   "consumes": ["application/json"],
24233   "produces": ["application/json"],
24234   "paths": {
24235     "/EnergyGenerationResURI" : {
24236       "get": {
24237         "description": "This resource describes the attributes associated with energy
24238 generation\nenergygenerated is a number that provides the energy generated in Watt-
24239 hour(Wh).\nRetrieves the current energy generation.\n",
24240         "parameters": [
24241           { "$ref": "#/parameters/interface" }
24242         ],
24243         "responses": {
24244           "200": {
24245             "description": "",
24246             "x-example": {
24247               {
24248                 "rt": ["oic.r.energy.generation"],
24249                 "id": "unique_example_id",
24250                 "energygenerated": 3000.00
24251               }
24252             },
24253             "schema": { "$ref": "#/definitions/EnergyGeneration" }
24254           }
24255         }
24256       }
24257     }
24258   }

```

```

24256     }
24257   }
24258 },
24259 "parameters": {
24260   "interface" : {
24261     "in" : "query",
24262     "name" : "if",
24263     "type" : "string",
24264     "enum" : ["oic.if.s", "oic.if.baseline"]
24265   }
24266 },
24267 "definitions": {
24268   "EnergyGeneration" :
24269   {
24270     "properties": {
24271       "energygenerated": {
24272         "description": "The energy generated in Watt-hour(Wh).",
24273         "readOnly": true,
24274         "type": "number"
24275       },
24276       "id": {
24277         "description": "Instance ID of this specific resource",
24278         "maxLength": 64,
24279         "readOnly": true,
24280         "type": "string"
24281       },
24282       "if": {
24283         "description": "The interface set supported by this resource",
24284         "items": {
24285           "enum": [
24286             "oic.if.baseline",
24287             "oic.if.ll",
24288             "oic.if.b",
24289             "oic.if.lb",
24290             "oic.if.rw",
24291             "oic.if.r",
24292             "oic.if.a",
24293             "oic.if.s"
24294           ],
24295           "type": "string"
24296         },
24297         "minItems": 1,
24298         "readOnly": true,
24299         "type": "array"
24300       },
24301       "n": {
24302         "description": "Friendly name of the resource",
24303         "maxLength": 64,
24304         "readOnly": true,
24305         "type": "string"
24306       },
24307       "precision": {
24308         "description": "Accuracy granularity of the exposed value",
24309         "readOnly": true,
24310         "type": "number"
24311       },
24312       "range": {
24313         "description": "The valid range for the value Property",
24314         "items": {
24315           "anyOf": [
24316             {
24317               "type": "number"
24318             },
24319             {
24320               "type": "integer"
24321             }
24322           ]
24323         },
24324         "maxItems": 2,
24325         "minItems": 2,
24326         "readOnly": true,

```

```

24327         "type": "array"
24328     },
24329     "rt": {
24330         "description": "Resource Type",
24331         "items": {
24332             "maxLength": 64,
24333             "type": "string"
24334         },
24335         "minItems": 1,
24336         "readOnly": true,
24337         "type": "array"
24338     },
24339     "step": {
24340         "anyOf": [
24341             {
24342                 "type": "integer"
24343             },
24344             {
24345                 "type": "number"
24346             }
24347         ],
24348         "description": "Step value across the defined range",
24349         "readOnly": true
24350     },
24351     "value": {
24352         "anyOf": [
24353             {
24354                 "type": "array"
24355             },
24356             {
24357                 "type": "string"
24358             },
24359             {
24360                 "type": "boolean"
24361             },
24362             {
24363                 "type": "integer"
24364             },
24365             {
24366                 "type": "number"
24367             },
24368             {
24369                 "type": "object"
24370             }
24371         ],
24372         "description": "The value sensed or actuated by this Resource"
24373     }
24374 },
24375 "required": [
24376     "energygenerated"
24377 ],
24378 "type": "object"
24379 }
24380 }
24381 }
24382 }
24383
24384

```

B.39.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
range	array: see schema		Read Only	The valid range for the value Property
rt	array: see schema		Read Only	Resource Type
energygenerated	number	yes	Read Only	The energy generated in Watt-hour(Wh).

n	string		Read Only	Friendly name of the resource
if	array: see schema		Read Only	The interface set supported by this resource
precision	number		Read Only	Accuracy granularity of the exposed value
id	string		Read Only	Instance ID of this specific resource
step	multiple types: see schema		Read Only	Step value across the defined range
value	multiple types: see schema			The value sensed or actuated by this Resource

24385 B.39.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/EnergyGenerationResURI		get			

24386 B.40 Energy Overload/Circuit Breaker

24387 B.40.1 Introduction

24388 This resource describes whether an energy overload detector/circuit breaker
 24389 is currently tripped.
 24390 The value is a boolean.
 24391 A value of 'true' means that energy overload has been tripped.
 24392 A value of 'false' means that energy overload has not been tripped.
 24393

24394 B.40.2 Example URI

24395 /EnergyOverloadResURI

24396 B.40.3 Resource Type

24397 The resource type (rt) is defined as: ['oic.r.energy.overload'].

24398 B.40.4 Swagger2.0 Definition

```

24399 {
24400   "swagger": "2.0",
24401   "info": {
24402     "title": "Energy Overload/Circuit Breaker",
24403     "version": "v1.1.0-20160519",
24404     "license": {
24405       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
24406       "x-description": "Redistribution and use in source and binary forms, with or without
24407 modification, are permitted provided that the following conditions are met:\n      1.
24408 Redistributions of source code must retain the above copyright notice, this list of conditions and
24409 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
24410 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
24411 other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open
24412 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
24413 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
24414 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
24415 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
24416 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
24417 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
24418 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
```

```

24419 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
24420 OF SUCH DAMAGE.\n"
24421 }
24422 },
24423 "schemes": ["http"],
24424 "consumes": ["application/json"],
24425 "produces": ["application/json"],
24426 "paths": {
24427   "/EnergyOverloadResURI" : {
24428     "get": {
24429       "description": "This resource describes whether an energy overload detector/circuit
24430 breaker\n is currently tripped.\nThe value is a boolean.\nA value of 'true' means that energy
24431 overload has been tripped.\nA value of 'false' means that energy overload has not been tripped.\n",
24432       "parameters": [
24433         {"$ref": "#/parameters/interface"}
24434       ],
24435       "responses": {
24436         "200": {
24437           "description": "",
24438           "x-example": {
24439             {
24440               "rt": ["oic.r.energy.overload"],
24441               "id": "unique_example_id",
24442               "value": true
24443             }
24444           },
24445           "schema": { "$ref": "#/definitions/EnergyOverload" }
24446         }
24447       }
24448     }
24449   },
24450 },
24451 "parameters": {
24452   "interface" : {
24453     "in" : "query",
24454     "name" : "if",
24455     "type" : "string",
24456     "enum" : ["oic.if.s", "oic.if.baseline"]
24457   }
24458 },
24459 "definitions": {
24460   "EnergyOverload" :
24461   {
24462     "properties": {
24463       "id": {
24464         "description": "Instance ID of this specific resource",
24465         "maxLength": 64,
24466         "readOnly": true,
24467         "type": "string"
24468       },
24469       "if": {
24470         "description": "The interface set supported by this resource",
24471         "items": {
24472           "enum": [
24473             "oic.if.baseline",
24474             "oic.if.ll",
24475             "oic.if.b",
24476             "oic.if.lb",
24477             "oic.if.rw",
24478             "oic.if.r",
24479             "oic.if.a",
24480             "oic.if.s"
24481           ],
24482           "type": "string"
24483         },
24484         "minItems": 1,
24485         "readOnly": true,
24486         "type": "array"
24487       },
24488       "n": {
24489         "description": "Friendly name of the resource",

```



```

24490         "maxLength": 64,
24491         "readOnly": true,
24492         "type": "string"
24493     },
24494     "precision": {
24495         "description": "Accuracy granularity of the exposed value",
24496         "readOnly": true,
24497         "type": "number"
24498     },
24499     "range": {
24500         "description": "The valid range for the value Property",
24501         "items": {
24502             "anyOf": [
24503                 {
24504                     "type": "number"
24505                 },
24506                 {
24507                     "type": "integer"
24508                 }
24509             ]
24510         },
24511         "maxItems": 2,
24512         "minItems": 2,
24513         "readOnly": true,
24514         "type": "array"
24515     },
24516     "rt": {
24517         "description": "Resource Type",
24518         "items": {
24519             "maxLength": 64,
24520             "type": "string"
24521         },
24522         "minItems": 1,
24523         "readOnly": true,
24524         "type": "array"
24525     },
24526     "step": {
24527         "anyOf": [
24528             {
24529                 "type": "integer"
24530             },
24531             {
24532                 "type": "number"
24533             }
24534         ],
24535         "description": "Step value across the defined range",
24536         "readOnly": true
24537     },
24538     "value": {
24539         "description": "true = sensed, false = not sensed.",
24540         "readOnly": true,
24541         "type": "boolean"
24542     }
24543 },
24544 "required": [
24545     "value"
24546 ],
24547 "type": "object"
24548 }
24549 }
24550 }
24551 }
24552

```

B.40.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
id	string		Read Only	Instance ID of this specific resource

value	boolean	yes	Read Only	true = sensed, false = not sensed.
step	multiple types: see schema		Read Only	Step value across the defined range
rt	array: see schema		Read Only	Resource Type
range	array: see schema		Read Only	The valid range for the value Property
n	string		Read Only	Friendly name of the resource
precision	number		Read Only	Accuracy granularity of the exposed value
if	array: see schema		Read Only	The interface set supported by this resource

24554 B.40.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/EnergyOverloadResURI		get			

24555 B.41 Energy Usage

24556 B.41.1 Introduction

24557 This resource describes a cumulative time-based energy usage query..
24558 The resource is a composite resource being made up as a collection of:
24559 TimePeriod Resource
24560 EnergyConsumption Resource
24561 Retrieves the energy usage information as a composite of consumption over time.
24562

24563 B.41.2 Example URI

24564 /EnergyUsageResURI

24565 B.41.3 Resource Type

24566 The resource type (rt) is defined as: ['oic.r.energy.usage'].

24567 B.41.4 Swagger2.0 Definition

```

24568 {
24569   "swagger": "2.0",
24570   "info": {
24571     "title": "Energy Usage",
24572     "version": "v1.1.0-20160519",
24573     "license": {
24574       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
24575       "x-description": "Redistribution and use in source and binary forms, with or without
24576 modification, are permitted provided that the following conditions are met:\n      1.
24577 Redistributions of source code must retain the above copyright notice, this list of conditions and
24578 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
24579 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
24580 other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open
24581 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
24582 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
24583 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
24584 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
24585 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
24586 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
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24587 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
24588 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
24589 OF SUCH DAMAGE.\n"
24590 }
24591 },
24592 "schemes": ["http"],
24593 "consumes": ["application/json"],
24594 "produces": ["application/json"],
24595 "paths": {
24596   "/EnergyUsageResURI" : {
24597     "get": {
24598       "description": "This resource describes a cumulative time-based energy usage query..\n\nThe
24599 resource is a composite resource being made up as a collection of:\n TimePeriod Resource\n
24600 EnergyConsumption Resource\nRetrieves the energy usage information as a composite of consumption
24601 over time.\n",
24602       "parameters": [
24603         {"$ref": "#/parameters/interface"}
24604       ],
24605       "responses": {
24606         "200": {
24607           "description": "",
24608           "x-example": {
24609             {
24610               "rt": ["oic.r.energy.usage"],
24611               "id": "unique_example_id",
24612               "resources": [
24613                 {
24614                   "href": "/TimeIntervalResURI",
24615                   "rel": "contains",
24616                   "rt": ["oic.r.time.period"],
24617                   "if": ["oic.if.a"],
24618                   "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
24619                 },
24620                 {
24621                   "href": "/EnergyConsumptionResURI",
24622                   "rel": "contains",
24623                   "rt": ["oic.r.energy.consumption"],
24624                   "if": ["oic.if.s"],
24625                   "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
24626                 }
24627               ]
24628             }
24629           },
24630           "schema": { "$ref": "#/definitions/Usage" }
24631         }
24632       }
24633     }
24634   },
24635 },
24636 "parameters": {
24637   "interface" : {
24638     "in" : "query",
24639     "name" : "if",
24640     "type" : "string",
24641     "enum" : ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
24642   }
24643 },
24644 "definitions": {
24645   "Usage" :
24646   {
24647     "properties": {
24648       "id": {
24649         "description": "Instance ID of this specific resource",
24650         "maxLength": 64,
24651         "readOnly": true,
24652         "type": "string"
24653       },
24654       "if": {
24655         "description": "The interface set supported by this resource",
24656         "items": {
24657           "enum": [

```

```

24658         "oic.if.baseline",
24659         "oic.if.ll",
24660         "oic.if.b",
24661         "oic.if.lb",
24662         "oic.if.rw",
24663         "oic.if.r",
24664         "oic.if.a",
24665         "oic.if.s"
24666     ],
24667     "type": "string"
24668 },
24669 "minItems": 1,
24670 "readOnly": true,
24671 "type": "array"
24672 },
24673 "n": {
24674     "description": "Friendly name of the resource",
24675     "maxLength": 64,
24676     "readOnly": true,
24677     "type": "string"
24678 },
24679 "precision": {
24680     "description": "Accuracy granularity of the exposed value",
24681     "readOnly": true,
24682     "type": "number"
24683 },
24684 "range": {
24685     "description": "The valid range for the value Property",
24686     "items": {
24687         "anyOf": [
24688             {
24689                 "type": "number"
24690             },
24691             {
24692                 "type": "integer"
24693             }
24694         ]
24695     },
24696     "maxItems": 2,
24697     "minItems": 2,
24698     "readOnly": true,
24699     "type": "array"
24700 },
24701 "resources": {
24702     "items": {
24703         "properties": {
24704             "anchor": {
24705                 "description": "This is used to override the context URI e.g. override the URI of
24706 the containing collection",
24707                 "format": "uri",
24708                 "maxLength": 256,
24709                 "type": "string"
24710             },
24711             "di": {
24712                 "description": "Unique identifier for device (UUID)",
24713                 "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-
24714 F0-9]{12}$",
24715                 "type": "string"
24716             },
24717             "eps": {
24718                 "description": "the Endpoint information of the target Resource",
24719                 "items": {
24720                     "properties": {
24721                         "ep": {
24722                 "description": "URI with Transport Protocol Suites + Endpoint Locator as
24723 specified in 10.2.1",
24724                 "format": "uri",
24725                 "type": "string"
24726                     },
24727                     "pri": {
24728                 "description": "The priority among multiple Endpoints as specified in

```

```

24729 10.2.3",
24730         "minimum": 1,
24731         "type": "integer"
24732     },
24733     },
24734     "type": "object"
24735 },
24736 "type": "array"
24737 },
24738 "href": {
24739     "description": "This is the target URI, it can be specified as a Relative
24740 Reference or fully-qualified URI. Relative Reference should be used along with the di parameter to
24741 make it unique.",
24742     "format": "uri",
24743     "maxLength": 256,
24744     "type": "string"
24745 },
24746 "if": {
24747     "description": "The interface set supported by this resource",
24748     "items": {
24749         "enum": [
24750             "oic.if.baseline",
24751             "oic.if.ll",
24752             "oic.if.b",
24753             "oic.if.rw",
24754             "oic.if.r",
24755             "oic.if.a",
24756             "oic.if.s"
24757         ],
24758         "type": "string"
24759     },
24760     "minItems": 1,
24761     "type": "array"
24762 },
24763 "ins": {
24764     "description": "The instance identifier for this web link in an array of web
24765 links - used in collections",
24766     "oneOf": [
24767         {
24768             "description": "An ordinal number that is not repeated - must be unique in
24769 the collection context",
24770             "type": "integer"
24771         },
24772         {
24773             "description": "Any unique string including a URI",
24774             "format": "uri",
24775             "maxLength": 256,
24776             "type": "string"
24777         },
24778         {
24779             "description": "Unique identifier (UUID)",
24780             "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-
24781 fA-F0-9]{12}$",
24782             "type": "string"
24783         }
24784     ]
24785 },
24786 "p": {
24787     "description": "Specifies the framework policies on the Resource referenced by
24788 the target URI",
24789     "properties": {
24790         "bm": {
24791             "description": "Specifies the framework policies on the Resource referenced
24792 by the target URI for e.g. observable and discoverable",
24793             "type": "integer"
24794         }
24795     },
24796     "required": [
24797         "bm"
24798     ],
24799     "type": "object"

```

```

24800         },
24801         "rel": {
24802             "description": "The relation of the target URI referenced by the link to the
context URI",
24803             "oneOf": [
24804                 {
24805                     "default": [
24806                         "hosts"
24807                     ],
24808                     "items": {
24809                         "maxLength": 64,
24810                         "type": "string"
24811                     },
24812                     "minItems": 1,
24813                     "type": "array"
24814                 },
24815                 {
24816                     "default": "hosts",
24817                     "maxLength": 64,
24818                     "type": "string"
24819                 }
24820             ]
24821         },
24822         "rt": {
24823             "description": "Resource Type",
24824             "items": {
24825                 "maxLength": 64,
24826                 "type": "string"
24827             },
24828             "minItems": 1,
24829             "type": "array"
24830         },
24831         "title": {
24832             "description": "A title for the link relation. Can be used by the UI to provide a
context",
24833             "maxLength": 64,
24834             "type": "string"
24835         },
24836         "type": {
24837             "default": "application/cbor",
24838             "description": "A hint at the representation of the resource referenced by the
target URI. This represents the media types that are used for both accepting and emitting",
24839             "items": {
24840                 "maxLength": 64,
24841                 "type": "string"
24842             },
24843             "minItems": 1,
24844             "type": "array"
24845         }
24846     },
24847     "required": [
24848         "href",
24849         "rt",
24850         "if"
24851     ],
24852     "type": "object"
24853 },
24854 "maxItems": 2,
24855 "minItems": 2,
24856 "type": "array"
24857 },
24858 "rt": {
24859     "description": "Resource Type",
24860     "items": {
24861         "maxLength": 64,
24862         "type": "string"
24863     },
24864     "minItems": 1,
24865     "readOnly": true,
24866     "type": "array"
24867 },
24868 },
24869 },
24870

```

```

24871     "step": {
24872         "anyOf": [
24873             {
24874                 "type": "integer"
24875             },
24876             {
24877                 "type": "number"
24878             }
24879         ],
24880         "description": "Step value across the defined range",
24881         "readOnly": true
24882     },
24883     "value": {
24884         "anyOf": [
24885             {
24886                 "type": "array"
24887             },
24888             {
24889                 "type": "string"
24890             },
24891             {
24892                 "type": "boolean"
24893             },
24894             {
24895                 "type": "integer"
24896             },
24897             {
24898                 "type": "number"
24899             },
24900             {
24901                 "type": "object"
24902             }
24903         ],
24904         "description": "The value sensed or actuated by this Resource"
24905     }
24906 },
24907 "type": "object"
24908 }
24909 }
24910 }
24911 }
24912

```

B.41.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	yes	Read Only	Resource Type
precision	number		Read Only	Accuracy granularity of the exposed value
step	multiple types: see schema		Read Only	Step value across the defined range
id	string		Read Only	Instance ID of this specific resource
resources	array: see schema			
n	string		Read Only	Friendly name of the resource
value	multiple types: see schema			The value sensed or actuated by this Resource

range	array: see schema		Read Only	The valid range for the value Property
if	array: see schema	yes	Read Only	The interface set supported by this resource

24914 B.41.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/EnergyUsageResURI		get			

24915 B.42 Foaming

24916 B.42.1 Introduction

24917 This resource describes the attributes associated with foaming. The foam strength of the liquid is
 24918 represented as an integer.
 24919 The foam strength is an integer, the range of which may be enforced by the presence of a range
 24920 Property defined in the baseresource.
 24921 Retrieves the state of foaming.

24923 B.42.2 Example URI

24924 /FoamingResURI

24925 B.42.3 Resource Type

24926 The resource type (rt) is defined as: ['oic.r.foaming'].

24927 B.42.4 Swagger2.0 Definition

```

24928 {
24929   "swagger": "2.0",
24930   "info": {
24931     "title": "Foaming",
24932     "version": "v1.1.0-20170815",
24933     "license": {
24934       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
24935       "x-description": "Redistribution and use in source and binary forms, with or without
24936 modification, are permitted provided that the following conditions are met:\n      1.
24937 Redistributions of source code must retain the above copyright notice, this list of conditions and
24938 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
24939 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
24940 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
24941 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
24942 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
24943 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
24944 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
24945 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
24946 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
24947 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
24948 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
24949 OF SUCH DAMAGE.\n"
24950   }
24951 },
24952 "schemes": ["http"],
24953 "consumes": ["application/json"],
24954 "produces": ["application/json"],
24955 "paths": {
24956   "/FoamingResURI" : {
24957     "get": {
24958       "description": "This resource describes the attributes associated with foaming. The foam
24959 strength of the liquid is represented as an integer.\nThe foam strength is an integer, the range of
24960 which may be enforced by the presence of a range Property defined in the baseresource.\nRetrieves
24961 the state of foaming.\n",
24962       "parameters": [

```



```

24963     {"$ref": "#/parameters/interface"}
24964   ],
24965   "responses": {
24966     "200": {
24967       "description": "",
24968       "x-example":
24969         {
24970           "rt": ["oic.r.foaming"],
24971           "id": "unique_example_id",
24972           "foamstrength": 50,
24973           "range": [0,100]
24974         }
24975       ,
24976       "schema": { "$ref": "#/definitions/Foaming" }
24977     }
24978   }
24979 },
24980 "post": {
24981   "description": "Sets foaming value\n",
24982   "parameters": [
24983     {"$ref": "#/parameters/interface"},
24984     {
24985       "name": "body",
24986       "in": "body",
24987       "required": true,
24988       "schema": { "$ref": "#/definitions/Foaming" },
24989       "x-example":
24990         {
24991           "id": "unique_example_id",
24992           "foamstrength": 50
24993         }
24994     }
24995   ],
24996   "responses": {
24997     "200": {
24998       "description": "",
24999       "x-example":
25000         {
25001           "id": "unique_example_id",
25002           "foamstrength": 50
25003         }
25004       ,
25005       "schema": { "$ref": "#/definitions/Foaming" }
25006     }
25007   }
25008 }
25009 },
25010 },
25011 "parameters": {
25012   "interface" : {
25013     "in" : "query",
25014     "name" : "if",
25015     "type" : "string",
25016     "enum" : ["oic.if.rw", "oic.if.baseline"]
25017   }
25018 },
25019 "definitions": {
25020   "Foaming" :
25021     {
25022       "properties": {
25023         "foamstrength": {
25024           "description": "The desired foaminess of the liquid.",
25025           "type": "integer"
25026         },
25027         "id": {
25028           "description": "Instance ID of this specific resource",
25029           "maxLength": 64,
25030           "readOnly": true,
25031           "type": "string"
25032         },
25033         "if": {

```

```

25034     "description": "The interface set supported by this resource",
25035     "items": {
25036         "enum": [
25037             "oic.if.baseline",
25038             "oic.if.ll",
25039             "oic.if.b",
25040             "oic.if.lb",
25041             "oic.if.rw",
25042             "oic.if.r",
25043             "oic.if.a",
25044             "oic.if.s"
25045         ],
25046         "type": "string"
25047     },
25048     "minItems": 1,
25049     "readOnly": true,
25050     "type": "array"
25051 },
25052 "n": {
25053     "description": "Friendly name of the resource",
25054     "maxLength": 64,
25055     "readOnly": true,
25056     "type": "string"
25057 },
25058 "precision": {
25059     "description": "Accuracy granularity of the exposed value",
25060     "readOnly": true,
25061     "type": "number"
25062 },
25063 "range": {
25064     "description": "The valid range for the value Property",
25065     "items": {
25066         "anyOf": [
25067             {
25068                 "type": "number"
25069             },
25070             {
25071                 "type": "integer"
25072             }
25073         ]
25074     },
25075     "maxItems": 2,
25076     "minItems": 2,
25077     "readOnly": true,
25078     "type": "array"
25079 },
25080 "rt": {
25081     "description": "Resource Type",
25082     "items": {
25083         "maxLength": 64,
25084         "type": "string"
25085     },
25086     "minItems": 1,
25087     "readOnly": true,
25088     "type": "array"
25089 },
25090 "step": {
25091     "anyOf": [
25092         {
25093             "type": "integer"
25094         },
25095         {
25096             "type": "number"
25097         }
25098     ],
25099     "description": "Step value across the defined range",
25100     "readOnly": true
25101 },
25102 "value": {
25103     "anyOf": [
25104         {

```

```

25105         "type": "array"
25106     },
25107     {
25108         "type": "string"
25109     },
25110     {
25111         "type": "boolean"
25112     },
25113     {
25114         "type": "integer"
25115     },
25116     {
25117         "type": "number"
25118     },
25119     {
25120         "type": "object"
25121     }
25122 ],
25123 "description": "The value sensed or actuated by this Resource"
25124 }
25125 },
25126 "required": [
25127     "foamstrength"
25128 ],
25129 "type": "object"
25130 }
25131 }
25132 }
25133 }
25134

```

B.42.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
foamstrength	integer	yes		The desired foaminess of the liquid.
precision	number		Read Only	Accuracy granularity of the exposed value
if	array: see schema		Read Only	The interface set supported by this resource
rt	array: see schema		Read Only	Resource Type
id	string		Read Only	Instance ID of this specific resource
step	multiple types: see schema		Read Only	Step value across the defined range
value	multiple types: see schema			The value sensed or actuated by this Resource
range	array: see schema		Read Only	The valid range for the value Property
n	string		Read Only	Friendly name of the resource

B.42.6 CRUDN behaviour

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

/FoamingResURI		get	post		
----------------	--	-----	------	--	--

25137 B.43 Generic Sensor

25138 B.43.1 Introduction

25139 This resource describes whether some value or property or entity has been sensed or not.
 25140 The value is a boolean.
 25141 A value of 'true' means that the target has been sensed.
 25142 A value of 'false' means that the target has not been sensed.
 25143

25144 B.43.2 Example URI

25145 /GenericSensorResURI

25146 B.43.3 Resource Type

25147 The resource type (rt) is defined as: ['oic.r.sensor'].

25148 B.43.4 Swagger2.0 Definition

```

25149 {
25150   "swagger": "2.0",
25151   "info": {
25152     "title": "Generic Sensor",
25153     "version": "v1.1.0-20160519",
25154     "license": {
25155       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
25156       "x-description": "Redistribution and use in source and binary forms, with or without
25157 modification, are permitted provided that the following conditions are met:\n      1.
25158 Redistributions of source code must retain the above copyright notice, this list of conditions and
25159 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
25160 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
25161 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
25162 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
25163 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
25164 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
25165 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
25166 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
25167 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND
25168 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
25169 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
25170 OF SUCH DAMAGE.\n"
25171     },
25172   },
25173   "schemes": ["http"],
25174   "consumes": ["application/json"],
25175   "produces": ["application/json"],
25176   "paths": {
25177     "/GenericSensorResURI" : {
25178       "get": {
25179         "description": "This resource describes whether some value or property or entity has been
25180 sensed or not.\nThe value is a boolean.\nA value of 'true' means that the target has been
25181 sensed.\nA value of 'false' means that the target has not been sensed.\n",
25182         "parameters": [
25183           { "$ref": "#/parameters/interface" }
25184         ],
25185         "responses": {
25186           "200": {
25187             "description": "",
25188             "x-example": {
25189               "rt": ["oic.r.sensor"],
25190               "id": "unique_example_id",
25191               "value": true
25192             }
25193           },
25194           "schema": { "$ref": "#/definitions/Sensor" }
25195         }
25196       }
25197     }
  
```

```

25197     }
25198   }
25199 }
25200 },
25201 "parameters": {
25202   "interface": {
25203     "in": "query",
25204     "name": "if",
25205     "type": "string",
25206     "enum": ["oic.if.s", "oic.if.baseline"]
25207   }
25208 },
25209 "definitions": {
25210   "Sensor": {
25211     {
25212       "properties": {
25213         "id": {
25214           "description": "Instance ID of this specific resource",
25215           "maxLength": 64,
25216           "readOnly": true,
25217           "type": "string"
25218         },
25219         "if": {
25220           "description": "The interface set supported by this resource",
25221           "items": {
25222             "enum": [
25223               "oic.if.baseline",
25224               "oic.if.ll",
25225               "oic.if.b",
25226               "oic.if.lb",
25227               "oic.if.rw",
25228               "oic.if.r",
25229               "oic.if.a",
25230               "oic.if.s"
25231             ],
25232             "type": "string"
25233           },
25234           "minItems": 1,
25235           "readOnly": true,
25236           "type": "array"
25237         },
25238         "n": {
25239           "description": "Friendly name of the resource",
25240           "maxLength": 64,
25241           "readOnly": true,
25242           "type": "string"
25243         },
25244         "precision": {
25245           "description": "Accuracy granularity of the exposed value",
25246           "readOnly": true,
25247           "type": "number"
25248         },
25249         "range": {
25250           "description": "The valid range for the value Property",
25251           "items": {
25252             "anyOf": [
25253               {
25254                 "type": "number"
25255               },
25256               {
25257                 "type": "integer"
25258               }
25259             ]
25260           },
25261           "maxItems": 2,
25262           "minItems": 2,
25263           "readOnly": true,
25264           "type": "array"
25265         },
25266         "rt": {
25267           "description": "Resource Type",

```

```

25268         "items": {
25269             "maxLength": 64,
25270             "type": "string"
25271         },
25272         "minItems": 1,
25273         "readOnly": true,
25274         "type": "array"
25275     },
25276     "step": {
25277         "anyOf": [
25278             {
25279                 "type": "integer"
25280             },
25281             {
25282                 "type": "number"
25283             }
25284         ],
25285         "description": "Step value across the defined range",
25286         "readOnly": true
25287     },
25288     "value": {
25289         "description": "true = sensed, false = not sensed.",
25290         "readOnly": true,
25291         "type": "boolean"
25292     }
25293 },
25294 "type": "object"
25295 }
25296
25297 }
25298 }
25299

```

B.43.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema		Read Only	Resource Type
precision	number		Read Only	Accuracy granularity of the exposed value
id	string		Read Only	Instance ID of this specific resource
step	multiple types: see schema		Read Only	Step value across the defined range
if	array: see schema		Read Only	The interface set supported by this resource
range	array: see schema		Read Only	The valid range for the value Property
value	boolean		Read Only	true = sensed, false = not sensed.
n	string		Read Only	Friendly name of the resource

B.43.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/GenericSensorResURI		get			

25302 **B.44 Geolocation**

25303 **B.44.1 Introduction**

25304 This resource describes the properties associated with the current geolocation coordinate.
25305 Geolocation is a geolocation coordinate data.
25306 Latitude is a device's current Latitude coordinate (degrees).
25307 Longitude is a device's current Longitude coordinate (degrees).
25308 Altitude is a device's current Altitude position (metres).
25309 Accuracy is the accuracy level of the latitude and longitude coordinates (metres).
25310 altitudeAccuracy is the accuracy level of the altitude coordinates (metres).
25311 heading is a direction of travel of device (degree).
25312 speed is a device's current velocity (metres per second).
25313 Retrieves the current geolocation coordinates.
25314

25315 **B.44.2 Example URI**

25316 /GeolocationResURI

25317 **B.44.3 Resource Type**

25318 The resource type (rt) is defined as: ['oic.r.sensor.geolocation'].

25319 **B.44.4 Swagger2.0 Definition**

```
25320 {  
25321   "swagger": "2.0",  
25322   "info": {  
25323     "title": "Geolocation",  
25324     "version": "v1.1.0-20160519",  
25325     "license": {  
25326       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
25327       "x-description": "Redistribution and use in source and binary forms, with or without  
25328 modification, are permitted provided that the following conditions are met:\n      1.  
25329 Redistributions of source code must retain the above copyright notice, this list of conditions and  
25330 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
25331 copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
25332 other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open  
25333 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT  
25334 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR  
25335 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity  
25336 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,  
25337 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS  
25338 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND  
25339 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR  
25340 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY  
25341 OF SUCH DAMAGE.\n    }  
25342   },  
25343   "schemes": ["http"],  
25344   "consumes": ["application/json"],  
25345   "produces": ["application/json"],  
25346   "paths": {  
25347     "/GeolocationResURI" : {  
25348       "get": {  
25349         "description": "This resource describes the properties associated with the current  
25350 geolocation coordinate.\nGeolocation is a geolocation coordinate data.\nLatitude is a device's  
25351 current Latitude coordinate (degrees).\nLongitude is a device's current Longitude coordinate  
25352 (degrees).\nAltitude is a device's current Altitude position (metres).\nAccuracy is the accuracy  
25353 level of the latitude and longitude coordinates (metres).\naltitudeAccuracy is the accuracy level  
25354 of the altitude coordinates (metres).\nheading is a direction of travel of device (degree).\nspeed  
25355 is a device's current velocity (metres per second).\nRetrieves the current geolocation  
25356 coordinates.\n",  
25357         "parameters": [  
25358           {  
25359             "$ref": "#/parameters/interface"  
25360           }  
25361         ],  
25362         "responses": {  
25363           "200": {
```

```

25363         "description" : "",
25364         "x-example":
25365             {
25366                 "rt":          ["oic.r.sensor.geolocation"],
25367                 "id":          "unique_example_id",
25368                 "latitude":    55.070859,
25369                 "longitude":   -3.60512,
25370                 "alt":         12.07,
25371                 "accuracy":    65.0,
25372                 "altitudeAccuracy": 0.0,
25373                 "heading":     90.0,
25374                 "speed":       0.0
25375             }
25376         ,
25377         "schema": { "$ref": "#/definitions/Geolocation" }
25378     }
25379 }
25380 }
25381 }
25382 },
25383 "parameters": {
25384     "interface" : {
25385         "in" : "query",
25386         "name" : "if",
25387         "type" : "string",
25388         "enum" : ["oic.if.s", "oic.if.baseline"]
25389     }
25390 },
25391 "definitions": {
25392     "Geolocation" :
25393     {
25394         "properties": {
25395             "accuracy": {
25396                 "description": "The accuracy level of the latitude and longitude coordinates (metres)",
25397                 "minimum": 0,
25398                 "readOnly": true,
25399                 "type": "number"
25400             },
25401             "alt": {
25402                 "description": "The current height of the position (metres)",
25403                 "minimum": 0,
25404                 "readOnly": true,
25405                 "type": "number"
25406             },
25407             "altitudeAccuracy": {
25408                 "description": "The accuracy level of the altitude coordinates (metres)",
25409                 "minimum": 0,
25410                 "readOnly": true,
25411                 "type": "number"
25412             },
25413             "heading": {
25414                 "description": "Direction of travel of device (degree)",
25415                 "maximum": 360,
25416                 "minimum": 0,
25417                 "readOnly": true,
25418                 "type": "number"
25419             },
25420             "id": {
25421                 "description": "Instance ID of this specific resource",
25422                 "maxLength": 64,
25423                 "readOnly": true,
25424                 "type": "string"
25425             },
25426             "if": {
25427                 "description": "The interface set supported by this resource",
25428                 "items": {
25429                     "enum": [
25430                         "oic.if.baseline",
25431                         "oic.if.ll",
25432                         "oic.if.b",
25433                         "oic.if.lb",

```



```

25434         "oic.if.rw",
25435         "oic.if.r",
25436         "oic.if.a",
25437         "oic.if.s"
25438     ],
25439     "type": "string"
25440 },
25441 "minItems": 1,
25442 "readOnly": true,
25443 "type": "array"
25444 },
25445 "latitude": {
25446     "description": "Device's Current Latitude coordinate (degrees)",
25447     "readOnly": true,
25448     "type": "number"
25449 },
25450 "longitude": {
25451     "description": "Device's Current Longitude coordinate (degrees)",
25452     "readOnly": true,
25453     "type": "number"
25454 },
25455 "n": {
25456     "description": "Friendly name of the resource",
25457     "maxLength": 64,
25458     "readOnly": true,
25459     "type": "string"
25460 },
25461 "precision": {
25462     "description": "Accuracy granularity of the exposed value",
25463     "readOnly": true,
25464     "type": "number"
25465 },
25466 "range": {
25467     "description": "The valid range for the value Property",
25468     "items": {
25469         "anyOf": [
25470             {
25471                 "type": "number"
25472             },
25473             {
25474                 "type": "integer"
25475             }
25476         ]
25477     },
25478     "maxItems": 2,
25479     "minItems": 2,
25480     "readOnly": true,
25481     "type": "array"
25482 },
25483 "rt": {
25484     "description": "Resource Type",
25485     "items": {
25486         "maxLength": 64,
25487         "type": "string"
25488     },
25489     "minItems": 1,
25490     "readOnly": true,
25491     "type": "array"
25492 },
25493 "speed": {
25494     "description": "Device's current velocity (metres per second)",
25495     "minimum": 0,
25496     "readOnly": true,
25497     "type": "number"
25498 },
25499 "step": {
25500     "anyOf": [
25501         {
25502             "type": "integer"
25503         },
25504         {

```

```

25505         "type": "number"
25506     }
25507 },
25508     "description": "Step value across the defined range",
25509     "readOnly": true
25510 },
25511     "value": {
25512         "anyOf": [
25513             {
25514                 "type": "array"
25515             },
25516             {
25517                 "type": "string"
25518             },
25519             {
25520                 "type": "boolean"
25521             },
25522             {
25523                 "type": "integer"
25524             },
25525             {
25526                 "type": "number"
25527             },
25528             {
25529                 "type": "object"
25530             }
25531         ],
25532         "description": "The value sensed or actuated by this Resource"
25533     }
25534 },
25535     "required": [
25536         "latitude",
25537         "longitude",
25538         "alt"
25539     ],
25540     "type": "object"
25541 }
25542 }
25543 }
25544 }
25545

```

B.44.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
accuracy	number		Read Only	The accuracy level of the latitude and longitude coordinates (metres)
heading	number		Read Only	Direction of travel of device (degree)
id	string		Read Only	Instance ID of this specific resource
alt	number	yes	Read Only	The current height of the position (metres)
value	multiple types: see schema			The value sensed or actuated by this Resource

latitude	number	yes	Read Only	Device's Current Latitude coordinate (degrees)
range	array: see schema		Read Only	The valid range for the value Property
altitudeAccuracy	number		Read Only	The accuracy level of the altitude coordinates (metres)
rt	array: see schema		Read Only	Resource Type
speed	number		Read Only	Device's current velocity (metres per second)
step	multiple types: see schema		Read Only	Step value across the defined range
longitude	number	yes	Read Only	Device's Current Longitude coordinate (degrees)
if	array: see schema		Read Only	The interface set supported by this resource
precision	number		Read Only	Accuracy granularity of the exposed value
n	string		Read Only	Friendly name of the resource

25547 B.44.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/GeolocationResURI		get			

25548 B.45 Glass Break Sensor

25549 B.45.1 Introduction

25550 This resource describes a glass break sensor.
 25551 The value is a boolean.
 25552 A value of 'true' means that glass break has been sensed.
 25553 A value of 'false' means that glass break not been sensed.
 25554

25555 B.45.2 Example URI

25556 /GlassBreakResURI

25557 B.45.3 Resource Type

25558 The resource type (rt) is defined as: ['oic.r.sensor.glassbreak'].

25559 B.45.4 Swagger2.0 Definition

```
25560 {
25561   "swagger": "2.0",
25562   "info": {
```

```

25563     "title": "Glass Break Sensor",
25564     "version": "v1.1.0-20160519",
25565     "license": {
25566         "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
25567         "x-description": "Redistribution and use in source and binary forms, with or without
25568 modification, are permitted provided that the following conditions are met:\n      1.
25569 Redistributions of source code must retain the above copyright notice, this list of conditions and
25570 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
25571 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
25572 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
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25579 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
25580 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
25581 OF SUCH DAMAGE.\n"
25582     },
25583 },
25584 "schemes": ["http"],
25585 "consumes": ["application/json"],
25586 "produces": ["application/json"],
25587 "paths": {
25588     "/GlassBreakResURI" : {
25589         "get": {
25590             "description": "This resource describes a glass break sensor.\nThe value is a boolean.\nA
25591 value of 'true' means that glass break has been sensed.\nA value of 'false' means that glass break
25592 not been sensed.\n",
25593             "parameters": [
25594                 { "$ref": "#/parameters/interface" }
25595             ],
25596             "responses": {
25597                 "200": {
25598                     "description": "",
25599                     "x-example":
25600                     {
25601                         "rt": ["oic.r.sensor.glassbreak"],
25602                         "id": "unique_example_id",
25603                         "value": true
25604                     },
25605                     "schema": { "$ref": "#/definitions/GlassBreak" }
25606                 }
25607             }
25608         }
25609     }
25610 },
25611 },
25612 "parameters": {
25613     "interface" : {
25614         "in" : "query",
25615         "name" : "if",
25616         "type" : "string",
25617         "enum" : ["oic.if.s", "oic.if.baseline"]
25618     }
25619 },
25620 "definitions": {
25621     "GlassBreak" :
25622     {
25623         "properties": {
25624             "id": {
25625                 "description": "Instance ID of this specific resource",
25626                 "maxLength": 64,
25627                 "readOnly": true,
25628                 "type": "string"
25629             },
25630             "if": {
25631                 "description": "The interface set supported by this resource",
25632                 "items": {
25633                     "enum": [

```

```

25634         "oic.if.baseline",
25635         "oic.if.ll",
25636         "oic.if.b",
25637         "oic.if.lb",
25638         "oic.if.rw",
25639         "oic.if.r",
25640         "oic.if.a",
25641         "oic.if.s"
25642     ],
25643     "type": "string"
25644 },
25645     "minItems": 1,
25646     "readOnly": true,
25647     "type": "array"
25648 },
25649     "n": {
25650         "description": "Friendly name of the resource",
25651         "maxLength": 64,
25652         "readOnly": true,
25653         "type": "string"
25654     },
25655     "precision": {
25656         "description": "Accuracy granularity of the exposed value",
25657         "readOnly": true,
25658         "type": "number"
25659     },
25660     "range": {
25661         "description": "The valid range for the value Property",
25662         "items": {
25663             "anyOf": [
25664                 {
25665                     "type": "number"
25666                 },
25667                 {
25668                     "type": "integer"
25669                 }
25670             ]
25671         },
25672         "maxItems": 2,
25673         "minItems": 2,
25674         "readOnly": true,
25675         "type": "array"
25676     },
25677     "rt": {
25678         "description": "Resource Type",
25679         "items": {
25680             "maxLength": 64,
25681             "type": "string"
25682         },
25683         "minItems": 1,
25684         "readOnly": true,
25685         "type": "array"
25686     },
25687     "step": {
25688         "anyOf": [
25689             {
25690                 "type": "integer"
25691             },
25692             {
25693                 "type": "number"
25694             }
25695         ],
25696         "description": "Step value across the defined range",
25697         "readOnly": true
25698     },
25699     "value": {
25700         "description": "true = sensed, false = not sensed.",
25701         "readOnly": true,
25702         "type": "boolean"
25703     }
25704 },

```

```

25705         "required": [
25706             "value"
25707         ],
25708         "type": "object"
25709     }
25710 }
25711 }
25712 }
25713

```

25714 B.45.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
value	boolean	yes	Read Only	true = sensed, false = not sensed.
range	array: see schema		Read Only	The valid range for the value Property
step	multiple types: see schema		Read Only	Step value across the defined range
rt	array: see schema		Read Only	Resource Type
id	string		Read Only	Instance ID of this specific resource
n	string		Read Only	Friendly name of the resource
precision	number		Read Only	Accuracy granularity of the exposed value
if	array: see schema		Read Only	The interface set supported by this resource

25715 B.45.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/GlassBreakResURI		get			

25716 B.46 Grinder

25717 B.46.1 Introduction

25718 This resource describes the attributes associated with a grinder. The coarseness of the grounds
 25719 is an integer. The higher the value, the less coarse. remaining is a percentage that represents the
 25720 unground material left.
 25721 Retrieves the state of a grinder.
 25722

25723 B.46.2 Example URI

25724 /GrinderResURI

25725 B.46.3 Resource Type

25726 The resource type (rt) is defined as: ['oic.r.grinder'].

25727 B.46.4 Swagger2.0 Definition

```

25728 {
25729     "swagger": "2.0",
25730     "info": {

```

```

25731     "title": "Grinder",
25732     "version": "v1.1.0-20170815",
25733     "license": {
25734         "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
25735         "x-description": "Redistribution and use in source and binary forms, with or without
25736 modification, are permitted provided that the following conditions are met:\n      1.
25737 Redistributions of source code must retain the above copyright notice, this list of conditions and
25738 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
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25746 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
25747 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
25748 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
25749 OF SUCH DAMAGE.\n"
25750     },
25751 },
25752 "schemes": ["http"],
25753 "consumes": ["application/json"],
25754 "produces": ["application/json"],
25755 "paths": {
25756     "/GrinderResURI" : {
25757         "get": {
25758             "description": "This resource describes the attributes associated with a grinder. The
25759 coarseness of the grounds is an integer. The higher the value, the less coarse. remaining is a
25760 percentage that represents the unground material left.\nRetrieves the state of a grinder.\n",
25761             "parameters": [
25762                 { "$ref": "#/parameters/interface" }
25763             ],
25764             "responses": {
25765                 "200": {
25766                     "description": "",
25767                     "x-example":
25768                     {
25769                         "rt": ["oic.r.grinder"],
25770                         "id": "unique_example_id",
25771                         "coarseness": 10,
25772                         "remaining": 50
25773                     }
25774                 },
25775                 "schema": { "$ref": "#/definitions/Grinder" }
25776             }
25777         },
25778     },
25779     "post": {
25780         "description": "Sets grinding values\n",
25781         "parameters": [
25782             { "$ref": "#/parameters/interface" },
25783             {
25784                 "name": "body",
25785                 "in": "body",
25786                 "required": true,
25787                 "schema": { "$ref": "#/definitions/GrinderUpdate" },
25788                 "x-example":
25789                 {
25790                     "id": "unique_example_id",
25791                     "coarseness": 10
25792                 }
25793             }
25794         ],
25795         "responses": {
25796             "200": {
25797                 "description": "",
25798                 "x-example":
25799                 {
25800                     "id": "unique_example_id",
25801                     "coarseness": 10

```

```

25802         }
25803     },
25804     "schema": { "$ref": "#/definitions/GrinderUpdate" }
25805 }
25806 }
25807 }
25808 }
25809 },
25810 "parameters": {
25811     "interface" : {
25812         "in" : "query",
25813         "name" : "if",
25814         "type" : "string",
25815         "enum" : ["oic.if.rw", "oic.if.baseline"]
25816     }
25817 },
25818 "definitions": {
25819     "Grinder" :
25820     {
25821         "properties": {
25822             "coarseness": {
25823                 "description": "The desired coarseness when grinding.",
25824                 "type": "integer"
25825             },
25826             "id": {
25827                 "description": "Instance ID of this specific resource",
25828                 "maxLength": 64,
25829                 "readOnly": true,
25830                 "type": "string"
25831             },
25832             "if": {
25833                 "description": "The interface set supported by this resource",
25834                 "items": {
25835                     "enum": [
25836                         "oic.if.baseline",
25837                         "oic.if.ll",
25838                         "oic.if.b",
25839                         "oic.if.lb",
25840                         "oic.if.rw",
25841                         "oic.if.r",
25842                         "oic.if.a",
25843                         "oic.if.s"
25844                     ],
25845                     "type": "string"
25846                 },
25847                 "minItems": 1,
25848                 "readOnly": true,
25849                 "type": "array"
25850             },
25851             "n": {
25852                 "description": "Friendly name of the resource",
25853                 "maxLength": 64,
25854                 "readOnly": true,
25855                 "type": "string"
25856             },
25857             "precision": {
25858                 "description": "Accuracy granularity of the exposed value",
25859                 "readOnly": true,
25860                 "type": "number"
25861             },
25862             "range": {
25863                 "description": "The valid range for the value Property",
25864                 "items": {
25865                     "anyOf": [
25866                         {
25867                             "type": "number"
25868                         },
25869                         {
25870                             "type": "integer"
25871                         }
25872                     ]

```



```

25873         },
25874         "maxItems": 2,
25875         "minItems": 2,
25876         "readOnly": true,
25877         "type": "array"
25878     },
25879     "remaining": {
25880         "description": "The percentage of unground material left.",
25881         "maximum": 100,
25882         "minimum": 0,
25883         "readOnly": true,
25884         "type": "integer"
25885     },
25886     "rt": {
25887         "description": "Resource Type",
25888         "items": {
25889             "maxLength": 64,
25890             "type": "string"
25891         },
25892         "minItems": 1,
25893         "readOnly": true,
25894         "type": "array"
25895     },
25896     "step": {
25897         "anyOf": [
25898             {
25899                 "type": "integer"
25900             },
25901             {
25902                 "type": "number"
25903             }
25904         ],
25905         "description": "Step value across the defined range",
25906         "readOnly": true
25907     },
25908     "value": {
25909         "anyOf": [
25910             {
25911                 "type": "array"
25912             },
25913             {
25914                 "type": "string"
25915             },
25916             {
25917                 "type": "boolean"
25918             },
25919             {
25920                 "type": "integer"
25921             },
25922             {
25923                 "type": "number"
25924             },
25925             {
25926                 "type": "object"
25927             }
25928         ],
25929         "description": "The value sensed or actuated by this Resource"
25930     }
25931 },
25932 "required": [
25933     "coarseness"
25934 ],
25935 "type": "object"
25936 }
25937
25938 ,
25939 "GrinderUpdate" :
25940 {
25941     "properties": {
25942         "coarseness": {
25943             "description": "The desired coarseness when grinding.",

```

```

25944         "type": "integer"
25945     },
25946     "id": {
25947         "description": "Instance ID of this specific resource",
25948         "maxLength": 64,
25949         "readOnly": true,
25950         "type": "string"
25951     },
25952     "if": {
25953         "description": "The interface set supported by this resource",
25954         "items": {
25955             "enum": [
25956                 "oic.if.baseline",
25957                 "oic.if.ll",
25958                 "oic.if.b",
25959                 "oic.if.lb",
25960                 "oic.if.rw",
25961                 "oic.if.x",
25962                 "oic.if.a",
25963                 "oic.if.s"
25964             ],
25965             "type": "string"
25966         },
25967         "minItems": 1,
25968         "readOnly": true,
25969         "type": "array"
25970     },
25971     "n": {
25972         "description": "Friendly name of the resource",
25973         "maxLength": 64,
25974         "readOnly": true,
25975         "type": "string"
25976     },
25977     "precision": {
25978         "description": "Accuracy granularity of the exposed value",
25979         "readOnly": true,
25980         "type": "number"
25981     },
25982     "range": {
25983         "description": "The valid range for the value Property",
25984         "items": {
25985             "anyOf": [
25986                 {
25987                     "type": "number"
25988                 },
25989                 {
25990                     "type": "integer"
25991                 }
25992             ]
25993         },
25994         "maxItems": 2,
25995         "minItems": 2,
25996         "readOnly": true,
25997         "type": "array"
25998     },
25999     "rt": {
26000         "description": "Resource Type",
26001         "items": {
26002             "maxLength": 64,
26003             "type": "string"
26004         },
26005         "minItems": 1,
26006         "readOnly": true,
26007         "type": "array"
26008     },
26009     "step": {
26010         "anyOf": [
26011             {
26012                 "type": "integer"
26013             },
26014             {

```

```

26015         "type": "number"
26016     }
26017 },
26018     "description": "Step value across the defined range",
26019     "readOnly": true
26020 },
26021     "value": {
26022         "anyOf": [
26023             {
26024                 "type": "array"
26025             },
26026             {
26027                 "type": "string"
26028             },
26029             {
26030                 "type": "boolean"
26031             },
26032             {
26033                 "type": "integer"
26034             },
26035             {
26036                 "type": "number"
26037             },
26038             {
26039                 "type": "object"
26040             }
26041         ],
26042         "description": "The value sensed or actuated by this Resource"
26043     }
26044 },
26045     "required": [
26046         "coarseness"
26047     ],
26048     "type": "object"
26049 }
26050
26051 }
26052 }
26053

```

B.46.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
remaining	integer		Read Only	The percentage of unground material left.
id	string		Read Only	Instance ID of this specific resource
step	multiple types: see schema		Read Only	Step value across the defined range
value	multiple types: see schema			The value sensed or actuated by this Resource
rt	array: see schema		Read Only	Resource Type
precision	number		Read Only	Accuracy granularity of the exposed value
coarseness	integer	yes		The desired coarseness when grinding.

range	array: see schema		Read Only	The valid range for the value Property
if	array: see schema		Read Only	The interface set supported by this resource
n	string		Read Only	Friendly name of the resource
id	string		Read Only	Instance ID of this specific resource
step	multiple types: see schema		Read Only	Step value across the defined range
value	multiple types: see schema			The value sensed or actuated by this Resource
rt	array: see schema		Read Only	Resource Type
precision	number		Read Only	Accuracy granularity of the exposed value
coarseness	integer	yes		The desired coarseness when grinding.
range	array: see schema		Read Only	The valid range for the value Property
if	array: see schema		Read Only	The interface set supported by this resource
n	string		Read Only	Friendly name of the resource

26055 B.46.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/GrinderResURI		get	post		

26056 B.47 Heart Rate Zone

26057 B.47.1 Introduction

26058 This resource describes a measured heart rate by the current Zone using the Zoladz method
26059 The Zoladz method defines Zones based on maximum heart rate; Zone 1 is the lowest, Zone 5 is
26060 the highest.
26061 The heartRateZone is an enumeration containing one of: "Zone1", "Zone2", "Zone3", "Zone4",
26062 "Zone5".
26063

26064 B.47.2 Example URI

26065 /HeartRateZoneResURI

26066 B.47.3 Resource Type

26067 The resource type (rt) is defined as: ['oic.r.sensor.heart.zone'].

B.47.4 Swagger2.0 Definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Heart Rate Zone",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
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ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/HeartRateZoneResURI" : {
      "get": {
        "description": "This resource describes a measured heart rate by the current Zone using the
Zoladz method\nThe Zoladz method defines Zones based on maximum heart rate; Zone 1 is the lowest,
Zone 5 is the highest.\n\nThe heartRateZone is an enumeration containing one of: \"Zone1\",
\"Zone2\", \"Zone3\", \"Zone4\", \"Zone5\".\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.sensor.heart.zone"],
              "id": "unique_example_id",
              "heartRateZone": "Zone3"
            },
            "schema": { "$ref": "#/definitions/heartRateZone" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface" : {
      "in" : "query",
      "name" : "if",
      "type" : "string",
      "enum" : ["oic.if.s", "oic.if.baseline"]
    }
  },
  "definitions": {
    "heartRateZone" : {
      "properties": {
        "heartRateZone": {
          "description": "Current heart rate zone based on the Zoladz system.",
          "enum": [
            "Zone1",
```

```

26138         "Zone2",
26139         "Zone3",
26140         "Zone4",
26141         "Zone5"
26142     ],
26143     "readOnly": true
26144 },
26145 "id": {
26146     "description": "Instance ID of this specific resource",
26147     "maxLength": 64,
26148     "readOnly": true,
26149     "type": "string"
26150 },
26151 "if": {
26152     "description": "The interface set supported by this resource",
26153     "items": {
26154         "enum": [
26155             "oic.if.baseline",
26156             "oic.if.ll",
26157             "oic.if.b",
26158             "oic.if.lb",
26159             "oic.if.rw",
26160             "oic.if.r",
26161             "oic.if.a",
26162             "oic.if.s"
26163         ],
26164         "type": "string"
26165     },
26166     "minItems": 1,
26167     "readOnly": true,
26168     "type": "array"
26169 },
26170 "n": {
26171     "description": "Friendly name of the resource",
26172     "maxLength": 64,
26173     "readOnly": true,
26174     "type": "string"
26175 },
26176 "precision": {
26177     "description": "Accuracy granularity of the exposed value",
26178     "readOnly": true,
26179     "type": "number"
26180 },
26181 "range": {
26182     "description": "The valid range for the value Property",
26183     "items": {
26184         "anyOf": [
26185             {
26186                 "type": "number"
26187             },
26188             {
26189                 "type": "integer"
26190             }
26191         ]
26192     },
26193     "maxItems": 2,
26194     "minItems": 2,
26195     "readOnly": true,
26196     "type": "array"
26197 },
26198 "rt": {
26199     "description": "Resource Type",
26200     "items": {
26201         "maxLength": 64,
26202         "type": "string"
26203     },
26204     "minItems": 1,
26205     "readOnly": true,
26206     "type": "array"
26207 },
26208 "step": {

```

```

26209         "anyOf": [
26210             {
26211                 "type": "integer"
26212             },
26213             {
26214                 "type": "number"
26215             }
26216         ],
26217         "description": "Step value across the defined range",
26218         "readOnly": true
26219     },
26220     "value": {
26221         "anyOf": [
26222             {
26223                 "type": "array"
26224             },
26225             {
26226                 "type": "string"
26227             },
26228             {
26229                 "type": "boolean"
26230             },
26231             {
26232                 "type": "integer"
26233             },
26234             {
26235                 "type": "number"
26236             },
26237             {
26238                 "type": "object"
26239             }
26240         ],
26241         "description": "The value sensed or actuated by this Resource"
26242     }
26243 },
26244 "required": [
26245     "heartRateZone"
26246 ]
26247 }
26248
26249 }
26250 }
26251

```

B.47.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema		Read Only	Step value across the defined range
id	string		Read Only	Instance ID of this specific resource
value	multiple types: see schema			The value sensed or actuated by this Resource
rt	array: see schema		Read Only	Resource Type
n	string		Read Only	Friendly name of the resource
heartRateZone	multiple types: see schema	yes	Read Only	Current heart rate zone based on the Zoladz system.

range	array: see schema		Read Only	The valid range for the value Property
if	array: see schema		Read Only	The interface set supported by this resource
precision	number		Read Only	Accuracy granularity of the exposed value

26253 B.47.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/HeartRateZoneResURI		get			

26254 B.48 Heating Zone

26255 B.48.1 Introduction

26256 This Resource provides information about the status of a heating zone of a Cook-Top.
26257 It describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the device
26258 implements pot recognition).
26259 maxheatinglevel defines the max level for the heating zone
26260 heatinglevel is the current heating level of the zone
26261 For each element the value range is from 0 (indication that the zone is not heating) to
26262 maxheatinglevel,
26263 Retrieves the current heating zone information.
26264

26265 B.48.2 Example URI

26266 /HeatingZoneResURI

26267 B.48.3 Resource Type

26268 The resource type (rt) is defined as: ['oic.r.heatingzone'].

26269 B.48.4 Swagger2.0 Definition

```

26270 {
26271   "swagger": "2.0",
26272   "info": {
26273     "title": "Heating Zone",
26274     "version": "OCF1.0-20160722",
26275     "license": {
26276       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
26277       "x-description": "Redistribution and use in source and binary forms, with or without
26278 modification, are permitted provided that the following conditions are met:\n      1.
26279 Redistributions of source code must retain the above copyright notice, this list of conditions and
26280 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
26281 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
26282 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
26283 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
26284 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
26285 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
26286 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
26287 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
26288 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
26289 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
26290 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
26291 OF SUCH DAMAGE.\n"
26292     }
26293   },
26294   "schemes": ["http"],
26295   "consumes": ["application/json"],
26296   "produces": ["application/json"],
26297   "paths": {

```



```

26298     "/HeatingZoneResURI" : {
26299         "get": {
26300             "description": "This Resource provides information about the status of a heating zone of a
26301 Cook-Top.\nIt describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the
26302 device implements pot recognition).\nmaxheatinglevel defines the max level for the heating
26303 zone\nheatinglevel is the current heating level of the zone\n For each element the value range is
26304 from 0 (indication that the zone is not heating) to maxheatinglevel,\nRetrieves the current heating
26305 zone information.\n",
26306             "parameters": [
26307                 { "$ref": "#/parameters/interface" }
26308             ],
26309             "responses": {
26310                 "200": {
26311                     "description": "",
26312                     "x-example":
26313                         {
26314                             "rt": ["oic.r.heatingzone"],
26315                             "id": "unique_example_id",
26316                             "maxheatinglevel": 6,
26317                             "heatinglevel": 0
26318                         }
26319                 },
26320                 "schema": { "$ref": "#/definitions/HeatingZone" }
26321             }
26322         }
26323     }
26324 },
26325 "parameters": {
26326     "interface" : {
26327         "in" : "query",
26328         "name" : "if",
26329         "type" : "string",
26330         "enum" : ["oic.if.s", "oic.if.baseline"]
26331     }
26332 },
26333 "definitions": {
26334     "HeatingZone" :
26335     {
26336         "properties": {
26337             "heatinglevel": {
26338                 "description": "Current heating level for the zone indicated.",
26339                 "readOnly": true,
26340                 "type": "integer"
26341             },
26342             "id": {
26343                 "description": "Instance ID of this specific resource",
26344                 "maxLength": 64,
26345                 "readOnly": true,
26346                 "type": "string"
26347             },
26348             "if": {
26349                 "description": "The interface set supported by this resource",
26350                 "items": {
26351                     "enum": [
26352                         "oic.if.baseline",
26353                         "oic.if.ll",
26354                         "oic.if.b",
26355                         "oic.if.lb",
26356                         "oic.if.rw",
26357                         "oic.if.r",
26358                         "oic.if.a",
26359                         "oic.if.s"
26360                     ],
26361                     "type": "string"
26362                 },
26363                 "minItems": 1,
26364                 "readOnly": true,
26365                 "type": "array"
26366             },
26367             "maxheatinglevel": {

```

```

26369         "description": "Maximum heating level for the zone indicated.",
26370         "readOnly": true,
26371         "type": "integer"
26372     },
26373     "n": {
26374         "description": "Friendly name of the resource",
26375         "maxLength": 64,
26376         "readOnly": true,
26377         "type": "string"
26378     },
26379     "precision": {
26380         "description": "Accuracy granularity of the exposed value",
26381         "readOnly": true,
26382         "type": "number"
26383     },
26384     "range": {
26385         "description": "The valid range for the value Property",
26386         "items": {
26387             "anyOf": [
26388                 {
26389                     "type": "number"
26390                 },
26391                 {
26392                     "type": "integer"
26393                 }
26394             ]
26395         },
26396         "maxItems": 2,
26397         "minItems": 2,
26398         "readOnly": true,
26399         "type": "array"
26400     },
26401     "rt": {
26402         "description": "Resource Type",
26403         "items": {
26404             "maxLength": 64,
26405             "type": "string"
26406         },
26407         "minItems": 1,
26408         "readOnly": true,
26409         "type": "array"
26410     },
26411     "step": {
26412         "anyOf": [
26413             {
26414                 "type": "integer"
26415             },
26416             {
26417                 "type": "number"
26418             }
26419         ],
26420         "description": "Step value across the defined range",
26421         "readOnly": true
26422     },
26423     "value": {
26424         "anyOf": [
26425             {
26426                 "type": "array"
26427             },
26428             {
26429                 "type": "string"
26430             },
26431             {
26432                 "type": "boolean"
26433             },
26434             {
26435                 "type": "integer"
26436             },
26437             {
26438                 "type": "number"
26439             }

```

```

26440         {
26441             "type": "object"
26442         }
26443     ],
26444     "description": "The value sensed or actuated by this Resource"
26445 },
26446 },
26447 "required": [
26448     "maxheatinglevel",
26449     "heatinglevel"
26450 ],
26451 "type": "object"
26452 }
26453 }
26454 }
26455 }
26456

```

26457 B.48.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
maxheatinglevel	integer	yes	Read Only	Maximum heating level for the zone indicated.
id	string		Read Only	Instance ID of this specific resource
step	multiple types: see schema		Read Only	Step value across the defined range
rt	array: see schema		Read Only	Resource Type
range	array: see schema		Read Only	The valid range for the value Property
precision	number		Read Only	Accuracy granularity of the exposed value
if	array: see schema		Read Only	The interface set supported by this resource
heatinglevel	integer	yes	Read Only	Current heating level for the zone indicated.
n	string		Read Only	Friendly name of the resource
value	multiple types: see schema			The value sensed or actuated by this Resource

26458 B.48.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/HeatingZoneResURI		get			

B.49 Heating Zone Collection

B.49.1 Introduction

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

B.49.2 Example URI

/HeatingZoneBaselineResURI

B.49.3 Resource Type

The resource type (rt) is defined as: ['oic.r.heatingzonecollection', 'oic.wk.col'].

B.49.4 Swagger2.0 Definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Heating Zone Collection",
    "version": "OCF1.0-20160722",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/HeatingZoneLLResURI" : {
      "get": {
        "description": "This Resource provides information about the status of the heating zones of
a Cook-Top.\nIt describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the
device implements pot recognition).\nThe resource is a collection of instances of oic.r.heatingzone
detailing the individual cooktop zones\n",
        "parameters": [
          {"$ref": "#/parameters/interface-11"}
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": [
              {"href": "/myZone1ResURI", "rt": ["oic.r.heatingzone"], "if": ["oic.if.s"],
"eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
              {"href": "/myZone2ResURI", "rt": ["oic.r.heatingzone"], "if": ["oic.if.s"],
"eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
              {"href": "/myZone3ResURI", "rt": ["oic.r.heatingzone"], "if": ["oic.if.s"],
"eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
              {"href": "/myZone4ResURI", "rt": ["oic.r.heatingzone"], "if": ["oic.if.s"],
```

```

26521 "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
26522 ]
26523 ,
26524 "schema": { "$ref": "#/definitions/HeatingZone-11" }
26525 }
26526 }
26527 }
26528 },
26529 "/HeatingZoneBaselineResURI" : {
26530 "get": {
26531 "description": "This Resource provides information about the status of the heating zones of
26532 a Cook-Top.\nIt describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the
26533 device implements pot recognition).\nThe resource is a collection of instances of oic.r.heatingzone
26534 detailing the individual cooktop zones\nRetrieves the current heating zone information.\n",
26535 "parameters": [
26536 {"$ref": "#/parameters/interface-baseline"}
26537 ],
26538 "responses": {
26539 "200": {
26540 "description": "",
26541 "x-example":
26542 {
26543 "rt": ["oic.r.heatingzonecollection", "oic.wk.col"],
26544 "id": "unique_example_id",
26545 "links": [
26546 {"href": "/myZone1ResURI", "rt": ["oic.r.heatingzone"], "if":
26547 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
26548 {"href": "/myZone2ResURI", "rt": ["oic.r.heatingzone"], "if":
26549 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
26550 {"href": "/myZone3ResURI", "rt": ["oic.r.heatingzone"], "if":
26551 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
26552 {"href": "/myZone4ResURI", "rt": ["oic.r.heatingzone"], "if":
26553 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
26554 ]
26555 }
26556 },
26557 "schema": { "$ref": "#/definitions/HeatingZone" }
26558 }
26559 }
26560 }
26561 }
26562 },
26563 "parameters": {
26564 "interface-11" : {
26565 "in" : "query",
26566 "name" : "if",
26567 "type" : "string",
26568 "enum" : ["oic.if.11"]
26569 },
26570 "interface-baseline" : {
26571 "in" : "query",
26572 "name" : "if",
26573 "type" : "string",
26574 "enum" : ["oic.if.baseline"]
26575 },
26576 "interface-all" : {
26577 "in" : "query",
26578 "name" : "if",
26579 "type" : "string",
26580 "enum" : ["oic.if.11", "oic.if.baseline"]
26581 }
26582 },
26583 "definitions": {
26584 "HeatingZone-11" :
26585 {
26586 "description": "All forms of links in a collection",
26587 "oneOf": [
26588 {
26589 "description": "A set (array) of simple or individual OIC Links. In addition to
26590 properties required for an OIC Link, the identifier for that link in this set is also required",
26591 "items": {

```

```

26592         "properties": {
26593             "anchor": {
26594                 "description": "This is used to override the context URI e.g. override the URI of
26595 the containing collection",
26596                 "format": "uri",
26597                 "maxLength": 256,
26598                 "type": "string"
26599             },
26600             "di": {
26601                 "description": "Unique identifier for device (UUID)",
26602                 "pattern": "[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-
26603 F0-9]{12}$",
26604                 "type": "string"
26605             },
26606             "eps": {
26607                 "description": "the Endpoint information of the target Resource",
26608                 "items": {
26609                     "properties": {
26610                         "ep": {
26611                             "description": "URI with Transport Protocol Suites + Endpoint Locator as
26612 specified in 10.2.1",
26613                             "format": "uri",
26614                             "type": "string"
26615                         },
26616                         "pri": {
26617                             "description": "The priority among multiple Endpoints as specified in
26618 10.2.3",
26619                             "minimum": 1,
26620                             "type": "integer"
26621                         }
26622                     },
26623                     "type": "object"
26624                 },
26625                 "type": "array"
26626             },
26627             "href": {
26628                 "description": "This is the target URI, it can be specified as a Relative
26629 Reference or fully-qualified URI. Relative Reference should be used along with the di parameter to
26630 make it unique.",
26631                 "format": "uri",
26632                 "maxLength": 256,
26633                 "type": "string"
26634             },
26635             "if": {
26636                 "description": "The interface set supported by this resource",
26637                 "items": {
26638                     "enum": [
26639                         "oic.if.baseline",
26640                         "oic.if.ll",
26641                         "oic.if.b",
26642                         "oic.if.rw",
26643                         "oic.if.r",
26644                         "oic.if.a",
26645                         "oic.if.s"
26646                     ],
26647                     "type": "string"
26648                 },
26649                 "minItems": 1,
26650                 "type": "array"
26651             },
26652             "ins": {
26653                 "description": "The instance identifier for this web link in an array of web
26654 links - used in collections",
26655                 "oneOf": [
26656                     {
26657                         "description": "An ordinal number that is not repeated - must be unique in
26658 the collection context",
26659                         "type": "integer"
26660                     },
26661                     {
26662                         "description": "Any unique string including a URI",

```

```

26663         "format": "uri",
26664         "maxLength": 256,
26665         "type": "string"
26666     },
26667     {
26668         "description": "Unique identifier (UUID)",
26669         "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-
26670 fA-F0-9]{12}$",
26671         "type": "string"
26672     }
26673 ],
26674 },
26675 "p": {
26676     "description": "Specifies the framework policies on the Resource referenced by
26677 the target URI",
26678     "properties": {
26679         "bm": {
26680             "description": "Specifies the framework policies on the Resource referenced
26681 by the target URI for e.g. observable and discoverable",
26682             "type": "integer"
26683         }
26684     },
26685     "required": [
26686         "bm"
26687     ],
26688     "type": "object"
26689 },
26690 "rel": {
26691     "description": "The relation of the target URI referenced by the link to the
26692 context URI",
26693     "oneOf": [
26694         {
26695             "default": [
26696                 "hosts"
26697             ],
26698             "items": {
26699                 "maxLength": 64,
26700                 "type": "string"
26701             },
26702             "minItems": 1,
26703             "type": "array"
26704         },
26705         {
26706             "default": "hosts",
26707             "maxLength": 64,
26708             "type": "string"
26709         }
26710     ],
26711 },
26712 "rt": {
26713     "description": "Resource Type",
26714     "items": {
26715         "maxLength": 64,
26716         "type": "string"
26717     },
26718     "minItems": 1,
26719     "type": "array"
26720 },
26721 "title": {
26722     "description": "A title for the link relation. Can be used by the UI to provide a
26723 context",
26724     "maxLength": 64,
26725     "type": "string"
26726 },
26727 "type": {
26728     "default": "application/cbor",
26729     "description": "A hint at the representation of the resource referenced by the
26730 target URI. This represents the media types that are used for both accepting and emitting",
26731     "items": {
26732         "maxLength": 64,
26733         "type": "string"

```

```

26734         },
26735         "minItems": 1,
26736         "type": "array"
26737     }
26738 },
26739 "required": [
26740     "href",
26741     "rt",
26742     "if"
26743 ],
26744 "type": "object"
26745 },
26746 "type": "array"
26747 }
26748 ]
26749 }
26750
26751 ,
26752 "HeatingZone" :
26753 {
26754     "description": "A collection is a set (array) of tagged-link or set (array) of simple links
26755 along with additional properties to describe the collection itself",
26756     "properties": {
26757         "di": {
26758             "description": "The device ID which is an UUIDv4 string; used for backward
26759 compatibility with Spec A definition of /oic/res",
26760             "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
26761 9]{12}$",
26762             "type": "string"
26763         },
26764         "drel": {
26765             "description": "When specified this is the default relationship to use when an OIC Link
26766 does not specify an explicit relationship with *rel* parameter",
26767             "type": "string"
26768         },
26769         "id": {
26770             "anyOf": [
26771                 {
26772                     "description": "A number that is unique to that collection; like an ordinal number
26773 that is not repeated",
26774                     "type": "integer"
26775                 },
26776                 {
26777                     "description": "A unique string that could be a hash or similarly unique",
26778                     "type": "string"
26779                 },
26780                 {
26781                     "description": "A unique string that could be a UUIDv4",
26782                     "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
26783 9]{12}$",
26784                     "type": "string"
26785                 }
26786             ],
26787             "description": "ID for the collection. Can be an value that is unique to the use
26788 context or a UUIDv4"
26789         },
26790         "links": {
26791             "description": "All forms of links in a collection",
26792             "oneOf": [
26793                 {
26794                     "description": "A set (array) of simple or individual OIC Links. In addition to
26795 properties required for an OIC Link, the identifier for that link in this set is also required",
26796                     "items": {
26797                         "properties": {
26798                             "anchor": {
26799                                 "description": "This is used to override the context URI e.g. override the
26800 URI of the containing collection",
26801                                 "format": "uri",
26802                                 "maxLength": 256,
26803                                 "type": "string"
26804                             }

```



```

26805         "di": {
26806             "description": "Unique identifier for device (UUID)",
26807             "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-
26808 fA-F0-9]{12}$",
26809             "type": "string"
26810         },
26811         "eps": {
26812             "description": "the Endpoint information of the target Resource",
26813             "items": {
26814                 "properties": {
26815                     "ep": {
26816                         "description": "URI with Transport Protocol Suites + Endpoint Locator
26817 as specified in 10.2.1",
26818                         "format": "uri",
26819                         "type": "string"
26820                     },
26821                     "pri": {
26822                         "description": "The priority among multiple Endpoints as specified in
26823 10.2.3",
26824                         "minimum": 1,
26825                         "type": "integer"
26826                     }
26827                 },
26828                 "type": "object"
26829             },
26830             "type": "array"
26831         },
26832         "href": {
26833             "description": "This is the target URI, it can be specified as a Relative
26834 Reference or fully-qualified URI. Relative Reference should be used along with the di parameter to
26835 make it unique.",
26836             "format": "uri",
26837             "maxLength": 256,
26838             "type": "string"
26839         },
26840         "if": {
26841             "description": "The interface set supported by this resource",
26842             "items": {
26843                 "enum": [
26844                     "oic.if.baseline",
26845                     "oic.if.ll",
26846                     "oic.if.b",
26847                     "oic.if.rw",
26848                     "oic.if.r",
26849                     "oic.if.a",
26850                     "oic.if.s"
26851                 ],
26852                 "type": "string"
26853             },
26854             "minItems": 1,
26855             "type": "array"
26856         },
26857         "ins": {
26858             "description": "The instance identifier for this web link in an array of web
26859 links - used in collections",
26860             "oneOf": [
26861                 {
26862                     "description": "An ordinal number that is not repeated - must be unique
26863 in the collection context",
26864                     "type": "integer"
26865                 },
26866                 {
26867                     "description": "Any unique string including a URI",
26868                     "format": "uri",
26869                     "maxLength": 256,
26870                     "type": "string"
26871                 },
26872                 {
26873                     "description": "Unique identifier (UUID)",
26874                     "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-
26875 [a-fA-F0-9]{12}$",

```

```

26876         "type": "string"
26877     }
26878 ]
26879 },
26880 "p": {
26881     "description": "Specifies the framework policies on the Resource referenced
by the target URI",
26882     "properties": {
26883         "bm": {
26884             "description": "Specifies the framework policies on the Resource
referenced by the target URI for e.g. observable and discoverable",
26885             "type": "integer"
26886         }
26887     },
26888     "required": [
26889         "bm"
26890     ],
26891     "type": "object"
26892 },
26893 "rel": {
26894     "description": "The relation of the target URI referenced by the link to the
context URI",
26895     "oneOf": [
26896         {
26897             "default": [
26898                 "hosts"
26899             ],
26900             "items": {
26901                 "maxLength": 64,
26902                 "type": "string"
26903             },
26904             "minItems": 1,
26905             "type": "array"
26906         },
26907         {
26908             "default": "hosts",
26909             "maxLength": 64,
26910             "type": "string"
26911         }
26912     ],
26913     "rt": {
26914         "description": "Resource Type",
26915         "items": {
26916             "maxLength": 64,
26917             "type": "string"
26918         },
26919         "minItems": 1,
26920         "type": "array"
26921     },
26922     "title": {
26923         "description": "A title for the link relation. Can be used by the UI to
provide a context",
26924         "maxLength": 64,
26925         "type": "string"
26926     },
26927     "type": {
26928         "default": "application/cbor",
26929         "description": "A hint at the representation of the resource referenced by
the target URI. This represents the media types that are used for both accepting and emitting",
26930         "items": {
26931             "maxLength": 64,
26932             "type": "string"
26933         },
26934         "minItems": 1,
26935         "type": "array"
26936     }
26937 },
26938     "required": [
26939         "href",
26940         "rt",

```

```

26947         "if"
26948     ],
26949     "type": "object"
26950 },
26951     "type": "array"
26952 }
26953 ]
26954 },
26955 "rt": {
26956     "items": {
26957         "enum": [
26958             "oic.r.heatingzonecollection",
26959             "oic.wk.col"
26960         ]
26961     },
26962     "maxItems": 2,
26963     "minItems": 2,
26964     "type": "array",
26965     "uniqueItems": true
26966 },
26967 "rts": {
26968     "description": "Defines the list of allowable resource types (for Target and anchors)
in links included in the collection; new links being created can only be from this list",
26969     "items": {
26970         "anyOf": [
26971             {
26972                 "enum": [
26973                     "oic.r.heatingzone",
26974                     "oic.r.value.conditional"
26975                 ]
26976             },
26977             {
26978                 "enum": [
26979                     "oic.r.heatingzone"
26980                 ]
26981             }
26982         ],
26983         "maxLength": 64,
26984         "type": "string"
26985     },
26986     "maxItems": 2,
26987     "minItems": 1,
26988     "readOnly": true,
26989     "type": "array",
26990     "uniqueItems": true
26991 },
26992 },
26993 },
26994 "type": "object"
26995 }
26996 }
26997 }
26998 }
26999

```

B.49.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
drel	string			When specified this is the default relationship to use when an OIC Link does not specify an explicit relationship with *rel* parameter
id	multiple types: see schema			ID for the collection. Can

				be an value that is unique to the use context or a UUIDv4
rts	array: see schema		Read Only	Defines the list of allowable resource types (for Target and anchors) in links included in the collection; new links being created can only be from this list
di	string			The device ID which is an UUIDv4 string; used for backward compatibility with Spec A definition of /oic/res
links	multiple types: see schema			All forms of links in a collection
rt	array: see schema	yes		
ins	multiple types: see schema			The instance identifier for this web link in an array of web links - used in collections
title	string			A title for the link relation. Can be used by the UI to provide a context
di	string			Unique identifier for device (UUID)
eps	array: see schema			the Endpoint information of the target Resource
p	object: see schema			Specifies the framework policies on the Resource referenced by the target URI
rel	multiple types: see schema			The relation of the target URI referenced by the link to the context URI
anchor	string			This is used to override the

				context URI e.g. override the URI of the containing collection
type	array: schema	see		A hint at the representation of the resource referenced by the target URI. This represents the media types that are used for both accepting and emitting
if	array: schema	see	yes	The interface set supported by this resource
rt	array: schema	see	yes	Resource Type
href	string		yes	This is the target URI, it can be specified as a Relative Reference or fully-qualified URI. Relative Reference should be used along with the di parameter to make it unique.

27001 B.49.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/HeatingZoneBaselineResURI		get			

27002 B.50 Height

27003 B.50.1 Introduction

27004 This resource describes the properties associated with height of an object's physical size.
 27005 Height (height) is height of an object.
 27006 Retrieves height of an object.
 27007

27008 B.50.2 Example URI

27009 /HeightResURI

27010 B.50.3 Resource Type

27011 The resource type (rt) is defined as: ['oic.r.height'].

27012 B.50.4 Swagger2.0 Definition

```
27013 {
27014   "swagger": "2.0",
27015   "info": {
27016     "title": "Height",
27017     "version": "v1.1.0-20160519",
27018     "license": {
```

```

27019         "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
27020         "x-description": "Redistribution and use in source and binary forms, with or without
27021 modification, are permitted provided that the following conditions are met:\n          1.
27022 Redistributions of source code must retain the above copyright notice, this list of conditions and
27023 the following disclaimer.\n          2. Redistributions in binary form must reproduce the above
27024 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
27025 other materials provided with the distribution.\n\n          THIS SOFTWARE IS PROVIDED BY THE Open
27026 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
27027 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
27028 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n          IN NO EVENT SHALL THE Open Connectivity
27029 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
27030 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
27031 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n          HOWEVER CAUSED AND
27032 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
27033 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
27034 OF SUCH DAMAGE.\n"
27035     }
27036 },
27037 "schemes": ["http"],
27038 "consumes": ["application/json"],
27039 "produces": ["application/json"],
27040 "paths": {
27041     "/HeightResURI" : {
27042         "get": {
27043             "description": "This resource describes the properties associated with height of an
27044 object's physical size.\nHeight (height) is height of an object.\nRetrieves height of an
27045 object.\n",
27046             "parameters": [
27047                 { "$ref": "#/parameters/interface" }
27048             ],
27049             "responses": {
27050                 "200": {
27051                     "description": "",
27052                     "x-example": {
27053                         {
27054                             "rt": ["oic.r.height"],
27055                             "id": "unique_example_id",
27056                             "height": 100.0
27057                         }
27058                     },
27059                     "schema": { "$ref": "#/definitions/Height" }
27060                 }
27061             }
27062         },
27063         "post": {
27064             "description": "Sets the Height.\n",
27065             "parameters": [
27066                 { "$ref": "#/parameters/interface" },
27067                 {
27068                     "name": "body",
27069                     "in": "body",
27070                     "required": true,
27071                     "schema": { "$ref": "#/definitions/Height" },
27072                     "x-example": {
27073                         {
27074                             "id": "unique_example_id",
27075                             "height": 200.0
27076                         }
27077                     }
27078                 }
27079             ],
27080             "responses": {
27081                 "200": {
27082                     "description": "Indicates that the height was successfully changed.\nThe new height
27083 is provided in the response.\n",
27084                     "x-example": {
27085                         {
27086                             "id": "unique_example_id",
27087                             "height": 200.0
27088                         }
27089                     },
27090                     "schema": { "$ref": "#/definitions/Height" }
27091                 }
27092             }
27093         }
27094     }
27095 }

```

```

27090         },
27091         "403": {
27092             "description": "Indicates that OIC client sent an invalid property value to the
27093 server.\nThe server responds with the current resource representation.\n",
27094             "x-example":
27095                 {
27096                     "id": "unique_example_id",
27097                     "height": 200.0
27098                 }
27099             ,
27100             "schema": { "$ref": "#/definitions/Height" }
27101         }
27102     }
27103 }
27104 },
27105 "parameters": {
27106     "interface" : {
27107         "in" : "query",
27108         "name" : "if",
27109         "type" : "string",
27110         "enum" : ["oic.if.a", "oic.if.baseline"]
27111     }
27112 },
27113 "definitions": {
27114     "Height" :
27115         {
27116             "properties": {
27117                 "height": {
27118                     "description": "Height of an object",
27119                     "minimum": 0,
27120                     "type": "number"
27121                 },
27122             },
27123             "id": {
27124                 "description": "Instance ID of this specific resource",
27125                 "maxLength": 64,
27126                 "readOnly": true,
27127                 "type": "string"
27128             },
27129             "if": {
27130                 "description": "The interface set supported by this resource",
27131                 "items": {
27132                     "enum": [
27133                         "oic.if.baseline",
27134                         "oic.if.ll",
27135                         "oic.if.b",
27136                         "oic.if.lb",
27137                         "oic.if.rw",
27138                         "oic.if.r",
27139                         "oic.if.a",
27140                         "oic.if.s"
27141                     ],
27142                     "type": "string"
27143                 },
27144                 "minItems": 1,
27145                 "readOnly": true,
27146                 "type": "array"
27147             },
27148             "n": {
27149                 "description": "Friendly name of the resource",
27150                 "maxLength": 64,
27151                 "readOnly": true,
27152                 "type": "string"
27153             },
27154             "precision": {
27155                 "description": "Accuracy granularity of the exposed value",
27156                 "readOnly": true,
27157                 "type": "number"
27158             },
27159             "range": {
27160                 "description": "The valid range for the value Property",

```

```

27161         "items": {
27162             "anyOf": [
27163                 {
27164                     "type": "number"
27165                 },
27166                 {
27167                     "type": "integer"
27168                 }
27169             ]
27170         },
27171         "maxItems": 2,
27172         "minItems": 2,
27173         "readOnly": true,
27174         "type": "array"
27175     },
27176     "rt": {
27177         "description": "Resource Type",
27178         "items": {
27179             "maxLength": 64,
27180             "type": "string"
27181         },
27182         "minItems": 1,
27183         "readOnly": true,
27184         "type": "array"
27185     },
27186     "step": {
27187         "anyOf": [
27188             {
27189                 "type": "integer"
27190             },
27191             {
27192                 "type": "number"
27193             }
27194         ],
27195         "description": "Step value across the defined range",
27196         "readOnly": true
27197     },
27198     "value": {
27199         "anyOf": [
27200             {
27201                 "type": "array"
27202             },
27203             {
27204                 "type": "string"
27205             },
27206             {
27207                 "type": "boolean"
27208             },
27209             {
27210                 "type": "integer"
27211             },
27212             {
27213                 "type": "number"
27214             },
27215             {
27216                 "type": "object"
27217             }
27218         ],
27219         "description": "The value sensed or actuated by this Resource"
27220     }
27221 },
27222 "required": [
27223     "height"
27224 ],
27225 "type": "object"
27226 }
27227
27228 }
27229
27230

```


27231 **B.50.5 Property Definition**

Property name	Value type	Mandatory	Access mode	Description
id	string		Read Only	Instance ID of this specific resource
rt	array: see schema		Read Only	Resource Type
height	number	yes		Height of an object
n	string		Read Only	Friendly name of the resource
precision	number		Read Only	Accuracy granularity of the exposed value
range	array: see schema		Read Only	The valid range for the value Property
step	multiple types: see schema		Read Only	Step value across the defined range
if	array: see schema		Read Only	The interface set supported by this resource
value	multiple types: see schema			The value sensed or actuated by this Resource

27232 **B.50.6 CRUDN behaviour**

Resource	Create	Read	Update	Delete	Notify
/HeightResURI		get	post		

27233 **B.51 Humidity**

27234 **B.51.1 Introduction**

27235 This resource describes a sensed or desired humidity.
 27236 The value humidity is an integer describing the percentage measured relative humidity.
 27237 The value desiredHumidity is an integer showing the desired target relative humidity.
 27238 Retrieves the current (relative) humidity level.
 27239

27240 **B.51.2 Example URI**

27241 /HumidityResURI

27242 **B.51.3 Resource Type**

27243 The resource type (rt) is defined as: ['oic.r.humidity'].

27244 **B.51.4 Swagger2.0 Definition**

```

27245 {
27246   "swagger": "2.0",
27247   "info": {
27248     "title": "Humidity",
27249     "version": "v1.1.0-20160519",
27250     "license": {
27251       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
27252       "x-description": "Redistribution and use in source and binary forms, with or without
27253       modification, are permitted provided that the following conditions are met:\n          1.
```

```

27254 Redistributions of source code must retain the above copyright notice, this list of conditions and
27255 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
27256 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
27257 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
27258 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
27259 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
27260 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
27261 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
27262 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
27263 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
27264 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
27265 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
27266 OF SUCH DAMAGE.\n"
27267 }
27268 },
27269 "schemes": ["http"],
27270 "consumes": ["application/json"],
27271 "produces": ["application/json"],
27272 "paths": {
27273   "/HumidityResURI" : {
27274     "get": {
27275       "description": "This resource describes a sensed or desired humidity.\n\nThe value humidity
27276 is an integer describing the percentage measured relative humidity.\n\nThe value desiredHumidity is
27277 an integer showing the desired target relative humidity.\n\nRetrieves the current (relative) humidity
27278 level.\n",
27279       "parameters": [
27280         { "$ref": "#/parameters/interface" }
27281       ],
27282       "responses": {
27283         "200": {
27284           "description": "",
27285           "x-example":
27286             {
27287               "rt": ["oic.r.humidity"],
27288               "id": "unique_example_id",
27289               "humidity": 40,
27290               "desiredHumidity": 40
27291             },
27292           "schema": { "$ref": "#/definitions/Humidity" }
27293         }
27294       }
27295     },
27296     "post": {
27297       "description": "Sets the desired relative humidity level.\n",
27298       "parameters": [
27299         { "$ref": "#/parameters/interface" },
27300         {
27301           "name": "body",
27302           "in": "body",
27303           "required": true,
27304           "schema": { "$ref": "#/definitions/HumidityUpdate" },
27305           "x-example":
27306             {
27307               "id": "unique_example_id",
27308               "desiredHumidity": 45
27309             }
27310         }
27311       ],
27312       "responses": {
27313         "200": {
27314           "description": "Indicates that the relative humidity level was changed.\n\nThe new
27315 relative humidity level is provided in the response.\n",
27316           "x-example":
27317             {
27318               "id": "unique_example_id",
27319               "desiredHumidity": 45
27320             },
27321           "schema": { "$ref": "#/definitions/HumidityUpdate" }
27322         }
27323       }
27324     }
27325   }
27326 }

```

```

27325     }
27326   }
27327 }
27328 },
27329 "parameters": {
27330   "interface": {
27331     "in": "query",
27332     "name": "if",
27333     "type": "string",
27334     "enum": ["oic.if.a", "oic.if.s", "oic.if.baseline"]
27335   }
27336 },
27337 "definitions": {
27338   "Humidity": {
27339     {
27340       "properties": {
27341         "desiredHumidity": {
27342           "description": "Desired value for Humidity",
27343           "maximum": 100,
27344           "minimum": 0,
27345           "type": "integer"
27346         },
27347         "humidity": {
27348           "description": "Current sensed value for Humidity",
27349           "maximum": 100,
27350           "minimum": 0,
27351           "readOnly": true,
27352           "type": "integer"
27353         },
27354         "id": {
27355           "description": "Instance ID of this specific resource",
27356           "maxLength": 64,
27357           "readOnly": true,
27358           "type": "string"
27359         },
27360         "if": {
27361           "description": "The interface set supported by this resource",
27362           "items": {
27363             "enum": [
27364               "oic.if.baseline",
27365               "oic.if.ll",
27366               "oic.if.b",
27367               "oic.if.lb",
27368               "oic.if.rw",
27369               "oic.if.r",
27370               "oic.if.a",
27371               "oic.if.s"
27372             ],
27373             "type": "string"
27374           },
27375           "minItems": 1,
27376           "readOnly": true,
27377           "type": "array"
27378         },
27379         "n": {
27380           "description": "Friendly name of the resource",
27381           "maxLength": 64,
27382           "readOnly": true,
27383           "type": "string"
27384         },
27385         "precision": {
27386           "description": "Accuracy granularity of the exposed value",
27387           "readOnly": true,
27388           "type": "number"
27389         },
27390         "range": {
27391           "description": "The valid range for the value Property",
27392           "items": {
27393             "anyOf": [
27394               {
27395                 "type": "number"

```

```

27396         },
27397         {
27398             "type": "integer"
27399         }
27400     ]
27401 },
27402 "maxItems": 2,
27403 "minItems": 2,
27404 "readOnly": true,
27405 "type": "array"
27406 },
27407 "rt": {
27408     "description": "Resource Type",
27409     "items": {
27410         "maxLength": 64,
27411         "type": "string"
27412     },
27413     "minItems": 1,
27414     "readOnly": true,
27415     "type": "array"
27416 },
27417 "step": {
27418     "anyOf": [
27419         {
27420             "type": "integer"
27421         },
27422         {
27423             "type": "number"
27424         }
27425     ],
27426     "description": "Step value across the defined range",
27427     "readOnly": true
27428 },
27429 "value": {
27430     "anyOf": [
27431         {
27432             "type": "array"
27433         },
27434         {
27435             "type": "string"
27436         },
27437         {
27438             "type": "boolean"
27439         },
27440         {
27441             "type": "integer"
27442         },
27443         {
27444             "type": "number"
27445         },
27446         {
27447             "type": "object"
27448         }
27449     ],
27450     "description": "The value sensed or actuated by this Resource"
27451 }
27452 },
27453 "required": [
27454     "humidity"
27455 ],
27456 "type": "object"
27457 }
27458
27459 ,
27460 "HumidityUpdate" :
27461 {
27462     "properties": {
27463         "desiredHumidity": {
27464             "description": "Desired value for Humidity",
27465             "maximum": 100,
27466             "minimum": 0,

```

```

27467         "type": "integer"
27468     },
27469     "id": {
27470         "description": "Instance ID of this specific resource",
27471         "maxLength": 64,
27472         "readOnly": true,
27473         "type": "string"
27474     },
27475     "if": {
27476         "description": "The interface set supported by this resource",
27477         "items": {
27478             "enum": [
27479                 "oic.if.baseline",
27480                 "oic.if.ll",
27481                 "oic.if.b",
27482                 "oic.if.lb",
27483                 "oic.if.rw",
27484                 "oic.if.x",
27485                 "oic.if.a",
27486                 "oic.if.s"
27487             ],
27488             "type": "string"
27489         },
27490         "minItems": 1,
27491         "readOnly": true,
27492         "type": "array"
27493     },
27494     "n": {
27495         "description": "Friendly name of the resource",
27496         "maxLength": 64,
27497         "readOnly": true,
27498         "type": "string"
27499     },
27500     "precision": {
27501         "description": "Accuracy granularity of the exposed value",
27502         "readOnly": true,
27503         "type": "number"
27504     },
27505     "range": {
27506         "description": "The valid range for the value Property",
27507         "items": {
27508             "anyOf": [
27509                 {
27510                     "type": "number"
27511                 },
27512                 {
27513                     "type": "integer"
27514                 }
27515             ]
27516         },
27517         "maxItems": 2,
27518         "minItems": 2,
27519         "readOnly": true,
27520         "type": "array"
27521     },
27522     "rt": {
27523         "description": "Resource Type",
27524         "items": {
27525             "maxLength": 64,
27526             "type": "string"
27527         },
27528         "minItems": 1,
27529         "readOnly": true,
27530         "type": "array"
27531     },
27532     "step": {
27533         "anyOf": [
27534             {
27535                 "type": "integer"
27536             },
27537             {

```

```

27538         "type": "number"
27539     }
27540 },
27541     "description": "Step value across the defined range",
27542     "readOnly": true
27543 },
27544     "value": {
27545         "anyOf": [
27546             {
27547                 "type": "array"
27548             },
27549             {
27550                 "type": "string"
27551             },
27552             {
27553                 "type": "boolean"
27554             },
27555             {
27556                 "type": "integer"
27557             },
27558             {
27559                 "type": "number"
27560             },
27561             {
27562                 "type": "object"
27563             }
27564         ],
27565         "description": "The value sensed or actuated by this Resource"
27566     }
27567 },
27568     "type": "object"
27569 }
27570 }
27571 }
27572 }
27573

```

B.51.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
value	multiple types: see schema			The value sensed or actuated by this Resource
id	string		Read Only	Instance ID of this specific resource
step	multiple types: see schema		Read Only	Step value across the defined range
range	array: see schema		Read Only	The valid range for the value Property
precision	number		Read Only	Accuracy granularity of the exposed value
desiredHumidity	integer			Desired value for Humidity
n	string		Read Only	Friendly name of the resource
rt	array: see schema		Read Only	Resource Type

if	array: see schema		Read Only	The interface set supported by this resource
value	multiple types: see schema			The value sensed or actuated by this Resource
id	string		Read Only	Instance ID of this specific resource
step	multiple types: see schema		Read Only	Step value across the defined range
humidity	integer	yes	Read Only	Current sensed value for Humidity
precision	number		Read Only	Accuracy granularity of the exposed value
desiredHumidity	integer			Desired value for Humidity
range	array: see schema		Read Only	The valid range for the value Property
n	string		Read Only	Friendly name of the resource
rt	array: see schema		Read Only	Resource Type
if	array: see schema		Read Only	The interface set supported by this resource

27575 B.51.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/HumidityResURI		get	post		

27576 B.52 Ice Maker

27577 B.52.1 Introduction

27578 This resource describes an the operational state of an Ice Maker.
 27579 The status is a string containing a value from the set of possible ice maker statuses.
 27580 The possible statuses are defined by the enumeration [on, off, full]
 27581 A status of 'on' means that the Ice Maker is operating.
 27582 A status of 'off' means that the Ice Maker is not operating.
 27583 A status of 'full' means that the ice collection bin is full (Ice Maker is operating).
 27584 Retrieves the current Ice Maker status.
 27585

27586 B.52.2 Example URI

27587 /IceMakerResURI

27588 B.52.3 Resource Type

27589 The resource type (rt) is defined as: ['oic.r.icemaker'].

B.52.4 Swagger2.0 Definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Ice Maker",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/IceMakerResURI" : {
      "get": {
        "description": "This resource describes an the operational state of an Ice Maker.\nThe
status is a string containing a value from the set of possible ice maker statuses.\nThe possible
statuses are defined by the enumeration [on, off, full]\nA status of 'on' means that the Ice Maker
is operating.\nA status of 'off' means that the Ice Maker is not operating.\nA status of 'full'
means that the ice collection bin is full (Ice Maker is operating).\nRetrieves the current Ice
Maker status.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.icemaker"],
              "id": "unique_example_id",
              "status": "on"
            },
            "schema": { "$ref": "#/definitions/IceMaker" }
          }
        }
      },
      "post": {
        "description": "Sets the desired Ice Maker status.\nOnly valid settings for status in a
Post shall be [on,off].\n",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/IceMakerUpdate" },
            "x-example": {
              "id": "unique_example_id",
              "status": "off"
            }
          }
        ]
      }
    }
  }
}
```



```

27660     ],
27661     "responses": {
27662         "200": {
27663             "description": "Indicates that the Ice Maker status was changed.\n\nThe new status is
27664 provided in the response.\n",
27665             "x-example":
27666                 {
27667                     "id": "unique_example_id",
27668                     "status": "off"
27669                 }
27670             ,
27671             "schema": { "$ref": "#/definitions/IceMakerUpdate" }
27672         },
27673         "403": {
27674             "description": "This response is generated by the OIC Server when the client
27675 sends:\n\n An update with an invalid property value for status.\n\nThe server responds with the
27676 current resource representation.\n",
27677             "x-example":
27678                 {
27679                     "id": "unique_example_id",
27680                     "status": "off"
27681                 }
27682             ,
27683             "schema": { "$ref": "#/definitions/IceMakerUpdate" }
27684         }
27685     }
27686 }
27687 }
27688 },
27689 "parameters": {
27690     "interface": {
27691         "in": "query",
27692         "name": "if",
27693         "type": "string",
27694         "enum": ["oic.if.a", "oic.if.baseline"]
27695     }
27696 },
27697 "definitions": {
27698     "IceMaker": {
27699         {
27700             "properties": {
27701                 "id": {
27702                     "description": "Instance ID of this specific resource",
27703                     "maxLength": 64,
27704                     "readOnly": true,
27705                     "type": "string"
27706                 },
27707                 "if": {
27708                     "description": "The interface set supported by this resource",
27709                     "items": {
27710                         "enum": [
27711                             "oic.if.baseline",
27712                             "oic.if.ll",
27713                             "oic.if.b",
27714                             "oic.if.lb",
27715                             "oic.if.rw",
27716                             "oic.if.r",
27717                             "oic.if.a",
27718                             "oic.if.s"
27719                         ],
27720                         "type": "string"
27721                     },
27722                     "minItems": 1,
27723                     "readOnly": true,
27724                     "type": "array"
27725                 },
27726                 "n": {
27727                     "description": "Friendly name of the resource",
27728                     "maxLength": 64,
27729                     "readOnly": true,
27730                     "type": "string"

```

```

27731 },
27732 "precision": {
27733   "description": "Accuracy granularity of the exposed value",
27734   "readOnly": true,
27735   "type": "number"
27736 },
27737 "range": {
27738   "description": "The valid range for the value Property",
27739   "items": {
27740     "anyOf": [
27741       {
27742         "type": "number"
27743       },
27744       {
27745         "type": "integer"
27746       }
27747     ]
27748   },
27749   "maxItems": 2,
27750   "minItems": 2,
27751   "readOnly": true,
27752   "type": "array"
27753 },
27754 "rt": {
27755   "description": "Resource Type",
27756   "items": {
27757     "maxLength": 64,
27758     "type": "string"
27759   },
27760   "minItems": 1,
27761   "readOnly": true,
27762   "type": "array"
27763 },
27764 "status": {
27765   "description": "Status of the Ice Maker",
27766   "enum": [
27767     "on",
27768     "off",
27769     "full"
27770   ]
27771 },
27772 "step": {
27773   "anyOf": [
27774     {
27775       "type": "integer"
27776     },
27777     {
27778       "type": "number"
27779     }
27780   ],
27781   "description": "Step value across the defined range",
27782   "readOnly": true
27783 },
27784 "value": {
27785   "anyOf": [
27786     {
27787       "type": "array"
27788     },
27789     {
27790       "type": "string"
27791     },
27792     {
27793       "type": "boolean"
27794     },
27795     {
27796       "type": "integer"
27797     },
27798     {
27799       "type": "number"
27800     },
27801     {

```

```

27802         "type": "object"
27803     }
27804 },
27805     "description": "The value sensed or actuated by this Resource"
27806 },
27807 },
27808     "required": [
27809         "status"
27810     ],
27811     "type": "object"
27812 }
27813
27814 ,
27815 "IceMakerUpdate" :
27816 {
27817     "properties": {
27818         "id": {
27819             "description": "Instance ID of this specific resource",
27820             "maxLength": 64,
27821             "readOnly": true,
27822             "type": "string"
27823         },
27824         "if": {
27825             "description": "The interface set supported by this resource",
27826             "items": {
27827                 "enum": [
27828                     "oic.if.baseline",
27829                     "oic.if.ll",
27830                     "oic.if.b",
27831                     "oic.if.lb",
27832                     "oic.if.rw",
27833                     "oic.if.x",
27834                     "oic.if.a",
27835                     "oic.if.s"
27836                 ],
27837                 "type": "string"
27838             },
27839             "minItems": 1,
27840             "readOnly": true,
27841             "type": "array"
27842         },
27843         "n": {
27844             "description": "Friendly name of the resource",
27845             "maxLength": 64,
27846             "readOnly": true,
27847             "type": "string"
27848         },
27849         "precision": {
27850             "description": "Accuracy granularity of the exposed value",
27851             "readOnly": true,
27852             "type": "number"
27853         },
27854         "range": {
27855             "description": "The valid range for the value Property",
27856             "items": {
27857                 "anyOf": [
27858                     {
27859                         "type": "number"
27860                     },
27861                     {
27862                         "type": "integer"
27863                     }
27864                 ]
27865             },
27866             "maxItems": 2,
27867             "minItems": 2,
27868             "readOnly": true,
27869             "type": "array"
27870         },
27871         "rt": {
27872             "description": "Resource Type",

```

```

27873         "items": {
27874             "maxLength": 64,
27875             "type": "string"
27876         },
27877         "minItems": 1,
27878         "readOnly": true,
27879         "type": "array"
27880     },
27881     "status": {
27882         "description": "Set the status of the Ice Maker",
27883         "enum": [
27884             "on",
27885             "off"
27886         ]
27887     },
27888     "step": {
27889         "anyOf": [
27890             {
27891                 "type": "integer"
27892             },
27893             {
27894                 "type": "number"
27895             }
27896         ],
27897         "description": "Step value across the defined range",
27898         "readOnly": true
27899     },
27900     "value": {
27901         "anyOf": [
27902             {
27903                 "type": "array"
27904             },
27905             {
27906                 "type": "string"
27907             },
27908             {
27909                 "type": "boolean"
27910             },
27911             {
27912                 "type": "integer"
27913             },
27914             {
27915                 "type": "number"
27916             },
27917             {
27918                 "type": "object"
27919             }
27920         ],
27921         "description": "The value sensed or actuated by this Resource"
27922     }
27923 },
27924 "required": [
27925     "status"
27926 ],
27927 "type": "object"
27928 }
27929 }
27930 }
27931 }
27932

```

B.52.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema		Read Only	Step value across the defined range
rt	array: see schema		Read Only	Resource Type

id	string		Read Only	Instance ID of this specific resource
if	array: see schema		Read Only	The interface set supported by this resource
range	array: see schema		Read Only	The valid range for the value Property
precision	number		Read Only	Accuracy granularity of the exposed value
n	string		Read Only	Friendly name of the resource
status	multiple types: see schema	yes		Set the status of the Ice Maker
value	multiple types: see schema			The value sensed or actuated by this Resource
step	multiple types: see schema		Read Only	Step value across the defined range
rt	array: see schema		Read Only	Resource Type
id	string		Read Only	Instance ID of this specific resource
if	array: see schema		Read Only	The interface set supported by this resource
range	array: see schema		Read Only	The valid range for the value Property
precision	number		Read Only	Accuracy granularity of the exposed value
n	string		Read Only	Friendly name of the resource
status	multiple types: see schema	yes		Status of the Ice Maker
value	multiple types: see schema			The value sensed or actuated by this Resource

27934

B.52.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/IceMakerResURI		get	post		

B.53 Illuminance Sensor

B.53.1 Introduction

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

B.53.2 Example URI

/IlluminanceSensorResURI

B.53.3 Resource Type

The resource type (rt) is defined as: ['oic.r.sensor.illuminance'].

B.53.4 Swagger2.0 Definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Illuminance Sensor",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/IlluminanceSensorResURI" : {
      "get": {
        "description": "This resource describes an illuminance sensor.\nIlluminance is a float and
represents the sensed luminous flux per unit area in lux.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.sensor.illuminance"],
              "id": "unique_example_id",
              "illuminance": 450.0
            },
            "schema": { "$ref": "#/definitions/Illuminance" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface" : {
```

```

27998     "in" : "query",
27999     "name" : "if",
28000     "type" : "string",
28001     "enum" : ["oic.if.s", "oic.if.baseline"]
28002   }
28003 },
28004 "definitions": {
28005   "Illuminance" :
28006   {
28007     "properties": {
28008       "id": {
28009         "description": "Instance ID of this specific resource",
28010         "maxLength": 64,
28011         "readOnly": true,
28012         "type": "string"
28013       },
28014       "if": {
28015         "description": "The interface set supported by this resource",
28016         "items": {
28017           "enum": [
28018             "oic.if.baseline",
28019             "oic.if.ll",
28020             "oic.if.b",
28021             "oic.if.lb",
28022             "oic.if.rw",
28023             "oic.if.x",
28024             "oic.if.a",
28025             "oic.if.s"
28026           ],
28027           "type": "string"
28028         },
28029         "minItems": 1,
28030         "readOnly": true,
28031         "type": "array"
28032       },
28033       "illuminance": {
28034         "description": "Sensed luminous flux per unit area in lux.",
28035         "readOnly": true,
28036         "type": "number"
28037       },
28038       "n": {
28039         "description": "Friendly name of the resource",
28040         "maxLength": 64,
28041         "readOnly": true,
28042         "type": "string"
28043       },
28044       "precision": {
28045         "description": "Accuracy granularity of the exposed value",
28046         "readOnly": true,
28047         "type": "number"
28048       },
28049       "range": {
28050         "description": "The valid range for the value Property",
28051         "items": {
28052           "anyOf": [
28053             {
28054               "type": "number"
28055             },
28056             {
28057               "type": "integer"
28058             }
28059           ]
28060         },
28061         "maxItems": 2,
28062         "minItems": 2,
28063         "readOnly": true,
28064         "type": "array"
28065       },
28066       "rt": {
28067         "description": "Resource Type",
28068         "items": {

```

```

28069         "maxLength": 64,
28070         "type": "string"
28071     },
28072     "minItems": 1,
28073     "readOnly": true,
28074     "type": "array"
28075 },
28076 "step": {
28077     "anyOf": [
28078         {
28079             "type": "integer"
28080         },
28081         {
28082             "type": "number"
28083         }
28084     ],
28085     "description": "Step value across the defined range",
28086     "readOnly": true
28087 },
28088 "value": {
28089     "anyOf": [
28090         {
28091             "type": "array"
28092         },
28093         {
28094             "type": "string"
28095         },
28096         {
28097             "type": "boolean"
28098         },
28099         {
28100             "type": "integer"
28101         },
28102         {
28103             "type": "number"
28104         },
28105         {
28106             "type": "object"
28107         }
28108     ],
28109     "description": "The value sensed or actuated by this Resource"
28110 },
28111 },
28112 "required": [
28113     "illuminance"
28114 ]
28115 }
28116 }
28117 }
28118 }
28119

```

B.53.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema		Read Only	The interface set supported by this resource
step	multiple types: see schema		Read Only	Step value across the defined range
value	multiple types: see schema			The value sensed or actuated by this Resource
rt	array: see schema		Read Only	Resource Type

id	string		Read Only	Instance ID of this specific resource
range	array: see schema		Read Only	The valid range for the value Property
precision	number		Read Only	Accuracy granularity of the exposed value
illuminance	number	yes	Read Only	Sensed luminous flux per unit area in lux.
n	string		Read Only	Friendly name of the resource

28121 B.53.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/IlluminanceSensorResURI		get			

28122 B.54 Liquid Level

28123 B.54.1 Introduction

28124 This resource describes the attributes associated with liquid level. The current level and desired
28125 level are defined in terms of a percentage. The behaviour of when the currentlevel and desiredlevel
28126 are not equal is determined by the device manufacturer.
28127 Retrieves the state of liquid level.
28128

28129 B.54.2 Example URI

28130 /LiquidLevelResURI

28131 B.54.3 Resource Type

28132 The resource type (rt) is defined as: ['oic.r.liquid.level'].

28133 B.54.4 Swagger2.0 Definition

```

28134 {
28135   "swagger": "2.0",
28136   "info": {
28137     "title": "Liquid Level",
28138     "version": "v1.1.0-20160519",
28139     "license": {
28140       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
28141       "x-description": "Redistribution and use in source and binary forms, with or without
28142 modification, are permitted provided that the following conditions are met:\n      1.
28143 Redistributions of source code must retain the above copyright notice, this list of conditions and
28144 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
28145 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
28146 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
28147 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
28148 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
28149 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
28150 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
28151 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
28152 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
28153 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
28154 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
28155 OF SUCH DAMAGE.\n"
28156   }
28157 },
28158 "schemes": ["http"],
28159 "consumes": ["application/json"],

```

```

28160     "produces": ["application/json"],
28161     "paths": {
28162         "/LiquidLevelResURI" : {
28163             "get": {
28164                 "description": "This resource describes the attributes associated with liquid level. The
28165 current level and desired level are defined in terms of a percentage. The behaviour of when the
28166 currentlevel and desiredlevel are not equal is determined by the device manufacturer.\nRetrieves
28167 the state of liquid level.\n",
28168                 "parameters": [
28169                     { "$ref": "#/parameters/interface" }
28170                 ],
28171                 "responses": {
28172                     "200": {
28173                         "description": "",
28174                         "x-example":
28175                             {
28176                                 "rt": ["oic.r.liquid.level"],
28177                                 "id": "unique_example_id",
28178                                 "currentlevel": 60,
28179                                 "desiredlevel": 80
28180                             }
28181                     },
28182                     "schema": { "$ref": "#/definitions/LiquidLevel" }
28183                 }
28184             }
28185         },
28186         "post": {
28187             "description": "Sets liquid level values\n",
28188             "parameters": [
28189                 { "$ref": "#/parameters/interface" },
28190                 {
28191                     "name": "body",
28192                     "in": "body",
28193                     "required": true,
28194                     "schema": { "$ref": "#/definitions/LiquidLevelUpdate" },
28195                     "x-example":
28196                         {
28197                             "id": "unique_example_id",
28198                             "desiredlevel": 80
28199                         }
28200                 }
28201             ],
28202             "responses": {
28203                 "200": {
28204                     "description": "",
28205                     "x-example":
28206                         {
28207                             "id": "unique_example_id",
28208                             "desiredlevel": 80
28209                         }
28210                     },
28211                     "schema": { "$ref": "#/definitions/LiquidLevelUpdate" }
28212                 }
28213             }
28214         }
28215     },
28216     "parameters": {
28217         "interface" : {
28218             "in" : "query",
28219             "name" : "if",
28220             "type" : "string",
28221             "enum" : ["oic.if.rw", "oic.if.r", "oic.if.baseline"]
28222         }
28223     },
28224     "definitions": {
28225         "LiquidLevel" :
28226             {
28227                 "properties": {
28228                     "currentlevel": {
28229                         "description": "The current level of the liquid in percentage.",
28230

```

```

28231         "maximum": 100,
28232         "minimum": 0,
28233         "readOnly": true,
28234         "type": "integer"
28235     },
28236     "desiredlevel": {
28237         "description": "The desired level of the liquid in percentage.",
28238         "maximum": 100,
28239         "minimum": 0,
28240         "type": "integer"
28241     },
28242     "id": {
28243         "description": "Instance ID of this specific resource",
28244         "maxLength": 64,
28245         "readOnly": true,
28246         "type": "string"
28247     },
28248     "if": {
28249         "description": "The interface set supported by this resource",
28250         "items": {
28251             "enum": [
28252                 "oic.if.baseline",
28253                 "oic.if.ll",
28254                 "oic.if.b",
28255                 "oic.if.lb",
28256                 "oic.if.rw",
28257                 "oic.if.r",
28258                 "oic.if.a",
28259                 "oic.if.s"
28260             ],
28261             "type": "string"
28262         },
28263         "minItems": 1,
28264         "readOnly": true,
28265         "type": "array"
28266     },
28267     "n": {
28268         "description": "Friendly name of the resource",
28269         "maxLength": 64,
28270         "readOnly": true,
28271         "type": "string"
28272     },
28273     "precision": {
28274         "description": "Accuracy granularity of the exposed value",
28275         "readOnly": true,
28276         "type": "number"
28277     },
28278     "range": {
28279         "description": "The valid range for the value Property",
28280         "items": {
28281             "anyOf": [
28282                 {
28283                     "type": "number"
28284                 },
28285                 {
28286                     "type": "integer"
28287                 }
28288             ]
28289         },
28290         "maxItems": 2,
28291         "minItems": 2,
28292         "readOnly": true,
28293         "type": "array"
28294     },
28295     "rt": {
28296         "description": "Resource Type",
28297         "items": {
28298             "maxLength": 64,
28299             "type": "string"
28300         },
28301         "minItems": 1,

```

```

28302         "readOnly": true,
28303         "type": "array"
28304     },
28305     "step": {
28306         "anyOf": [
28307             {
28308                 "type": "integer"
28309             },
28310             {
28311                 "type": "number"
28312             }
28313         ],
28314         "description": "Step value across the defined range",
28315         "readOnly": true
28316     },
28317     "value": {
28318         "anyOf": [
28319             {
28320                 "type": "array"
28321             },
28322             {
28323                 "type": "string"
28324             },
28325             {
28326                 "type": "boolean"
28327             },
28328             {
28329                 "type": "integer"
28330             },
28331             {
28332                 "type": "number"
28333             },
28334             {
28335                 "type": "object"
28336             }
28337         ],
28338         "description": "The value sensed or actuated by this Resource"
28339     }
28340 },
28341 "required": [
28342     "currentlevel"
28343 ],
28344 "type": "object"
28345 }
28346
28347 ,
28348 "LiquidLevelUpdate" :
28349 {
28350     "properties": {
28351         "desiredlevel": {
28352             "description": "The desired level of the liquid in percentage.",
28353             "maximum": 100,
28354             "minimum": 0,
28355             "type": "integer"
28356         },
28357         "id": {
28358             "description": "Instance ID of this specific resource",
28359             "maxLength": 64,
28360             "readOnly": true,
28361             "type": "string"
28362         },
28363         "if": {
28364             "description": "The interface set supported by this resource",
28365             "items": {
28366                 "enum": [
28367                     "oic.if.baseline",
28368                     "oic.if.ll",
28369                     "oic.if.b",
28370                     "oic.if.lb",
28371                     "oic.if.rw",
28372                     "oic.if.r",

```

```

28373         "oic.if.a",
28374         "oic.if.s"
28375     ],
28376     "type": "string"
28377 },
28378 "minItems": 1,
28379 "readOnly": true,
28380 "type": "array"
28381 },
28382 "n": {
28383     "description": "Friendly name of the resource",
28384     "maxLength": 64,
28385     "readOnly": true,
28386     "type": "string"
28387 },
28388 "precision": {
28389     "description": "Accuracy granularity of the exposed value",
28390     "readOnly": true,
28391     "type": "number"
28392 },
28393 "range": {
28394     "description": "The valid range for the value Property",
28395     "items": {
28396         "anyOf": [
28397             {
28398                 "type": "number"
28399             },
28400             {
28401                 "type": "integer"
28402             }
28403         ]
28404     },
28405     "maxItems": 2,
28406     "minItems": 2,
28407     "readOnly": true,
28408     "type": "array"
28409 },
28410 "rt": {
28411     "description": "Resource Type",
28412     "items": {
28413         "maxLength": 64,
28414         "type": "string"
28415     },
28416     "minItems": 1,
28417     "readOnly": true,
28418     "type": "array"
28419 },
28420 "step": {
28421     "anyOf": [
28422         {
28423             "type": "integer"
28424         },
28425         {
28426             "type": "number"
28427         }
28428     ],
28429     "description": "Step value across the defined range",
28430     "readOnly": true
28431 },
28432 "value": {
28433     "anyOf": [
28434         {
28435             "type": "array"
28436         },
28437         {
28438             "type": "string"
28439         },
28440         {
28441             "type": "boolean"
28442         },
28443         {

```

```

28444         "type": "integer"
28445     },
28446     {
28447         "type": "number"
28448     },
28449     {
28450         "type": "object"
28451     }
28452 ],
28453 "description": "The value sensed or actuated by this Resource"
28454 },
28455 },
28456 "required": [
28457     "desiredlevel"
28458 ],
28459 "type": "object"
28460 }
28461 }
28462 }
28463 }
28464

```

B.54.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema		Read Only	Step value across the defined range
range	array: see schema		Read Only	The valid range for the value Property
n	string		Read Only	Friendly name of the resource
precision	number		Read Only	Accuracy granularity of the exposed value
rt	array: see schema		Read Only	Resource Type
currentlevel	integer	yes	Read Only	The current level of the liquid in percentage.
value	multiple types: see schema			The value sensed or actuated by this Resource
desiredlevel	integer			The desired level of the liquid in percentage.
if	array: see schema		Read Only	The interface set supported by this resource
id	string		Read Only	Instance ID of this specific resource
step	multiple types: see schema		Read Only	Step value across the defined range
range	array: see schema		Read Only	The valid range for the value Property

desiredlevel	integer	yes		The desired level of the liquid in percentage.
n	string		Read Only	Friendly name of the resource
rt	array: see schema		Read Only	Resource Type
value	multiple types: see schema			The value sensed or actuated by this Resource
if	array: see schema		Read Only	The interface set supported by this resource
precision	number		Read Only	Accuracy granularity of the exposed value
id	string		Read Only	Instance ID of this specific resource

28466 B.54.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/LiquidLevelResURI		get	post		

28467 B.55 Lock Code

28468 B.55.1 Introduction

28469 Resource describing a lock code.
 28470 The lockCodeList is an array of possible codes that may be associated with a lock.
 28471 These are all presented as strings.
 28472 Retrieves the current lock code values.
 28473

28474 B.55.2 Example URI

28475 /LockCodeResURI

28476 B.55.3 Resource Type

28477 The resource type (rt) is defined as: ['oic.r.lock.code'].

28478 B.55.4 Swagger2.0 Definition

```
28479 {
28480   "swagger": "2.0",
28481   "info": {
28482     "title": "Lock Code",
28483     "version": "v1.1.0-20160519",
28484     "license": {
28485       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
28486       "x-description": "Redistribution and use in source and binary forms, with or without
28487 modification, are permitted provided that the following conditions are met:\n      1.
28488 Redistributions of source code must retain the above copyright notice, this list of conditions and
28489 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
28490 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
28491 other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open
28492 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
28493 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
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28495 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
28496 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
28497 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
```

```

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28499 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
28500 OF SUCH DAMAGE.\n"
28501 }
28502 },
28503 "schemes": ["http"],
28504 "consumes": ["application/json"],
28505 "produces": ["application/json"],
28506 "paths": {
28507     "/LockCodeResURI" : {
28508         "get": {
28509             "description": "Resource describing a lock code.\nThe lockCodeList is an array of possible
28510 codes that may be associated with a lock.\nThese are all presented as strings.\nRetrieves the
28511 current lock code values.\n",
28512             "parameters": [
28513                 { "$ref": "#/parameters/interface" }
28514             ],
28515             "responses": {
28516                 "200": {
28517                     "description": "",
28518                     "x-example":
28519                     {
28520                         "rt": ["oic.r.lock.code"],
28521                         "id": "unique_example_id",
28522                         "lockCodeList": ["012345", "112233"]
28523                     }
28524                 },
28525                 "schema": { "$ref": "#/definitions/LockCode" }
28526             }
28527         },
28528     },
28529     "post": {
28530         "description": "Updates the current lock code values.\n",
28531         "parameters": [
28532             { "$ref": "#/parameters/interface" },
28533             {
28534                 "name": "body",
28535                 "in": "body",
28536                 "required": true,
28537                 "schema": { "$ref": "#/definitions/LockCode" },
28538                 "x-example":
28539                 {
28540                     "id": "unique_example_id",
28541                     "lockCodeList": ["543210", "332211"]
28542                 }
28543             }
28544         ],
28545         "responses": {
28546             "200": {
28547                 "description": "",
28548                 "x-example":
28549                 {
28550                     "id": "unique_example_id",
28551                     "lockCodeList": ["543210", "332211"]
28552                 }
28553             },
28554             "schema": { "$ref": "#/definitions/LockCode" }
28555         }
28556     }
28557 },
28558 },
28559 },
28560 "parameters": {
28561     "interface" : {
28562         "in" : "query",
28563         "name" : "if",
28564         "type" : "string",
28565         "enum" : ["oic.if.a", "oic.if.baseline"]
28566     }
28567 },
28568 "definitions": {

```



```

28569 "LockCode" :
28570 {
28571   "properties": {
28572     "id": {
28573       "description": "Instance ID of this specific resource",
28574       "maxLength": 64,
28575       "readOnly": true,
28576       "type": "string"
28577     },
28578     "if": {
28579       "description": "The interface set supported by this resource",
28580       "items": {
28581         "enum": [
28582           "oic.if.baseline",
28583           "oic.if.ll",
28584           "oic.if.b",
28585           "oic.if.lb",
28586           "oic.if.rw",
28587           "oic.if.r",
28588           "oic.if.a",
28589           "oic.if.s"
28590         ],
28591         "type": "string"
28592       },
28593       "minItems": 1,
28594       "readOnly": true,
28595       "type": "array"
28596     },
28597     "lockCodeList": {
28598       "items": {
28599         "description": "Value for the lock code",
28600         "type": "string"
28601       },
28602       "type": "array"
28603     },
28604     "n": {
28605       "description": "Friendly name of the resource",
28606       "maxLength": 64,
28607       "readOnly": true,
28608       "type": "string"
28609     },
28610     "precision": {
28611       "description": "Accuracy granularity of the exposed value",
28612       "readOnly": true,
28613       "type": "number"
28614     },
28615     "range": {
28616       "description": "The valid range for the value Property",
28617       "items": {
28618         "anyOf": [
28619           {
28620             "type": "number"
28621           },
28622           {
28623             "type": "integer"
28624           }
28625         ]
28626       },
28627       "maxItems": 2,
28628       "minItems": 2,
28629       "readOnly": true,
28630       "type": "array"
28631     },
28632     "rt": {
28633       "description": "Resource Type",
28634       "items": {
28635         "maxLength": 64,
28636         "type": "string"
28637       },
28638       "minItems": 1,
28639       "readOnly": true,

```

```

28640         "type": "array"
28641     },
28642     "step": {
28643         "anyOf": [
28644             {
28645                 "type": "integer"
28646             },
28647             {
28648                 "type": "number"
28649             }
28650         ],
28651         "description": "Step value across the defined range",
28652         "readOnly": true
28653     },
28654     "value": {
28655         "anyOf": [
28656             {
28657                 "type": "array"
28658             },
28659             {
28660                 "type": "string"
28661             },
28662             {
28663                 "type": "boolean"
28664             },
28665             {
28666                 "type": "integer"
28667             },
28668             {
28669                 "type": "number"
28670             },
28671             {
28672                 "type": "object"
28673             }
28674         ],
28675         "description": "The value sensed or actuated by this Resource"
28676     }
28677 },
28678 "required": [
28679     "lockCodeList"
28680 ],
28681 "type": "object"
28682 }
28683
28684 }
28685 }
28686

```

B.55.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
lockCodeList	array: see schema	yes		
value	multiple types: see schema			The value sensed or actuated by this Resource
step	multiple types: see schema		Read Only	Step value across the defined range
range	array: see schema		Read Only	The valid range for the value Property
n	string		Read Only	Friendly name of the resource

if	array: see schema		Read Only	The interface set supported by this resource
precision	number		Read Only	Accuracy granularity of the exposed value
rt	array: see schema		Read Only	Resource Type
id	string		Read Only	Instance ID of this specific resource

28688 B.55.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/LockCodeResURI		get	post		

28689 B.56 Lock

28690 B.56.1 Introduction

28691 Resource describing a lock.
 28692 For the type of lockState, the value 'Locked' indicates that the door is Locked.
 28693 The value 'Unlocked' indicates that the door is Unlocked.
 28694 Retrieves the state of the lock.
 28695

28696 B.56.2 Example URI

28697 /LockStatusResURI

28698 B.56.3 Resource Type

28699 The resource type (rt) is defined as: ['oic.r.lock.status'].

28700 B.56.4 Swagger2.0 Definition

```

28701 {
28702   "swagger": "2.0",
28703   "info": {
28704     "title": "Lock",
28705     "version": "v1.1.0-20160519",
28706     "license": {
28707       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
28708       "x-description": "Redistribution and use in source and binary forms, with or without
28709 modification, are permitted provided that the following conditions are met:\n      1.
28710 Redistributions of source code must retain the above copyright notice, this list of conditions and
28711 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
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28713 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
28714 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
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28717 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
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28719 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
28720 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
28721 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
28722 OF SUCH DAMAGE.\n"
28723   },
28724 },
28725 "schemes": ["http"],
28726 "consumes": ["application/json"],
28727 "produces": ["application/json"],
28728 "paths": {
28729   "/LockStatusResURI" : {
28730     "get": {

```

```

28731         "description": "Resource describing a lock.\nFor the type of lockState, the value 'Locked'
28732 indicates that the door is Locked.\nThe value 'Unlocked' indicates that the door is
28733 Unlocked.\nRetrieves the state of the lock.\n",
28734         "parameters": [
28735             { "$ref": "#/parameters/interface" }
28736         ],
28737         "responses": {
28738             "200": {
28739                 "description": "",
28740                 "x-example":
28741                     {
28742                         "rt": ["oic.r.lock.status"],
28743                         "id": "unique_example_id",
28744                         "lockState": "Locked"
28745                     },
28746             },
28747             "schema": { "$ref": "#/definitions/Lock" }
28748         }
28749     },
28750     "post": {
28751         "description": "Sets the current lock state.\n",
28752         "parameters": [
28753             { "$ref": "#/parameters/interface" },
28754             {
28755                 "name": "body",
28756                 "in": "body",
28757                 "required": true,
28758                 "schema": { "$ref": "#/definitions/Lock" },
28759                 "x-example":
28760                     {
28761                         "id": "unique_example_id",
28762                         "lockState": "Unlocked"
28763                     }
28764             }
28765         ],
28766         "responses": {
28767             "200": {
28768                 "description": "",
28769                 "x-example":
28770                     {
28771                         "id": "unique_example_id",
28772                         "lockState": "Unlocked"
28773                     },
28774             },
28775             "schema": { "$ref": "#/definitions/Lock" }
28776         },
28777             "403": {
28778                 "description": "This response is generated by the OIC Server when the client
28779 sends:\n An update with an invalid property value for lockState.\nThe server responds with the
28780 current resource representation.\n",
28781                 "x-example":
28782                     {
28783                         "lockState": "Unlocked"
28784                     },
28785                 "schema": { "$ref": "#/definitions/Lock" }
28786             }
28787         }
28788     },
28789     }
28790 },
28791 },
28792 },
28793 "parameters": {
28794     "interface": {
28795         "in": "query",
28796         "name": "if",
28797         "type": "string",
28798         "enum": ["oic.if.a", "oic.if.baseline"]
28799     }
28800 },
28801 "definitions": {

```

```

28802 "Lock" :
28803 {
28804   "properties": {
28805     "id": {
28806       "description": "Instance ID of this specific resource",
28807       "maxLength": 64,
28808       "readOnly": true,
28809       "type": "string"
28810     },
28811     "if": {
28812       "description": "The interface set supported by this resource",
28813       "items": {
28814         "enum": [
28815           "oic.if.baseline",
28816           "oic.if.ll",
28817           "oic.if.b",
28818           "oic.if.lb",
28819           "oic.if.rw",
28820           "oic.if.r",
28821           "oic.if.a",
28822           "oic.if.s"
28823         ],
28824         "type": "string"
28825       },
28826       "minItems": 1,
28827       "readOnly": true,
28828       "type": "array"
28829     },
28830     "lockState": {
28831       "description": "State of the lock.",
28832       "enum": [
28833         "Locked",
28834         "Unlocked"
28835       ],
28836       "type": "string"
28837     },
28838     "n": {
28839       "description": "Friendly name of the resource",
28840       "maxLength": 64,
28841       "readOnly": true,
28842       "type": "string"
28843     },
28844     "precision": {
28845       "description": "Accuracy granularity of the exposed value",
28846       "readOnly": true,
28847       "type": "number"
28848     },
28849     "range": {
28850       "description": "The valid range for the value Property",
28851       "items": {
28852         "anyOf": [
28853           {
28854             "type": "number"
28855           },
28856           {
28857             "type": "integer"
28858           }
28859         ]
28860       },
28861       "maxItems": 2,
28862       "minItems": 2,
28863       "readOnly": true,
28864       "type": "array"
28865     },
28866     "rt": {
28867       "description": "Resource Type",
28868       "items": {
28869         "maxLength": 64,
28870         "type": "string"
28871       },
28872       "minItems": 1,

```

```

28873         "readOnly": true,
28874         "type": "array"
28875     },
28876     "step": {
28877         "anyOf": [
28878             {
28879                 "type": "integer"
28880             },
28881             {
28882                 "type": "number"
28883             }
28884         ],
28885         "description": "Step value across the defined range",
28886         "readOnly": true
28887     },
28888     "value": {
28889         "anyOf": [
28890             {
28891                 "type": "array"
28892             },
28893             {
28894                 "type": "string"
28895             },
28896             {
28897                 "type": "boolean"
28898             },
28899             {
28900                 "type": "integer"
28901             },
28902             {
28903                 "type": "number"
28904             },
28905             {
28906                 "type": "object"
28907             }
28908         ],
28909         "description": "The value sensed or actuated by this Resource"
28910     },
28911     },
28912     "required": [
28913         "lockState"
28914     ],
28915     "type": "object"
28916 }
28917 }
28918 }
28919 }
28920

```

B.56.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema		Read Only	Resource Type
range	array: see schema		Read Only	The valid range for the value Property
precision	number		Read Only	Accuracy granularity of the exposed value
id	string		Read Only	Instance ID of this specific resource
value	multiple types: see schema			The value sensed or actuated by this Resource

n	string		Read Only	Friendly name of the resource
step	multiple types: see schema		Read Only	Step value across the defined range
lockState	string	yes		State of the lock.
if	array: see schema		Read Only	The interface set supported by this resource

B.56.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/LockStatusResURI		get	post		

B.57 Magnetic Field Direction Sensor

B.57.1 Introduction

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

B.57.2 Example URI

/MagneticFieldDirectionResURI

B.57.3 Resource Type

The resource type (rt) is defined as: ['oic.r.sensor.magneticfielddirection'].

B.57.4 Swagger2.0 Definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Magnetic Field Direction Sensor",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
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OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/MagneticFieldDirectionResURI" : {
      "get": {
        "description": "This resource describes the direction of the Earth's magnetic field at the
observer's current point in space.\nTypical use case includes measurement of compass readings on a
```

```

28968 personal device.\n
28969 The value is an array containing Hx, Hy, Hz (in that order) each of which are
28970 floats.\n
28971 Each of Hx, Hy and Hz are expressed in A/m (Amperes per metre)\n",
28972 "parameters": [
28973   {"$ref": "#/parameters/interface"}
28974 ],
28975 "responses": {
28976   "200": {
28977     "description": "",
28978     "x-example": {
28979       "rt": ["oic.r.sensor.magneticfielddirection"],
28980       "id": "unique_example_id",
28981       "value": [100.0,15.0,90.0]
28982     },
28983     "schema": { "$ref": "#/definitions/magneticFieldDirection" }
28984   }
28985 }
28986 }
28987 },
28988 },
28989 "parameters": {
28990   "interface": {
28991     "in": "query",
28992     "name": "if",
28993     "type": "string",
28994     "enum": ["oic.if.s", "oic.if.baseline"]
28995   }
28996 },
28997 "definitions": {
28998   "magneticFieldDirection": {
28999     "properties": {
29000       "id": {
29001         "description": "Instance ID of this specific resource",
29002         "maxLength": 64,
29003         "readOnly": true,
29004         "type": "string"
29005       },
29006       "if": {
29007         "description": "The interface set supported by this resource",
29008         "items": {
29009           "enum": [
29010             "oic.if.baseline",
29011             "oic.if.ll",
29012             "oic.if.b",
29013             "oic.if.lb",
29014             "oic.if.rw",
29015             "oic.if.r",
29016             "oic.if.a",
29017             "oic.if.s"
29018           ],
29019           "type": "string"
29020         },
29021         "minItems": 1,
29022         "readOnly": true,
29023         "type": "array"
29024       },
29025       "n": {
29026         "description": "Friendly name of the resource",
29027         "maxLength": 64,
29028         "readOnly": true,
29029         "type": "string"
29030       },
29031       "precision": {
29032         "description": "Accuracy granularity of the exposed value",
29033         "readOnly": true,
29034         "type": "number"
29035       },
29036       "range": {
29037         "description": "The valid range for the value Property",

```



```

29039         "items": {
29040             "anyOf": [
29041                 {
29042                     "type": "number"
29043                 },
29044                 {
29045                     "type": "integer"
29046                 }
29047             ]
29048         },
29049         "maxItems": 2,
29050         "minItems": 2,
29051         "readOnly": true,
29052         "type": "array"
29053     },
29054     "rt": {
29055         "description": "Resource Type",
29056         "items": {
29057             "maxLength": 64,
29058             "type": "string"
29059         },
29060         "minItems": 1,
29061         "readOnly": true,
29062         "type": "array"
29063     },
29064     "step": {
29065         "anyOf": [
29066             {
29067                 "type": "integer"
29068             },
29069             {
29070                 "type": "number"
29071             }
29072         ],
29073         "description": "Step value across the defined range",
29074         "readOnly": true
29075     },
29076     "value": {
29077         "description": "Array containing Hx, Hy, Hz.",
29078         "items": {
29079             "type": "number"
29080         },
29081         "maxItems": 3,
29082         "minItems": 3,
29083         "readOnly": true,
29084         "type": "array"
29085     }
29086 },
29087 "required": [
29088     "value"
29089 ]
29090 }
29091 }
29092 }
29093 }
29094

```

B.57.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
range	array: see schema		Read Only	The valid range for the value Property
n	string		Read Only	Friendly name of the resource
if	array: see schema		Read Only	The interface set supported by this resource

id	string		Read Only	Instance ID of this specific resource
rt	array: see schema		Read Only	Resource Type
value	array: see schema	yes	Read Only	Array containing Hx, Hy, Hz.
precision	number		Read Only	Accuracy granularity of the exposed value
step	multiple types: see schema		Read Only	Step value across the defined range

29096 B.57.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/MagneticFieldDirectionResURI		get			

29097 B.58 Media

29098 B.58.1 Introduction

29099 This resource specifies the media types that an OCF Server supports.
 29100 The resource is an array of media elements. Each element contains:
 29101 A URL at which the specified media type can be accessed.
 29102 A string array containing the definition of the media using SDP.
 29103 Each entry in the sdp array is an SDP line.
 29104 Each line shall follow the SDP description syntax as defined in the SDP specification.
 29105 The SDP specification can be found at <http://tools.ietf.org/html/rfc4566>.
 29106 Retrieves the current media resource.
 29107

29108 B.58.2 Example URI

29109 /MediaResURI

29110 B.58.3 Resource Type

29111 The resource type (rt) is defined as: ['oic.r.media'].

29112 B.58.4 Swagger2.0 Definition

```

29113 {
29114   "swagger": "2.0",
29115   "info": {
29116     "title": "Media",
29117     "version": "v1.1.0-20160519",
29118     "license": {
29119       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
29120       "x-description": "Redistribution and use in source and binary forms, with or without
29121 modification, are permitted provided that the following conditions are met:\n      1.
29122 Redistributions of source code must retain the above copyright notice, this list of conditions and
29123 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
29124 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
29125 other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open
29126 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
29127 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
29128 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
29129 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
29130 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
29131 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
29132 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
29133 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
29134 OF SUCH DAMAGE.\n"
29135   }
  
```

```

29136 },
29137 "schemes": ["http"],
29138 "consumes": ["application/json"],
29139 "produces": ["application/json"],
29140 "paths": {
29141   "/MediaResURI" : {
29142     "get": {
29143       "description": "This resource specifies the media types that an OCF Server supports.\n\nThe
29144 resource is an array of media elements. Each element contains:\n  A URL at which the specified
29145 media type can be accessed.\n  A string array containing the definition of the media using SDP.\n\n
29146 Each entry in the sdp array is an SDP line.\n  Each line shall follow the SDP description syntax
29147 as defined in the SDP specification.\n\nThe SDP specification can be found at
29148 http://tools.ietf.org/html/rfc4566.\n\nRetrieves the current media resource.\n",
29149       "parameters": [
29150         {"$ref": "#/parameters/interface"}
29151       ],
29152       "responses": {
29153         "200": {
29154           "description": "",
29155           "x-example":
29156             {
29157               "rt": ["oic.r.media"],
29158               "id": "unique_example_id",
29159               "media": [
29160                 {
29161                   "url": "some example url",
29162                   "sdp": [
29163                     "m=video 1 RTP/AVP 96",
29164                     "a=rtpmap:96 H264/9000",
29165                     "a=fmtp:96 profile-level-id=42A028;packetization-mode=1"
29166                   ]
29167                 },
29168                 {
29169                   "url": "some other example1 url",
29170                   "sdp": [
29171                     "m=audio 2 RTP/AVP 97",
29172                     "a=rtpmap:97 MP4A-LATM/90000"
29173                   ]
29174                 },
29175                 {
29176                   "url": "some other example2 url",
29177                   "sdp": [
29178                     "m=video 3 RTP/AVP 98",
29179                     "a=rtpmap:98 jpeg/90000",
29180                     "a=fmtp:98 sampling=YCbCr-4:2:0;width=256;height=256"
29181                   ]
29182                 }
29183               ]
29184             }
29185           ,
29186           "schema": { "$ref": "#/definitions/Media" }
29187         }
29188       }
29189     }
29190   },
29191 },
29192 "parameters": {
29193   "interface" : {
29194     "in" : "query",
29195     "name" : "if",
29196     "type" : "string",
29197     "enum" : ["oic.if.s", "oic.if.baseline"]
29198   }
29199 },
29200 "definitions": {
29201   "Media" :
29202     {
29203       "properties": {
29204         "id": {
29205           "description": "Instance ID of this specific resource",
29206           "maxLength": 64,

```

```

29207         "readOnly": true,
29208         "type": "string"
29209     },
29210     "if": {
29211         "description": "The interface set supported by this resource",
29212         "items": {
29213             "enum": [
29214                 "oic.if.baseline",
29215                 "oic.if.ll",
29216                 "oic.if.b",
29217                 "oic.if.lb",
29218                 "oic.if.rw",
29219                 "oic.if.r",
29220                 "oic.if.a",
29221                 "oic.if.s"
29222             ],
29223             "type": "string"
29224         },
29225         "minItems": 1,
29226         "readOnly": true,
29227         "type": "array"
29228     },
29229     "media": {
29230         "items": {
29231             "properties": {
29232                 "sdp": {
29233                     "description": "Array of strings, one per SDP line",
29234                     "items": {
29235                         "description": "SDP media or attribute line",
29236                         "type": "string"
29237                     },
29238                     "type": "array"
29239                 },
29240                 "url": {
29241                     "description": "url for the media instance",
29242                     "type": "string"
29243                 }
29244             },
29245             "type": "object"
29246         },
29247         "type": "array"
29248     },
29249     "n": {
29250         "description": "Friendly name of the resource",
29251         "maxLength": 64,
29252         "readOnly": true,
29253         "type": "string"
29254     },
29255     "precision": {
29256         "description": "Accuracy granularity of the exposed value",
29257         "readOnly": true,
29258         "type": "number"
29259     },
29260     "range": {
29261         "description": "The valid range for the value Property",
29262         "items": {
29263             "anyOf": [
29264                 {
29265                     "type": "number"
29266                 },
29267                 {
29268                     "type": "integer"
29269                 }
29270             ]
29271         },
29272         "maxItems": 2,
29273         "minItems": 2,
29274         "readOnly": true,
29275         "type": "array"
29276     },
29277     "rt": {

```

```

29278         "description": "Resource Type",
29279         "items": {
29280             "maxLength": 64,
29281             "type": "string"
29282         },
29283         "minItems": 1,
29284         "readOnly": true,
29285         "type": "array"
29286     },
29287     "step": {
29288         "anyOf": [
29289             {
29290                 "type": "integer"
29291             },
29292             {
29293                 "type": "number"
29294             }
29295         ],
29296         "description": "Step value across the defined range",
29297         "readOnly": true
29298     },
29299     "value": {
29300         "anyOf": [
29301             {
29302                 "type": "array"
29303             },
29304             {
29305                 "type": "string"
29306             },
29307             {
29308                 "type": "boolean"
29309             },
29310             {
29311                 "type": "integer"
29312             },
29313             {
29314                 "type": "number"
29315             },
29316             {
29317                 "type": "object"
29318             }
29319         ],
29320         "description": "The value sensed or actuated by this Resource"
29321     }
29322 },
29323 "required": [
29324     "media"
29325 ]
29326 }
29327
29328 }
29329 }
29330

```

B.58.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
precision	number		Read Only	Accuracy granularity of the exposed value
rt	array: see schema		Read Only	Resource Type
id	string		Read Only	Instance ID of this specific resource
if	array: see schema		Read Only	The interface set supported by this resource

value	multiple types: see schema			The value sensed or actuated by this Resource
range	array: see schema		Read Only	The valid range for the value Property
media	array: see schema	yes		
step	multiple types: see schema		Read Only	Step value across the defined range
n	string		Read Only	Friendly name of the resource

29332 B.58.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/MediaResURI		get			

29333 B.59 Media Source

29334 B.59.1 Introduction

29335 This resource defines a media source that exists on a device.
 29336 The source can be an input source or output source, this resource is agnostic of that.
 29337 The sourceName specifies a pre-defined media input or output (e.g."HDMI", "DVI")
 29338 The sourceNumber is a numeric identifier to specify the instance (e.g. "PC", 1)
 29339 The sourceType is an enumeration defining whether the source is audio, video or both.
 29340 The status is a boolean that determines if the specific source instance is selected or not.
 29341 A status of true means that the source instance is selected.
 29342 A status of false means that the source instance is not selected.
 29343

29344 B.59.2 Example URI

29345 /mediaSourceResURI

29346 B.59.3 Resource Type

29347 The resource type (rt) is defined as: ['oic.r.mediasource'].

29348 B.59.4 Swagger2.0 Definition

```

29349 {
29350   "swagger": "2.0",
29351   "info": {
29352     "title": "Media Source",
29353     "version": "v1.1.0-20160519",
29354     "license": {
29355       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
29356       "x-description": "Redistribution and use in source and binary forms, with or without
29357 modification, are permitted provided that the following conditions are met:\n      1.
29358 Redistributions of source code must retain the above copyright notice, this list of conditions and
29359 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
29360 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
29361 other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open
29362 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
29363 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
29364 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
29365 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
29366 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
29367 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
29368 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
29369 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
  
```

```

29370 OF SUCH DAMAGE.\n"
29371     }
29372 },
29373 "schemes": ["http"],
29374 "consumes": ["application/json"],
29375 "produces": ["application/json"],
29376 "paths": {
29377     "/mediaSourceResURI" : {
29378         "get": {
29379             "description": "This resource defines a media source that exists on a device.\nThe source
29380 can be an input source or output source, this resource is agnostic of that.\nThe sourceName
29381 specifies a pre-defined media input or output (e.g.\\"HDMI\\", \\"DVI\\")\nThe sourceNumber is a
29382 numeric identifier to specify the instance (e.g. \\"PC\\", 1)\nThe sourceType is an enumeration
29383 defining whether the source is audio, video or both.\nThe status is a boolean that determines if
29384 the specific source instance is selected or not.\n    A status of true means that the source
29385 instance is selected.\n    A status of false means that the source instance is not selected.\n",
29386             "parameters": [
29387                 { "$ref": "#/parameters/interface" }
29388             ],
29389             "responses": {
29390                 "200": {
29391                     "description": "",
29392                     "x-example":
29393                     {
29394                         "rt": ["oic.r.mediasource"],
29395                         "id": "unique_example_id",
29396                         "sourceName": "HDMI-CEC",
29397                         "sourceNumber": "1",
29398                         "sourceType": "audioPlusVideo",
29399                         "status": true
29400                     },
29401                     ,
29402                     "schema": { "$ref": "#/definitions/mediaSource" }
29403                 }
29404             },
29405         },
29406         "post": {
29407             "description": "Changes the status of the source.\nAllows changes of the sourceName and the
29408 status.\n",
29409             "parameters": [
29410                 { "$ref": "#/parameters/interface" },
29411                 {
29412                     "name": "body",
29413                     "in": "body",
29414                     "required": true,
29415                     "schema": { "$ref": "#/definitions/mediaSource" },
29416                     "x-example":
29417                     {
29418                         "id": "unique_example_id",
29419                         "sourceName": "my new name",
29420                         "sourceNumber": "1",
29421                         "status": true
29422                     }
29423                 }
29424             ],
29425             "responses": {
29426                 "200": {
29427                     "description": "",
29428                     "x-example":
29429                     {
29430                         "id": "unique_example_id",
29431                         "sourceName": "my new name",
29432                         "sourceNumber": "1",
29433                         "status": true
29434                     },
29435                     ,
29436                     "schema": { "$ref": "#/definitions/mediaSource" }
29437                 }
29438             }
29439         }
29440     }

```

```

29441 },
29442 "parameters": {
29443   "interface" : {
29444     "in" : "query",
29445     "name" : "if",
29446     "type" : "string",
29447     "enum" : ["oic.if.a", "oic.if.baseline"]
29448   }
29449 },
29450 "definitions": {
29451   "mediaSource" :
29452     {
29453     "properties": {
29454       "id": {
29455         "description": "Instance ID of this specific resource",
29456         "maxLength": 64,
29457         "readOnly": true,
29458         "type": "string"
29459       },
29460       "if": {
29461         "description": "The interface set supported by this resource",
29462         "items": {
29463           "enum": [
29464             "oic.if.baseline",
29465             "oic.if.ll",
29466             "oic.if.b",
29467             "oic.if.lb",
29468             "oic.if.rw",
29469             "oic.if.r",
29470             "oic.if.a",
29471             "oic.if.s"
29472           ],
29473           "type": "string"
29474         },
29475         "minItems": 1,
29476         "readOnly": true,
29477         "type": "array"
29478       },
29479       "n": {
29480         "description": "Friendly name of the resource",
29481         "maxLength": 64,
29482         "readOnly": true,
29483         "type": "string"
29484       },
29485       "precision": {
29486         "description": "Accuracy granularity of the exposed value",
29487         "readOnly": true,
29488         "type": "number"
29489       },
29490       "range": {
29491         "description": "The valid range for the value Property",
29492         "items": {
29493           "anyOf": [
29494             {
29495               "type": "number"
29496             },
29497             {
29498               "type": "integer"
29499             }
29500           ]
29501         },
29502         "maxItems": 2,
29503         "minItems": 2,
29504         "readOnly": true,
29505         "type": "array"
29506       },
29507       "rt": {
29508         "description": "Resource Type",
29509         "items": {
29510           "maxLength": 64,
29511           "type": "string"

```



```

29512         },
29513         "minItems": 1,
29514         "readOnly": true,
29515         "type": "array"
29516     },
29517     "sourceName": {
29518         "description": "Specifies a pre-defined media input or output",
29519         "type": "string"
29520     },
29521     "sourceNumber": {
29522         "description": "Numeric identifier to specify the instance",
29523         "readOnly": true,
29524         "type": [
29525             "integer",
29526             "string"
29527         ]
29528     },
29529     "sourceType": {
29530         "description": "Specifies the type of the source",
29531         "enum": [
29532             "audioOnly",
29533             "videoOnly",
29534             "audioPlusVideo"
29535         ],
29536         "readOnly": true
29537     },
29538     "status": {
29539         "description": "Specifies if the specific source instance is selected or not",
29540         "type": "boolean"
29541     },
29542     "step": {
29543         "anyOf": [
29544             {
29545                 "type": "integer"
29546             },
29547             {
29548                 "type": "number"
29549             }
29550         ],
29551         "description": "Step value across the defined range",
29552         "readOnly": true
29553     },
29554     "value": {
29555         "anyOf": [
29556             {
29557                 "type": "array"
29558             },
29559             {
29560                 "type": "string"
29561             },
29562             {
29563                 "type": "boolean"
29564             },
29565             {
29566                 "type": "integer"
29567             },
29568             {
29569                 "type": "number"
29570             },
29571             {
29572                 "type": "object"
29573             }
29574         ],
29575         "description": "The value sensed or actuated by this Resource"
29576     }
29577 },
29578 "required": [
29579     "sourceName",
29580     "status"
29581 ]
29582 }

```

29583
29584 }
29585 }
29586 }

29587 **B.59.5 Property Definition**

Property name	Value type	Mandatory	Access mode	Description
precision	number		Read Only	Accuracy granularity of the exposed value
n	string		Read Only	Friendly name of the resource
id	string		Read Only	Instance ID of this specific resource
step	multiple types: see schema		Read Only	Step value across the defined range
status	boolean	yes		Specifies if the specific source instance is selected or not
sourceName	string	yes		Specifies a pre-defined media input or output
sourceNumber	['integer', 'string']		Read Only	Numeric identifier to specify the instance
sourceType	multiple types: see schema		Read Only	Specifies the type of the source
rt	array: see schema		Read Only	Resource Type
if	array: see schema		Read Only	The interface set supported by this resource
value	multiple types: see schema			The value sensed or actuated by this Resource
range	array: see schema		Read Only	The valid range for the value Property

29588 **B.59.6 CRUDN behaviour**

Resource	Create	Read	Update	Delete	Notify
/mediaSourceResURI		get	post		

29589 **B.60 Media Source List**

29590 **B.60.1 Introduction**

29591 This resource provides the list of media sources available on the device.
29592 The sources are an array of mediaSource(s) as separately defined.
29593 The basic resource type oic.r.mediaSourceList does not provide any indications whether the
29594 source is input or output.

29595 Hence, two specializations of this resource exist.
29596 When a device exposes input sources then an instance of this resource with a resource type of
29597 oic.r.media.input is exposed.
29598 When a device exposes output sources then an instance of this resource with a resource type of
29599 oic.r.media.output is exposed.
29600 A device that exposes both input and output media sources then exposes two instances of this
29601 resource,
29602 one with a resource type of oic.r.media.input and one with a resource type of oic.r.media.output
29603

29604 **B.60.2 Example URI**

29605 /mediaSourceListResURI

29606 **B.60.3 Resource Type**

29607 The resource type (rt) is defined as: ['oic.r.mediasourcelist'].

29608 **B.60.4 Swagger2.0 Definition**

```
29609 {  
29610   "swagger": "2.0",  
29611   "info": {  
29612     "title": "Media Source List",  
29613     "version": "v1.1.0-20160519",  
29614     "license": {  
29615       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
29616       "x-description": "Redistribution and use in source and binary forms, with or without  
29617 modification, are permitted provided that the following conditions are met:\n      1.  
29618 Redistributions of source code must retain the above copyright notice, this list of conditions and  
29619 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
29620 copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
29621 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open  
29622 Connectivity Foundation, INC. \n\"AS IS\n\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT  
29623 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR  
29624 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity  
29625 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,  
29626 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS  
29627 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND  
29628 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR  
29629 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY  
29630 OF SUCH DAMAGE.\n\n    }  
29631   },  
29632 },  
29633 "schemes": ["http"],  
29634 "consumes": ["application/json"],  
29635 "produces": ["application/json"],  
29636 "paths": {  
29637   "/mediaSourceListResURI" : {  
29638     "get": {  
29639       "description": "This resource provides the list of media sources available on the  
29640 device.\n\nThe sources are an array of mediaSource(s) as separately defined.\n\nThe basic resource type  
29641 oic.r.mediaSourceList does not provide any indications whether the source is input or  
29642 output.\n\nHence, two specializations of this resource exist.\n\nWhen a device exposes input sources  
29643 then an instance of this resource with a resource type of oic.r.media.input is exposed.\n\nWhen a  
29644 device exposes output sources then an instance of this resource with a resource type of  
29645 oic.r.media.output is exposed.\n\nA device that exposes both input and output media sources then  
29646 exposes two instances of this resource,\n\nnone with a resource type of oic.r.media.input and one with  
29647 a resource type of oic.r.media.output\n",  
29648     "parameters": [  
29649       {  
29650         "$ref": "#/parameters/interface"  
29651       }  
29652     ],  
29653     "responses": {  
29654       "200": {  
29655         "description": "",  
29656         "x-example": {  
29657           "rt": ["oic.r.mediasourcelist"],  
29658           "id": "unique_example_id",  
29659           "sources": [  
29660
```

```

29659         {
29660             "sourceName": "HDMI-CEC",
29661             "sourceNumber": "1",
29662             "sourceType": "audioPlusVideo",
29663             "status": true
29664         },
29665         {
29666             "sourceName": "dualRCA",
29667             "sourceNumber": "1",
29668             "sourceType": "audioOnly",
29669             "status": false
29670         }
29671     ]
29672 },
29673 ,
29674     "schema": { "$ref": "#/definitions/mediaSourceList" }
29675 },
29676 },
29677 },
29678 "post": {
29679     "description": "Changes the status of the source(s).\nAllows changes of the sourceName and
the status.\n",
29680     "parameters": [
29681         { "$ref": "#/parameters/interface" },
29682         {
29683             "name": "body",
29684             "in": "body",
29685             "required": true,
29686             "schema": { "$ref": "#/definitions/mediaSourceList" },
29687             "x-example":
29688                 {
29689                     "id": "unique_example_id",
29690                     "sources": [
29691                         {
29692                             "sourceName": "my new name",
29693                             "sourceNumber": "1",
29694                             "status": true
29695                         }
29696                     ]
29697                 }
29698     ]
29699 },
29700 ],
29701 "responses": {
29702     "200": {
29703         "description": "",
29704         "x-example":
29705             {
29706                 "id": "unique_example_id",
29707                 "sources": [
29708                     {
29709                         "sourceName": "my new name",
29710                         "sourceNumber": "1",
29711                         "status": true
29712                     }
29713                 ]
29714             }
29715         ,
29716         "schema": { "$ref": "#/definitions/mediaSourceList" }
29717     }
29718 },
29719 },
29720 },
29721 },
29722 "parameters": {
29723     "interface": {
29724         "in": "query",
29725         "name": "if",
29726         "type": "string",
29727         "enum": ["oic.if.a", "oic.if.baseline"]
29728     }
29729 },

```

```

29730 "definitions": {
29731   "mediaSourceList" :
29732     {
29733       "properties": {
29734         "id": {
29735           "description": "Instance ID of this specific resource",
29736           "maxLength": 64,
29737           "readOnly": true,
29738           "type": "string"
29739         },
29740         "if": {
29741           "description": "The interface set supported by this resource",
29742           "items": {
29743             "enum": [
29744               "oic.if.baseline",
29745               "oic.if.ll",
29746               "oic.if.b",
29747               "oic.if.lb",
29748               "oic.if.rw",
29749               "oic.if.x",
29750               "oic.if.a",
29751               "oic.if.s"
29752             ],
29753             "type": "string"
29754           },
29755           "minItems": 1,
29756           "readOnly": true,
29757           "type": "array"
29758         },
29759         "n": {
29760           "description": "Friendly name of the resource",
29761           "maxLength": 64,
29762           "readOnly": true,
29763           "type": "string"
29764         },
29765         "precision": {
29766           "description": "Accuracy granularity of the exposed value",
29767           "readOnly": true,
29768           "type": "number"
29769         },
29770         "range": {
29771           "description": "The valid range for the value Property",
29772           "items": {
29773             "anyOf": [
29774               {
29775                 "type": "number"
29776               },
29777               {
29778                 "type": "integer"
29779               }
29780             ]
29781           },
29782           "maxItems": 2,
29783           "minItems": 2,
29784           "readOnly": true,
29785           "type": "array"
29786         },
29787         "rt": {
29788           "description": "Resource Type",
29789           "items": {
29790             "maxLength": 64,
29791             "type": "string"
29792           },
29793           "minItems": 1,
29794           "readOnly": true,
29795           "type": "array"
29796         },
29797         "sources": {
29798           "items": {
29799             "oneOf": [
29800               {

```

```

29801         "properties": {
29802             "sourceName": {
29803                 "description": "Specifies a pre-defined media input or output",
29804                 "type": "string"
29805             },
29806             "sourceNumber": {
29807                 "description": "Numeric identifier to specify the instance",
29808                 "readOnly": true,
29809                 "type": [
29810                     "integer",
29811                     "string"
29812                 ]
29813             },
29814             "sourceType": {
29815                 "description": "Specifies the type of the source",
29816                 "enum": [
29817                     "audioOnly",
29818                     "videoOnly",
29819                     "audioPlusVideo"
29820                 ],
29821                 "readOnly": true
29822             },
29823             "status": {
29824                 "description": "Specifies if the specific source instance is selected or
29825 not",
29826                 "type": "boolean"
29827             }
29828         }
29829     },
29830 ],
29831 },
29832 "type": "array"
29833 },
29834 "step": {
29835     "anyOf": [
29836         {
29837             "type": "integer"
29838         },
29839         {
29840             "type": "number"
29841         }
29842     ],
29843     "description": "Step value across the defined range",
29844     "readOnly": true
29845 },
29846 "value": {
29847     "anyOf": [
29848         {
29849             "type": "array"
29850         },
29851         {
29852             "type": "string"
29853         },
29854         {
29855             "type": "boolean"
29856         },
29857         {
29858             "type": "integer"
29859         },
29860         {
29861             "type": "number"
29862         },
29863         {
29864             "type": "object"
29865         }
29866     ],
29867     "description": "The value sensed or actuated by this Resource"
29868 }
29869 },
29870 "required": [
29871     "sources"

```

29872]
29873 }
29874 }
29875 }
29876 }
29877

29878 **B.60.5 Property Definition**

Property name	Value type	Mandatory	Access mode	Description
sources	array: see schema	yes		
rt	array: see schema		Read Only	Resource Type
if	array: see schema		Read Only	The interface set supported by this resource
id	string		Read Only	Instance ID of this specific resource
precision	number		Read Only	Accuracy granularity of the exposed value
value	multiple types: see schema			The value sensed or actuated by this Resource
step	multiple types: see schema		Read Only	Step value across the defined range
range	array: see schema		Read Only	The valid range for the value Property
n	string		Read Only	Friendly name of the resource

29879 **B.60.6 CRUDN behaviour**

Resource	Create	Read	Update	Delete	Notify
/mediaSourceListResURI		get	post		

29880 **B.61 Media Source Input**

29881 **B.61.1 Introduction**

29882 This resource provides the list of input media sources available on the device.
29883 The sources are an array of mediaSource(s) as separately defined.
29884

29885 **B.61.2 Example URI**

29886 /mediaSourceInputResURI

29887 **B.61.3 Resource Type**

29888 The resource type (rt) is defined as: ['oic.r.media.input'].

29889 **B.61.4 Swagger2.0 Definition**

29890 {
29891 "swagger": "2.0",
29892 "info": {
29893 "title": "Media Source Input",
29894 "version": "v1.1.0-20160519",

```

29895     "license": {
29896         "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
29897         "x-description": "Redistribution and use in source and binary forms, with or without
29898 modification, are permitted provided that the following conditions are met:\n        1.
29899 Redistributions of source code must retain the above copyright notice, this list of conditions and
29900 the following disclaimer.\n        2. Redistributions in binary form must reproduce the above
29901 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
29902 other materials provided with the distribution.\n\n        THIS SOFTWARE IS PROVIDED BY THE Open
29903 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
29904 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
29905 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n        IN NO EVENT SHALL THE Open Connectivity
29906 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
29907 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
29908 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n        HOWEVER CAUSED AND
29909 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
29910 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
29911 OF SUCH DAMAGE.\n"
29912     },
29913 },
29914 "schemes": ["http"],
29915 "consumes": ["application/json"],
29916 "produces": ["application/json"],
29917 "paths": {
29918     "/mediaSourceInputResURI" : {
29919         "get": {
29920             "description": "This resource provides the list of input media sources available on the
29921 device.\nThe sources are an array of mediaSource(s) as separately defined.\n",
29922             "parameters": [
29923                 {"$ref": "#/parameters/interface"}
29924             ],
29925             "responses": {
29926                 "200": {
29927                     "description": "",
29928                     "x-example":
29929                     {
29930                         "rt": ["oic.r.media.input"],
29931                         "id": "unique_example_id",
29932                         "sources": [
29933                             {
29934                                 "sourceName": "HDMI-CEC",
29935                                 "sourceNumber": "1",
29936                                 "sourceType": "audioPlusVideo",
29937                                 "status": true
29938                             },
29939                             {
29940                                 "sourceName": "dualRCA",
29941                                 "sourceNumber": "1",
29942                                 "sourceType": "audioOnly",
29943                                 "status": false
29944                             }
29945                         ]
29946                     }
29947                 },
29948                 "schema": { "$ref": "#/definitions/mediaSourceList" }
29949             }
29950         },
29951     },
29952     "post": {
29953         "description": "Changes the status of the source(s).\nAllows changes of the sourceName and
29954 the status.\n",
29955         "parameters": [
29956             {"$ref": "#/parameters/interface"},
29957             {
29958                 "name": "body",
29959                 "in": "body",
29960                 "required": true,
29961                 "schema": { "$ref": "#/definitions/mediaSourceList" },
29962                 "x-example":
29963                 {
29964                     "id": "unique_example_id",
29965                     "sources": [

```



```

29966         {
29967             "sourceName": "my new name",
29968             "sourceNumber": "1",
29969             "status": true
29970         }
29971     ]
29972 }
29973 },
29974 ],
29975 "responses": {
29976     "200": {
29977         "description": "",
29978         "x-example":
29979         {
29980             "id": "unique_example_id",
29981             "sources": [
29982                 {
29983                     "sourceName": "my new name",
29984                     "sourceNumber": "1",
29985                     "status": true
29986                 }
29987             ]
29988         }
29989     },
29990     "schema": { "$ref": "#/definitions/mediaSourceList" }
29991 }
29992 }
29993 }
29994 },
29995 },
29996 "parameters": {
29997     "interface": {
29998         "in": "query",
29999         "name": "if",
30000         "type": "string",
30001         "enum": ["oic.if.a", "oic.if.baseline"]
30002     }
30003 },
30004 "definitions": {
30005     "mediaSourceList": {
30006         {
30007             "properties": {
30008                 "id": {
30009                     "description": "Instance ID of this specific resource",
30010                     "maxLength": 64,
30011                     "readOnly": true,
30012                     "type": "string"
30013                 },
30014                 "if": {
30015                     "description": "The interface set supported by this resource",
30016                     "items": {
30017                         "enum": [
30018                             "oic.if.baseline",
30019                             "oic.if.ll",
30020                             "oic.if.b",
30021                             "oic.if.lb",
30022                             "oic.if.rw",
30023                             "oic.if.r",
30024                             "oic.if.a",
30025                             "oic.if.s"
30026                         ],
30027                         "type": "string"
30028                     },
30029                     "minItems": 1,
30030                     "readOnly": true,
30031                     "type": "array"
30032                 },
30033                 "n": {
30034                     "description": "Friendly name of the resource",
30035                     "maxLength": 64,
30036                     "readOnly": true,

```

```

30037         "type": "string"
30038     },
30039     "precision": {
30040         "description": "Accuracy granularity of the exposed value",
30041         "readOnly": true,
30042         "type": "number"
30043     },
30044     "range": {
30045         "description": "The valid range for the value Property",
30046         "items": {
30047             "anyOf": [
30048                 {
30049                     "type": "number"
30050                 },
30051                 {
30052                     "type": "integer"
30053                 }
30054             ]
30055         },
30056         "maxItems": 2,
30057         "minItems": 2,
30058         "readOnly": true,
30059         "type": "array"
30060     },
30061     "rt": {
30062         "description": "Resource Type",
30063         "items": {
30064             "maxLength": 64,
30065             "type": "string"
30066         },
30067         "minItems": 1,
30068         "readOnly": true,
30069         "type": "array"
30070     },
30071     "sources": {
30072         "items": {
30073             "oneOf": [
30074                 {
30075                     "properties": {
30076                         "sourceName": {
30077                             "description": "Specifies a pre-defined media input or output",
30078                             "type": "string"
30079                         },
30080                         "sourceNumber": {
30081                             "description": "Numeric identifier to specify the instance",
30082                             "readOnly": true,
30083                             "type": [
30084                                 "integer",
30085                                 "string"
30086                             ]
30087                         },
30088                         "sourceType": {
30089                             "description": "Specifies the type of the source",
30090                             "enum": [
30091                                 "audioOnly",
30092                                 "videoOnly",
30093                                 "audioPlusVideo"
30094                             ],
30095                             "readOnly": true
30096                         },
30097                         "status": {
30098                             "description": "Specifies if the specific source instance is selected or
30099 not",
30100                             "type": "boolean"
30101                         }
30102                     }
30103                 }
30104             ]
30105         },
30106         "type": "array"
30107     },

```

```

30108     "step": {
30109         "anyOf": [
30110             {
30111                 "type": "integer"
30112             },
30113             {
30114                 "type": "number"
30115             }
30116         ],
30117         "description": "Step value across the defined range",
30118         "readOnly": true
30119     },
30120     "value": {
30121         "anyOf": [
30122             {
30123                 "type": "array"
30124             },
30125             {
30126                 "type": "string"
30127             },
30128             {
30129                 "type": "boolean"
30130             },
30131             {
30132                 "type": "integer"
30133             },
30134             {
30135                 "type": "number"
30136             },
30137             {
30138                 "type": "object"
30139             }
30140         ],
30141         "description": "The value sensed or actuated by this Resource"
30142     },
30143     "required": [
30144         "sources"
30145     ]
30146 }
30147 }
30148 }
30149 }
30150 }
30151

```

B.61.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
id	string		Read Only	Instance ID of this specific resource
sources	array: see schema	yes		
step	multiple types: see schema		Read Only	Step value across the defined range
n	string		Read Only	Friendly name of the resource
value	multiple types: see schema			The value sensed or actuated by this Resource
rt	array: see schema		Read Only	Resource Type

precision	number		Read Only	Accuracy granularity of the exposed value
range	array: see schema		Read Only	The valid range for the value Property
if	array: see schema		Read Only	The interface set supported by this resource

30153 B.61.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/mediaSourceInputResURI		get	post		

30154 B.62 Media Source Output

30155 B.62.1 Introduction

30156 This resource provides the list of output media sources available on the device.
30157 The sources are an array of mediaSource(s) as separately defined.
30158

30159 B.62.2 Example URI

30160 /mediaSourceOutputResURI

30161 B.62.3 Resource Type

30162 The resource type (rt) is defined as: ['oic.r.media.output'].

30163 B.62.4 Swagger2.0 Definition

```

30164 {
30165   "swagger": "2.0",
30166   "info": {
30167     "title": "Media Source Output",
30168     "version": "v1.1.0-20160519",
30169     "license": {
30170       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
30171       "x-description": "Redistribution and use in source and binary forms, with or without
30172 modification, are permitted provided that the following conditions are met:\n      1.
30173 Redistributions of source code must retain the above copyright notice, this list of conditions and
30174 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
30175 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
30176 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
30177 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
30178 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
30179 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
30180 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
30181 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
30182 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
30183 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
30184 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
30185 OF SUCH DAMAGE.\n"
30186   }
30187 },
30188 "schemes": ["http"],
30189 "consumes": ["application/json"],
30190 "produces": ["application/json"],
30191 "paths": {
30192   "/mediaSourceOutputResURI" : {
30193     "get": {
30194       "description": "This resource provides the list of output media sources available on the
30195 device.\n\nThe sources are an array of mediaSource(s) as separately defined.\n",
30196       "parameters": [
30197         {"$ref": "#/parameters/interface"}
30198       ]
30199     }
30200   }
30201 }
```

```

30199     "responses": {
30200         "200": {
30201             "description" : "",
30202             "x-example":
30203                 {
30204                     "rt": ["oic.r.media.output"],
30205                     "id": "unique_example_id",
30206                     "sources": [
30207                         {
30208                             "sourceName": "HDMI-CEC",
30209                             "sourceNumber": "1",
30210                             "sourceType": "audioPlusVideo",
30211                             "status": true
30212                         },
30213                         {
30214                             "sourceName": "dualRCA",
30215                             "sourceNumber": "1",
30216                             "sourceType": "audioOnly",
30217                             "status": false
30218                         }
30219                     ]
30220                 }
30221             ,
30222             "schema": { "$ref": "#/definitions/mediaSourceList" }
30223         }
30224     },
30225     "post": {
30226         "description": "Changes the status of the source(s).\nAllows changes of the sourceName and
the status.\n",
30227         "parameters": [
30228             { "$ref": "#/parameters/interface" },
30229             {
30230                 "name": "body",
30231                 "in": "body",
30232                 "required": true,
30233                 "schema": { "$ref": "#/definitions/mediaSourceList" },
30234                 "x-example":
30235                     {
30236                         "id": "unique_example_id",
30237                         "sources": [
30238                             {
30239                                 "sourceName": "my new name",
30240                                 "sourceNumber": "1",
30241                                 "status": true
30242                             }
30243                         ]
30244                     }
30245             }
30246         ]
30247     },
30248     "responses": {
30249         "200": {
30250             "description" : "",
30251             "x-example":
30252                 {
30253                     "id": "unique_example_id",
30254                     "sources": [
30255                         {
30256                             "sourceName": "my new name",
30257                             "sourceNumber": "1",
30258                             "status": true
30259                         }
30260                     ]
30261                 }
30262             ,
30263             "schema": { "$ref": "#/definitions/mediaSourceList" }
30264         }
30265     }
30266 },
30267 },
30268 },
30269 },

```

```

30270 "parameters": {
30271   "interface" : {
30272     "in" : "query",
30273     "name" : "if",
30274     "type" : "string",
30275     "enum" : ["oic.if.a", "oic.if.baseline"]
30276   },
30277 },
30278 "definitions": {
30279   "mediaSourceList" :
30280   {
30281     "properties": {
30282       "id": {
30283         "description": "Instance ID of this specific resource",
30284         "maxLength": 64,
30285         "readOnly": true,
30286         "type": "string"
30287       },
30288       "if": {
30289         "description": "The interface set supported by this resource",
30290         "items": {
30291           "enum": [
30292             "oic.if.baseline",
30293             "oic.if.ll",
30294             "oic.if.b",
30295             "oic.if.lb",
30296             "oic.if.rw",
30297             "oic.if.r",
30298             "oic.if.a",
30299             "oic.if.s"
30300           ],
30301           "type": "string"
30302         },
30303         "minItems": 1,
30304         "readOnly": true,
30305         "type": "array"
30306       },
30307       "n": {
30308         "description": "Friendly name of the resource",
30309         "maxLength": 64,
30310         "readOnly": true,
30311         "type": "string"
30312       },
30313       "precision": {
30314         "description": "Accuracy granularity of the exposed value",
30315         "readOnly": true,
30316         "type": "number"
30317       },
30318       "range": {
30319         "description": "The valid range for the value Property",
30320         "items": {
30321           "anyOf": [
30322             {
30323               "type": "number"
30324             },
30325             {
30326               "type": "integer"
30327             }
30328           ]
30329         },
30330         "maxItems": 2,
30331         "minItems": 2,
30332         "readOnly": true,
30333         "type": "array"
30334       },
30335       "rt": {
30336         "description": "Resource Type",
30337         "items": {
30338           "maxLength": 64,
30339           "type": "string"
30340         },

```

```

30341         "minItems": 1,
30342         "readOnly": true,
30343         "type": "array"
30344     },
30345     "sources": {
30346         "items": {
30347             "oneOf": [
30348                 {
30349                     "properties": {
30350                         "sourceName": {
30351                             "description": "Specifies a pre-defined media input or output",
30352                             "type": "string"
30353                         },
30354                         "sourceNumber": {
30355                             "description": "Numeric identifier to specify the instance",
30356                             "readOnly": true,
30357                             "type": [
30358                                 "integer",
30359                                 "string"
30360                             ]
30361                         },
30362                         "sourceType": {
30363                             "description": "Specifies the type of the source",
30364                             "enum": [
30365                                 "audioOnly",
30366                                 "videoOnly",
30367                                 "audioPlusVideo"
30368                             ],
30369                             "readOnly": true
30370                         },
30371                         "status": {
30372                             "description": "Specifies if the specific source instance is selected or
30373 not",
30374                             "type": "boolean"
30375                         }
30376                     }
30377                 }
30378             ],
30379             "type": "array"
30380         },
30381         "step": {
30382             "anyOf": [
30383                 {
30384                     "type": "integer"
30385                 },
30386                 {
30387                     "type": "number"
30388                 }
30389             ],
30390             "description": "Step value across the defined range",
30391             "readOnly": true
30392         },
30393         "value": {
30394             "anyOf": [
30395                 {
30396                     "type": "array"
30397                 },
30398                 {
30399                     "type": "string"
30400                 },
30401                 {
30402                     "type": "boolean"
30403                 },
30404                 {
30405                     "type": "integer"
30406                 },
30407                 {
30408                     "type": "number"
30409                 }
30410             ],
30411         }

```

```

30412         "type": "object"
30413     }
30414 },
30415     "description": "The value sensed or actuated by this Resource"
30416 },
30417 },
30418     "required": [
30419         "sources"
30420     ]
30421 }
30422
30423 }
30424 }
30425

```

30426 B.62.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
sources	array: see schema	yes		
n	string		Read Only	Friendly name of the resource
range	array: see schema		Read Only	The valid range for the value Property
id	string		Read Only	Instance ID of this specific resource
step	multiple types: see schema		Read Only	Step value across the defined range
rt	array: see schema		Read Only	Resource Type
value	multiple types: see schema			The value sensed or actuated by this Resource
precision	number		Read Only	Accuracy granularity of the exposed value
if	array: see schema		Read Only	The interface set supported by this resource

30427 B.62.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/mediaSourceOutputResURI		get	post		

30428 B.63 Mode

30429 B.63.1 Introduction

30430 This resource describes the modes of operation that a device can provide.
30431 The mode can be read or set.
30432 The supportedModes is an array of possible modes the device supports.
30433 The modes are an array of the currently active mode(s).
30434 Retrieves the current mode.
30435

B.63.2 Example URI

/ModeResURI

B.63.3 Resource Type

The resource type (rt) is defined as: ['oic.r.mode'].

B.63.4 Swagger2.0 Definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Mode",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/ModeResURI" : {
      "get": {
        "description": "This resource describes the modes of operation that a device can
provide.\nThe mode can be read or set.\nThe supportedModes is an array of possible modes the device
supports.\nThe modes are an array of the currently active mode(s).\nRetrieves the current mode.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.mode"],
              "id": "unique_example_id",
              "supportedModes": ["active", "armedAway", "armedStay", "armedInstant"],
              "modes": ["active"]
            }
          },
          "schema": { "$ref": "#/definitions/Mode" }
        }
      },
      "post": {
        "description": "Sets the desired mode.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/ModeUpdate" },
            "x-example": {

```

```

30503         "id": "unique_example_id",
30504         "modes": ["armedAway"]
30505     }
30506 }
30507 ],
30508 "responses": {
30509     "200": {
30510         "description": "",
30511         "x-example":
30512             {
30513                 "id": "unique_example_id",
30514                 "modes": ["armedAway"]
30515             }
30516     },
30517     "schema": { "$ref": "#/definitions/ModeUpdate" }
30518 },
30519     "403": {
30520         "description": "This response is generated by the OIC Server when the client
30521 sends:\n An update with an value for mode that is not found in supportedModes.\nThe server
30522 responds with the current resource representation.\n",
30523         "x-example":
30524             {
30525                 "id": "unique_example_id",
30526                 "supportedModes": ["active", "armedAway", "armedStay", "armedInstant"],
30527                 "modes": ["active"]
30528             }
30529     },
30530     "schema": { "$ref": "#/definitions/Mode" }
30531 }
30532 }
30533 }
30534 }
30535 },
30536 "parameters": {
30537     "interface": {
30538         "in": "query",
30539         "name": "if",
30540         "type": "string",
30541         "enum": ["oic.if.a", "oic.if.baseline"]
30542     }
30543 },
30544 "definitions": {
30545     "Mode": {
30546         {
30547         "properties": {
30548             "id": {
30549                 "description": "Instance ID of this specific resource",
30550                 "maxLength": 64,
30551                 "readOnly": true,
30552                 "type": "string"
30553             },
30554             "if": {
30555                 "description": "The interface set supported by this resource",
30556                 "items": {
30557                     "enum": [
30558                         "oic.if.baseline",
30559                         "oic.if.ll",
30560                         "oic.if.b",
30561                         "oic.if.lb",
30562                         "oic.if.rw",
30563                         "oic.if.r",
30564                         "oic.if.a",
30565                         "oic.if.s"
30566                     ],
30567                     "type": "string"
30568                 },
30569                 "minItems": 1,
30570                 "readOnly": true,
30571                 "type": "array"
30572             }
30573         },
30574         "modes": {

```

```

30574         "description": "Array of the currently active mode(s)",
30575         "items": {
30576             "type": "string"
30577         },
30578         "type": "array"
30579     },
30580     "n": {
30581         "description": "Friendly name of the resource",
30582         "maxLength": 64,
30583         "readOnly": true,
30584         "type": "string"
30585     },
30586     "precision": {
30587         "description": "Accuracy granularity of the exposed value",
30588         "readOnly": true,
30589         "type": "number"
30590     },
30591     "range": {
30592         "description": "The valid range for the value Property",
30593         "items": {
30594             "anyOf": [
30595                 {
30596                     "type": "number"
30597                 },
30598                 {
30599                     "type": "integer"
30600                 }
30601             ]
30602         },
30603         "maxItems": 2,
30604         "minItems": 2,
30605         "readOnly": true,
30606         "type": "array"
30607     },
30608     "rt": {
30609         "description": "Resource Type",
30610         "items": {
30611             "maxLength": 64,
30612             "type": "string"
30613         },
30614         "minItems": 1,
30615         "readOnly": true,
30616         "type": "array"
30617     },
30618     "step": {
30619         "anyOf": [
30620             {
30621                 "type": "integer"
30622             },
30623             {
30624                 "type": "number"
30625             }
30626         ],
30627         "description": "Step value across the defined range",
30628         "readOnly": true
30629     },
30630     "supportedModes": {
30631         "description": "Array of possible modes the device supports.",
30632         "items": {
30633             "type": "string"
30634         },
30635         "readOnly": true,
30636         "type": "array"
30637     },
30638     "value": {
30639         "anyOf": [
30640             {
30641                 "type": "array"
30642             },
30643             {
30644                 "type": "string"

```

```

30645         },
30646         {
30647             "type": "boolean"
30648         },
30649         {
30650             "type": "integer"
30651         },
30652         {
30653             "type": "number"
30654         },
30655         {
30656             "type": "object"
30657         }
30658     ],
30659     "description": "The value sensed or actuated by this Resource"
30660 },
30661 },
30662 "required": [
30663     "supportedModes",
30664     "modes"
30665 ],
30666 "type": "object"
30667 }
30668
30669 ,
30670 "ModeUpdate" :
30671 {
30672     "properties": {
30673         "id": {
30674             "description": "Instance ID of this specific resource",
30675             "maxLength": 64,
30676             "readOnly": true,
30677             "type": "string"
30678         },
30679         "if": {
30680             "description": "The interface set supported by this resource",
30681             "items": {
30682                 "enum": [
30683                     "oic.if.baseline",
30684                     "oic.if.ll",
30685                     "oic.if.b",
30686                     "oic.if.lb",
30687                     "oic.if.rw",
30688                     "oic.if.r",
30689                     "oic.if.a",
30690                     "oic.if.s"
30691                 ],
30692                 "type": "string"
30693             },
30694             "minItems": 1,
30695             "readOnly": true,
30696             "type": "array"
30697         },
30698         "modes": {
30699             "description": "Desired mode",
30700             "items": {
30701                 "type": "string"
30702             },
30703             "type": "array"
30704         },
30705         "n": {
30706             "description": "Friendly name of the resource",
30707             "maxLength": 64,
30708             "readOnly": true,
30709             "type": "string"
30710         },
30711         "precision": {
30712             "description": "Accuracy granularity of the exposed value",
30713             "readOnly": true,
30714             "type": "number"
30715         },

```

```

30716     "range": {
30717         "description": "The valid range for the value Property",
30718         "items": {
30719             "anyOf": [
30720                 {
30721                     "type": "number"
30722                 },
30723                 {
30724                     "type": "integer"
30725                 }
30726             ]
30727         },
30728         "maxItems": 2,
30729         "minItems": 2,
30730         "readOnly": true,
30731         "type": "array"
30732     },
30733     "rt": {
30734         "description": "Resource Type",
30735         "items": {
30736             "maxLength": 64,
30737             "type": "string"
30738         },
30739         "minItems": 1,
30740         "readOnly": true,
30741         "type": "array"
30742     },
30743     "step": {
30744         "anyOf": [
30745             {
30746                 "type": "integer"
30747             },
30748             {
30749                 "type": "number"
30750             }
30751         ],
30752         "description": "Step value across the defined range",
30753         "readOnly": true
30754     },
30755     "value": {
30756         "anyOf": [
30757             {
30758                 "type": "array"
30759             },
30760             {
30761                 "type": "string"
30762             },
30763             {
30764                 "type": "boolean"
30765             },
30766             {
30767                 "type": "integer"
30768             },
30769             {
30770                 "type": "number"
30771             },
30772             {
30773                 "type": "object"
30774             }
30775         ],
30776         "description": "The value sensed or actuated by this Resource"
30777     }
30778 },
30779 "required": [
30780     "modes"
30781 ],
30782 "type": "object"
30783 }
30784
30785 }
```

30786 }

30787

30788

B.63.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema		Read Only	Step value across the defined range
range	array: see schema		Read Only	The valid range for the value Property
precision	number		Read Only	Accuracy granularity of the exposed value
id	string		Read Only	Instance ID of this specific resource
supportedModes	array: see schema	yes	Read Only	Array of possible modes the device supports.
n	string		Read Only	Friendly name of the resource
modes	array: see schema	yes		Array of the currently active mode(s)
rt	array: see schema		Read Only	Resource Type
value	multiple types: see schema			The value sensed or actuated by this Resource
if	array: see schema		Read Only	The interface set supported by this resource
step	multiple types: see schema		Read Only	Step value across the defined range
range	array: see schema		Read Only	The valid range for the value Property
precision	number		Read Only	Accuracy granularity of the exposed value
id	string		Read Only	Instance ID of this specific resource
n	string		Read Only	Friendly name of the resource
modes	array: see schema	yes		Desired mode
rt	array: see schema		Read Only	Resource Type
value	multiple types: see schema			The value sensed or actuated by this Resource

if	array: schema	see		Read Only	The interface set supported by this resource
----	------------------	-----	--	-----------	--

30789 B.63.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/ModeResURI		get	post		

30790 B.64 Motion Sensor

30791 B.64.1 Introduction

30792 This resource describes whether motion has been sensed or not.
30793 The value is a boolean.
30794 A value of 'true' means that motion has been sensed.
30795 A value of 'false' means that motion not been sensed.
30796

30797 B.64.2 Example URI

30798 /MotionResURI

30799 B.64.3 Resource Type

30800 The resource type (rt) is defined as: ['oic.r.sensor.motion'].

30801 B.64.4 Swagger2.0 Definition

```

30802 {
30803   "swagger": "2.0",
30804   "info": {
30805     "title": "Motion Sensor",
30806     "version": "v1.1.0-20160519",
30807     "license": {
30808       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
30809       "x-description": "Redistribution and use in source and binary forms, with or without
30810 modification, are permitted provided that the following conditions are met:\n      1.
30811 Redistributions of source code must retain the above copyright notice, this list of conditions and
30812 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
30813 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
30814 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
30815 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
30816 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
30817 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
30818 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
30819 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
30820 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
30821 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
30822 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
30823 OF SUCH DAMAGE.\n"
30824   }
30825 },
30826 "schemes": ["http"],
30827 "consumes": ["application/json"],
30828 "produces": ["application/json"],
30829 "paths": {
30830   "/MotionResURI" : {
30831     "get": {
30832       "description": "This resource describes whether motion has been sensed or not.\nThe value
30833 is a boolean.\nA value of 'true' means that motion has been sensed.\nA value of 'false' means that
30834 motion not been sensed.\n",
30835       "parameters": [
30836         {"$ref": "#/parameters/interface"}
30837       ],
30838       "responses": {
30839         "200": {
30840           "description": "",
30841           "x-example":
30842             {

```

```

30843         "rt":      ["oic.r.sensor.motion"],
30844         "id":      "unique_example_id",
30845         "value": true
30846     }
30847     ,
30848     "schema": { "$ref": "#/definitions/Motion" }
30849 }
30850 }
30851 }
30852 }
30853 },
30854 "parameters": {
30855     "interface" : {
30856         "in" : "query",
30857         "name" : "if",
30858         "type" : "string",
30859         "enum" : ["oic.if.s", "oic.if.baseline"]
30860     }
30861 },
30862 "definitions": {
30863     "Motion" :
30864     {
30865         "properties": {
30866             "id": {
30867                 "description": "Instance ID of this specific resource",
30868                 "maxLength": 64,
30869                 "readOnly": true,
30870                 "type": "string"
30871             },
30872             "if": {
30873                 "description": "The interface set supported by this resource",
30874                 "items": {
30875                     "enum": [
30876                         "oic.if.baseline",
30877                         "oic.if.ll",
30878                         "oic.if.b",
30879                         "oic.if.lb",
30880                         "oic.if.rw",
30881                         "oic.if.r",
30882                         "oic.if.a",
30883                         "oic.if.s"
30884                     ],
30885                     "type": "string"
30886                 },
30887                 "minItems": 1,
30888                 "readOnly": true,
30889                 "type": "array"
30890             },
30891             "n": {
30892                 "description": "Friendly name of the resource",
30893                 "maxLength": 64,
30894                 "readOnly": true,
30895                 "type": "string"
30896             },
30897             "precision": {
30898                 "description": "Accuracy granularity of the exposed value",
30899                 "readOnly": true,
30900                 "type": "number"
30901             },
30902             "range": {
30903                 "description": "The valid range for the value Property",
30904                 "items": {
30905                     "anyOf": [
30906                         {
30907                             "type": "number"
30908                         },
30909                         {
30910                             "type": "integer"
30911                         }
30912                     ]
30913                 },

```



```

30914         "maxItems": 2,
30915         "minItems": 2,
30916         "readOnly": true,
30917         "type": "array"
30918     },
30919     "rt": {
30920         "description": "Resource Type",
30921         "items": {
30922             "maxLength": 64,
30923             "type": "string"
30924         },
30925         "minItems": 1,
30926         "readOnly": true,
30927         "type": "array"
30928     },
30929     "step": {
30930         "anyOf": [
30931             {
30932                 "type": "integer"
30933             },
30934             {
30935                 "type": "number"
30936             }
30937         ],
30938         "description": "Step value across the defined range",
30939         "readOnly": true
30940     },
30941     "value": {
30942         "description": "true = sensed, false = not sensed.",
30943         "readOnly": true,
30944         "type": "boolean"
30945     }
30946 },
30947 "required": [
30948     "value"
30949 ],
30950 "type": "object"
30951 }
30952 }
30953 }
30954 }
30955

```

B.64.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema		Read Only	The interface set supported by this resource
value	boolean	yes	Read Only	true = sensed, false = not sensed.
n	string		Read Only	Friendly name of the resource
precision	number		Read Only	Accuracy granularity of the exposed value
step	multiple types: see schema		Read Only	Step value across the defined range
range	array: see schema		Read Only	The valid range for the value Property
rt	array: see schema		Read Only	Resource Type

id	string		Read Only	Instance ID of this specific resource
----	--------	--	-----------	---------------------------------------

30957 B.64.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/MotionResURI		get			

30958 B.65 Movement

30959 B.65.1 Introduction

30960 This resource specifies linear movement.
 30961 The movementSettings is an array of strings containing possible movement values (e.g. spin, stop,
 30962 left, right).
 30963 The movement is the currently selected movement value.
 30964 The movementModifier is a modifier to the movement value (e.g. "spin", "90")
 30965

30966 B.65.2 Example URI

30967 /MovementResURI

30968 B.65.3 Resource Type

30969 The resource type (rt) is defined as: ['oic.r.movement.linear'].

30970 B.65.4 Swagger2.0 Definition

```

30971 {
30972   "swagger": "2.0",
30973   "info": {
30974     "title": "Movement",
30975     "version": "v1.1.0-20160519",
30976     "license": {
30977       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
30978       "x-description": "Redistribution and use in source and binary forms, with or without
30979 modification, are permitted provided that the following conditions are met:\n      1.
30980 Redistributions of source code must retain the above copyright notice, this list of conditions and
30981 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
30982 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
30983 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
30984 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
30985 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
30986 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
30987 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
30988 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
30989 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
30990 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
30991 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
30992 OF SUCH DAMAGE.\n"
30993   },
30994 },
30995 "schemes": ["http"],
30996 "consumes": ["application/json"],
30997 "produces": ["application/json"],
30998 "paths": {
30999   "/MovementResURI" : {
31000     "get": {
31001       "description": "This resource specifies linear movement.\nThe movementSettings is an array
31002 of strings containing possible movement values (e.g. spin, stop, left, right).\nThe movement is the
31003 currently selected movement value.\nThe movementModifier is a modifier to the movement value (e.g.
31004 \\"spin\\", \\"90\\")\n",
31005       "parameters": [
31006         {"$ref": "#/parameters/interface"}
31007       ],
31008       "responses": {
31009         "200": {

```

```

31010         "description" : "",
31011         "x-example":
31012             {
31013                 "rt": ["oic.r.movement.linear"],
31014                 "id": "unique_example_id",
31015                 "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
31016                 "movement": "rotate",
31017                 "movementModifier": "90"
31018             }
31019         ,
31020         "schema": { "$ref": "#/definitions/movement" }
31021     }
31022 },
31023 },
31024 "post": {
31025     "description": "Sets the current device movement\n",
31026     "parameters": [
31027         { "$ref": "#/parameters/interface" },
31028         {
31029             "name": "body",
31030             "in": "body",
31031             "required": true,
31032             "schema": { "$ref": "#/definitions/movement" },
31033             "x-example":
31034                 {
31035                     "id": "unique_example_id",
31036                     "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
31037                     "movement": "stop"
31038                 }
31039         }
31040     ],
31041     "responses": {
31042         "200": {
31043             "description" : "",
31044             "x-example":
31045                 {
31046                     "id": "unique_example_id",
31047                     "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
31048                     "movement": "stop"
31049                 }
31050             ,
31051             "schema": { "$ref": "#/definitions/movement" }
31052         }
31053     }
31054 },
31055 },
31056 },
31057 "parameters": {
31058     "interface" : {
31059         "in" : "query",
31060         "name" : "if",
31061         "type" : "string",
31062         "enum" : ["oic.if.s", "oic.if.baseline"]
31063     }
31064 },
31065 "definitions": {
31066     "movement" :
31067         {
31068             "properties": {
31069                 "id": {
31070                     "description": "Instance ID of this specific resource",
31071                     "maxLength": 64,
31072                     "readOnly": true,
31073                     "type": "string"
31074                 },
31075                 "if": {
31076                     "description": "The interface set supported by this resource",
31077                     "items": {
31078                         "enum": [
31079                             "oic.if.baseline",
31080                             "oic.if.ll",

```

```

31081         "oic.if.b",
31082         "oic.if.lb",
31083         "oic.if.rw",
31084         "oic.if.r",
31085         "oic.if.a",
31086         "oic.if.s"
31087     ],
31088     "type": "string"
31089 },
31090     "minItems": 1,
31091     "readOnly": true,
31092     "type": "array"
31093 },
31094     "movement": {
31095         "description": "Current movement value",
31096         "type": "string"
31097     },
31098     "movementModifier": {
31099         "description": "Modifier to the movement value (e.g. spin-90, left-20), units are
31100 device dependent",
31101         "type": "string"
31102     },
31103     "movementSettings": {
31104         "description": "array of possible movement values",
31105         "items": {
31106             "type": "string"
31107         },
31108         "readOnly": true,
31109         "type": "array"
31110     },
31111     "n": {
31112         "description": "Friendly name of the resource",
31113         "maxLength": 64,
31114         "readOnly": true,
31115         "type": "string"
31116     },
31117     "precision": {
31118         "description": "Accuracy granularity of the exposed value",
31119         "readOnly": true,
31120         "type": "number"
31121     },
31122     "range": {
31123         "description": "The valid range for the value Property",
31124         "items": {
31125             "anyOf": [
31126                 {
31127                     "type": "number"
31128                 },
31129                 {
31130                     "type": "integer"
31131                 }
31132             ]
31133         },
31134         "maxItems": 2,
31135         "minItems": 2,
31136         "readOnly": true,
31137         "type": "array"
31138     },
31139     "rt": {
31140         "description": "Resource Type",
31141         "items": {
31142             "maxLength": 64,
31143             "type": "string"
31144         },
31145         "minItems": 1,
31146         "readOnly": true,
31147         "type": "array"
31148     },
31149     "step": {
31150         "anyOf": [
31151             {

```

```

31152         "type": "integer"
31153     },
31154     {
31155         "type": "number"
31156     }
31157 ],
31158 "description": "Step value across the defined range",
31159 "readOnly": true
31160 },
31161 "value": {
31162     "anyOf": [
31163         {
31164             "type": "array"
31165         },
31166         {
31167             "type": "string"
31168         },
31169         {
31170             "type": "boolean"
31171         },
31172         {
31173             "type": "integer"
31174         },
31175         {
31176             "type": "number"
31177         },
31178         {
31179             "type": "object"
31180         }
31181     ],
31182     "description": "The value sensed or actuated by this Resource"
31183 }
31184 },
31185 "required": [
31186     "movementSettings",
31187     "movement"
31188 ],
31189 "type": "object"
31190 }
31191 }
31192 }
31193 }
31194

```

B.65.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
movementModifier	string			Modifier to the movement value (e.g. spin-90, left-20), units are device dependent
id	string		Read Only	Instance ID of this specific resource
precision	number		Read Only	Accuracy granularity of the exposed value
range	array: see schema		Read Only	The valid range for the value Property
n	string		Read Only	Friendly name of the resource

movementSettings	array: see schema	yes	Read Only	array of possible movement values
rt	array: see schema		Read Only	Resource Type
value	multiple types: see schema			The value sensed or actuated by this Resource
if	array: see schema		Read Only	The interface set supported by this resource
step	multiple types: see schema		Read Only	Step value across the defined range
movement	string	yes		Current movement value

31196 B.65.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/MovementResURI		get	post		

31197 B.66 Night Mode

31198 B.66.1 Introduction

31199 This resource describes a night mode on/off feature.
31200 A nightMode value of 'true' means that the feature is on.
31201 A nightMode value of 'false' means that the feature is off.
31202

31203 B.66.2 Example URI

31204 /NightModeResURI

31205 B.66.3 Resource Type

31206 The resource type (rt) is defined as: ['oic.r.nightmode'].

31207 B.66.4 Swagger2.0 Definition

```

31208 {
31209   "swagger": "2.0",
31210   "info": {
31211     "title": "Night Mode",
31212     "version": "v1.1.0-20160519",
31213     "license": {
31214       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
31215       "x-description": "Redistribution and use in source and binary forms, with or without
31216 modification, are permitted provided that the following conditions are met:\n      1.
31217 Redistributions of source code must retain the above copyright notice, this list of conditions and
31218 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
31219 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
31220 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
31221 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
31222 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
31223 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
31224 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
31225 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
31226 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
31227 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
31228 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
31229 OF SUCH DAMAGE.\n"
31230   }
31231 },

```

```

31232     "schemes": ["http"],
31233     "consumes": ["application/json"],
31234     "produces": ["application/json"],
31235     "paths": {
31236         "/NightModeResURI" : {
31237             "get": {
31238                 "description": "This resource describes a night mode on/off feature.\nA nightMode value of
31239 'true' means that the feature is on.\nA nightMode value of 'false' means that the feature is
31240 off.\n",
31241                 "parameters": [
31242                     {"$ref": "#/parameters/interface"}
31243                 ],
31244                 "responses": {
31245                     "200": {
31246                         "description": "",
31247                         "x-example":
31248                             {
31249                                 "rt": ["oic.r.nightmode"],
31250                                 "id": "unique_example_id",
31251                                 "nightMode": false
31252                             }
31253                         ,
31254                         "schema": { "$ref": "#/definitions/NightMode" }
31255                     }
31256                 }
31257             },
31258             "post": {
31259                 "description": "",
31260                 "parameters": [
31261                     {"$ref": "#/parameters/interface"},
31262                     {
31263                         "name": "body",
31264                         "in": "body",
31265                         "required": true,
31266                         "schema": { "$ref": "#/definitions/NightMode" },
31267                         "x-example":
31268                             {
31269                                 "id": "unique_example_id",
31270                                 "nightMode": true
31271                             }
31272                     }
31273                 ],
31274                 "responses": {
31275                     "200": {
31276                         "description": "",
31277                         "x-example":
31278                             {
31279                                 "id": "unique_example_id",
31280                                 "nightMode": true
31281                             }
31282                         ,
31283                         "schema": { "$ref": "#/definitions/NightMode" }
31284                     }
31285                 }
31286             }
31287         }
31288     },
31289     "parameters": {
31290         "interface" : {
31291             "in" : "query",
31292             "name" : "if",
31293             "type" : "string",
31294             "enum" : ["oic.if.a", "oic.if.baseline"]
31295         }
31296     },
31297     "definitions": {
31298         "NightMode" :
31299             {
31300                 "properties": {
31301                     "id": {
31302                         "description": "Instance ID of this specific resource",

```

```

31303         "maxLength": 64,
31304         "readOnly": true,
31305         "type": "string"
31306     },
31307     "if": {
31308         "description": "The interface set supported by this resource",
31309         "items": {
31310             "enum": [
31311                 "oic.if.baseline",
31312                 "oic.if.ll",
31313                 "oic.if.b",
31314                 "oic.if.lb",
31315                 "oic.if.rw",
31316                 "oic.if.r",
31317                 "oic.if.a",
31318                 "oic.if.s"
31319             ],
31320             "type": "string"
31321         },
31322         "minItems": 1,
31323         "readOnly": true,
31324         "type": "array"
31325     },
31326     "n": {
31327         "description": "Friendly name of the resource",
31328         "maxLength": 64,
31329         "readOnly": true,
31330         "type": "string"
31331     },
31332     "nightMode": {
31333         "description": "Status of the Night Mode",
31334         "type": "boolean"
31335     },
31336     "precision": {
31337         "description": "Accuracy granularity of the exposed value",
31338         "readOnly": true,
31339         "type": "number"
31340     },
31341     "range": {
31342         "description": "The valid range for the value Property",
31343         "items": {
31344             "anyOf": [
31345                 {
31346                     "type": "number"
31347                 },
31348                 {
31349                     "type": "integer"
31350                 }
31351             ]
31352         },
31353         "maxItems": 2,
31354         "minItems": 2,
31355         "readOnly": true,
31356         "type": "array"
31357     },
31358     "rt": {
31359         "description": "Resource Type",
31360         "items": {
31361             "maxLength": 64,
31362             "type": "string"
31363         },
31364         "minItems": 1,
31365         "readOnly": true,
31366         "type": "array"
31367     },
31368     "step": {
31369         "anyOf": [
31370             {
31371                 "type": "integer"
31372             },
31373             {

```



```

31374         "type": "number"
31375     }
31376 ],
31377     "description": "Step value across the defined range",
31378     "readOnly": true
31379 },
31380     "value": {
31381         "anyOf": [
31382             {
31383                 "type": "array"
31384             },
31385             {
31386                 "type": "string"
31387             },
31388             {
31389                 "type": "boolean"
31390             },
31391             {
31392                 "type": "integer"
31393             },
31394             {
31395                 "type": "number"
31396             },
31397             {
31398                 "type": "object"
31399             }
31400         ],
31401         "description": "The value sensed or actuated by this Resource"
31402     }
31403 },
31404     "required": [
31405         "nightMode"
31406     ],
31407     "type": "object"
31408 }
31409 }
31410 }
31411 }
31412

```

B.66.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
n	string		Read Only	Friendly name of the resource
nightMode	boolean	yes		Status of the Night Mode
precision	number		Read Only	Accuracy granularity of the exposed value
range	array: see schema		Read Only	The valid range for the value Property
rt	array: see schema		Read Only	Resource Type
value	multiple types: see schema			The value sensed or actuated by this Resource
if	array: see schema		Read Only	The interface set supported by this resource
step	multiple types: see schema		Read Only	Step value across the defined range

id	string		Read Only	Instance ID of this specific resource
----	--------	--	-----------	---------------------------------------

31414 B.66.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/NightModeResURI		get	post		

31415 B.67 Open Level

31416 B.67.1 Introduction

31417 This resource describes how open or ajar an entity such as a window, door, blind or shutter is.
 31418 The openLevel can be read (acting as a sensor).
 31419 The openLevel can also be set (acting as an actuator).
 31420 The openLevel is device dependent across the range provided.
 31421 When range (from oic.r.baseresource) is omitted then 0 to 100 is assumed where 0 means closed,
 31422 100 means fully open.
 31423 If a range is provided then the lower bound=closed, upper bound=open.
 31424 If step (from oic.r.baseresource) is present then it represents the increment between possible
 31425 values; if not provided 1 is assumed.
 31426 Retrieves the current openLevel.
 31427

31428 B.67.2 Example URI

31429 /OpenLevelResURI

31430 B.67.3 Resource Type

31431 The resource type (rt) is defined as: ['oic.r.openlevel'].

31432 B.67.4 Swagger2.0 Definition

```

31433 {
31434   "swagger": "2.0",
31435   "info": {
31436     "title": "Open Level",
31437     "version": "v1.1.0-20160519",
31438     "license": {
31439       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
31440       "x-description": "Redistribution and use in source and binary forms, with or without
31441 modification, are permitted provided that the following conditions are met:\n      1.
31442 Redistributions of source code must retain the above copyright notice, this list of conditions and
31443 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
31444 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
31445 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
31446 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
31447 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
31448 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
31449 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
31450 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
31451 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
31452 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
31453 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
31454 OF SUCH DAMAGE.\n"
31455     }
31456   },
31457   "schemes": ["http"],
31458   "consumes": ["application/json"],
31459   "produces": ["application/json"],
31460   "paths": {
31461     "/OpenLevelResURI" : {
31462       "get": {
31463         "description": "This resource describes how open or ajar an entity such as a window, door,
31464 blind or shutter is.\nThe openLevel can be read (acting as a sensor).\nThe openLevel can also be
31465 set (acting as an actuator).\nThe openLevel is device dependent across the range provided.\nWhen
  
```

```

31466 range (from oic.r.baseresource) is omitted then 0 to 100 is assumed where 0 means closed, 100 means
31467 fully open.\nIf a range is provided then the lower bound=closed, upper bound=open.\nIf step (from
31468 oic.r.baseresource) is present then it represents the increment between possible values; if not
31469 provided 1 is assumed.\nRetrieves the current openLevel.\n",
31470     "parameters": [
31471         { "$ref": "#/parameters/interface" }
31472     ],
31473     "responses": {
31474         "200": {
31475             "description": "",
31476             "x-example":
31477             {
31478                 "rt": ["oic.r.openlevel"],
31479                 "id": "unique_example_id",
31480                 "openLevel": 50,
31481                 "step": 2,
31482                 "range": [0,100]
31483             }
31484         },
31485         "schema": { "$ref": "#/definitions/OpenLevel" }
31486     }
31487 },
31488 },
31489 "post": {
31490     "description": "Sets the desired openLevel.\n",
31491     "parameters": [
31492         { "$ref": "#/parameters/interface" },
31493         {
31494             "name": "body",
31495             "in": "body",
31496             "required": true,
31497             "schema": { "$ref": "#/definitions/OpenLevel" },
31498             "x-example":
31499             {
31500                 "id": "unique_example_id",
31501                 "openLevel": 0
31502             }
31503         }
31504     ],
31505     "responses": {
31506         "200": {
31507             "description": "",
31508             "x-example":
31509             {
31510                 "id": "unique_example_id",
31511                 "openLevel": 0
31512             }
31513         },
31514         "schema": { "$ref": "#/definitions/OpenLevel" }
31515     },
31516     "403": {
31517         "description": "This response is generated by the OIC Server when the client
31518 sends:\n An update with an out of range property value for openLevel.\nThe server responds with
31519 the current resource representation.\n",
31520         "x-example":
31521         {
31522             "id": "unique_example_id",
31523             "openLevel": 50,
31524             "step": 2,
31525             "range": [0,100]
31526         }
31527     },
31528     "schema": { "$ref": "#/definitions/OpenLevel" }
31529 }
31530 }
31531 }
31532 }
31533 },
31534 "parameters": {
31535     "interface": {
31536         "in": "query",

```

```

31537         "name" : "if",
31538         "type" : "string",
31539         "enum" : ["oic.if.a", "oic.if.baseline"]
31540     }
31541 },
31542 "definitions": {
31543     "OpenLevel" :
31544     {
31545         "properties": {
31546             "id": {
31547                 "description": "Instance ID of this specific resource",
31548                 "maxLength": 64,
31549                 "readOnly": true,
31550                 "type": "string"
31551             },
31552             "if": {
31553                 "description": "The interface set supported by this resource",
31554                 "items": {
31555                     "enum": [
31556                         "oic.if.baseline",
31557                         "oic.if.ll",
31558                         "oic.if.b",
31559                         "oic.if.lb",
31560                         "oic.if.rw",
31561                         "oic.if.r",
31562                         "oic.if.a",
31563                         "oic.if.s"
31564                     ],
31565                     "type": "string"
31566                 },
31567                 "minItems": 1,
31568                 "readOnly": true,
31569                 "type": "array"
31570             },
31571             "increment": {
31572                 "description": "Deprecated, use 'step' instead.",
31573                 "readOnly": true,
31574                 "type": "integer"
31575             },
31576             "n": {
31577                 "description": "Friendly name of the resource",
31578                 "maxLength": 64,
31579                 "readOnly": true,
31580                 "type": "string"
31581             },
31582             "openLevel": {
31583                 "description": "How open or ajar the entity is",
31584                 "type": "integer"
31585             },
31586             "precision": {
31587                 "description": "Accuracy granularity of the exposed value",
31588                 "readOnly": true,
31589                 "type": "number"
31590             },
31591             "range": {
31592                 "description": "The valid range for the value Property",
31593                 "items": {
31594                     "anyOf": [
31595                         {
31596                             "type": "number"
31597                         },
31598                         {
31599                             "type": "integer"
31600                         }
31601                     ]
31602                 },
31603                 "maxItems": 2,
31604                 "minItems": 2,
31605                 "readOnly": true,
31606                 "type": "array"
31607             }

```

```

31608     "rt": {
31609         "description": "Resource Type",
31610         "items": {
31611             "maxLength": 64,
31612             "type": "string"
31613         },
31614         "minItems": 1,
31615         "readOnly": true,
31616         "type": "array"
31617     },
31618     "step": {
31619         "anyOf": [
31620             {
31621                 "type": "integer"
31622             },
31623             {
31624                 "type": "number"
31625             }
31626         ],
31627         "description": "Step value across the defined range",
31628         "readOnly": true
31629     },
31630     "value": {
31631         "anyOf": [
31632             {
31633                 "type": "array"
31634             },
31635             {
31636                 "type": "string"
31637             },
31638             {
31639                 "type": "boolean"
31640             },
31641             {
31642                 "type": "integer"
31643             },
31644             {
31645                 "type": "number"
31646             },
31647             {
31648                 "type": "object"
31649             }
31650         ],
31651         "description": "The value sensed or actuated by this Resource"
31652     }
31653 },
31654 "required": [
31655     "openLevel"
31656 ],
31657 "type": "object"
31658 }
31659 }
31660 }
31661 }
31662

```

31663 B.67.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema		Read Only	The interface set supported by this resource
n	string		Read Only	Friendly name of the resource
step	multiple types: see schema		Read Only	Step value across the defined range

openLevel	integer	yes		How open or ajar the entity is
increment	integer		Read Only	Deprecated, use 'step' instead.
range	array: see schema		Read Only	The valid range for the value Property
id	string		Read Only	Instance ID of this specific resource
rt	array: see schema		Read Only	Resource Type
precision	number		Read Only	Accuracy granularity of the exposed value
value	multiple types: see schema			The value sensed or actuated by this Resource

31664 B.67.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/OpenLevelResURI		get	post		

31665 B.68 Operational State

31666 B.68.1 Introduction

31667 This resource describes the operational and job states on a device.
31668 The states can be read or set, setting indicates a desired state.
31669 A device may reject an attempt to set a state that would result
31670 in adverse operational characteristics.
31671 The machineStates is an array of the possible operational states.
31672 The currentMachineState is the current state of operation of the device.
31673 The jobStates is an array of the possible job states.
31674 The currentJobState is the currently active jobState.
31675 The runningTime is the ISO8601 encoded elapsed time in the current operational state.
31676 The remainingTime is the ISO8601 encoded time till completion of the current operational state.
31677 The progressPercentage is the percentage completeness of the current jobState.
31678 Retrieves the current operational and job states.
31679

31680 B.68.2 Example URI

31681 /OperationalStateResURI

31682 B.68.3 Resource Type

31683 The resource type (rt) is defined as: ['oic.r.operational.state'].

31684 B.68.4 Swagger2.0 Definition

```

31685 {
31686   "swagger": "2.0",
31687   "info": {
31688     "title": "Operational State",
31689     "version": "v1.1.0-20160519",
31690     "license": {
31691       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
31692       "x-description": "Redistribution and use in source and binary forms, with or without
31693 modification, are permitted provided that the following conditions are met:\n      1.
31694 Redistributions of source code must retain the above copyright notice, this list of conditions and
```

```

31695 the following disclaimer.\n          2. Redistributions in binary form must reproduce the above
31696 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
31697 other materials provided with the distribution.\n\n          THIS SOFTWARE IS PROVIDED BY THE Open
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31699 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
31700 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n          IN NO EVENT SHALL THE Open Connectivity
31701 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
31702 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
31703 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n          HOWEVER CAUSED AND
31704 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
31705 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
31706 OF SUCH DAMAGE.\n"
31707     }
31708   },
31709   "schemes": ["http"],
31710   "consumes": ["application/json"],
31711   "produces": ["application/json"],
31712   "paths": {
31713     "/OperationalStateResURI" : {
31714       "get": {
31715         "description": "This resource describes the operational and job states on a device.\n\nThe
31716 states can be read or set, setting indicates a desired state.\n\nA device may reject an attempt to
31717 set a state that would result\n\nin adverse operational characteristics.\n\nThe machineStates is an
31718 array of the possible operational states.\n\nThe currentMachineState is the current state of
31719 operation of the device.\n\nThe jobStates is an array of the possible job states.\n\nThe
31720 currentJobState is the currently active jobState.\n\nThe runningTime is the ISO8601 encoded elapsed
31721 time in the current operational state.\n\nThe remainingTime is the ISO8601 encoded time till
31722 completion of the current operational state.\n\nThe progressPercentage is the percentage completeness
31723 of the current jobState.\n\nRetrieves the current operational and job states.\n",
31724         "parameters": [
31725           { "$ref": "#/parameters/interface" }
31726         ],
31727         "responses": {
31728           "200": {
31729             "description": "",
31730             "x-example": {
31731               {
31732                 "rt": ["oic.r.operational.state"],
31733                 "id": "unique_example_id",
31734                 "machineStates": ["pause", "stopped", "idle", "active"],
31735                 "currentMachineState": "active",
31736                 "jobStates": ["preWash", "wash", "rinse", "spin", "dry", "airDry",
31737 "wrinklePrevent"],
31738                 "currentJobState": "rinse",
31739                 "runningTime": "PT15M20S",
31740                 "remainingTime": "PT10M40S",
31741                 "progressPercentage": 75
31742               }
31743             },
31744             "schema": { "$ref": "#/definitions/Operation" }
31745           }
31746         }
31747       },
31748       "post": {
31749         "description": "Sets the desired operational or job state.\n",
31750         "parameters": [
31751           { "$ref": "#/parameters/interface" },
31752           {
31753             "name": "body",
31754             "in": "body",
31755             "required": true,
31756             "schema": { "$ref": "#/definitions/OperationUpdate" },
31757             "x-example": {
31758               {
31759                 "id": "unique_example_id",
31760                 "currentMachineState": "pause",
31761                 "currentJobState": "wash"
31762               }
31763             }
31764           }
31765         ],
31766         "responses": {

```

```

31766         "200": {
31767             "description" : "",
31768             "x-example":
31769                 {
31770                     "id": "unique_example_id",
31771                     "currentMachineState": "pause",
31772                     "currentJobState": "wash"
31773                 }
31774             ,
31775             "schema": { "$ref": "#/definitions/OperationUpdate" }
31776         },
31777         "403": {
31778             "description" : "This response is generated by the OIC Server when the client
31779 sends:\n An update with an value for currentMachineState that is not found in machineStates.\n An
31780 update with an value for currentJobState that is not found in jobStates.\nThe server responds with
31781 the current resource representation.\n",
31782             "x-example":
31783                 {
31784                     "id": "unique_example_id",
31785                     "machineStates": ["pause", "stopped", "idle", "active"],
31786                     "currentMachineState": "active",
31787                     "jobStates": ["preWash", "wash", "rinse", "spin", "dry", "airDry",
31788 "wrinklePrevent"],
31789                     "currentJobState": "rinse",
31790                     "runningTime": "PT15M20S",
31791                     "remainingTime": "PT10M40S",
31792                     "progressPercentage": 75
31793                 }
31794             ,
31795             "schema": { "$ref": "#/definitions/Operation" }
31796         }
31797     }
31798 }
31799 },
31800 },
31801 "parameters": {
31802     "interface" : {
31803         "in" : "query",
31804         "name" : "if",
31805         "type" : "string",
31806         "enum" : ["oic.if.a", "oic.if.baseline"]
31807     }
31808 },
31809 "definitions": {
31810     "Operation" :
31811         {
31812             "properties": {
31813                 "currentJobState": {
31814                     "description": "Currently active jobState",
31815                     "type": "string"
31816                 },
31817                 "currentMachineState": {
31818                     "description": "Current state of operation of the device.",
31819                     "type": "string"
31820                 },
31821                 "id": {
31822                     "description": "Instance ID of this specific resource",
31823                     "maxLength": 64,
31824                     "readOnly": true,
31825                     "type": "string"
31826                 },
31827                 "if": {
31828                     "description": "The interface set supported by this resource",
31829                     "items": {
31830                         "enum": [
31831                             "oic.if.baseline",
31832                             "oic.if.ll",
31833                             "oic.if.b",
31834                             "oic.if.lb",
31835                             "oic.if.rw",
31836                             "oic.if.r",

```



```

31837         "oic.if.a",
31838         "oic.if.s"
31839     ],
31840     "type": "string"
31841 },
31842 "minItems": 1,
31843 "readOnly": true,
31844 "type": "array"
31845 },
31846 "jobStates": {
31847     "description": "array of the possible job states.",
31848     "items": {
31849         "type": "string"
31850     },
31851     "readOnly": true,
31852     "type": "array"
31853 },
31854 "machineStates": {
31855     "description": "array of the possible operational states.",
31856     "items": {
31857         "type": "string"
31858     },
31859     "readOnly": true,
31860     "type": "array"
31861 },
31862 "n": {
31863     "description": "Friendly name of the resource",
31864     "maxLength": 64,
31865     "readOnly": true,
31866     "type": "string"
31867 },
31868 "precision": {
31869     "description": "Accuracy granularity of the exposed value",
31870     "readOnly": true,
31871     "type": "number"
31872 },
31873 "progressPercentage": {
31874     "description": "Percentage completeness of the current jobState",
31875     "maximum": 100,
31876     "minimum": 0,
31877     "readOnly": true,
31878     "type": "integer"
31879 },
31880 "range": {
31881     "description": "The valid range for the value Property",
31882     "items": {
31883         "anyOf": [
31884             {
31885                 "type": "number"
31886             },
31887             {
31888                 "type": "integer"
31889             }
31890         ]
31891     },
31892     "maxItems": 2,
31893     "minItems": 2,
31894     "readOnly": true,
31895     "type": "array"
31896 },
31897 "remainingTime": {
31898     "description": "Time till completion of the current operational state",
31899     "readOnly": true,
31900     "type": "string"
31901 },
31902 "rt": {
31903     "description": "Resource Type",
31904     "items": {
31905         "maxLength": 64,
31906         "type": "string"
31907     },

```

```

31908         "minItems": 1,
31909         "readOnly": true,
31910         "type": "array"
31911     },
31912     "runningTime": {
31913         "description": "Elapsed time in the current operational state",
31914         "readOnly": true,
31915         "type": "string"
31916     },
31917     "step": {
31918         "anyOf": [
31919             {
31920                 "type": "integer"
31921             },
31922             {
31923                 "type": "number"
31924             }
31925         ],
31926         "description": "Step value across the defined range",
31927         "readOnly": true
31928     },
31929     "value": {
31930         "anyOf": [
31931             {
31932                 "type": "array"
31933             },
31934             {
31935                 "type": "string"
31936             },
31937             {
31938                 "type": "boolean"
31939             },
31940             {
31941                 "type": "integer"
31942             },
31943             {
31944                 "type": "number"
31945             },
31946             {
31947                 "type": "object"
31948             }
31949         ],
31950         "description": "The value sensed or actuated by this Resource"
31951     }
31952 },
31953 "required": [
31954     "machineStates",
31955     "currentMachineState"
31956 ],
31957 "type": "object"
31958 }
31959
31960 ,
31961 "OperationUpdate" :
31962 {
31963     "properties": {
31964         "currentJobState": {
31965             "description": "Currently active jobState",
31966             "type": "string"
31967         },
31968         "currentMachineState": {
31969             "description": "Current state of operation of the device.",
31970             "type": "string"
31971         },
31972         "id": {
31973             "description": "Instance ID of this specific resource",
31974             "maxLength": 64,
31975             "readOnly": true,
31976             "type": "string"
31977         },
31978         "if": {

```

```

31979     "description": "The interface set supported by this resource",
31980     "items": {
31981         "enum": [
31982             "oic.if.baseline",
31983             "oic.if.ll",
31984             "oic.if.b",
31985             "oic.if.lb",
31986             "oic.if.rw",
31987             "oic.if.r",
31988             "oic.if.a",
31989             "oic.if.s"
31990         ],
31991         "type": "string"
31992     },
31993     "minItems": 1,
31994     "readOnly": true,
31995     "type": "array"
31996 },
31997 "n": {
31998     "description": "Friendly name of the resource",
31999     "maxLength": 64,
32000     "readOnly": true,
32001     "type": "string"
32002 },
32003 "precision": {
32004     "description": "Accuracy granularity of the exposed value",
32005     "readOnly": true,
32006     "type": "number"
32007 },
32008 "range": {
32009     "description": "The valid range for the value Property",
32010     "items": {
32011         "anyOf": [
32012             {
32013                 "type": "number"
32014             },
32015             {
32016                 "type": "integer"
32017             }
32018         ]
32019     },
32020     "maxItems": 2,
32021     "minItems": 2,
32022     "readOnly": true,
32023     "type": "array"
32024 },
32025 "rt": {
32026     "description": "Resource Type",
32027     "items": {
32028         "maxLength": 64,
32029         "type": "string"
32030     },
32031     "minItems": 1,
32032     "readOnly": true,
32033     "type": "array"
32034 },
32035 "step": {
32036     "anyOf": [
32037         {
32038             "type": "integer"
32039         },
32040         {
32041             "type": "number"
32042         }
32043     ],
32044     "description": "Step value across the defined range",
32045     "readOnly": true
32046 },
32047 "value": {
32048     "anyOf": [
32049         {

```

```

32050         "type": "array"
32051     },
32052     {
32053         "type": "string"
32054     },
32055     {
32056         "type": "boolean"
32057     },
32058     {
32059         "type": "integer"
32060     },
32061     {
32062         "type": "number"
32063     },
32064     {
32065         "type": "object"
32066     }
32067 ],
32068 "description": "The value sensed or actuated by this Resource"
32069 },
32070 },
32071 "type": "object"
32072 }
32073
32074 }
32075 }
32076

```

B.68.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
id	string		Read Only	Instance ID of this specific resource
runningTime	string		Read Only	Elapsed time in the current operational state
if	array: see schema		Read Only	The interface set supported by this resource
step	multiple types: see schema		Read Only	Step value across the defined range
progressPercentage	integer		Read Only	Percentage completeness of the current jobState
precision	number		Read Only	Accuracy granularity of the exposed value
value	multiple types: see schema			The value sensed or actuated by this Resource
rt	array: see schema		Read Only	Resource Type
n	string		Read Only	Friendly name of the resource
currentJobState	string			Currently active jobState

currentMachineState	string	yes		Current state of operation of the device.
jobStates	array: see schema		Read Only	array of the possible job states.
remainingTime	string		Read Only	Time till completion of the current operational state
range	array: see schema		Read Only	The valid range for the value Property
machineStates	array: see schema	yes	Read Only	array of the possible operational states.
id	string		Read Only	Instance ID of this specific resource
currentJobState	string			Currently active jobState
if	array: see schema		Read Only	The interface set supported by this resource
currentMachineState	string			Current state of operation of the device.
step	multiple types: see schema		Read Only	Step value across the defined range
rt	array: see schema		Read Only	Resource Type
precision	number		Read Only	Accuracy granularity of the exposed value
value	multiple types: see schema			The value sensed or actuated by this Resource
range	array: see schema		Read Only	The valid range for the value Property
n	string		Read Only	Friendly name of the resource

32078 B.68.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/OperationalStateResURI		get	post		

32079 B.69 Presence Sensor

32080 B.69.1 Introduction

32081 This resource describes whether presence has been sensed or not.
32082 The value is a boolean.

32083 A value of 'true' means that presence has been sensed.
32084 A value of 'false' means that presence not been sensed.
32085

32086 B.69.2 Example URI

32087 /PresenceResURI

32088 B.69.3 Resource Type

32089 The resource type (rt) is defined as: ['oic.r.sensor.presence'].

32090 B.69.4 Swagger2.0 Definition

```
32091 {  
32092   "swagger": "2.0",  
32093   "info": {  
32094     "title": "Presence Sensor",  
32095     "version": "v1.1.0-20160519",  
32096     "license": {  
32097       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
32098       "x-description": "Redistribution and use in source and binary forms, with or without  
32099 modification, are permitted provided that the following conditions are met:\n      1.  
32100 Redistributions of source code must retain the above copyright notice, this list of conditions and  
32101 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
32102 copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
32103 other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open  
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32107 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,  
32108 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS  
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32110 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR  
32111 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY  
32112 OF SUCH DAMAGE.\n    }  
32113   },  
32114   "schemes": ["http"],  
32115   "consumes": ["application/json"],  
32116   "produces": ["application/json"],  
32117   "paths": {  
32118     "/PresenceResURI" : {  
32119       "get": {  
32120         "description": "This resource describes whether presence has been sensed or not.\nThe value  
32121 is a boolean.\nA value of 'true' means that presence has been sensed.\nA value of 'false' means  
32122 that presence not been sensed.\n",  
32123         "parameters": [  
32124           { "$ref": "#/parameters/interface" }  
32125         ],  
32126         "responses": {  
32127           "200": {  
32128             "description": "",  
32129             "x-example":  
32130               {  
32131                 "rt": ["oic.r.sensor.presence"],  
32132                 "id": "unique_example_id",  
32133                 "value": true  
32134               }  
32135             ,  
32136             "schema": { "$ref": "#/definitions/Presence" }  
32137           }  
32138         }  
32139       }  
32140     }  
32141   },  
32142   "parameters": {  
32143     "interface" : {  
32144       "in" : "query",  
32145       "name" : "if",  
32146       "type" : "string",  
32147       "enum" : ["oic.if.s", "oic.if.baseline"]  
32148     }  
32149   }  
32150 }
```

```

32149     }
32150   },
32151   "definitions": {
32152     "Presence" :
32153     {
32154       "properties": {
32155         "id": {
32156           "description": "Instance ID of this specific resource",
32157           "maxLength": 64,
32158           "readOnly": true,
32159           "type": "string"
32160         },
32161         "if": {
32162           "description": "The interface set supported by this resource",
32163           "items": {
32164             "enum": [
32165               "oic.if.baseline",
32166               "oic.if.ll",
32167               "oic.if.b",
32168               "oic.if.lb",
32169               "oic.if.rw",
32170               "oic.if.x",
32171               "oic.if.a",
32172               "oic.if.s"
32173             ],
32174             "type": "string"
32175           },
32176           "minItems": 1,
32177           "readOnly": true,
32178           "type": "array"
32179         },
32180         "n": {
32181           "description": "Friendly name of the resource",
32182           "maxLength": 64,
32183           "readOnly": true,
32184           "type": "string"
32185         },
32186         "precision": {
32187           "description": "Accuracy granularity of the exposed value",
32188           "readOnly": true,
32189           "type": "number"
32190         },
32191         "range": {
32192           "description": "The valid range for the value Property",
32193           "items": {
32194             "anyOf": [
32195               {
32196                 "type": "number"
32197               },
32198               {
32199                 "type": "integer"
32200               }
32201             ]
32202           },
32203           "maxItems": 2,
32204           "minItems": 2,
32205           "readOnly": true,
32206           "type": "array"
32207         },
32208         "rt": {
32209           "description": "Resource Type",
32210           "items": {
32211             "maxLength": 64,
32212             "type": "string"
32213           },
32214           "minItems": 1,
32215           "readOnly": true,
32216           "type": "array"
32217         },
32218         "step": {
32219           "anyOf": [

```

```

32220         {
32221             "type": "integer"
32222         },
32223         {
32224             "type": "number"
32225         }
32226     ],
32227     "description": "Step value across the defined range",
32228     "readOnly": true
32229 },
32230 "value": {
32231     "description": "true = sensed, false = not sensed.",
32232     "readOnly": true,
32233     "type": "boolean"
32234 },
32235 },
32236 "required": [
32237     "value"
32238 ],
32239 "type": "object"
32240 }
32241 }
32242 }
32243 }
32244

```

32245 B.69.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
value	boolean	yes	Read Only	true = sensed, false = not sensed.
precision	number		Read Only	Accuracy granularity of the exposed value
if	array: see schema		Read Only	The interface set supported by this resource
n	string		Read Only	Friendly name of the resource
id	string		Read Only	Instance ID of this specific resource
step	multiple types: see schema		Read Only	Step value across the defined range
range	array: see schema		Read Only	The valid range for the value Property
rt	array: see schema		Read Only	Resource Type

32246 B.69.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/PresenceResURI		get			

32247 B.70 Pan Tilt Zoom Movement

32248 B.70.1 Introduction

32249 This resource specifies the pan tilt and zoom capabilities of a device.
32250 The resource rt is dynamic and reflects whether the values apply to
32251 physical movement of the device or digital/virtual enhancements to the image.

For physical movement the rt is 'oic.r.movement.ptz'.
 For digital/virtual image enhancements the rt is 'oic.r.image.ptz'.
 The Pan and Tilt are specified in degrees.
 The Zoom Factor is a value in the range 1-100 for linear (optical) zoom.
 The Zoom Factor is a value in the range [1x, 2x, 4x, 8x, 16x, 32x] for digital zoom.
 If there is no zoom value to set the Zoom Factor shall be '1x'.
 The value 0 degrees means neutral, this is the vendor defined setting.
 Note that this resource also can be used to create an offset for physical movement.
 When that is the case, the rt value is: oic.r.movement.offset.ptz
 Note that this resource also can be used to create an offset for image movement.
 When that is the case, the rt value is: oic.r.image.offset.ptz
 When the pan_range value is omitted, then the range is [-180.0,180.0].
 If pan is not supported then the range shall be [0.0,0.0]
 When the tilt_range value is omitted, then the range is [-180.0,180.0].
 If tilt is not supported then the range shall be [0.0,0.0]
 Retrieves the current pan, tilt and zoom setting.

B.70.2 Example URI

/PanTiltZoomResURI

B.70.3 Resource Type

The resource type (rt) is defined as: ['oic.r.ptz'].

B.70.4 Swagger2.0 Definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Pan Tilt Zoom Movement",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open
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ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/PanTiltZoomResURI" : {
      "get": {
        "description": "This resource specifies the pan tilt and zoom capabilities of a
device.\nThe resource rt is dynamic and reflects whether the values apply to\n physical movement
of the device or digital/virtual enhancements to the image.\nFor physical movement the rt is
'oic.r.movement.ptz'.\nFor digital/virtual image enhancements the rt is 'oic.r.image.ptz'.
\nThe Pan
and Tilt are specified in degrees.\nThe Zoom Factor is a value in the range 1-100 for linear
(optical) zoom.\nThe Zoom Factor is a value in the range [1x, 2x, 4x, 8x, 16x, 32x] for digital
zoom.\nIf there is no zoom value to set the Zoom Factor shall be '1x'.
\nThe value 0 degrees means
neutral, this is the vendor defined setting.\nNote that this resource also can be used to create an
offset for physical movement.\nWhen that is the case, the rt value is:
oic.r.movement.offset.ptz\nNote that this resource also can be used to create an offset for image
```

```

32314 movement.\nWhen that is the case, the rt value is: oic.r.image.offset.ptz\nWhen the pan_range value
32315 is omitted, then the range is [-180.0,180.0].\nIf pan is not supported then the range shall be
32316 [0.0,0.0]\nWhen the tilt_range value is omitted, then the range is [-180.0,180.0].\nIf tilt is not
32317 supported then the range shall be [0.0,0.0]\nRetrieves the current pan, tilt and zoom setting.\n",
32318     "parameters": [
32319         { "$ref": "#/parameters/interface" }
32320     ],
32321     "responses": {
32322         "200": {
32323             "description": "",
32324             "x-example":
32325                 {
32326                     "rt": ["oic.r.ptz"],
32327                     "id": "unique_example_id",
32328                     "pan": 0.0,
32329                     "tilt": 0.0,
32330                     "zoomFactor": "2x"
32331                 }
32332             ,
32333             "schema": { "$ref": "#/definitions/PanTiltZoom" }
32334         }
32335     }
32336 },
32337 "post": {
32338     "description": "Sets the current pan, tilt and zoom value\n",
32339     "parameters": [
32340         { "$ref": "#/parameters/interface" },
32341         {
32342             "name": "body",
32343             "in": "body",
32344             "required": true,
32345             "schema": { "$ref": "#/definitions/PanTiltZoom" },
32346             "x-example":
32347                 {
32348                     "id": "unique_example_id",
32349                     "pan": 10.0,
32350                     "tilt": -10.0,
32351                     "zoomFactor": "4x"
32352                 }
32353         }
32354     ],
32355     "responses": {
32356         "200": {
32357             "description": "",
32358             "x-example":
32359                 {
32360                     "id": "unique_example_id",
32361                     "pan": 10.0,
32362                     "tilt": -10.0,
32363                     "zoomFactor": "4x"
32364                 }
32365             ,
32366             "schema": { "$ref": "#/definitions/PanTiltZoom" }
32367         }
32368     }
32369 },
32370 }
32371 },
32372 "parameters": {
32373     "interface": {
32374         "in": "query",
32375         "name": "if",
32376         "type": "string",
32377         "enum": ["oic.if.a", "oic.if.baseline"]
32378     }
32379 },
32380 "definitions": {
32381     "PanTiltZoom":
32382         {
32383             "properties": {
32384                 "id": {

```

```

32385         "description": "Instance ID of this specific resource",
32386         "maxLength": 64,
32387         "readOnly": true,
32388         "type": "string"
32389     },
32390     "if": {
32391         "description": "The interface set supported by this resource",
32392         "items": {
32393             "enum": [
32394                 "oic.if.baseline",
32395                 "oic.if.ll",
32396                 "oic.if.b",
32397                 "oic.if.lb",
32398                 "oic.if.rw",
32399                 "oic.if.r",
32400                 "oic.if.a",
32401                 "oic.if.s"
32402             ],
32403             "type": "string"
32404         },
32405         "minItems": 1,
32406         "readOnly": true,
32407         "type": "array"
32408     },
32409     "n": {
32410         "description": "Friendly name of the resource",
32411         "maxLength": 64,
32412         "readOnly": true,
32413         "type": "string"
32414     },
32415     "pan": {
32416         "description": "horizontal pan in degrees",
32417         "type": "number"
32418     },
32419     "pan_range": {
32420         "description": "Min and Max values for the pan setting",
32421         "items": {
32422             "type": "number"
32423         },
32424         "maxItems": 2,
32425         "minItems": 2,
32426         "readOnly": true,
32427         "type": "array"
32428     },
32429     "precision": {
32430         "description": "Accuracy granularity of the exposed value",
32431         "readOnly": true,
32432         "type": "number"
32433     },
32434     "range": {
32435         "description": "The valid range for the value Property",
32436         "items": {
32437             "anyOf": [
32438                 {
32439                     "type": "number"
32440                 },
32441                 {
32442                     "type": "integer"
32443                 }
32444             ]
32445         },
32446         "maxItems": 2,
32447         "minItems": 2,
32448         "readOnly": true,
32449         "type": "array"
32450     },
32451     "rt": {
32452         "description": "Resource Type",
32453         "items": {
32454             "maxLength": 64,
32455             "type": "string"

```

```

32456         },
32457         "minItems": 1,
32458         "readOnly": true,
32459         "type": "array"
32460     },
32461     "step": {
32462         "anyOf": [
32463             {
32464                 "type": "integer"
32465             },
32466             {
32467                 "type": "number"
32468             }
32469         ],
32470         "description": "Step value across the defined range",
32471         "readOnly": true
32472     },
32473     "tilt": {
32474         "description": "vertical tilt in degrees",
32475         "type": "number"
32476     },
32477     "tilt_range": {
32478         "description": "Min and Max values for the tilt setting",
32479         "items": {
32480             "type": "number"
32481         },
32482         "maxItems": 2,
32483         "minItems": 2,
32484         "readOnly": true,
32485         "type": "array"
32486     },
32487     "value": {
32488         "anyOf": [
32489             {
32490                 "type": "array"
32491             },
32492             {
32493                 "type": "string"
32494             },
32495             {
32496                 "type": "boolean"
32497             },
32498             {
32499                 "type": "integer"
32500             },
32501             {
32502                 "type": "number"
32503             },
32504             {
32505                 "type": "object"
32506             }
32507         ],
32508         "description": "The value sensed or actuated by this Resource"
32509     },
32510     "zoomFactor": {
32511         "description": "The Zoomfactor value",
32512         "type": "string"
32513     },
32514     "zoomFactorRange": {
32515         "description": "allowed Zoom Factor values. Linear equates to a 1-100 min/max.",
32516         "enum": [
32517             "linear",
32518             "1x",
32519             "2x",
32520             "4x",
32521             "8x",
32522             "16x",
32523             "32x"
32524         ],
32525         "readOnly": true,
32526         "type": "string"

```

```

32527     }
32528   },
32529   "required": [
32530     "pan",
32531     "tilt",
32532     "zoomFactor"
32533   ],
32534   "type": "object"
32535 }
32536
32537 }
32538 }
32539

```

B.70.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
zoomFactorRange	string		Read Only	allowed Zoom Factor values. Linear equates to a 1-100 min/max.
pan_range	array: see schema		Read Only	Min and Max values for the pan setting
tilt	number	yes		vertical tilt in degrees
tilt_range	array: see schema		Read Only	Min and Max values for the tilt setting
zoomFactor	string	yes		The Zoomfactor value
precision	number		Read Only	Accuracy granularity of the exposed value
step	multiple types: see schema		Read Only	Step value across the defined range
n	string		Read Only	Friendly name of the resource
if	array: see schema		Read Only	The interface set supported by this resource
pan	number	yes		horizontal pan in degrees
id	string		Read Only	Instance ID of this specific resource
value	multiple types: see schema			The value sensed or actuated by this Resource
rt	array: see schema		Read Only	Resource Type
range	array: see schema		Read Only	The valid range for the value Property

32541 B.70.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/PanTiltZoomResURI		get	post		

32542 B.71 Ramp Time

32543 B.71.1 Introduction

32544 This resource that describes the Ramp Time of a dimming function.
 32545 This specifies the actual speed of changing between 2 dimming values.
 32546 Time is specified in milliseconds [ms].
 32547 When range (from oic.r.baseresource) is omitted the maximum value is 100 ms.
 32548 The RampTime of 0ms indicates the minimal delay possible by the implementation.
 32549 Retrieves the current RampTime.
 32550

32551 B.71.2 Example URI

32552 /RampTimeResURI

32553 B.71.3 Resource Type

32554 The resource type (rt) is defined as: ['oic.r.light.ramptime'].

32555 B.71.4 Swagger2.0 Definition

```

32556 {
32557   "swagger": "2.0",
32558   "info": {
32559     "title": "Ramp Time",
32560     "version": "v1.1.0-20160519",
32561     "license": {
32562       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
32563       "x-description": "Redistribution and use in source and binary forms, with or without
32564 modification, are permitted provided that the following conditions are met:\n      1.
32565 Redistributions of source code must retain the above copyright notice, this list of conditions and
32566 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
32567 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
32568 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
32569 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
32570 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
32571 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
32572 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
32573 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
32574 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
32575 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
32576 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
32577 OF SUCH DAMAGE.\n"
32578     },
32579   },
32580   "schemes": ["http"],
32581   "consumes": ["application/json"],
32582   "produces": ["application/json"],
32583   "paths": {
32584     "/RampTimeResURI" : {
32585       "get": {
32586         "description": "This resource that describes the Ramp Time of a dimming function.\nThis
32587 specifies the actual speed of changing between 2 dimming values.\nTime is specified in milliseconds
32588 [ms].\nWhen range (from oic.r.baseresource) is omitted the maximum value is 100 ms.\nThe RampTime
32589 of 0ms indicates the minimal delay possible by the implementation.\nRetrieves the current
32590 RampTime.\n",
32591         "parameters": [
32592           {"$ref": "#/parameters/interface"}
32593         ],
32594         "responses": {
32595           "200": {
32596             "description": "",
32597             "x-example":
32598               {

```

```

32599         "rt":      ["oic.r.light.ramptime"],
32600         "id":      "unique_example_id",
32601         "ramptime": 0,
32602         "range":   [0,100]
32603     }
32604     ,
32605     "schema": { "$ref": "#/definitions/RampTime" }
32606 }
32607 },
32608 },
32609 "post": {
32610     "description": "Sets the current RampTime.\n",
32611     "parameters": [
32612         { "$ref": "#/parameters/interface" },
32613         {
32614             "name": "body",
32615             "in": "body",
32616             "required": true,
32617             "schema": { "$ref": "#/definitions/RampTime" },
32618             "x-example":
32619                 {
32620                     "id": "unique_example_id",
32621                     "ramptime": 50
32622                 }
32623         },
32624     ],
32625     "responses": {
32626         "200": {
32627             "description": "",
32628             "x-example":
32629                 {
32630                     "id": "unique_example_id",
32631                     "ramptime": 50
32632                 }
32633             ,
32634             "schema": { "$ref": "#/definitions/RampTime" }
32635         },
32636         "403": {
32637             "description": "This response is generated by the OIC Server when the client
32638 sends:\n An update with an out of range property value for ramptime.\nThe server responds with the
32639 current resource representation.\n",
32640             "x-example":
32641                 {
32642                     "id": "unique_example_id",
32643                     "ramptime": 40
32644                 }
32645             ,
32646             "schema": { "$ref": "#/definitions/RampTime" }
32647         }
32648     }
32649 },
32650 },
32651 },
32652 "parameters": {
32653     "interface": {
32654         "in": "query",
32655         "name": "if",
32656         "type": "string",
32657         "enum": ["oic.if.a", "oic.if.baseline"]
32658     }
32659 },
32660 "definitions": {
32661     "RampTime":
32662     {
32663         "properties": {
32664             "id": {
32665                 "description": "Instance ID of this specific resource",
32666                 "maxLength": 64,
32667                 "readOnly": true,
32668                 "type": "string"
32669             },

```

```

32670 "if": {
32671     "description": "The interface set supported by this resource",
32672     "items": {
32673         "enum": [
32674             "oic.if.baseline",
32675             "oic.if.ll",
32676             "oic.if.b",
32677             "oic.if.lb",
32678             "oic.if.rw",
32679             "oic.if.x",
32680             "oic.if.a",
32681             "oic.if.s"
32682         ],
32683         "type": "string"
32684     },
32685     "minItems": 1,
32686     "readOnly": true,
32687     "type": "array"
32688 },
32689 "n": {
32690     "description": "Friendly name of the resource",
32691     "maxLength": 64,
32692     "readOnly": true,
32693     "type": "string"
32694 },
32695 "precision": {
32696     "description": "Accuracy granularity of the exposed value",
32697     "readOnly": true,
32698     "type": "number"
32699 },
32700 "rampTime": {
32701     "description": "Actual speed of changing between 2 dimming values",
32702     "type": "integer"
32703 },
32704 "range": {
32705     "description": "The valid range for the value Property",
32706     "items": {
32707         "anyOf": [
32708             {
32709                 "type": "number"
32710             },
32711             {
32712                 "type": "integer"
32713             }
32714         ]
32715     },
32716     "maxItems": 2,
32717     "minItems": 2,
32718     "readOnly": true,
32719     "type": "array"
32720 },
32721 "rt": {
32722     "description": "Resource Type",
32723     "items": {
32724         "maxLength": 64,
32725         "type": "string"
32726     },
32727     "minItems": 1,
32728     "readOnly": true,
32729     "type": "array"
32730 },
32731 "step": {
32732     "anyOf": [
32733         {
32734             "type": "integer"
32735         },
32736         {
32737             "type": "number"
32738         }
32739     ],
32740     "description": "Step value across the defined range",

```



```

32741         "readOnly": true
32742     },
32743     "value": {
32744         "anyOf": [
32745             {
32746                 "type": "array"
32747             },
32748             {
32749                 "type": "string"
32750             },
32751             {
32752                 "type": "boolean"
32753             },
32754             {
32755                 "type": "integer"
32756             },
32757             {
32758                 "type": "number"
32759             },
32760             {
32761                 "type": "object"
32762             }
32763         ],
32764         "description": "The value sensed or actuated by this Resource"
32765     }
32766 },
32767 "required": [
32768     "rampTime"
32769 ],
32770 "type": "object"
32771 }
32772
32773 }
32774 }
32775

```

B.71.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
value	multiple types: see schema			The value sensed or actuated by this Resource
rampTime	integer	yes		Actual speed of changing between 2 dimming values
precision	number		Read Only	Accuracy granularity of the exposed value
n	string		Read Only	Friendly name of the resource
step	multiple types: see schema		Read Only	Step value across the defined range
range	array: see schema		Read Only	The valid range for the value Property
id	string		Read Only	Instance ID of this specific resource
if	array: see schema		Read Only	The interface set supported by this resource

rt	array: schema	see		Read Only	Resource Type
----	------------------	-----	--	-----------	---------------

32777 B.71.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/RampTimeResURI		get	post		

32778 B.72 Refrigeration

32779 B.72.1 Introduction

32780 This resource describes a refrigeration function.
32781 The filter state is a read-only value providing the percentage life time remaining for the water filter.
32782 RapidFreeze is a boolean that controls the rapid freeze capability if present.
32783 RapidCool is a boolean that controls the rapid cool capability if present.
32784 Defrost is a boolean that controls the defrost cycle if present.
32785 At least one of the listed Properties shall be present in a Resource Instance.
32786 Retrieves the current Refrigeration function status; all Properties supported by the Device are
32787 returned.
32788

32789 B.72.2 Example URI

32790 /RefrigerationResURI

32791 B.72.3 Resource Type

32792 The resource type (rt) is defined as: ['oic.r.refrigeration'].

32793 B.72.4 Swagger2.0 Definition

```

32794 {
32795   "swagger": "2.0",
32796   "info": {
32797     "title": "Refrigeration",
32798     "version": "v1.1.0-20160519",
32799     "license": {
32800       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
32801       "x-description": "Redistribution and use in source and binary forms, with or without
32802 modification, are permitted provided that the following conditions are met:\n      1.
32803 Redistributions of source code must retain the above copyright notice, this list of conditions and
32804 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
32805 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
32806 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
32807 Connectivity Foundation, INC. \nAS IS\n AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
32808 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
32809 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
32810 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
32811 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
32812 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
32813 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
32814 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
32815 OF SUCH DAMAGE.\n"
32816     }
32817   },
32818   "schemes": ["http"],
32819   "consumes": ["application/json"],
32820   "produces": ["application/json"],
32821   "paths": {
32822     "/RefrigerationResURI" : {
32823       "get": {
32824         "description": "This resource describes a refrigeration function.\nThe filter state is a
32825 read-only value providing the percentage life time remaining for the water filter.\nRapidFreeze is
32826 a boolean that controls the rapid freeze capability if present.\nRapidCool is a boolean that
32827 controls the rapid cool capability if present.\nDefrost is a boolean that controls the defrost
32828 cycle if present.\nAt least one of the listed Properties shall be present in a Resource
32829 Instance.\nRetrieves the current Refrigeration function status; all Properties supported by the
32830 Device are returned.\n",

```

```

32831     "parameters": [
32832         { "$ref": "#/parameters/interface" }
32833     ],
32834     "responses": {
32835         "200": {
32836             "description": "",
32837             "x-example":
32838                 {
32839                     "rt": ["oic.r.refrigeration"],
32840                     "id": "unique_example_id",
32841                     "filter": 75,
32842                     "rapidFreeze": false,
32843                     "rapidCool": false,
32844                     "defrost": true
32845                 },
32846             "schema": { "$ref": "#/definitions/Refrigeration" }
32847         }
32848     },
32849 },
32850 {
32851     "post": {
32852         "description": "Activates the desired Refrigeration functions.\nSupported values are
32853         rapidFreeze, rapidCool and defrost.\nAt least one of the supported values shall be provided.\n",
32854         "parameters": [
32855             { "$ref": "#/parameters/interface" },
32856             {
32857                 "name": "body",
32858                 "in": "body",
32859                 "required": true,
32860                 "schema": { "$ref": "#/definitions/RefrigerationUpdate" },
32861                 "x-example":
32862                     {
32863                         "id": "unique_example_id",
32864                         "rapidFreeze": true
32865                     }
32866             },
32867         ],
32868         "responses": {
32869             "200": {
32870                 "description": "Indicates that the Refrigeration function was changed.\nThe new
32871                 status can be provided in the response.\n",
32872                 "x-example":
32873                     {
32874                         "id": "unique_example_id",
32875                         "rapidFreeze": true
32876                     },
32877                 "schema": { "$ref": "#/definitions/RefrigerationUpdate" }
32878             }
32879         }
32880     },
32881 },
32882 },
32883 },
32884 "parameters": {
32885     "interface": {
32886         "in": "query",
32887         "name": "if",
32888         "type": "string",
32889         "enum": ["oic.if.a", "oic.if.baseline"]
32890     }
32891 },
32892 "definitions": {
32893     "Refrigeration":
32894         {
32895             "anyOf": [
32896                 {
32897                     "required": [
32898                         "filter"
32899                     ],
32900                 },
32901                 {

```

```

32902         "required": [
32903             "rapidFreeze"
32904         ],
32905     },
32906     {
32907         "required": [
32908             "rapidCool"
32909         ],
32910     },
32911     {
32912         "required": [
32913             "defrost"
32914         ]
32915     }
32916 ],
32917 "properties": {
32918     "defrost": {
32919         "description": "Indicates whether a defrost cycle is currently active",
32920         "type": "boolean"
32921     },
32922     "filter": {
32923         "description": "Percentage life time remaining for the water filter",
32924         "maximum": 100,
32925         "minimum": 0,
32926         "readOnly": true,
32927         "type": "integer"
32928     },
32929     "id": {
32930         "description": "Instance ID of this specific resource",
32931         "maxLength": 64,
32932         "readOnly": true,
32933         "type": "string"
32934     },
32935     "if": {
32936         "description": "The interface set supported by this resource",
32937         "items": {
32938             "enum": [
32939                 "oic.if.baseline",
32940                 "oic.if.ll",
32941                 "oic.if.b",
32942                 "oic.if.lb",
32943                 "oic.if.rw",
32944                 "oic.if.r",
32945                 "oic.if.a",
32946                 "oic.if.s"
32947             ],
32948             "type": "string"
32949         },
32950         "minItems": 1,
32951         "readOnly": true,
32952         "type": "array"
32953     },
32954     "n": {
32955         "description": "Friendly name of the resource",
32956         "maxLength": 64,
32957         "readOnly": true,
32958         "type": "string"
32959     },
32960     "precision": {
32961         "description": "Accuracy granularity of the exposed value",
32962         "readOnly": true,
32963         "type": "number"
32964     },
32965     "range": {
32966         "description": "The valid range for the value Property",
32967         "items": {
32968             "anyOf": [
32969                 {
32970                     "type": "number"
32971                 },
32972                 {

```

```

32973         "type": "integer"
32974     }
32975 ]
32976 },
32977 "maxItems": 2,
32978 "minItems": 2,
32979 "readOnly": true,
32980 "type": "array"
32981 },
32982 "rapidCool": {
32983     "description": "Indicates whether the unit has a rapid cool capability active",
32984     "type": "boolean"
32985 },
32986 "rapidFreeze": {
32987     "description": "Indicates whether the unit has a rapid freeze capability active.",
32988     "type": "boolean"
32989 },
32990 "rt": {
32991     "description": "Resource Type",
32992     "items": {
32993         "maxLength": 64,
32994         "type": "string"
32995     },
32996     "minItems": 1,
32997     "readOnly": true,
32998     "type": "array"
32999 },
33000 "step": {
33001     "anyOf": [
33002         {
33003             "type": "integer"
33004         },
33005         {
33006             "type": "number"
33007         }
33008     ],
33009     "description": "Step value across the defined range",
33010     "readOnly": true
33011 },
33012 "value": {
33013     "anyOf": [
33014         {
33015             "type": "array"
33016         },
33017         {
33018             "type": "string"
33019         },
33020         {
33021             "type": "boolean"
33022         },
33023         {
33024             "type": "integer"
33025         },
33026         {
33027             "type": "number"
33028         },
33029         {
33030             "type": "object"
33031         }
33032     ],
33033     "description": "The value sensed or actuated by this Resource"
33034 }
33035 },
33036 "type": "object"
33037 }
33038
33039 'RefrigerationUpdate' :
33040 {
33041     "anyOf": [
33042         {
33043

```

```

33044         "required": [
33045             "rapidFreeze"
33046         ],
33047     },
33048     {
33049         "required": [
33050             "rapidCool"
33051         ],
33052     },
33053     {
33054         "required": [
33055             "defrost"
33056         ]
33057     }
33058 ],
33059 "properties": {
33060     "defrost": {
33061         "description": "Indicates whether a defrost cycle is currently active",
33062         "type": "boolean"
33063     },
33064     "id": {
33065         "description": "Instance ID of this specific resource",
33066         "maxLength": 64,
33067         "readOnly": true,
33068         "type": "string"
33069     },
33070     "if": {
33071         "description": "The interface set supported by this resource",
33072         "items": {
33073             "enum": [
33074                 "oic.if.baseline",
33075                 "oic.if.ll",
33076                 "oic.if.b",
33077                 "oic.if.lb",
33078                 "oic.if.rw",
33079                 "oic.if.r",
33080                 "oic.if.a",
33081                 "oic.if.s"
33082             ],
33083             "type": "string"
33084         },
33085         "minItems": 1,
33086         "readOnly": true,
33087         "type": "array"
33088     },
33089     "n": {
33090         "description": "Friendly name of the resource",
33091         "maxLength": 64,
33092         "readOnly": true,
33093         "type": "string"
33094     },
33095     "precision": {
33096         "description": "Accuracy granularity of the exposed value",
33097         "readOnly": true,
33098         "type": "number"
33099     },
33100     "range": {
33101         "description": "The valid range for the value Property",
33102         "items": {
33103             "anyOf": [
33104                 {
33105                     "type": "number"
33106                 },
33107                 {
33108                     "type": "integer"
33109                 }
33110             ]
33111         },
33112         "maxItems": 2,
33113         "minItems": 2,
33114         "readOnly": true,

```

```

33115         "type": "array"
33116     },
33117     "rapidCool": {
33118         "description": "Indicates whether the unit has a rapid cool capability active",
33119         "type": "boolean"
33120     },
33121     "rapidFreeze": {
33122         "description": "Indicates whether the unit has a rapid freeze capability active.",
33123         "type": "boolean"
33124     },
33125     "rt": {
33126         "description": "Resource Type",
33127         "items": {
33128             "maxLength": 64,
33129             "type": "string"
33130         },
33131         "minItems": 1,
33132         "readOnly": true,
33133         "type": "array"
33134     },
33135     "step": {
33136         "anyOf": [
33137             {
33138                 "type": "integer"
33139             },
33140             {
33141                 "type": "number"
33142             }
33143         ],
33144         "description": "Step value across the defined range",
33145         "readOnly": true
33146     },
33147     "value": {
33148         "anyOf": [
33149             {
33150                 "type": "array"
33151             },
33152             {
33153                 "type": "string"
33154             },
33155             {
33156                 "type": "boolean"
33157             },
33158             {
33159                 "type": "integer"
33160             },
33161             {
33162                 "type": "number"
33163             },
33164             {
33165                 "type": "object"
33166             }
33167         ],
33168         "description": "The value sensed or actuated by this Resource"
33169     },
33170     "type": "object"
33171 }
33172 }
33173 }
33174 }
33175 }
33176

```

33177 B.72.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
rapidFreeze	boolean			Indicates whether the unit has a rapid

				freeze capability active.
if	array: see schema		Read Only	The interface set supported by this resource
id	string		Read Only	Instance ID of this specific resource
filter	integer		Read Only	Percentage life time remaining for the water filter
value	multiple types: see schema			The value sensed or actuated by this Resource
defrost	boolean	yes		Indicates whether a defrost cycle is currently active
rt	array: see schema		Read Only	Resource Type
n	string		Read Only	Friendly name of the resource
step	multiple types: see schema		Read Only	Step value across the defined range
range	array: see schema		Read Only	The valid range for the value Property
rapidCool	boolean			Indicates whether the unit has a rapid cool capability active
precision	number		Read Only	Accuracy granularity of the exposed value
n	string		Read Only	Friendly name of the resource
rapidFreeze	boolean			Indicates whether the unit has a rapid freeze capability active.
step	multiple types: see schema		Read Only	Step value across the defined range
rt	array: see schema		Read Only	Resource Type
if	array: see schema		Read Only	The interface set supported by this resource
range	array: see schema		Read Only	The valid range for the value Property

value	multiple types: see schema			The value sensed or actuated by this Resource
defrost	boolean	yes		Indicates whether a defrost cycle is currently active
id	string		Read Only	Instance ID of this specific resource
rapidCool	boolean			Indicates whether the unit has a rapid cool capability active
precision	number		Read Only	Accuracy granularity of the exposed value

33178 B.72.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/RefrigerationResURI		get	post		

33179 B.73 Selectable Levels

33180 B.73.1 Introduction

33181 This Resource provides a set of device defined 'levels' that can be selected for an operation.
 33182 For example where a humidifier has a discrete set that model different humidity levels that can be
 33183 set.

33184 availablelevels is an array of the levels that can be selected, these can be a number or an integer.
 33185 targetlevel is the level that has currently been selected and is written to in order to select a new
 33186 level.

33187 When retrieved the targetlevel provides the actual value that has been selected.
 33188 Retrieves the current selectable levels.
 33189

33190 B.73.2 Example URI

33191 /SelectableLevelsResURI

33192 B.73.3 Resource Type

33193 The resource type (rt) is defined as: ['oic.r.selectablelevels'].

33194 B.73.4 Swagger2.0 Definition

```

33195 {
33196   "swagger": "2.0",
33197   "info": {
33198     "title": "Selectable Levels",
33199     "version": "v1.1.0-20160519",
33200     "license": {
33201       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
33202       "x-description": "Redistribution and use in source and binary forms, with or without
33203 modification, are permitted provided that the following conditions are met:\n      1.
33204 Redistributions of source code must retain the above copyright notice, this list of conditions and
33205 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
33206 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
33207 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
33208 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
33209 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
33210 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
  
```

```

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33214 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
33215 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
33216 OF SUCH DAMAGE.\n"
33217 }
33218 },
33219 "schemes": ["http"],
33220 "consumes": ["application/json"],
33221 "produces": ["application/json"],
33222 "paths": {
33223   "/SelectableLevelsResURI" : {
33224     "get": {
33225       "description": "This Resource provides a set of device defined 'levels' that can be
33226 selected for an operation.\nFor example where a humidifier has a discrete set that model different
33227 humidity levels that can be set.\navailablelevels is an array of the levels that can be selected,
33228 these can be a number or an integer.\ntargetlevel is the level that has currently been selected and
33229 is written to in order to select a new level.\nWhen retrieved the targetlevel provides the actual
33230 value that has been selected.\nRetrieves the current selectable levels.\n",
33231       "parameters": [
33232         {"$ref": "#/parameters/interface"}
33233       ],
33234       "responses": {
33235         "200": {
33236           "description": "",
33237           "x-example":
33238             {
33239               "rt": ["oic.r.selectablelevels"],
33240               "id": "unique_example_id",
33241               "availablelevels": [0,2,4,6,8],
33242               "targetlevel": 2
33243             },
33244           "schema": { "$ref": "#/definitions/SelectableLevels" }
33245         }
33246       }
33247     },
33248     "post": {
33249       "description": "Sets the current level from the set that is selectable",
33250       "parameters": [
33251         {"$ref": "#/parameters/interface"},
33252         {
33253           "name": "body",
33254           "in": "body",
33255           "required": true,
33256           "schema": { "$ref": "#/definitions/UpdateSchema" },
33257           "x-example":
33258             {
33259               "targetlevel": 4
33260             }
33261         }
33262       ],
33263       "responses": {
33264         "200": {
33265           "description": "",
33266           "x-example":
33267             {
33268               "targetlevel": 4
33269             },
33270         "403": {
33271           "description": "Generated by a Server when an attempt is made to update to a
33272 targetlevel that is not in the set of availablelevels",
33273           "x-example":
33274             {
33275               "id": "unique_example_id",
33276               "availablelevels": [0,2,4,6,8],
33277               "targetlevel": 2
33278             }
33279         }
33280       }
33281     }
33282   }
33283 }

```

```

33282         }
33283     },
33284     "schema": { "$ref": "#/definitions/SelectableLevels" }
33285 }
33286 }
33287 }
33288 },
33289 },
33290 "parameters": {
33291     "interface": {
33292         "in": "query",
33293         "name": "if",
33294         "type": "string",
33295         "enum": ["oic.if.a", "oic.if.baseline"]
33296     }
33297 },
33298 "definitions": {
33299     "SelectableLevels": {
33300         {
33301             "properties": {
33302                 "availablelevels": {
33303                     "description": "Set of levels from which one can be selected",
33304                     "items": {
33305                         "anyOf": [
33306                             {
33307                                 "type": "integer"
33308                             },
33309                             {
33310                                 "type": "number"
33311                             }
33312                         ]
33313                     },
33314                     "readOnly": true,
33315                     "type": "array"
33316                 },
33317                 "id": {
33318                     "description": "Instance ID of this specific resource",
33319                     "maxLength": 64,
33320                     "readOnly": true,
33321                     "type": "string"
33322                 },
33323                 "if": {
33324                     "description": "The interface set supported by this resource",
33325                     "items": {
33326                         "enum": [
33327                             "oic.if.baseline",
33328                             "oic.if.ll",
33329                             "oic.if.b",
33330                             "oic.if.lb",
33331                             "oic.if.rw",
33332                             "oic.if.r",
33333                             "oic.if.a",
33334                             "oic.if.s"
33335                         ],
33336                         "type": "string"
33337                     },
33338                     "minItems": 1,
33339                     "readOnly": true,
33340                     "type": "array"
33341                 },
33342                 "n": {
33343                     "description": "Friendly name of the resource",
33344                     "maxLength": 64,
33345                     "readOnly": true,
33346                     "type": "string"
33347                 },
33348                 "precision": {
33349                     "description": "Accuracy granularity of the exposed value",
33350                     "readOnly": true,
33351                     "type": "number"
33352                 }

```

```

33353 "range": {
33354     "description": "The valid range for the value Property",
33355     "items": {
33356         "anyOf": [
33357             {
33358                 "type": "number"
33359             },
33360             {
33361                 "type": "integer"
33362             }
33363         ]
33364     },
33365     "maxItems": 2,
33366     "minItems": 2,
33367     "readOnly": true,
33368     "type": "array"
33369 },
33370 "rt": {
33371     "description": "Resource Type",
33372     "items": {
33373         "maxLength": 64,
33374         "type": "string"
33375     },
33376     "minItems": 1,
33377     "readOnly": true,
33378     "type": "array"
33379 },
33380 "step": {
33381     "anyOf": [
33382         {
33383             "type": "integer"
33384         },
33385         {
33386             "type": "number"
33387         }
33388     ],
33389     "description": "Step value across the defined range",
33390     "readOnly": true
33391 },
33392 "targetlevel": {
33393     "anyOf": [
33394         {
33395             "type": "integer"
33396         },
33397         {
33398             "type": "number"
33399         }
33400     ],
33401     "description": "The target level from the available selectable set"
33402 },
33403 "value": {
33404     "anyOf": [
33405         {
33406             "type": "array"
33407         },
33408         {
33409             "type": "string"
33410         },
33411         {
33412             "type": "boolean"
33413         },
33414         {
33415             "type": "integer"
33416         },
33417         {
33418             "type": "number"
33419         },
33420         {
33421             "type": "object"
33422         }
33423     ],

```

```

33424         "description": "The value sensed or actuated by this Resource"
33425     },
33426 },
33427 "required": [
33428     "availablelevels",
33429     "targetlevel"
33430 ],
33431 "type": "object"
33432 }
33433
33434 ,
33435 "UpdateSchema" :
33436 {
33437     "properties": {
33438         "id": {
33439             "description": "Instance ID of this specific resource",
33440             "maxLength": 64,
33441             "readOnly": true,
33442             "type": "string"
33443         },
33444         "if": {
33445             "description": "The interface set supported by this resource",
33446             "items": {
33447                 "enum": [
33448                     "oic.if.baseline",
33449                     "oic.if.ll",
33450                     "oic.if.b",
33451                     "oic.if.lb",
33452                     "oic.if.rw",
33453                     "oic.if.r",
33454                     "oic.if.a",
33455                     "oic.if.s"
33456                 ],
33457                 "type": "string"
33458             },
33459             "minItems": 1,
33460             "readOnly": true,
33461             "type": "array"
33462         },
33463         "n": {
33464             "description": "Friendly name of the resource",
33465             "maxLength": 64,
33466             "readOnly": true,
33467             "type": "string"
33468         },
33469         "precision": {
33470             "description": "Accuracy granularity of the exposed value",
33471             "readOnly": true,
33472             "type": "number"
33473         },
33474         "range": {
33475             "description": "The valid range for the value Property",
33476             "items": {
33477                 "anyOf": [
33478                     {
33479                         "type": "number"
33480                     },
33481                     {
33482                         "type": "integer"
33483                     }
33484                 ]
33485             },
33486             "maxItems": 2,
33487             "minItems": 2,
33488             "readOnly": true,
33489             "type": "array"
33490         },
33491         "rt": {
33492             "description": "Resource Type",
33493             "items": {
33494                 "maxLength": 64,

```

```

33495         "type": "string"
33496     },
33497     "minItems": 1,
33498     "readOnly": true,
33499     "type": "array"
33500 },
33501 "step": {
33502     "anyOf": [
33503         {
33504             "type": "integer"
33505         },
33506         {
33507             "type": "number"
33508         }
33509     ],
33510     "description": "Step value across the defined range",
33511     "readOnly": true
33512 },
33513 "targetlevel": {
33514     "description": "The target level from the available selectable set",
33515     "type": [
33516         "integer",
33517         "number"
33518     ]
33519 },
33520 "value": {
33521     "anyOf": [
33522         {
33523             "type": "array"
33524         },
33525         {
33526             "type": "string"
33527         },
33528         {
33529             "type": "boolean"
33530         },
33531         {
33532             "type": "integer"
33533         },
33534         {
33535             "type": "number"
33536         },
33537         {
33538             "type": "object"
33539         }
33540     ],
33541     "description": "The value sensed or actuated by this Resource"
33542 }
33543 },
33544 "required": [
33545     "targetlevel"
33546 ],
33547 "type": "object"
33548 }
33549 }
33550 }
33551 }
33552

```

B.73.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
targetlevel	['integer', 'number']	yes		The target level from the available selectable set
if	array: see schema		Read Only	The interface set supported by this resource

rt	array: see schema		Read Only	Resource Type
precision	number		Read Only	Accuracy granularity of the exposed value
id	string		Read Only	Instance ID of this specific resource
step	multiple types: see schema		Read Only	Step value across the defined range
range	array: see schema		Read Only	The valid range for the value Property
value	multiple types: see schema			The value sensed or actuated by this Resource
n	string		Read Only	Friendly name of the resource
targetlevel	multiple types: see schema	yes		The target level from the available selectable set
if	array: see schema		Read Only	The interface set supported by this resource
step	multiple types: see schema		Read Only	Step value across the defined range
rt	array: see schema		Read Only	Resource Type
precision	number		Read Only	Accuracy granularity of the exposed value
id	string		Read Only	Instance ID of this specific resource
availablelevels	array: see schema	yes	Read Only	Set of levels from which one can be selected
range	array: see schema		Read Only	The valid range for the value Property
value	multiple types: see schema			The value sensed or actuated by this Resource
n	string		Read Only	Friendly name of the resource

33554

B.73.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/SelectableLevelsResURI		get	post		

B.74 Signal Strength

B.74.1 Introduction

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

B.74.2 Example URI

/SignalStrengthResURI

B.74.3 Resource Type

The resource type (rt) is defined as: ['oic.r.signalstrength'].

B.74.4 Swagger2.0 Definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Signal Strength",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
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ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/SignalStrengthResURI" : {
      "get": {
        "description": "This resource describes the strength of a signal by means of lqi and
rssi.\nThe lqi is a floating point number that represents Link Quality Indicator.\nThe rssi is a
floating point number that represents the received signal strength indicator.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.signalstrength"],
              "id": "unique_example_id",
              "lqi": 10.0,
              "rssi": 55.0
            }
          },
          "schema": { "$ref": "#/definitions/SignalStrength" }
        }
      }
    }
  }
}
```



```

33618 },
33619 "parameters": {
33620   "interface" : {
33621     "in" : "query",
33622     "name" : "if",
33623     "type" : "string",
33624     "enum" : ["oic.if.s", "oic.if.baseline"]
33625   }
33626 },
33627 "definitions": {
33628   "SignalStrength" :
33629     {
33630     "properties": {
33631       "id": {
33632         "description": "Instance ID of this specific resource",
33633         "maxLength": 64,
33634         "readOnly": true,
33635         "type": "string"
33636       },
33637       "if": {
33638         "description": "The interface set supported by this resource",
33639         "items": {
33640           "enum": [
33641             "oic.if.baseline",
33642             "oic.if.ll",
33643             "oic.if.b",
33644             "oic.if.lb",
33645             "oic.if.rw",
33646             "oic.if.r",
33647             "oic.if.a",
33648             "oic.if.s"
33649           ],
33650           "type": "string"
33651         },
33652         "minItems": 1,
33653         "readOnly": true,
33654         "type": "array"
33655       },
33656       "lqi": {
33657         "description": "current value of Link Quality Indicator",
33658         "readOnly": true,
33659         "type": "number"
33660       },
33661       "n": {
33662         "description": "Friendly name of the resource",
33663         "maxLength": 64,
33664         "readOnly": true,
33665         "type": "string"
33666       },
33667       "precision": {
33668         "description": "Accuracy granularity of the exposed value",
33669         "readOnly": true,
33670         "type": "number"
33671       },
33672       "range": {
33673         "description": "The valid range for the value Property",
33674         "items": {
33675           "anyOf": [
33676             {
33677               "type": "number"
33678             },
33679             {
33680               "type": "integer"
33681             }
33682           ]
33683         },
33684         "maxItems": 2,
33685         "minItems": 2,
33686         "readOnly": true,
33687         "type": "array"
33688       },

```

```

33689     "rssi": {
33690         "description": "current value of Received Signal Strength Indicator",
33691         "readOnly": true,
33692         "type": "number"
33693     },
33694     "rt": {
33695         "description": "Resource Type",
33696         "items": {
33697             "maxLength": 64,
33698             "type": "string"
33699         },
33700         "minItems": 1,
33701         "readOnly": true,
33702         "type": "array"
33703     },
33704     "step": {
33705         "anyOf": [
33706             {
33707                 "type": "integer"
33708             },
33709             {
33710                 "type": "number"
33711             }
33712         ],
33713         "description": "Step value across the defined range",
33714         "readOnly": true
33715     },
33716     "value": {
33717         "anyOf": [
33718             {
33719                 "type": "array"
33720             },
33721             {
33722                 "type": "string"
33723             },
33724             {
33725                 "type": "boolean"
33726             },
33727             {
33728                 "type": "integer"
33729             },
33730             {
33731                 "type": "number"
33732             },
33733             {
33734                 "type": "object"
33735             }
33736         ],
33737         "description": "The value sensed or actuated by this Resource"
33738     }
33739 },
33740 "required": [
33741     "lqi",
33742     "rssi"
33743 ],
33744 "type": "object"
33745 }
33746 }
33747 }
33748 }
33749

```

B.74.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
id	string		Read Only	Instance ID of this specific resource
rt	array: see schema		Read Only	Resource Type

value	multiple types: see schema			The value sensed or actuated by this Resource
n	string		Read Only	Friendly name of the resource
range	array: see schema		Read Only	The valid range for the value Property
if	array: see schema		Read Only	The interface set supported by this resource
rssi	number	yes	Read Only	current value of Received Signal Strength Indicator
lqi	number	yes	Read Only	current value of Link Quality Indicator
precision	number		Read Only	Accuracy granularity of the exposed value
step	multiple types: see schema		Read Only	Step value across the defined range

33751 B.74.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/SignalStrengthResURI		get			

33752 B.75 Sleep Sensor

33753 B.75.1 Introduction

33754 This resource describes whether human sleep has been sensed or not.
33755 The value is a boolean.
33756 A value of 'true' means that sleep has been sensed.
33757 A value of 'false' means that sleep not been sensed.
33758

33759 B.75.2 Example URI

33760 /SleepSensorResURI

33761 B.75.3 Resource Type

33762 The resource type (rt) is defined as: ['oic.r.sensor.sleep'].

33763 B.75.4 Swagger2.0 Definition

```

33764 {
33765   "swagger": "2.0",
33766   "info": {
33767     "title": "Sleep Sensor",
33768     "version": "v1.1.0-20160519",
33769     "license": {
33770       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
33771       "x-description": "Redistribution and use in source and binary forms, with or without
33772 modification, are permitted provided that the following conditions are met:\n      1.
33773 Redistributions of source code must retain the above copyright notice, this list of conditions and
33774 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
33775 copyright notice, this list of conditions and the following disclaimer in the documentation and/or

```

```

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33783 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
33784 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
33785 OF SUCH DAMAGE.\n"
33786 }
33787 },
33788 "schemes": ["http"],
33789 "consumes": ["application/json"],
33790 "produces": ["application/json"],
33791 "paths": {
33792   "/SleepSensorResURI" : {
33793     "get": {
33794       "description": "This resource describes whether human sleep has been sensed or not.\nThe
33795 value is a boolean.\nA value of 'true' means that sleep has been sensed.\nA value of 'false' means
33796 that sleep not been sensed.\n",
33797       "parameters": [
33798         { "$ref": "#/parameters/interface" }
33799       ],
33800       "responses": {
33801         "200": {
33802           "description": "",
33803           "x-example":
33804             {
33805               "rt": ["oic.r.sensor.sleep"],
33806               "id": "unique_example_id",
33807               "value": true
33808             },
33809           ,
33810           "schema": { "$ref": "#/definitions/sleep" }
33811         }
33812       }
33813     }
33814   }
33815 },
33816 "parameters": {
33817   "interface" : {
33818     "in" : "query",
33819     "name" : "if",
33820     "type" : "string",
33821     "enum" : ["oic.if.s", "oic.if.baseline"]
33822   }
33823 },
33824 "definitions": {
33825   "sleep" :
33826     {
33827     "properties": {
33828       "id": {
33829         "description": "Instance ID of this specific resource",
33830         "maxLength": 64,
33831         "readOnly": true,
33832         "type": "string"
33833       },
33834       "if": {
33835         "description": "The interface set supported by this resource",
33836         "items": {
33837           "enum": [
33838             "oic.if.baseline",
33839             "oic.if.ll",
33840             "oic.if.b",
33841             "oic.if.lb",
33842             "oic.if.rw",
33843             "oic.if.r",
33844             "oic.if.a",
33845             "oic.if.s"
33846           ]

```

```

33847         "type": "string"
33848     },
33849     "minItems": 1,
33850     "readOnly": true,
33851     "type": "array"
33852 },
33853 "n": {
33854     "description": "Friendly name of the resource",
33855     "maxLength": 64,
33856     "readOnly": true,
33857     "type": "string"
33858 },
33859 "precision": {
33860     "description": "Accuracy granularity of the exposed value",
33861     "readOnly": true,
33862     "type": "number"
33863 },
33864 "range": {
33865     "description": "The valid range for the value Property",
33866     "items": {
33867         "anyOf": [
33868             {
33869                 "type": "number"
33870             },
33871             {
33872                 "type": "integer"
33873             }
33874         ]
33875     },
33876     "maxItems": 2,
33877     "minItems": 2,
33878     "readOnly": true,
33879     "type": "array"
33880 },
33881 "rt": {
33882     "description": "Resource Type",
33883     "items": {
33884         "maxLength": 64,
33885         "type": "string"
33886     },
33887     "minItems": 1,
33888     "readOnly": true,
33889     "type": "array"
33890 },
33891 "step": {
33892     "anyOf": [
33893         {
33894             "type": "integer"
33895         },
33896         {
33897             "type": "number"
33898         }
33899     ],
33900     "description": "Step value across the defined range",
33901     "readOnly": true
33902 },
33903 "value": {
33904     "description": "true = sensed, false = not sensed.",
33905     "readOnly": true,
33906     "type": "boolean"
33907 }
33908 },
33909 "required": [
33910     "value"
33911 ],
33912 "type": "object"
33913 }
33914 }
33915 }
33916 }
33917

```

33918 **B.75.5 Property Definition**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema		Read Only	Resource Type
step	multiple types: see schema		Read Only	Step value across the defined range
if	array: see schema		Read Only	The interface set supported by this resource
range	array: see schema		Read Only	The valid range for the value Property
n	string		Read Only	Friendly name of the resource
id	string		Read Only	Instance ID of this specific resource
value	boolean	yes	Read Only	true = sensed, false = not sensed.
precision	number		Read Only	Accuracy granularity of the exposed value

33919 **B.75.6 CRUDN behaviour**

Resource	Create	Read	Update	Delete	Notify
/SleepSensorResURI		get			

33920 **B.76 Smoke Sensor**

33921 **B.76.1 Introduction**

33922 This resource describes whether smoke has been sensed or not.
33923 The value is a boolean.
33924 A value of 'true' means that smoke has been sensed.
33925 A value of 'false' means that smoke not been sensed.
33926

33927 **B.76.2 Example URI**

33928 /SmokeSensorResURI

33929 **B.76.3 Resource Type**

33930 The resource type (rt) is defined as: ['oic.r.sensor.smoke'].

33931 **B.76.4 Swagger2.0 Definition**

```
33932 {  
33933   "swagger": "2.0",  
33934   "info": {  
33935     "title": "Smoke Sensor",  
33936     "version": "v1.1.0-20160519",  
33937     "license": {  
33938       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
33939       "x-description": "Redistribution and use in source and binary forms, with or without  
33940 modification, are permitted provided that the following conditions are met:\n      1.  
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33942 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
33943 copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
33944 other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open
```

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33951 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
33952 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
33953 OF SUCH DAMAGE.\n"
33954     }
33955   },
33956   "schemes": ["http"],
33957   "consumes": ["application/json"],
33958   "produces": ["application/json"],
33959   "paths": {
33960     "/SmokeSensorResURI" : {
33961       "get": {
33962         "description": "This resource describes whether smoke has been sensed or not.\nThe value is
33963 a boolean.\nA value of 'true' means that smoke has been sensed.\nA value of 'false' means that
33964 smoke not been sensed.\n",
33965         "parameters": [
33966           {"$ref": "#/parameters/interface"}
33967         ],
33968         "responses": {
33969           "200": {
33970             "description": "",
33971             "x-example":
33972             {
33973               "rt": ["oic.r.sensor.smoke"],
33974               "id": "unique_example_id",
33975               "value": true
33976             },
33977             "schema": { "$ref": "#/definitions/smoke" }
33978           }
33979         }
33980       }
33981     }
33982   },
33983   },
33984   "parameters": {
33985     "interface" : {
33986       "in" : "query",
33987       "name" : "if",
33988       "type" : "string",
33989       "enum" : ["oic.if.s", "oic.if.baseline"]
33990     }
33991   },
33992   "definitions": {
33993     "smoke" :
33994     {
33995       "properties": {
33996         "id": {
33997           "description": "Instance ID of this specific resource",
33998           "maxLength": 64,
33999           "readOnly": true,
34000           "type": "string"
34001         },
34002         "if": {
34003           "description": "The interface set supported by this resource",
34004           "items": {
34005             "enum": [
34006               "oic.if.baseline",
34007               "oic.if.ll",
34008               "oic.if.b",
34009               "oic.if.lb",
34010               "oic.if.rw",
34011               "oic.if.x",
34012               "oic.if.a",
34013               "oic.if.s"
34014             ],
34015           "type": "string"

```

```

34016         },
34017         "minItems": 1,
34018         "readOnly": true,
34019         "type": "array"
34020     },
34021     "n": {
34022         "description": "Friendly name of the resource",
34023         "maxLength": 64,
34024         "readOnly": true,
34025         "type": "string"
34026     },
34027     "precision": {
34028         "description": "Accuracy granularity of the exposed value",
34029         "readOnly": true,
34030         "type": "number"
34031     },
34032     "range": {
34033         "description": "The valid range for the value Property",
34034         "items": {
34035             "anyOf": [
34036                 {
34037                     "type": "number"
34038                 },
34039                 {
34040                     "type": "integer"
34041                 }
34042             ]
34043         },
34044         "maxItems": 2,
34045         "minItems": 2,
34046         "readOnly": true,
34047         "type": "array"
34048     },
34049     "rt": {
34050         "description": "Resource Type",
34051         "items": {
34052             "maxLength": 64,
34053             "type": "string"
34054         },
34055         "minItems": 1,
34056         "readOnly": true,
34057         "type": "array"
34058     },
34059     "step": {
34060         "anyOf": [
34061             {
34062                 "type": "integer"
34063             },
34064             {
34065                 "type": "number"
34066             }
34067         ],
34068         "description": "Step value across the defined range",
34069         "readOnly": true
34070     },
34071     "value": {
34072         "description": "true = sensed, false = not sensed.",
34073         "readOnly": true,
34074         "type": "boolean"
34075     }
34076 },
34077 "required": [
34078     "value"
34079 ],
34080 "type": "object"
34081 }
34082
34083 }
34084 }
34085

```


34086 **B.76.5 Property Definition**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema		Read Only	Resource Type
range	array: see schema		Read Only	The valid range for the value Property
step	multiple types: see schema		Read Only	Step value across the defined range
id	string		Read Only	Instance ID of this specific resource
n	string		Read Only	Friendly name of the resource
value	boolean	yes	Read Only	true = sensed, false = not sensed.
if	array: see schema		Read Only	The interface set supported by this resource
precision	number		Read Only	Accuracy granularity of the exposed value

34087 **B.76.6 CRUDN behaviour**

Resource	Create	Read	Update	Delete	Notify
/SmokeSensorResURI		get			

34088 **B.77 Speech Synthesis-TTS**

34089 **B.77.1 Introduction**

34090 This resource may be created on the OIC Server that is capable of rendering speech by an OIC
34091 Client
34092 and allows the client to provide an SSML document with text to render
34093 or may be created on the OIC Server by some resident application.
34094 The audio rendered is at this stage local to the Server (i.e. not streamed).
34095 The utterance is an SSML document.
34096 The supportedLanguages is an array of the RFC 5646 defined language tags that are supported.
34097 The supportedVoices is an SSML document fragment indicating the voices that are supported.
34098 Utterance in the example shall be a properly escaped (JSON rules) SSML document. An example
34099 is given below:
34100 "<?xml version="1.0" encoding="ISO-8859-1"?>
34101
34102 <speak version="1.1" xmlns="http://www.w3.org/2001/10/synthesis"
34103
34104 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
34105
34106 xsi:schemaLocation="http://www.w3.org/2001/10/synthesis
34107
34108 http://www.w3.org/TR/speech-synthesis11/synthesis.xsd"

```

34113
34114
34115         xml:lang="en-US">
34116
34117
34118
34119
34120
34121         The           title           of           the           movie           is:
34122
34123
34124         "Monty           Pythons           The           Meaning           of           Life"
34125
34126
34127         which           is           directed           by           Terry           Jones.
34128
34129
34130     </speak"
34131

```

B.77.2 Example URI

/SpeechTTSResURI

B.77.3 Resource Type

The resource type (rt) is defined as: ['oic.r.speech.tts'].

B.77.4 Swagger2.0 Definition

```

34137 {
34138     "swagger": "2.0",
34139     "info": {
34140         "title": "Speech Synthesis-TTS",
34141         "version": "v1.1.0-20160519",
34142         "license": {
34143             "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
34144             "x-description": "Redistribution and use in source and binary forms, with or without
34145 modification, are permitted provided that the following conditions are met:\n        1.
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34147 the following disclaimer.\n        2. Redistributions in binary form must reproduce the above
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34156 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
34157 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
34158 OF SUCH DAMAGE.\n"
34159     }
34160 },
34161 "schemes": ["http"],
34162 "consumes": ["application/json"],
34163 "produces": ["application/json"],
34164 "paths": {
34165     "/SpeechTTSResURI" : {
34166         "get": {
34167             "description": "This resource may be created on the OIC Server that is capable of rendering
34168 speech by an OIC Client\n and allows the client to provide an SSML document with text to render\n
34169 or may be created on the OIC Server by some resident application.\nThe audio rendered is at this
34170 stage local to the Server (i.e. not streamed).\nThe utterance is an SSML document.\nThe
34171 supportedLanguages is an array of the RFC 5646 defined language tags that are supported.\nThe
34172 supportedVoices is an SSML document fragment indicating the voices that are supported.\nUtterance
34173 in the example shall be a properly escaped (JSON rules) SSML document. An example is given below:\n

```

```

34174 \<?xml version=\"1.0\" encoding=\"ISO-8859-1\"?>\n\r\n <speak version=\"1.1\"
34175 xmlns=\"http://www.w3.org/2001/10/synthesis\"\n\r\n
34176 \txmlns:xsi=\"http://www.w3.org/2001/XMLSchema-instance\"\n\r\n
34177 \txsi:schemaLocation=\"http://www.w3.org/2001/10/synthesis\"\n\r\n
34178 \thttp://www.w3.org/TR/speech-synthesis11/synthesis.xsd\"\n\r\n \txml:lang=\"en-US\">\n\r\n
34179 \n\r\n \tThe title of the movie is:\n\r\n \t\"Monty Pythons The Meaning of Life\"\n\r\n \twhich
34180 is directed by Terry Jones.\n\r\n </speak\"\n",
34181 "parameters": [
34182     { "$ref": "#/parameters/interface" }
34183 ],
34184 "responses": {
34185     "200": {
34186         "description": "",
34187         "x-example":
34188             {
34189                 "rt": ["oic.r.speech.tts"],
34190                 "id": "unique_example_id",
34191                 "utterance": "SSML Document",
34192                 "supportedLanguages": ["en-US", "en-GB", "fr-CA"],
34193                 "supportedVoices": "<voice gender=\"female\" variant=\"2\"></voice>\n\r<voice
34194 name=\"Mike\"></voice>"
34195             }
34196         ,
34197         "schema": { "$ref": "#/definitions/Speech" }
34198     }
34199 },
34200 },
34201 "post": {
34202     "description": "Changes the utterance being rendered.\nExample shows a change in language
34203 selected.\n",
34204     "parameters": [
34205         { "$ref": "#/parameters/interface" },
34206         {
34207             "name": "body",
34208             "in": "body",
34209             "required": true,
34210             "schema": { "$ref": "#/definitions/Speech" },
34211             "x-example":
34212                 {
34213                     "rt": ["oic.r.speech.tts"],
34214                     "id": "unique_example_id",
34215                     "utterance": "SSML Document"
34216                 }
34217         }
34218     ],
34219     "responses": {
34220         "200": {
34221             "description": "",
34222             "x-example":
34223                 {
34224                     "rt": ["oic.r.speech.tts"],
34225                     "id": "unique_example_id",
34226                     "utterance": "SSML Document"
34227                 }
34228             ,
34229             "schema": { "$ref": "#/definitions/Speech" }
34230         }
34231     }
34232 },
34233 },
34234 },
34235 "parameters": {
34236     "interface": {
34237         "in": "query",
34238         "name": "if",
34239         "type": "string",
34240         "enum": ["oic.if.a", "oic.if.baseline"]
34241     }
34242 },
34243 "definitions": {
34244     "Speech":

```

```

34245     {
34246 "properties": {
34247   "id": {
34248     "description": "Instance ID of this specific resource",
34249     "maxLength": 64,
34250     "readOnly": true,
34251     "type": "string"
34252   },
34253   "if": {
34254     "description": "The interface set supported by this resource",
34255     "items": {
34256       "enum": [
34257         "oic.if.baseline",
34258         "oic.if.ll",
34259         "oic.if.b",
34260         "oic.if.lb",
34261         "oic.if.rw",
34262         "oic.if.x",
34263         "oic.if.a",
34264         "oic.if.s"
34265       ],
34266       "type": "string"
34267     },
34268     "minItems": 1,
34269     "readOnly": true,
34270     "type": "array"
34271   },
34272   "n": {
34273     "description": "Friendly name of the resource",
34274     "maxLength": 64,
34275     "readOnly": true,
34276     "type": "string"
34277   },
34278   "precision": {
34279     "description": "Accuracy granularity of the exposed value",
34280     "readOnly": true,
34281     "type": "number"
34282   },
34283   "range": {
34284     "description": "The valid range for the value Property",
34285     "items": {
34286       "anyOf": [
34287         {
34288           "type": "number"
34289         },
34290         {
34291           "type": "integer"
34292         }
34293       ]
34294     },
34295     "maxItems": 2,
34296     "minItems": 2,
34297     "readOnly": true,
34298     "type": "array"
34299   },
34300   "rt": {
34301     "description": "Resource Type",
34302     "items": {
34303       "maxLength": 64,
34304       "type": "string"
34305     },
34306     "minItems": 1,
34307     "readOnly": true,
34308     "type": "array"
34309   },
34310   "step": {
34311     "anyOf": [
34312       {
34313         "type": "integer"
34314       },
34315       {

```

```

34316         "type": "number"
34317     }
34318 },
34319 "description": "Step value across the defined range",
34320 "readOnly": true
34321 },
34322 "supportedLanguages": {
34323     "description": "array of supported language tags",
34324     "items": {
34325         "type": "string"
34326     },
34327     "readOnly": true,
34328     "type": "array"
34329 },
34330 "supportedVoices": {
34331     "description": "SSML document fragment indicating supported voices",
34332     "readOnly": true,
34333     "type": "string"
34334 },
34335 "utterance": {
34336     "description": "SSML document including the speech body",
34337     "type": "string"
34338 },
34339 "value": {
34340     "anyOf": [
34341         {
34342             "type": "array"
34343         },
34344         {
34345             "type": "string"
34346         },
34347         {
34348             "type": "boolean"
34349         },
34350         {
34351             "type": "integer"
34352         },
34353         {
34354             "type": "number"
34355         },
34356         {
34357             "type": "object"
34358         }
34359     ],
34360     "description": "The value sensed or actuated by this Resource"
34361 },
34362 },
34363 "required": [
34364     "utterance"
34365 ],
34366 "type": "object"
34367 }
34368 }
34369 }
34370 }
34371

```

B.77.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
value	multiple types: see schema			The value sensed or actuated by this Resource
id	string		Read Only	Instance ID of this specific resource

range	array: see schema		Read Only	The valid range for the value Property
step	multiple types: see schema		Read Only	Step value across the defined range
utterance	string	yes		SSML document including the speech body
if	array: see schema		Read Only	The interface set supported by this resource
rt	array: see schema		Read Only	Resource Type
precision	number		Read Only	Accuracy granularity of the exposed value
n	string		Read Only	Friendly name of the resource
supportedLanguages	array: see schema		Read Only	array of supported language tags
supportedVoices	string		Read Only	SSML document fragment indicating supported voices

34373 B.77.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/SpeechTTSResURI		get	post		

34374 B.78 Temperature

34375 B.78.1 Introduction

34376 This resource describes a sensed or actuated Temperature value.
34377 The temperature describes the current value measured.
34378 The units is a single value that is one of C, F or K.
34379 It provides the unit of measurement for the temperature value.
34380 It is a read-only value that is provided by the server.
34381 If the units Property is missing the default is Celsius [C].
34382 When range (from oic.r.baseresource) is omitted the default is +/- MAXINT.
34383 Retrieves the current temperature value.
34384 A client can specify the units for the requested temperature by use of a query parameter.
34385 If no query parameter is provided the server provides its default measure or set value.
34386 It is recommended to return always the units Property in the result.
34387

34388 B.78.2 Example URI

34389 /TemperatureResURI

34390 B.78.3 Resource Type

34391 The resource type (rt) is defined as: ['oic.r.temperature'].

B.78.4 Swagger2.0 Definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Temperature",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/TemperatureResURI" : {
      "get": {
        "description": "This resource describes a sensed or actuated Temperature value.\nThe
temperature describes the current value measured.\nThe units is a single value that is one of C, F
or K.\nIt provides the unit of measurement for the temperature value.\nIt is a read-only value that
is provided by the server.\nIf the units Property is missing the default is Celsius [C].\nWhen
range (from oic.r.baseresource) is omitted the default is +/- MAXINT.\nRetrieves the current
temperature value.\nA client can specify the units for the requested temperature by use of a query
parameter.\nIf no query parameter is provided the server provides its default measure or set
value.\nIt is recommended to return always the units Property in the result.\n",
        "parameters": [
          {
            "$ref": "#/parameters/interface",
            "in": "query",
            "description": "Units",
            "type": "string",
            "enum": ["C", "F", "K"],
            "name": "units"
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.temperature"],
              "id": "unique_example_id",
              "temperature": 20.0,
              "units": "C",
              "range": [0.0,100.0]
            },
            "schema": { "$ref": "#/definitions/Temperature" }
          },
          "403": {
            "description": "This response is generated by the OIC Server when the client
sends:\n A retrieve with q queryParameter indicating a unit that the server does not support.\nThe
server responds with the current resource representation including the\nunits property illustrating
the supported units and the error.\n",
            "x-example": {

```

```

34462         "id":          "unique_example_id",
34463         "temperature": 20.0,
34464         "units":       "C"
34465     }
34466     ,
34467     "schema": { "$ref": "#/definitions/Temperature" }
34468 }
34469 },
34470 ],
34471 "post": {
34472     "description": "Sets the desired temperature value.\nIf a unit is included and the server
34473 does not support the unit indicated the request will fail.\nIf the units are omitted value is taken
34474 to be in C.\n",
34475     "parameters": [
34476         { "$ref": "#/parameters/interface" },
34477         {
34478             "name": "body",
34479             "in": "body",
34480             "required": true,
34481             "schema": { "$ref": "#/definitions/Temperature" },
34482             "x-example":
34483                 {
34484                     "id":          "unique_example_id",
34485                     "temperature": 18.0
34486                 }
34487         }
34488     ],
34489     "responses": {
34490         "200": {
34491             "description": "",
34492             "x-example":
34493                 {
34494                     "id":          "unique_example_id",
34495                     "temperature": 18.0
34496                 }
34497             ,
34498             "schema": { "$ref": "#/definitions/Temperature" }
34499         },
34500         "403": {
34501             "description": "This response is generated by the OIC Server when the client
34502 sends:\n An update with an out of range property value for temperature.\n An update with an
34503 unsupported unit for this server.\nThe server responds with the current resource representation
34504 including\nthe range property illustrating the supported range and the error.\n",
34505             "x-example":
34506                 {
34507                     "id":          "unique_example_id",
34508                     "temperature": 20.0,
34509                     "units":       "C",
34510                     "range":       [0.0,100.0]
34511                 }
34512             ,
34513             "schema": { "$ref": "#/definitions/Temperature" }
34514         }
34515     }
34516 },
34517 },
34518 },
34519 "parameters": {
34520     "interface": {
34521         "in": "query",
34522         "name": "if",
34523         "type": "string",
34524         "enum": ["oic.if.a", "oic.if.s", "oic.if.baseline"]
34525     }
34526 },
34527 "definitions": {
34528     "Temperature":
34529         {
34530             "properties": {
34531                 "id": {
34532                     "description": "Instance ID of this specific resource",

```



```

34533         "maxLength": 64,
34534         "readOnly": true,
34535         "type": "string"
34536     },
34537     "if": {
34538         "description": "The interface set supported by this resource",
34539         "items": {
34540             "enum": [
34541                 "oic.if.baseline",
34542                 "oic.if.ll",
34543                 "oic.if.b",
34544                 "oic.if.lb",
34545                 "oic.if.rw",
34546                 "oic.if.r",
34547                 "oic.if.a",
34548                 "oic.if.s"
34549             ],
34550             "type": "string"
34551         },
34552         "minItems": 1,
34553         "readOnly": true,
34554         "type": "array"
34555     },
34556     "n": {
34557         "description": "Friendly name of the resource",
34558         "maxLength": 64,
34559         "readOnly": true,
34560         "type": "string"
34561     },
34562     "precision": {
34563         "description": "Accuracy granularity of the exposed value",
34564         "readOnly": true,
34565         "type": "number"
34566     },
34567     "range": {
34568         "description": "The valid range for the value Property",
34569         "items": {
34570             "anyOf": [
34571                 {
34572                     "type": "number"
34573                 },
34574                 {
34575                     "type": "integer"
34576                 }
34577             ]
34578         },
34579         "maxItems": 2,
34580         "minItems": 2,
34581         "readOnly": true,
34582         "type": "array"
34583     },
34584     "rt": {
34585         "description": "Resource Type",
34586         "items": {
34587             "maxLength": 64,
34588             "type": "string"
34589         },
34590         "minItems": 1,
34591         "readOnly": true,
34592         "type": "array"
34593     },
34594     "step": {
34595         "anyOf": [
34596             {
34597                 "type": "integer"
34598             },
34599             {
34600                 "type": "number"
34601             }
34602         ],
34603         "description": "Step value across the defined range",

```

```

34604         "readOnly": true
34605     },
34606     "temperature": {
34607         "description": "Current temperature setting or measurement",
34608         "type": "number"
34609     },
34610     "units": {
34611         "description": "Units for the temperature value",
34612         "enum": [
34613             "C",
34614             "F",
34615             "K"
34616         ],
34617         "readOnly": true
34618     },
34619     "value": {
34620         "anyOf": [
34621             {
34622                 "type": "array"
34623             },
34624             {
34625                 "type": "string"
34626             },
34627             {
34628                 "type": "boolean"
34629             },
34630             {
34631                 "type": "integer"
34632             },
34633             {
34634                 "type": "number"
34635             },
34636             {
34637                 "type": "object"
34638             }
34639         ],
34640         "description": "The value sensed or actuated by this Resource"
34641     }
34642 },
34643 "required": [
34644     "temperature"
34645 ],
34646 "type": "object"
34647 }
34648 }
34649 }
34650 }
34651

```

B.78.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema		Read Only	Step value across the defined range
temperature	number	yes		Current temperature setting or measurement
n	string		Read Only	Friendly name of the resource
precision	number		Read Only	Accuracy granularity of the exposed value
rt	array: see schema		Read Only	Resource Type

value	multiple types: see schema			The value sensed or actuated by this Resource
units	multiple types: see schema		Read Only	Units for the temperature value
range	array: see schema		Read Only	The valid range for the value Property
if	array: see schema		Read Only	The interface set supported by this resource
id	string		Read Only	Instance ID of this specific resource

34653 B.78.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/TemperatureResURI		get	post		

34654 B.79 Three Axis Sensor

34655 B.79.1 Introduction

34656 This resource provides a representation of the measurement from a three-axis sensor.
34657 The orientation is an array of numbers representing x-plane, y-plane and z-plane values.
34658 The unit of measurement for each pane is 'g'.
34659

34660 B.79.2 Example URI

34661 /ThreeAxisResURI

34662 B.79.3 Resource Type

34663 The resource type (rt) is defined as: ['oic.r.sensor.threeaxis'].

34664 B.79.4 Swagger2.0 Definition

```

34665 {
34666   "swagger": "2.0",
34667   "info": {
34668     "title": "Three Axis Sensor",
34669     "version": "v1.1.0-20160519",
34670     "license": {
34671       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
34672       "x-description": "Redistribution and use in source and binary forms, with or without
34673 modification, are permitted provided that the following conditions are met:\n      1.
34674 Redistributions of source code must retain the above copyright notice, this list of conditions and
34675 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
34676 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
34677 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
34678 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
34679 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
34680 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
34681 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
34682 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
34683 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
34684 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
34685 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
34686 OF SUCH DAMAGE.\n"
34687     }
34688   },
34689   "schemes": ["http"],

```

```

34690     "consumes": ["application/json"],
34691     "produces": ["application/json"],
34692     "paths": {
34693         "/ThreeAxisResURI" : {
34694             "get": {
34695                 "description": "This resource provides a representation of the measurement from a three-
34696 axis sensor.\n\nThe orientation is an array of numbers representing x-plane, y-plane and z-plane
34697 values.\n\nThe unit of measurement for each pane is 'g'.\n",
34698                 "parameters": [
34699                     { "$ref": "#/parameters/interface" }
34700                 ],
34701                 "responses": {
34702                     "200": {
34703                         "description": "",
34704                         "x-example":
34705                             {
34706                                 "rt": ["oic.r.sensor.threeaxis"],
34707                                 "id": "unique_example_id",
34708                                 "orientation": [0.7, 1.1, -0.2]
34709                             }
34710                     },
34711                     "schema": { "$ref": "#/definitions/threeAxis" }
34712                 }
34713             }
34714         }
34715     },
34716 },
34717 "parameters": {
34718     "interface" : {
34719         "in" : "query",
34720         "name" : "if",
34721         "type" : "string",
34722         "enum" : ["oic.if.s", "oic.if.baseline"]
34723     }
34724 },
34725 "definitions": {
34726     "threeAxis" :
34727     {
34728         "properties": {
34729             "id": {
34730                 "description": "Instance ID of this specific resource",
34731                 "maxLength": 64,
34732                 "readOnly": true,
34733                 "type": "string"
34734             },
34735             "if": {
34736                 "description": "The interface set supported by this resource",
34737                 "items": {
34738                     "enum": [
34739                         "oic.if.baseline",
34740                         "oic.if.ll",
34741                         "oic.if.b",
34742                         "oic.if.lb",
34743                         "oic.if.rw",
34744                         "oic.if.x",
34745                         "oic.if.a",
34746                         "oic.if.s"
34747                     ],
34748                     "type": "string"
34749                 },
34750                 "minItems": 1,
34751                 "readOnly": true,
34752                 "type": "array"
34753             },
34754             "n": {
34755                 "description": "Friendly name of the resource",
34756                 "maxLength": 64,
34757                 "readOnly": true,
34758                 "type": "string"
34759             },
34760             "orientation": {

```

```

34761         "description": "Array containing x-plane, y-plane and z-plane orientation in 'g'.",
34762         "items": {
34763             "type": "number"
34764         },
34765         "maxItems": 3,
34766         "minItems": 3,
34767         "readOnly": true,
34768         "type": "array"
34769     },
34770     "precision": {
34771         "description": "Accuracy granularity of the exposed value",
34772         "readOnly": true,
34773         "type": "number"
34774     },
34775     "range": {
34776         "description": "The valid range for the value Property",
34777         "items": {
34778             "anyOf": [
34779                 {
34780                     "type": "number"
34781                 },
34782                 {
34783                     "type": "integer"
34784                 }
34785             ]
34786         },
34787         "maxItems": 2,
34788         "minItems": 2,
34789         "readOnly": true,
34790         "type": "array"
34791     },
34792     "rt": {
34793         "description": "Resource Type",
34794         "items": {
34795             "maxLength": 64,
34796             "type": "string"
34797         },
34798         "minItems": 1,
34799         "readOnly": true,
34800         "type": "array"
34801     },
34802     "step": {
34803         "anyOf": [
34804             {
34805                 "type": "integer"
34806             },
34807             {
34808                 "type": "number"
34809             }
34810         ],
34811         "description": "Step value across the defined range",
34812         "readOnly": true
34813     },
34814     "value": {
34815         "anyOf": [
34816             {
34817                 "type": "array"
34818             },
34819             {
34820                 "type": "string"
34821             },
34822             {
34823                 "type": "boolean"
34824             },
34825             {
34826                 "type": "integer"
34827             },
34828             {
34829                 "type": "number"
34830             }
34831         ]

```

```

34832         "type": "object"
34833     }
34834 },
34835     "description": "The value sensed or actuated by this Resource"
34836 },
34837 },
34838     "required": [
34839         "orientation"
34840     ]
34841 }
34842 }
34843 }
34844 }
34845

```

34846 B.79.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
range	array: see schema		Read Only	The valid range for the value Property
n	string		Read Only	Friendly name of the resource
precision	number		Read Only	Accuracy granularity of the exposed value
id	string		Read Only	Instance ID of this specific resource
orientation	array: see schema	yes	Read Only	Array containing x-plane, y-plane and z-plane orientation in 'g'.
if	array: see schema		Read Only	The interface set supported by this resource
value	multiple types: see schema			The value sensed or actuated by this Resource
rt	array: see schema		Read Only	Resource Type
step	multiple types: see schema		Read Only	Step value across the defined range

34847 B.79.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/ThreeAxisResURI		get			

34848 B.80 Time Period

34849 B.80.1 Introduction

34850 This resource describes the time period over which any additionally provided
34851 information is derived or bounded.
34852 The startTime and stopTime are ISO8601 encoded strings. startTime must be present.
34853 The interval is the interval of the time period in minutes, if present this value must be no less than
34854 1 minute.
34855 stopTime and interval are mutually exclusive; both Properties cannot be present in a Resource

34856 instance.
34857 Defines a time period for information retrieval, action or other behaviour.
34858

34859 **B.80.2 Example URI**

34860 /TimePeriodResURI

34861 **B.80.3 Resource Type**

34862 The resource type (rt) is defined as: ['oic.r.time.period'].

34863 **B.80.4 Swagger2.0 Definition**

```
34864 {  
34865   "swagger": "2.0",  
34866   "info": {  
34867     "title": "Time Period",  
34868     "version": "v1.1.0-20160519",  
34869     "license": {  
34870       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
34871       "x-description": "Redistribution and use in source and binary forms, with or without  
34872 modification, are permitted provided that the following conditions are met:\n      1.  
34873 Redistributions of source code must retain the above copyright notice, this list of conditions and  
34874 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
34875 copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
34876 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open  
34877 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT  
34878 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR  
34879 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity  
34880 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,  
34881 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS  
34882 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND  
34883 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR  
34884 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY  
34885 OF SUCH DAMAGE.\n    }  
34886   },  
34887   "schemes": ["http"],  
34888   "consumes": ["application/json"],  
34889   "produces": ["application/json"],  
34890   "paths": {  
34891     "/TimePeriodResURI" : {  
34892       "get": {  
34893         "description": "This resource describes the time period over which any additionally  
34894 provided\ninformation is derived or bounded.\nThe startTime and stopTime are ISO8601 encoded  
34895 strings. startTime must be present.\nThe interval is the interval of the time period in minutes,  
34896 if present this value must be no less than 1 minute.\nstopTime and interval are mutually exclusive;  
34897 both Properties cannot be present in a Resource instance.\nDefines a time period for information  
34898 retrieval, action or other behaviour.\n",  
34899         "parameters": [  
34900           { "$ref": "#/parameters/interface" }  
34901         ],  
34902         "responses": {  
34903           "200": {  
34904             "description": "",  
34905             "x-example":  
34906               {  
34907                 "rt": ["oic.r.time.period"],  
34908                 "id": "unique_example_id",  
34909                 "startTime": "2015-01-09T14:30Z",  
34910                 "stopTime": "2015-01-09T14:45Z"  
34911               }  
34912             },  
34913             "schema": { "$ref": "#/definitions/TimePeriod" }  
34914           }  
34915         }  
34916       },  
34917       "post": {  
34918         "description": "Sets or updates a time period for information retrieval, action or other  
34919 behavior.\n",  
34920         "parameters": [  
34921
```

```

34922     {"$ref": "#/parameters/interface"},
34923     {
34924         "name": "body",
34925         "in": "body",
34926         "required": true,
34927         "schema": { "$ref": "#/definitions/TimePeriod" },
34928         "x-example":
34929             {
34930                 "id": "unique_example_id",
34931                 "startTime": "2015-01-09T14:30Z",
34932                 "stopTime": "2015-01-09T14:45Z"
34933             }
34934     },
34935 ],
34936 "responses": {
34937     "200": {
34938         "description": "",
34939         "x-example":
34940             {
34941                 "id": "unique_example_id",
34942                 "startTime": "2015-01-09T14:30Z",
34943                 "stopTime": "2015-01-09T14:45Z"
34944             },
34945         "schema": { "$ref": "#/definitions/TimePeriod" }
34946     }
34947 },
34948 },
34949 },
34950 },
34951 },
34952 "parameters": {
34953     "interface": {
34954         "in": "query",
34955         "name": "if",
34956         "type": "string",
34957         "enum": ["oic.if.a", "oic.if.baseline"]
34958     }
34959 },
34960 "definitions": {
34961     "TimePeriod": {
34962         {
34963             "properties": {
34964                 "id": {
34965                     "description": "Instance ID of this specific resource",
34966                     "maxLength": 64,
34967                     "readOnly": true,
34968                     "type": "string"
34969                 },
34970                 "if": {
34971                     "description": "The interface set supported by this resource",
34972                     "items": {
34973                         "enum": [
34974                             "oic.if.baseline",
34975                             "oic.if.ll",
34976                             "oic.if.b",
34977                             "oic.if.lb",
34978                             "oic.if.rw",
34979                             "oic.if.r",
34980                             "oic.if.a",
34981                             "oic.if.s"
34982                         ],
34983                         "type": "string"
34984                     },
34985                     "minItems": 1,
34986                     "readOnly": true,
34987                     "type": "array"
34988                 },
34989                 "interval": {
34990                     "description": "Time interval in minutes after the startTime, if present stopTime
34991 cannot be present",
34992                     "type": "integer"

```



```

34993     },
34994     "n": {
34995         "description": "Friendly name of the resource",
34996         "maxLength": 64,
34997         "readOnly": true,
34998         "type": "string"
34999     },
35000     "precision": {
35001         "description": "Accuracy granularity of the exposed value",
35002         "readOnly": true,
35003         "type": "number"
35004     },
35005     "range": {
35006         "description": "The valid range for the value Property",
35007         "items": {
35008             "anyOf": [
35009                 {
35010                     "type": "number"
35011                 },
35012                 {
35013                     "type": "integer"
35014                 }
35015             ]
35016         },
35017         "maxItems": 2,
35018         "minItems": 2,
35019         "readOnly": true,
35020         "type": "array"
35021     },
35022     "rt": {
35023         "description": "Resource Type",
35024         "items": {
35025             "maxLength": 64,
35026             "type": "string"
35027         },
35028         "minItems": 1,
35029         "readOnly": true,
35030         "type": "array"
35031     },
35032     "startTime": {
35033         "description": "Start time for the time period",
35034         "type": "string"
35035     },
35036     "step": {
35037         "anyOf": [
35038             {
35039                 "type": "integer"
35040             },
35041             {
35042                 "type": "number"
35043             }
35044         ],
35045         "description": "Step value across the defined range",
35046         "readOnly": true
35047     },
35048     "stopTime": {
35049         "description": "Stop time for the time period, if present interval cannot be present",
35050         "type": "string"
35051     },
35052     "value": {
35053         "anyOf": [
35054             {
35055                 "type": "array"
35056             },
35057             {
35058                 "type": "string"
35059             },
35060             {
35061                 "type": "boolean"
35062             },
35063             {

```

```

35064         "type": "integer"
35065     },
35066     {
35067         "type": "number"
35068     },
35069     {
35070         "type": "object"
35071     }
35072 ],
35073 "description": "The value sensed or actuated by this Resource"
35074 },
35075 },
35076 "required": [
35077     "startTime"
35078 ],
35079 "type": "object"
35080 }
35081 }
35082 }
35083 }
35084

```

B.80.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
range	array: see schema		Read Only	The valid range for the value Property
value	multiple types: see schema			The value sensed or actuated by this Resource
startTime	string	yes		Start time for the time period
if	array: see schema		Read Only	The interface set supported by this resource
n	string		Read Only	Friendly name of the resource
step	multiple types: see schema		Read Only	Step value across the defined range
precision	number		Read Only	Accuracy granularity of the exposed value
rt	array: see schema		Read Only	Resource Type
stopTime	string			Stop time for the time period, if present interval cannot be present
id	string		Read Only	Instance ID of this specific resource
interval	integer			Time interval in minutes after the startTime, if present stopTime cannot be present

35086 B.80.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/TimePeriodResURI		get	post		

35087 B.81 Touch Sensor

35088 B.81.1 Introduction

35089 This resource describes whether touch has been sensed or not.
 35090 The value is a boolean.
 35091 A value of 'true' means that touch has been sensed.
 35092 A value of 'false' means that touch not been sensed.
 35093

35094 B.81.2 Example URI

35095 /TouchResURI

35096 B.81.3 Resource Type

35097 The resource type (rt) is defined as: ['oic.r.sensor.touch'].

35098 B.81.4 Swagger2.0 Definition

```

35099 {
35100   "swagger": "2.0",
35101   "info": {
35102     "title": "Touch Sensor",
35103     "version": "v1.1.0-20160519",
35104     "license": {
35105       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
35106       "x-description": "Redistribution and use in source and binary forms, with or without
35107 modification, are permitted provided that the following conditions are met:\n      1.
35108 Redistributions of source code must retain the above copyright notice, this list of conditions and
35109 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
35110 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
35111 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
35112 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
35113 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
35114 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
35115 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
35116 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
35117 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
35118 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
35119 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
35120 OF SUCH DAMAGE.\n"
35121     }
35122   },
35123   "schemes": ["http"],
35124   "consumes": ["application/json"],
35125   "produces": ["application/json"],
35126   "paths": {
35127     "/TouchResURI" : {
35128       "get": {
35129         "description": "This resource describes whether touch has been sensed or not.\nThe value is
35130 a boolean.\nA value of 'true' means that touch has been sensed.\nA value of 'false' means that
35131 touch not been sensed.\n",
35132         "parameters": [
35133           {"$ref": "#/parameters/interface"}
35134         ],
35135         "responses": {
35136           "200": {
35137             "description": "",
35138             "x-example":
35139             {
35140               "rt": ["oic.r.sensor.touch"],
35141               "id": "unique_example_id",
35142               "value": true
35143             }
35144           }
35145         }
35146       }
35147     }
35148   }
35149 }
```

```

35144         ,
35145         "schema": { "$ref": "#/definitions/Touch" }
35146     }
35147 }
35148 }
35149 }
35150 },
35151 "parameters": {
35152     "interface" : {
35153         "in" : "query",
35154         "name" : "if",
35155         "type" : "string",
35156         "enum" : ["oic.if.s", "oic.if.baseline"]
35157     }
35158 },
35159 "definitions": {
35160     "Touch" :
35161     {
35162         "properties": {
35163             "id": {
35164                 "description": "Instance ID of this specific resource",
35165                 "maxLength": 64,
35166                 "readOnly": true,
35167                 "type": "string"
35168             },
35169             "if": {
35170                 "description": "The interface set supported by this resource",
35171                 "items": {
35172                     "enum": [
35173                         "oic.if.baseline",
35174                         "oic.if.ll",
35175                         "oic.if.b",
35176                         "oic.if.lb",
35177                         "oic.if.rw",
35178                         "oic.if.r",
35179                         "oic.if.a",
35180                         "oic.if.s"
35181                     ],
35182                     "type": "string"
35183                 },
35184                 "minItems": 1,
35185                 "readOnly": true,
35186                 "type": "array"
35187             },
35188             "n": {
35189                 "description": "Friendly name of the resource",
35190                 "maxLength": 64,
35191                 "readOnly": true,
35192                 "type": "string"
35193             },
35194             "precision": {
35195                 "description": "Accuracy granularity of the exposed value",
35196                 "readOnly": true,
35197                 "type": "number"
35198             },
35199             "range": {
35200                 "description": "The valid range for the value Property",
35201                 "items": {
35202                     "anyOf": [
35203                         {
35204                             "type": "number"
35205                         },
35206                         {
35207                             "type": "integer"
35208                         }
35209                     ]
35210                 },
35211                 "maxItems": 2,
35212                 "minItems": 2,
35213                 "readOnly": true,
35214                 "type": "array"

```

```

35215     },
35216     "rt": {
35217         "description": "Resource Type",
35218         "items": {
35219             "maxLength": 64,
35220             "type": "string"
35221         },
35222         "minItems": 1,
35223         "readOnly": true,
35224         "type": "array"
35225     },
35226     "step": {
35227         "anyOf": [
35228             {
35229                 "type": "integer"
35230             },
35231             {
35232                 "type": "number"
35233             }
35234         ],
35235         "description": "Step value across the defined range",
35236         "readOnly": true
35237     },
35238     "value": {
35239         "description": "true = sensed, false = not sensed.",
35240         "readOnly": true,
35241         "type": "boolean"
35242     }
35243 },
35244 "required": [
35245     "value"
35246 ],
35247 "type": "object"
35248 }
35249 }
35250 }
35251 }
35252

```

B.81.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema		Read Only	The interface set supported by this resource
step	multiple types: see schema		Read Only	Step value across the defined range
n	string		Read Only	Friendly name of the resource
range	array: see schema		Read Only	The valid range for the value Property
id	string		Read Only	Instance ID of this specific resource
precision	number		Read Only	Accuracy granularity of the exposed value
rt	array: see schema		Read Only	Resource Type
value	boolean	yes	Read Only	true = sensed, false = not sensed.

35254 B.81.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/TouchResURI		get			

35255 B.82 UV Radiation

35256 B.82.1 Introduction

35257 This resource specifies UV radiation measurement.
 35258 The measurement is the current measured UV Index
 35259 Retrieves the current UV Radiation value
 35260

35261 B.82.2 Example URI

35262 /UVRadiationResURI

35263 B.82.3 Resource Type

35264 The resource type (rt) is defined as: ['oic.r.sensor.radiation.uv'].

35265 B.82.4 Swagger2.0 Definition

```

35266 {
35267   "swagger": "2.0",
35268   "info": {
35269     "title": "UV Radiation",
35270     "version": "v1.1.0-20160519",
35271     "license": {
35272       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
35273       "x-description": "Redistribution and use in source and binary forms, with or without
35274 modification, are permitted provided that the following conditions are met:\n      1.
35275 Redistributions of source code must retain the above copyright notice, this list of conditions and
35276 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
35277 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
35278 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
35279 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
35280 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
35281 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
35282 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
35283 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
35284 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
35285 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
35286 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
35287 OF SUCH DAMAGE.\n"
35288     }
35289   },
35290   "schemes": ["http"],
35291   "consumes": ["application/json"],
35292   "produces": ["application/json"],
35293   "paths": {
35294     "/UVRadiationResURI" : {
35295       "get": {
35296         "description": "This resource specifies UV radiation measurement.\nThe measurement is the
35297 current measured UV Index\nRetrieves the current UV Radiation value\n",
35298         "parameters": [
35299           { "$ref": "#/parameters/interface" }
35300         ],
35301         "responses": {
35302           "200": {
35303             "description": "",
35304             "x-example":
35305               {
35306                 "rt": ["oic.r.sensor.radiation.uv"],
35307                 "id": "unique_example_id",
35308                 "measurement": 3.5
35309               }
35310           },
35311           "schema": { "$ref": "#/definitions/UVRadiation" }

```

```

35312     }
35313   }
35314 }
35315 }
35316 },
35317 "parameters": {
35318   "interface" : {
35319     "in" : "query",
35320     "name" : "if",
35321     "type" : "string",
35322     "enum" : ["oic.if.s", "oic.if.baseline"]
35323   }
35324 },
35325 "definitions": {
35326   "UVRadiation" :
35327     {
35328     "properties": {
35329       "id": {
35330         "description": "Instance ID of this specific resource",
35331         "maxLength": 64,
35332         "readOnly": true,
35333         "type": "string"
35334       },
35335       "if": {
35336         "description": "The interface set supported by this resource",
35337         "items": {
35338           "enum": [
35339             "oic.if.baseline",
35340             "oic.if.ll",
35341             "oic.if.b",
35342             "oic.if.lb",
35343             "oic.if.rw",
35344             "oic.if.r",
35345             "oic.if.a",
35346             "oic.if.s"
35347           ],
35348           "type": "string"
35349         },
35350         "minItems": 1,
35351         "readOnly": true,
35352         "type": "array"
35353       },
35354       "measurement": {
35355         "description": "The measured UV Index",
35356         "readOnly": true,
35357         "type": "number"
35358       },
35359       "n": {
35360         "description": "Friendly name of the resource",
35361         "maxLength": 64,
35362         "readOnly": true,
35363         "type": "string"
35364       },
35365       "precision": {
35366         "description": "Accuracy granularity of the exposed value",
35367         "readOnly": true,
35368         "type": "number"
35369       },
35370       "range": {
35371         "description": "The valid range for the value Property",
35372         "items": {
35373           "anyOf": [
35374             {
35375               "type": "number"
35376             },
35377             {
35378               "type": "integer"
35379             }
35380           ]
35381         },
35382         "maxItems": 2,

```

```

35383         "minItems": 2,
35384         "readOnly": true,
35385         "type": "array"
35386     },
35387     "rt": {
35388         "description": "Resource Type",
35389         "items": {
35390             "maxLength": 64,
35391             "type": "string"
35392         },
35393         "minItems": 1,
35394         "readOnly": true,
35395         "type": "array"
35396     },
35397     "step": {
35398         "anyOf": [
35399             {
35400                 "type": "integer"
35401             },
35402             {
35403                 "type": "number"
35404             }
35405         ],
35406         "description": "Step value across the defined range",
35407         "readOnly": true
35408     },
35409     "value": {
35410         "anyOf": [
35411             {
35412                 "type": "array"
35413             },
35414             {
35415                 "type": "string"
35416             },
35417             {
35418                 "type": "boolean"
35419             },
35420             {
35421                 "type": "integer"
35422             },
35423             {
35424                 "type": "number"
35425             },
35426             {
35427                 "type": "object"
35428             }
35429         ],
35430         "description": "The value sensed or actuated by this Resource"
35431     }
35432 },
35433 "required": [
35434     "measurement"
35435 ],
35436 "type": "object"
35437 }
35438 }
35439 }
35440 }
35441

```

B.82.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema		Read Only	Step value across the defined range
id	string		Read Only	Instance ID of this specific resource

if	array: see schema		Read Only	The interface set supported by this resource
rt	array: see schema		Read Only	Resource Type
precision	number		Read Only	Accuracy granularity of the exposed value
n	string		Read Only	Friendly name of the resource
range	array: see schema		Read Only	The valid range for the value Property
measurement	number	yes	Read Only	The measured UV Index
value	multiple types: see schema			The value sensed or actuated by this Resource

35443 B.82.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/UVRadiationResURI		get			

35444 B.83 Value Conditional

35445 B.83.1 Introduction

35446 This resource specifies conditions that can be applied to an observed value in any Resource.
35447 These conditions are applied by the server exposing the Resource to any generated notifications
35448 because of subscriptions to the Resource.
35449 A unicast RETRIEVE to the Resource will receive the most recent value; which may not be the
35450 most recent notified value.
35451 A server exposes this Resource in association with the Resource conveying the observed value.
35452 This is done by means of a new Resource instance with an RT of ["oic.r.<thing being observed>",
35453 "oic.r.value.conditional"], e.g ["oic.r.temperature", "oic.r.value.conditional"]. Please see Section
35454 5.7.1 of the published OCF Resource Type Specification for more details.
35455 The threshold is the amount by which the thing being observed must change before a notification
35456 is sent.
35457 The minnotifyperiod is the minimum time in ms (milliseconds) that must elapse before a notification
35458 is sent.
35459 If the maxnotifyperiod (time in ms (milliseconds)) elapses then a notification must be sent.
35460 The maxnotifyperiod timer resets each time a notification is sent.
35461 A value of '0' for any of threshold, minnotifyperiod or maxnotifyperiod means that the capability is
35462 supported but not active.
35463

35464 B.83.2 Example URI

35465 /ValueConditionalResURI

35466 B.83.3 Resource Type

35467 The resource type (rt) is defined as: ["oic.r.value.conditional"].

35468 B.83.4 Swagger2.0 Definition

```
35469 {
35470   "swagger": "2.0",
35471   "info": {
```

```

35472     "title": "Value Conditional",
35473     "version": "v1.1.0-20161031",
35474     "license": {
35475         "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
35476         "x-description": "Redistribution and use in source and binary forms, with or without
35477 modification, are permitted provided that the following conditions are met:\n      1.
35478 Redistributions of source code must retain the above copyright notice, this list of conditions and
35479 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
35480 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
35481 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
35482 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
35483 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
35484 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
35485 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
35486 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
35487 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
35488 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
35489 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
35490 OF SUCH DAMAGE.\n"
35491     },
35492 },
35493 "schemes": ["http"],
35494 "consumes": ["application/json"],
35495 "produces": ["application/json"],
35496 "paths": {
35497     "/ValueConditionalResURI" : {
35498         "get": {
35499             "description": "This resource specifies conditions that can be applied to an observed value
35500 in any Resource.\nThese conditions are applied by the server exposing the Resource to any generated
35501 notifications because of subscriptions to the Resource.\nA unicast RETRIEVE to the Resource will
35502 receive the most recent value; which may not be the most recent notified value.\nA server exposes
35503 this Resource in association with the Resource conveying the observed value.\nThis is done by means
35504 of a new Resource instance with an RT of [\"oic.r.<thing being observed>\",
35505 \"oic.r.value.conditional\"], e.g [\"oic.r.temperature\", \"oic.r.value.conditional\"]. Please see
35506 Section 5.7.1 of the published OCF Resource Type Specification for more details.\nThe threshold is
35507 the amount by which the thing being observed must change before a notification is sent.\nThe
35508 minnotifyperiod is the minimum time in ms (milliseconds) that must elapse before a notification is
35509 sent.\nIf the maxnotifyperiod (time in ms (milliseconds)) elapses then a notification must be
35510 sent.\nThe maxnotifyperiod timer resets each time a notification is sent.\nA value of '0' for any
35511 of threshold, minnotifyperiod or maxnotifyperiod means that the capability is supported but not
35512 active.\n",
35513             "parameters": [
35514                 { "$ref": "#/parameters/interface" }
35515             ],
35516             "responses": {
35517                 "200": {
35518                     "description": "",
35519                     "x-example":
35520                     {
35521                         "rt": ["oic.r.value.conditional"],
35522                         "id": "unique_example_id",
35523                         "threshold": 2,
35524                         "minnotifyperiod": 2000,
35525                         "maxnotifyperiod": 5000
35526                     }
35527                 },
35528                 "schema": { "$ref": "#/definitions/valueconditional" }
35529             }
35530         },
35531     },
35532     "post": {
35533         "description": "body:\n application/json:\n      schema: valueconditional\n      example: |\n35534 { \n      \"threshold\": 2,\n      \"minnotifyperiod\": 1500\n      }\n",
35535         "parameters": [
35536             { "$ref": "#/parameters/interface" }
35537         ],
35538         "responses": {
35539             "200": {
35540                 "description": "",
35541                 "x-example":
35542                 {

```

```

35543         "threshold": 2,
35544         "minnotifyperiod": 1500
35545     }
35546     ,
35547     "schema": { "$ref": "#/definitions/valueconditional" }
35548 }
35549 }
35550 }
35551 }
35552 },
35553 "parameters": {
35554     "interface" : {
35555         "in" : "query",
35556         "name" : "if",
35557         "type" : "string",
35558         "enum" : ["oic.if.rw", "oic.if.baseline"]
35559     }
35560 },
35561 "definitions": {
35562     "valueconditional" :
35563     {
35564         "anyOf": [
35565             {
35566                 "required": [
35567                     "threshold"
35568                 ],
35569             },
35570             {
35571                 "required": [
35572                     "minnotifyperiod"
35573                 ],
35574             },
35575             {
35576                 "required": [
35577                     "maxnotifyperiod"
35578                 ],
35579             }
35580         ],
35581         "properties": {
35582             "maxnotifyperiod": {
35583                 "description": "Maximum elapsed time in ms before a notification must be sent.",
35584                 "minimum": 0,
35585                 "type": "integer"
35586             },
35587             "minnotifyperiod": {
35588                 "description": "Minimum elapsed time in ms before a notification is sent.",
35589                 "minimum": 0,
35590                 "type": "integer"
35591             },
35592             "threshold": {
35593                 "description": "Amount by which the measured value must change before a notification is
35594 sent.",
35595                 "minimum": 0,
35596                 "type": "number"
35597             }
35598         },
35599         "type": "object"
35600     }
35601 }
35602 }
35603 }
35604

```

B.83.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
maxnotifyperiod	integer	yes		Maximum elapsed time in ms before a

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

35606 B.83.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/ValueConditionalResURI		get	post		

35607 B.84 Vehicle Connector

35608 B.84.1 Introduction

35609 This resource describes the attributes associated with an electric vehicle charging connector. The
35610 connected state is a boolean indicating the status of the connector (False = disconnected, True =
35611 connected). The rated charging capacity and rated discharging capacity are in Amps (A).
35612 Retrieves the state of the vehicle connector.
35613

35614 B.84.2 Example URI

35615 /VehicleConnectorResURI

35616 B.84.3 Resource Type

35617 The resource type (rt) is defined as: ['oic.r.vehicle.connector'].

35618 B.84.4 Swagger2.0 Definition

```

35619 {
35620   "swagger": "2.0",
35621   "info": {
35622     "title": "Vehicle Connector",
35623     "version": "v1.1.0-20170815",
35624     "license": {
35625       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
35626       "x-description": "Redistribution and use in source and binary forms, with or without
35627 modification, are permitted provided that the following conditions are met:\n      1.
35628 Redistributions of source code must retain the above copyright notice, this list of conditions and
35629 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
35630 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
35631 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
35632 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
35633 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
35634 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
35635 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
35636 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
35637 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
35638 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
35639 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
35640 OF SUCH DAMAGE.\n"
35641     }
35642   },
35643   "schemes": ["http"],
35644   "consumes": ["application/json"],
35645   "produces": ["application/json"],
35646   "paths": {

```

```

35647     "/VehicleConnectorResURI" : {
35648         "get": {
35649             "description": "This resource describes the attributes associated with an electric vehicle
35650 charging connector. The connected state is a boolean indicating the status of the connector (False
35651 = disconnected, True = connected). The rated charging capacity and rated discharging capacity are
35652 in Amps (A).\nRetrieves the state of the vehicle connector.\n",
35653             "parameters": [
35654                 { "$ref": "#/parameters/interface" }
35655             ],
35656             "responses": {
35657                 "200": {
35658                     "description": "",
35659                     "x-example":
35660                     {
35661                         "rt": ["oic.r.vehicle.connector"],
35662                         "id": "unique_example_id",
35663                         "connected": true,
35664                         "ratedchargingcapacity": 20.0,
35665                         "rateddischargingcapacity": 5.0
35666                     }
35667                 },
35668                 "schema": { "$ref": "#/definitions/VehicleConnector" }
35669             }
35670         }
35671     }
35672 },
35673 {
35674     "parameters": {
35675         "interface" : {
35676             "in" : "query",
35677             "name" : "if",
35678             "type" : "string",
35679             "enum" : ["oic.if.s", "oic.if.baseline"]
35680         }
35681     },
35682     "definitions": {
35683         "VehicleConnector" :
35684         {
35685             "properties": {
35686                 "connected": {
35687                     "description": "The connection state.",
35688                     "readOnly": true,
35689                     "type": "boolean"
35690                 },
35691                 "id": {
35692                     "description": "Instance ID of this specific resource",
35693                     "maxLength": 64,
35694                     "readOnly": true,
35695                     "type": "string"
35696                 },
35697                 "if": {
35698                     "description": "The interface set supported by this resource",
35699                     "items": {
35700                         "enum": [
35701                             "oic.if.baseline",
35702                             "oic.if.ll",
35703                             "oic.if.b",
35704                             "oic.if.lb",
35705                             "oic.if.rw",
35706                             "oic.if.r",
35707                             "oic.if.a",
35708                             "oic.if.s"
35709                         ],
35710                         "type": "string"
35711                     },
35712                     "minItems": 1,
35713                     "readOnly": true,
35714                     "type": "array"
35715                 },
35716                 "n": {
35717                     "description": "Friendly name of the resource",

```

```

35718         "maxLength": 64,
35719         "readOnly": true,
35720         "type": "string"
35721     },
35722     "precision": {
35723         "description": "Accuracy granularity of the exposed value",
35724         "readOnly": true,
35725         "type": "number"
35726     },
35727     "range": {
35728         "description": "The valid range for the value Property",
35729         "items": {
35730             "anyOf": [
35731                 {
35732                     "type": "number"
35733                 },
35734                 {
35735                     "type": "integer"
35736                 }
35737             ]
35738         },
35739         "maxItems": 2,
35740         "minItems": 2,
35741         "readOnly": true,
35742         "type": "array"
35743     },
35744     "ratedchargingcapacity": {
35745         "description": "The rated charging capacity in Amps (A).",
35746         "readOnly": true,
35747         "type": "number"
35748     },
35749     "rateddischargingcapacity": {
35750         "description": "The rated discharging capacity in Amps (A).",
35751         "readOnly": true,
35752         "type": "number"
35753     },
35754     "rt": {
35755         "description": "Resource Type",
35756         "items": {
35757             "maxLength": 64,
35758             "type": "string"
35759         },
35760         "minItems": 1,
35761         "readOnly": true,
35762         "type": "array"
35763     },
35764     "step": {
35765         "anyOf": [
35766             {
35767                 "type": "integer"
35768             },
35769             {
35770                 "type": "number"
35771             }
35772         ],
35773         "description": "Step value across the defined range",
35774         "readOnly": true
35775     },
35776     "value": {
35777         "anyOf": [
35778             {
35779                 "type": "array"
35780             },
35781             {
35782                 "type": "string"
35783             },
35784             {
35785                 "type": "boolean"
35786             },
35787             {
35788                 "type": "integer"

```

```

35789         },
35790         {
35791             "type": "number"
35792         },
35793         {
35794             "type": "object"
35795         }
35796     ],
35797     "description": "The value sensed or actuated by this Resource"
35798 },
35799 },
35800 "required": [
35801     "connected"
35802 ],
35803 "type": "object"
35804 }
35805 }
35806 }
35807 }
35808

```

B.84.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema		Read Only	Step value across the defined range
rateddischargingcapacity	number		Read Only	The rated discharging capacity in Amps (A).
rt	array: see schema		Read Only	Resource Type
connected	boolean	yes	Read Only	The connection state.
n	string		Read Only	Friendly name of the resource
value	multiple types: see schema			The value sensed or actuated by this Resource
if	array: see schema		Read Only	The interface set supported by this resource
ratedchargingcapacity	number		Read Only	The rated charging capacity in Amps (A).
precision	number		Read Only	Accuracy granularity of the exposed value
id	string		Read Only	Instance ID of this specific resource
range	array: see schema		Read Only	The valid range for the value Property

B.84.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
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/VehicleConnectorResURI		get			
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35811 B.85 Water Sensor

35812 B.85.1 Introduction

35813 This resource describes whether water has been sensed or not.
 35814 The value is a boolean.
 35815 A value of 'true' means that water has been sensed.
 35816 A value of 'false' means that water not been sensed.
 35817

35818 B.85.2 Example URI

35819 /WaterResURI

35820 B.85.3 Resource Type

35821 The resource type (rt) is defined as: ['oic.r.sensor.water'].

35822 B.85.4 Swagger2.0 Definition

```

35823 {
35824   "swagger": "2.0",
35825   "info": {
35826     "title": "Water Sensor",
35827     "version": "v1.1.0-20160519",
35828     "license": {
35829       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
35830       "x-description": "Redistribution and use in source and binary forms, with or without
35831 modification, are permitted provided that the following conditions are met:\n      1.
35832 Redistributions of source code must retain the above copyright notice, this list of conditions and
35833 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
35834 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
35835 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
35836 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
35837 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
35838 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
35839 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
35840 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
35841 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND
35842 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
35843 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
35844 OF SUCH DAMAGE.\n"
35845     },
35846   },
35847   "schemes": ["http"],
35848   "consumes": ["application/json"],
35849   "produces": ["application/json"],
35850   "paths": {
35851     "/WaterResURI" : {
35852       "get": {
35853         "description": "This resource describes whether water has been sensed or not.\nThe value is
35854 a boolean.\nA value of 'true' means that water has been sensed.\nA value of 'false' means that
35855 water not been sensed.\n",
35856         "parameters": [
35857           {"$ref": "#/parameters/interface"}
35858         ],
35859         "responses": {
35860           "200": {
35861             "description": "",
35862             "x-example":
35863               {
35864                 "rt": ["oic.r.sensor.water"],
35865                 "id": "unique_example_id",
35866                 "value": true
35867               },
35868             "schema": { "$ref": "#/definitions/Water" }
35869           }
35870         }
35871       }
35872     }
35873   }

```



```

35871     }
35872   }
35873 }
35874 },
35875 "parameters": {
35876   "interface": {
35877     "in": "query",
35878     "name": "if",
35879     "type": "string",
35880     "enum": ["oic.if.s", "oic.if.baseline"]
35881   }
35882 },
35883 "definitions": {
35884   "Water": {
35885     {
35886       "properties": {
35887         "id": {
35888           "description": "Instance ID of this specific resource",
35889           "maxLength": 64,
35890           "readOnly": true,
35891           "type": "string"
35892         },
35893         "if": {
35894           "description": "The interface set supported by this resource",
35895           "items": {
35896             "enum": [
35897               "oic.if.baseline",
35898               "oic.if.ll",
35899               "oic.if.b",
35900               "oic.if.lb",
35901               "oic.if.rw",
35902               "oic.if.r",
35903               "oic.if.a",
35904               "oic.if.s"
35905             ],
35906             "type": "string"
35907           },
35908           "minItems": 1,
35909           "readOnly": true,
35910           "type": "array"
35911         },
35912         "n": {
35913           "description": "Friendly name of the resource",
35914           "maxLength": 64,
35915           "readOnly": true,
35916           "type": "string"
35917         },
35918         "precision": {
35919           "description": "Accuracy granularity of the exposed value",
35920           "readOnly": true,
35921           "type": "number"
35922         },
35923         "range": {
35924           "description": "The valid range for the value Property",
35925           "items": {
35926             "anyOf": [
35927               {
35928                 "type": "number"
35929               },
35930               {
35931                 "type": "integer"
35932               }
35933             ]
35934           },
35935           "maxItems": 2,
35936           "minItems": 2,
35937           "readOnly": true,
35938           "type": "array"
35939         },
35940         "rt": {
35941           "description": "Resource Type",

```

```

35942         "items": {
35943             "maxLength": 64,
35944             "type": "string"
35945         },
35946         "minItems": 1,
35947         "readOnly": true,
35948         "type": "array"
35949     },
35950     "step": {
35951         "anyOf": [
35952             {
35953                 "type": "integer"
35954             },
35955             {
35956                 "type": "number"
35957             }
35958         ],
35959         "description": "Step value across the defined range",
35960         "readOnly": true
35961     },
35962     "value": {
35963         "description": "true = sensed, false = not sensed.",
35964         "readOnly": true,
35965         "type": "boolean"
35966     }
35967 },
35968 "required": [
35969     "value"
35970 ],
35971 "type": "object"
35972 }
35973
35974 }
35975 }
35976

```

B.85.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
step	multiple types: see schema		Read Only	Step value across the defined range
precision	number		Read Only	Accuracy granularity of the exposed value
range	array: see schema		Read Only	The valid range for the value Property
rt	array: see schema		Read Only	Resource Type
if	array: see schema		Read Only	The interface set supported by this resource
id	string		Read Only	Instance ID of this specific resource
n	string		Read Only	Friendly name of the resource
value	boolean	yes	Read Only	true = sensed, false = not sensed.

B.85.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
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/WaterResURI		get			
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35979 B.86 Weight

35980 B.86.1 Introduction

35981 This resource describes the properties associated with weight of an object.
 35982 Weight (weight) is weight of an object.
 35983 Retrieves weight of an object.
 35984

35985 B.86.2 Example URI

35986 /WeightResURI

35987 B.86.3 Resource Type

35988 The resource type (rt) is defined as: ['oic.r.weight'].

35989 B.86.4 Swagger2.0 Definition

```

35990 {
35991   "swagger": "2.0",
35992   "info": {
35993     "title": "Weight",
35994     "version": "v1.1.0-20160519",
35995     "license": {
35996       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
35997       "x-description": "Redistribution and use in source and binary forms, with or without
35998 modification, are permitted provided that the following conditions are met:\n      1.
35999 Redistributions of source code must retain the above copyright notice, this list of conditions and
36000 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
36001 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
36002 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
36003 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
36004 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
36005 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
36006 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
36007 EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
36008 OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND
36009 ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
36010 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
36011 OF SUCH DAMAGE.\n"
36012     },
36013   },
36014   "schemes": ["http"],
36015   "consumes": ["application/json"],
36016   "produces": ["application/json"],
36017   "paths": {
36018     "/WeightResURI" : {
36019       "get": {
36020         "description": "This resource describes the properties associated with weight of an
36021 object.\nWeight (weight) is weight of an object.\nRetrieves weight of an object.\n",
36022         "parameters": [
36023           { "$ref": "#/parameters/interface" }
36024         ],
36025         "responses": {
36026           "200": {
36027             "description": "",
36028             "x-example":
36029               {
36030                 "rt": ["oic.r.weight"],
36031                 "id": "unique_example_id",
36032                 "weight": 200.0
36033               }
36034             ,
36035             "schema": { "$ref": "#/definitions/Weight" }
36036           }
36037         }
36038       }
36039     }
36040   }

```

```

36039     }
36040   },
36041   "parameters": {
36042     "interface" : {
36043       "in" : "query",
36044       "name" : "if",
36045       "type" : "string",
36046       "enum" : ["oic.if.s", "oic.if.baseline"]
36047     }
36048   },
36049   "definitions": {
36050     "Weight" :
36051     {
36052       "properties": {
36053         "id": {
36054           "description": "Instance ID of this specific resource",
36055           "maxLength": 64,
36056           "readOnly": true,
36057           "type": "string"
36058         },
36059         "if": {
36060           "description": "The interface set supported by this resource",
36061           "items": {
36062             "enum": [
36063               "oic.if.baseline",
36064               "oic.if.ll",
36065               "oic.if.b",
36066               "oic.if.lb",
36067               "oic.if.rw",
36068               "oic.if.r",
36069               "oic.if.a",
36070               "oic.if.s"
36071             ],
36072             "type": "string"
36073           },
36074           "minItems": 1,
36075           "readOnly": true,
36076           "type": "array"
36077         },
36078         "n": {
36079           "description": "Friendly name of the resource",
36080           "maxLength": 64,
36081           "readOnly": true,
36082           "type": "string"
36083         },
36084         "precision": {
36085           "description": "Accuracy granularity of the exposed value",
36086           "readOnly": true,
36087           "type": "number"
36088         },
36089         "range": {
36090           "description": "The valid range for the value Property",
36091           "items": {
36092             "anyOf": [
36093               {
36094                 "type": "number"
36095               },
36096               {
36097                 "type": "integer"
36098               }
36099             ]
36100           },
36101           "maxItems": 2,
36102           "minItems": 2,
36103           "readOnly": true,
36104           "type": "array"
36105         },
36106         "rt": {
36107           "description": "Resource Type",
36108           "items": {
36109             "maxLength": 64,

```

```

36110         "type": "string"
36111     },
36112     "minItems": 1,
36113     "readOnly": true,
36114     "type": "array"
36115 },
36116 "step": {
36117     "anyOf": [
36118         {
36119             "type": "integer"
36120         },
36121         {
36122             "type": "number"
36123         }
36124     ],
36125     "description": "Step value across the defined range",
36126     "readOnly": true
36127 },
36128 "value": {
36129     "anyOf": [
36130         {
36131             "type": "array"
36132         },
36133         {
36134             "type": "string"
36135         },
36136         {
36137             "type": "boolean"
36138         },
36139         {
36140             "type": "integer"
36141         },
36142         {
36143             "type": "number"
36144         },
36145         {
36146             "type": "object"
36147         }
36148     ],
36149     "description": "The value sensed or actuated by this Resource"
36150 },
36151 "weight": {
36152     "description": "Weight of an object",
36153     "minimum": 0,
36154     "readOnly": true,
36155     "type": "number"
36156 },
36157 },
36158 "required": [
36159     "weight"
36160 ],
36161 "type": "object"
36162 }
36163 }
36164 }
36165 }
36166

```

B.86.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
precision	number		Read Only	Accuracy granularity of the exposed value
id	string		Read Only	Instance ID of this specific resource

step	multiple types: see schema		Read Only	Step value across the defined range
range	array: see schema		Read Only	The valid range for the value Property
n	string		Read Only	Friendly name of the resource
value	multiple types: see schema			The value sensed or actuated by this Resource
rt	array: see schema		Read Only	Resource Type
if	array: see schema		Read Only	The interface set supported by this resource
weight	number	yes	Read Only	Weight of an object

B.86.6 CRUDN behaviour

Resource	Create	Read	Update	Delete	Notify
/WeightResURI		get			