

OCF Resource Type Specification

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1 Scope

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

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

This document is built on top of ISO/IEC 30118-1:2018. ISO/IEC 30118-1:2018 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 are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

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

3 Terms, definitions, and abbreviated terms

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

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

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

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

3.2 Abbreviated terms

3.2.1

CRUDN

Create Retrieve Update Delete Notify

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

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4 Document conventions and organization

4.1 Conventions

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

4.2 Notation

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

Required (or shall or mandatory).

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

Recommended (or should).

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

Allowed (or allowed).

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

DEPRECATED

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

Conditionally allowed (CA)

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

Conditionally required (CR)

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

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

Words that are emphasized are printed in *italic*.

5 Baseline Model Constructs

5.1 URI

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

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

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

5.2 Interfaces

5.2.1 Introduction

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

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

5.2.2 Restricting Interface Functionality

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).

The actual implementation of a resource can be limited by:

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

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

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

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

5.3 OpenAPI Specification 2.0 definition

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

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

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

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

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

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

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

5.4 Property definition

5.4.1 Common Properties

ISO/IEC 30118-1:2018 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 document; they are exposed within the ISO/IEC 30118-1:2018 defined “/oic/res/” Resource Type through which the OCF Server and its available Resources are discovered. The Common Properties “id” and “n” may be specified for all Resource Types defined in this document. Table 2 lists all of the noted Common Properties.

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 ISO/IEC 30118-1:2018 defined baseline interface (oic.if.baseline) by specifying this in a query parameter.

Table 2 – Common Properties for OCF Resources

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

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

5.4.2 Resource Properties

5.4.2.1 Introduction

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

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

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

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

5.4.2.2 "range" Property

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

5.4.2.3 "step" Property

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

5.4.2.4 "precision" Property

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

5.4.3 Basic Resource Schema

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

5.4.4 CRUDN Operation Response Codes

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

Table 4 – Return codes behaviour in OpenAPI Specification 2.0

Response Code	Meaning
200	Payload of the response will confirm the change. The OpenAPI Specification 2.0 definition will contain a schema to define the payload.
201	Payload is the URL of the Resource that was created by the server as a result of a CREATE operation. The OpenAPI Specification 2.0 definition will contain schema to define the payload.
204	Ok, everything went well, no payload provided. The OpenAPI Specification 2.0 definition does not contain a schema. The OpenAPI Specification 2.0 definition may even omit this value, since it is regarded as default behaviour of an OCF Server.
403	Case 1: In the case of a RETRIEVE on a Resource with the use of a query parameter selecting specific Property values; if the server does not support the values provided then this response should be returned. The response payload should include the allowed values for the query parameter. Case 2: The server could not CREATE or UPDATE the Resource due to a problem with the provided payload. For an UPDATE, unless otherwise stated in the Resource Type definition, the response payload should include the same schema defined for a 200; indicating the current Resource Property value(s).

5.5 Example Resource Definitions

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

5.6 Observable Resource Types

5.6.1 Introduction

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

5.6.2 Conditional Notification

5.6.2.1 General

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”]”.

5.6.2.2 Conditional Notification Property Summary

Table 5 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 – 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

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

5.6.2.3 Property Definition: threshold

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

5.6.2.4 Property Definition: minnotifyperiod

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

5.6.2.5 Property Definition: maxnotifyperiod

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

5.6.2.6 Governing State Machine

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

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

```
graph TD
    A[If minnotifyperiod expired:] --> B[If observed value changed:]
    B --> C[If change amount >= threshold:]
    C --> D[Send notification with current value]
    C --> E[Reset minnotifyperiod , maxnotifyperiod]
    E --> F[If maxnotifyperiod expired:]
    F --> G[Get current value]
    G --> H[Send notification with current value]
    H --> I[Reset minnotifyperiod , maxnotifyperiod]
```

Figure 1 – Overall conditional notification logic

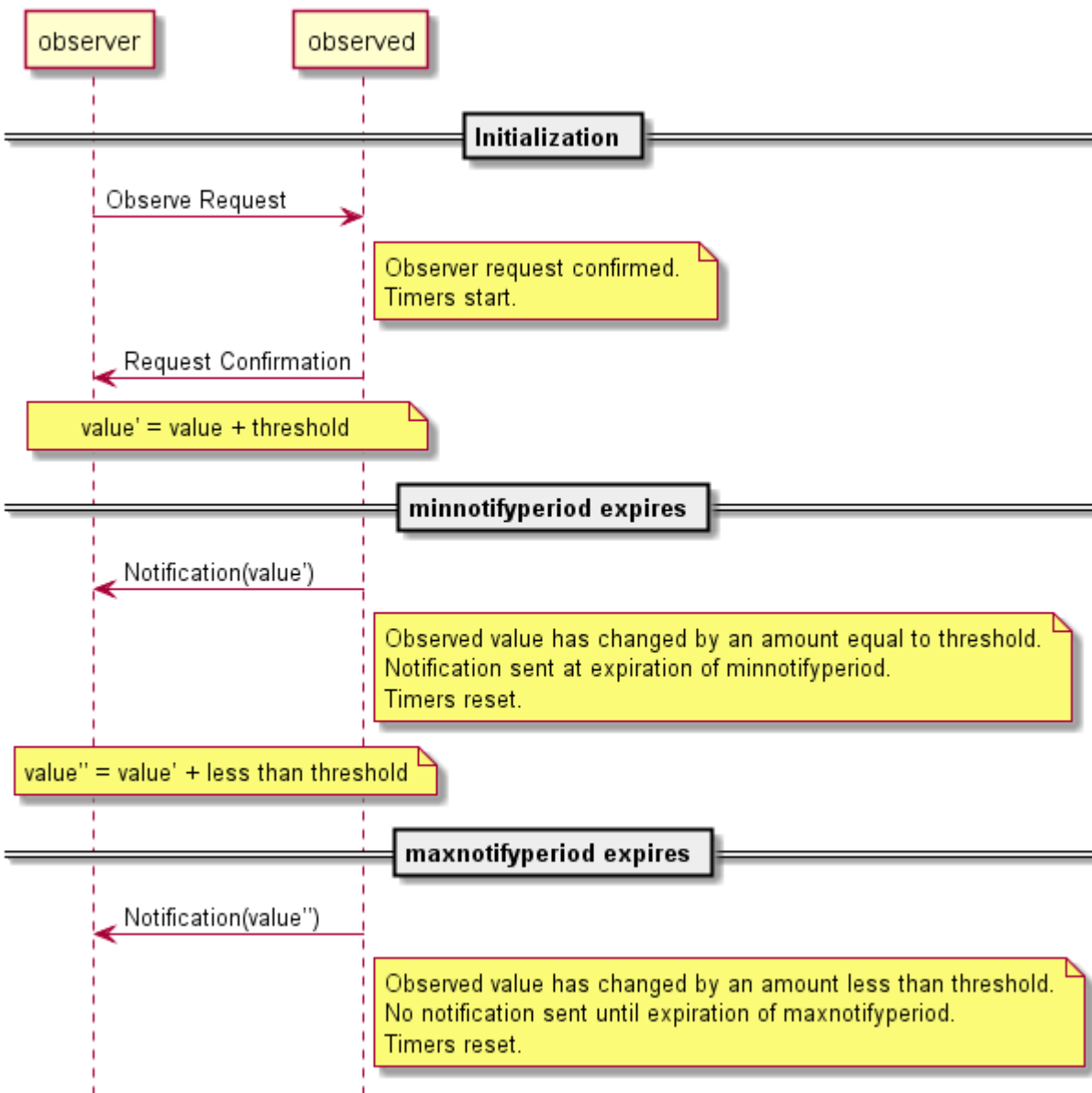


Figure 2 – Conditional Notification Example Flow

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 Figure 3. 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.

1969 The linking is done by using an array of Links; refer to ISO/IEC 30118-1:2018 clause 7.8.2 for more
1970 details. Note that the example in Figure 3 contains a partial schema of this definition as it is for
1971 descriptive purpose only. The Property name of the array in the example is “resources”.

1972 The contents of the listed Resources can be achieved in a single operation by using the ISO/IEC
1973 30118-1:2018 defined oic.if.b interface.

```
{
  "swagger": "2.0",
  "info": {
    "title": "Compsite Example",
    "version": "v1.1.0-2018",
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/CompositeResURI?if=oic.if.baseline" : {
      "get": {
        "description": "Composite Resource.\n",
        "parameters": [
          {"$ref": "#/parameters/interface-baseline"}
        ],
        "responses": {
          "200": {
            "description": "Success path response for the Resource",
            "x-example": {
              "rt": ["oic.r.example"],
              "if": ["oic.if.ll", "oic.if.b", "oic.if.baseline"],
              "id": "unique_example_id",
              "resources": [
                {
                  "href": "/TimeIntervalResURI",
                  "rt": ["oic.r.time.period"],
                  "if": ["oic.if.a", "oic.if.baseline"],
                  "eps": [{"ep": "coaps://[fe80::bld6]:1122"}]
                },
                {
                  "href": "/GasConsumptionResURI",
                  "rt": ["oic.r.gas.consumption"],
                  "if": ["oic.if.s", "oic.if.baseline"],
                  "eps": [{"ep": "coaps://[fe80::bld6]:1122"}]
                }
              ]
            },
            "schema": {"$ref": "#/definitions/composite"}
          }
        }
      }
    }
  }
}
```

Figure 3 – Composite Resource Example

5.8 Document Version

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

5.9 Data types

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

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

6 Resource Type definitions

6.1 Introduction

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

All Resource Types shall be created in accordance with ISO/IEC 30118-1:2018 clause 7.4. 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 – Alphabetical list of Resource Types

Friendly Name (informative)	Resource Type (rt)	Clause
3D Printer	oic.r.printer.3d	6.88
Acceleration Sensor	oic.r.sensor.acceleration	6.56
Activity	oic.r.activity	6.127
Activity Count	oic.r.sensor.activity.count	6.24
Activity Tracker Atomic Measurement	oic.r.activitytracker-am	6.128
Air Flow	oic.r.airflow	6.2
Air Flow Control	oic.r.airflowcontrol	6.3
Air Quality	oic.r.airquality	6.66
Air Quality Collection	oic.r.airqualitycollection	6.67
Alarm	oic.r.alarm	6.129
Altimeter	oic.r.altimeter	6.61
Atmospheric Pressure	oic.r.sensor.atmosphericpressure	6.25
Audio Controls	oic.r.audio	6.26
Auto Focus	oic.r.autofocus	6.27
Automatic Document Feeder	oic.r.automaticdocumentfeeder	6.28
Auto White Balance	oic.r.colour.autowhitebalance	6.32
Battery	oic.r.energy.battery	6.4
Battery Material	oic.r.batterymaterial	6.79
Body Composition Analyser Atomic Measurement	oic.r.bodycompositionanalyser-am	6.155
Binary switch	oic.r.switch.binary	6.5
Blood Pressure	oic.r.blood.pressure	6.89
Blood Pressure Monitor Atomic Measurement	oic.r.bloodpressuremonitor-am	6.90
BMI	oic.r.bmi	6.91
Body Fat	oic.r.body.fat	6.92
Body Fat Free Mass	oic.r.body.ffm	6.93

Body Location Temperature	oic.r.body.location.temperature	6.94
Body Scale Atomic Measurement	oic.r.body.scale-am	6.95
Body Soft Lean Mass	oic.r.body.slm	6.96
Body Thermometer Atomic Measurement	oic.r.bodythermometer-am	6.97
Body Water	oic.r.body.water	6.98
Brewing	oic.r.brewing	6.80
Brightness	oic.r.light.brightness	6.6
Button Switch	oic.r.button	6.29
Cadence	oic.r.cadence	6.144
Calibrate for Continuous Glucose Meter (CGM)	oic.r.cgm.calibrate	6.131
Calorific Value	oic.r.calorificvalue	6.116
Carbon Dioxide Sensor	oic.r.sensor.carbondioxide	6.30
Carbon Monoxide Sensor	oic.r.sensor.carbonmonoxide	6.31
Circuit Breaker (IEC 61850)	oic.r.circuitbreaker	6.145
Clock	oic.r.clock	6.62
Colour Chroma	oic.r.colour.chroma	6.7
Colour Hue Saturation	oic.r.colour.hs	6.78
Colour RGB	oic.r.colour.rgb	6.8
Colour Saturation	oic.r.colour.saturation	6.33
Colour Space Coordinates	oic.r.colour.csc	6.76
Colour Temperature	oic.r.colour.colourtemperature	6.77
Consumable	oic.r.consumable	6.68
Consumable Collection	oic.r.consumablecollection	6.69
Contact Sensor	oic.r.sensor.contact	6.34
Continuous Glucose Meter (CGM) Atomic Measurement	oic.r.cgm-am	6.130
Conversion Factor	oic.r.conversionfactor	6.117
Cycling Power	oic.r.cyclingpower	6.146
Delay Defrost	oic.r.delaydefrost	6.70
Demand Response Load Control (DRLC)	oic.r.energy.drlc	6.35
Deodorization	oic.r.deodorization	6.152
Device Settings - Accessibility	oic.r.settings.accessibility	6.164
Device Settings - Broadcasting	oic.r.settings.broadcasting	6.165
Device Settings - Picture	oic.r.settings.picture	6.166
Device Settings - Sound	oic.r.settings.sound	6.167
Device Settings - Support	oic.r.settings.support	6.168
Device Settings - System	oic.r.settings.system	6.169
Dimming	oic.r.light.dimming	6.9
Door	oic.r.door	6.10
Ecomode	oic.r.ecomode	6.71

Electric Vehicle Connector	oic.r.vehicle.connector	6.86
Electrical Energy	oic.r.energy.electrical	6.81
Energy Consumption	oic.r.energy.consumption	6.11
Energy Generation	oic.r.energy.generation	6.82
Energy Overload/Circuit Breaker	oic.r.energy.overload	6.36
Energy Usage	oic.r.energy.usage	6.12
Gas Consumption	oic.r.gas.consumption	6.118
Gas Usage	oic.r.gas.usage	6.119
Fault Interrupter Switch	oic.r.switch.fault	6.156
Foaming	oic.r.foaming	6.83
Generic Sensor	oic.r.sensor	6.37
Geolocation Sensor	oic.r.sensor.geolocation	6.63
Glass Break Sensor	oic.r.sensor.glassbreak	6.38
Glucose	oic.r.glucose	6.99
Glucose Meter Complex Carbohydrates	oic.r.glucose.carb	6.100
Glucose Meter Exercise	oic.r.glucose.exercise	6.101
Glucose Meter HbA1c	oic.r.glucose.hba1c	6.102
Glucose Meter Context Health	oic.r.glucose.health	6.103
Glucose Meter Context Meal	oic.r.glucose.meal	6.104
Glucose Meter Context Medication	oic.r.glucose.medication	6.105
Glucose Meter Atomic Measurement	oic.r.glucosemeter-am	6.106
Glucose Meter Context Sample Location	oic.r.glucose.samplelocation	6.107
Glucose Meter Context Tester	oic.r.glucose.testers	6.108
Grinder	oic.r.grinder	6.84
HVAC Capacity	Oic.r.hvac.capacity	6.157
Heart Rate	oic.r.heartrate	6.136
Heart Rate Monitor Atomic Measurement Representation	oic.r.heartratemonitor-am	6.137
Heart Rate Zone Sensor	oic.r.sensor.heart.zone	6.39
Heating Zone	oic.r.heatingzone	6.72
Heating Zone Collection	oic.r.heatingzonecollection	6.73
Height	oic.r.height	6.64
Humidity	oic.r.humidity	6.13
IAS Zone Info	oic.r.iaszoneinfo	6.124
IAS Zone Collection	oic.r.iaszone	6.125
Icemaker	oic.r.icemaker	6.14
Illuminance Sensor	oic.r.sensor.illuminance	6.40
Impact Sensor	oic.r.impactsensor	6.120
Inverter (IEC 61850)	oic.r.inverter	6.147
KeyCard Switch	oic.r.keycardswitch	6.153

Keypad Character	oic.r.keypadchar	6.121
Liquid Level	oic.r.liquid.level	6.85
Lock	oic.r.lock.status	6.15
Lock Code	oic.r.lock.code	6.16
Magnetic Field Direction	oic.r.sensor.magneticfielddirection	6.41
Media	oic.r.media	6.42
Media Audio	oic.r.media.audio	6.158
Media Core	oic.r.media.core	6.159
Media Image	oic.r.media.image	6.160
Media Source	oic.r.mediasource	6.43
Media Source List	oic.r.mediasourcelist	6.44
Media Source Input	oic.r.media.input	6.45
Media Source Output	oic.r.media.output	6.46
Media Text	oic.r.media.text	6.161
Media Video	oic.r.media.video	6.162
Mode	oic.r.mode	6.17
Movement	oic.r.movement.linear	6.57
Motion Sensor	oic.r.sensor.motion	6.47
Muscle Oxygen Saturation	oic.r.muscleoxygensaturation	6.154
Night Mode	oic.r.nightmode	6.48
Opaque Data	oic.r.opaquedata	6.122
Open Level	oic.r.openlevel	6.18
Operational State	oic.r.operational.state	6.19
Optical RFID Station	oic.r.orfid.station	6.109
Optical RFID Tag	oic.r.orfid.tag	6.110
Pan Tilt Zoom Movement	oic.r.ptz	6.50
Power Source	oic.r.powersource	6.111
Presence Sensor	oic.r.sensor.presence	6.49
Print Queue	oic.r.printer.queue	6.112
Pulsatile Characteristic for Pulse Oximeter	oic.r.pulsatilecharacteristic	6.138
Pulsatile Occurrence for Pulse Oximeter	oic.r.pulsatileoccurrence	6.139
Pulse Oximeter Atomic Measurement Representation	oic.r.pulseoximeter-am	6.140
Pulse Rate	oic.r.pulserate	6.113
PV array system connection terminal (IEC 61850)	oic.r.pvconnectionterminal	6.148
Ramp Time	oic.r.light.ramptime	6.20
Refrigeration	oic.r.refrigeration	6.21
Restricted Switch	oic.r.switch.restricted	6.163
Sampling Interface for Continuous Glucose Meter (CGM)	oic.r.cgm.samplinginterval	6.132
Selectable Levels	oic.r.selectablelevels	6.74

Sensor for Continuous Glucose Meter (CGM)	oic.r.cgm.sensor	6.133
Sensor Properties	oic.r.sensor.props	6.114
Signal Strength	oic.r.signalstrength	6.51
Sleep	oic.r.sleep	6.141
Sleep Monitor Atomic Measurement Batch Representation	oic.r.sleepmonitor-am	6.142
Sleep Sensor	oic.r.sensor.sleep	6.58
Smoke Sensor	oic.r.sensor.smoke	6.59
Speech Synthesis	oic.r.speech.tts	6.52
Speed	oic.r.speed	6.149
SpO2 for Pulse Oximeter	oic.r.spo2	6.143
Status for Continuous Glucose Meter (CGM)	oic.r.cgm.status	6.134
Temperature	oic.r.temperature	6.22
Three Axis Sensor	oic.r.sensor.threeaxis	6.60
Threshold for Continuous Glucose Meter (CGM)	oic.r.cgm.threshold	6.135
Time Period	oic.r.time.period	6.23
Time Stamp	oic.r.time.stamp	6.87
Torque	oic.r.torque	6.150
Touch Sensor	oic.r.sensor.touch	6.53
UV Radiation	oic.r.sensor.radiation.uv	6.54
User ID	oic.r.userid	6.115
User Info for Application Layer	oic.r.userinfo	6.123
Value Conditional	oic.r.value.conditional	6.75
Water Info	oic.r.waterinfo	6.151
Water Sensor	oic.r.sensor.water	6.55
Weight	oic.r.weight	6.65
Window Covering	oic.r.windowcovering	6.126

1995

1996 6.2 Air Flow

1997 6.2.1 Introduction

1998 This Resource describes Properties associated with air flow.

1999 The Property "supporteddirections" is the set of valid values for the direction property for a particular instance of this Resource Type.

2001 The Property "direction" is the directionality of the air flow if applicable, if Property "supporteddirections" is also present it must be a value from that set.

2003 The values of Property "direction" are dependent on the capabilities of the unit.

2004 The Property "speed" is an integer representing the current speed level for the unit.

2005 The Property "range" is an array of the min,max values for the speed level. If not present the "range" defaults to [0,100].

2007 Property "automode" is the status of the automode feature; Off means automode is not enabled, 2008 On means automode is active and the speed is automatically controlled by the Device.

6.2.2 Example URI

/AirFlowResURI

6.2.3 Resource type

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

6.2.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Air Flow",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
        "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
        CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
        reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/AirFlowResURI" : {
      "get": {
        "description": "This Resource describes Properties associated with air flow.\n\nThe Property
        \"supporteddirections\" is the set of valid values for the direction property for a particular
        instance of this Resource Type.\n\nThe Property \"direction\" is the directionality of the air flow if
        applicable, if Property \"supporteddirections\" is also present it must be a value from that set.\n\n
        The values of Property \"direction\" are dependent on the capabilities of the unit.\n\nThe Property
        \"speed\" is an integer representing the current speed level for the unit.\n\nThe Property \"range\"
        is an array of the min,max values for the speed level. If not present the \"range\" defaults to
        [0,100].\n\nProperty \"automode\" is the status of the automode feature; Off means automode is not
        enabled, On means automode is active and the speed is automatically controlled by the Device.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.airflow"],
              "if": ["oic.if.a", "oic.if.baseline"],
              "supporteddirections": ["left", "right", "centre"],
              "direction": "left",
              "speed": 5,
              "range": [1, 7],
              "automode": "Off"
            },
            "schema": { "$ref": "#/definitions/AirFlow" }
          }
        }
      },
      "post": {
        "description": "When \"automode\" is set to true, \"direction\" and \"speed\" are not
        utilized by the device.",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/AirFlow" },
            "x-example": {

```

```

2076         "direction": "right",
2077         "speed": 3
2078     }
2079 },
2080 ],
2081 "responses": {
2082     "200": {
2083         "description" : "",
2084         "x-example":
2085             {
2086                 "direction": "right",
2087                 "speed": 3
2088             },
2089         "schema": { "$ref": "#/definitions/AirFlow" }
2090     },
2091     "403": {
2092         "description": "This response is generated by the OCF Server when the client sends:\n
2093 An UPDATE with an invalid Property value for direction.\n An UPDATE with an out of range property
2094 value for speed.\nThe server may respond with the current resource representation.\n",
2095         "x-example":
2096             {
2097                 "supporteddirections": ["left", "right", "centre"],
2098                 "direction": "right",
2099                 "speed": 3
2100             },
2101         "schema": { "$ref": "#/definitions/AirFlow" }
2102     }
2103 }
2104 }
2105 },
2106 },
2107 "parameters": {
2108     "interface" : {
2109         "in": "query",
2110         "name": "if",
2111         "type": "string",
2112         "enum": ["oic.if.a", "oic.if.baseline"]
2113     }
2114 },
2115 "definitions": {
2116     "AirFlow" : {
2117         "properties": {
2118             "rt" : {
2119                 "description": "The Resource Type",
2120                 "items": {
2121                     "enum": ["oic.r.airflow"],
2122                     "maxLength": 64,
2123                     "type": "string"
2124                 },
2125                 "minItems": 1,
2126                 "uniqueItems": true,
2127                 "readOnly": true,
2128                 "type": "array"
2129             },
2130             "speed" : {
2131                 "description": "The current speed level.",
2132                 "type": "integer"
2133             },
2134             "direction" : {
2135                 "description": "The directionality of the air flow, a value indicated by
2136 \"supporteddirections\".",
2137                 "type": "string"
2138             },
2139             "automode" : {
2140                 "description": "The status of the automode feature, if on speed is set by the Device.",
2141                 "enum": [
2142                     "On",
2143                     "Off"
2144                 ],
2145                 "type": "string"
2146             },
2147             "supporteddirections" : {

```

```

2148         "description": "The array of possible direction settings for this instance of the Resource
2149 Type.",
2150         "items": {
2151             "minItems": 1,
2152             "type": "string",
2153             "uniqueItems": true
2154         },
2155         "readOnly": true,
2156         "type": "array"
2157     },
2158     "n": {
2159         "$ref":
2160 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2161 schema.json#/definitions/n"
2162     },
2163     "id": {
2164         "$ref":
2165 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2166 schema.json#/definitions/id"
2167     },
2168     "range": {
2169         "$ref":
2170 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
2171 schema.json#/definitions/range_integer"
2172     },
2173     "step": {
2174         "$ref":
2175 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
2176 schema.json#/definitions/step_integer"
2177     },
2178     "if": {
2179         "description": "The OCF Interface set supported by this Resource.",
2180         "items": {
2181             "enum": [
2182                 "oic.if.a",
2183                 "oic.if.baseline"
2184             ],
2185             "type": "string"
2186         },
2187         "minItems": 2,
2188         "uniqueItems": true,
2189         "readOnly": true,
2190         "type": "array"
2191     }
2192 },
2193 "type": "object",
2194 "required": ["speed"]
2195 }
2196 }
2197 }
2198

```

2199 6.2.5 Property definition

2200 Table 7 defines the Properties that are part of the "oic.r.airflow" Resource Type.

2201 **Table 7 – The Property definitions of the Resource with type "rt" = "oic.r.airflow".**

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

				on speed is set by the Device.
supporteddirections	array: see schema	No	Read Only	The array of possible direction settings for this instance of the Resource Type.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

6.2.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get	post		observe

6.3 Air Flow Control

6.3.1 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 Collection of:

- AirFlow Resource

- BinarySwitch Resource

6.3.2 Example URI

/AirFlowControlResURI

6.3.3 Resource type

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

6.3.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Air Flow Control",
    "version": "20190307",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
```

```

2235     "paths": {
2236         "/AirFlowControlResURI?if=oic.if.ll" : {
2237             "get": {
2238                 "description": "This Resource describes the attributes associated with control of air
2239 flow,\nfor example as modelled by a Thermostat (fan), Room A/C or other device.\nThe Resource is a
2240 Collection of:\n AirFlow Resource\n BinarySwitch Resource\n",
2241                 "parameters": [
2242                     { "$ref": "#/parameters/interface-all" }
2243                 ],
2244                 "responses": {
2245                     "200": {
2246                         "description" : "",
2247                         "x-example": [
2248                             { "href": "/BinarySwitchResURI", "rt":["oic.r.switch.binary"],
2249 "if":["oic.if.a","oic.if.baseline"], "eps": [{ "ep": "coaps://[fe80::b1d6]:1122"}]},
2250                             { "href": "/AirFlowResURI", "rt":["oic.r.airflow"],
2251 "if":["oic.if.a","oic.if.baseline"], "eps": [{ "ep": "coaps://[fe80::b1d6]:1122"}]}
2252                         ],
2253                         "schema": { "$ref": "#/definitions/AirFlowControl-ll" }
2254                     }
2255                 }
2256             },
2257             "/AirFlowControlResURI?if=oic.if.b": {
2258                 "get": {
2259                     "description": "This Resource describes the attributes associated with control of air
2260 flow,\nfor example as modelled by a Thermostat (fan), Room A/C or other device.\nThe Resource is a
2261 Collection of:\n AirFlow Resource\n BinarySwitch Resource\n",
2262                     "parameters": [
2263                         { "$ref": "#/parameters/interface-all" }
2264                     ],
2265                     "responses": {
2266                         "200": {
2267                             "description" : "",
2268                             "x-example": [
2269                                 {
2270                                     "href": "/BinarySwitchResURI",
2271                                     "rep": {
2272                                         "value": true
2273                                     }
2274                                 },
2275                                 {
2276                                     "href": "/AirFlowResURI",
2277                                     "rep": {
2278                                         "supporteddirections": ["left","right","centre"],
2279                                         "direction": "right",
2280                                         "speed": 3,
2281                                         "range": [1,7],
2282                                         "automode": "Off"
2283                                     }
2284                                 }
2285                             ],
2286                             "schema": { "$ref": "#/definitions/AirFlowControlBatch-Retrieve" }
2287                         }
2288                     }
2289                 },
2290                 "post": {
2291                     "description": "Sets the current air flow control values using the batch OCF Interface\n",
2292                     "parameters": [
2293                         { "$ref": "#/parameters/interface-b" },
2294                         {
2295                             "name": "body",
2296                             "in": "body",
2297                             "required": true,
2298                             "schema": { "$ref": "#/definitions/AirFlowControlBatch-Update" },
2299                             "x-example": [
2300                                 {
2301                                     "href": "/AirFlowResURI",
2302                                     "rep": {
2303                                         "direction": "left",
2304                                         "speed": 4
2305                                     }
2306                                 }

```

```

2307     }
2308   ]
2309 }
2310 ],
2311 "responses": {
2312   "200": {
2313     "description": "",
2314     "x-example": [
2315       {
2316         "href": "/BinarySwitchResURI",
2317         "rep": {
2318           "value": true
2319         }
2320       },
2321       {
2322         "href": "/AirFlowResURI",
2323         "rep": {
2324           "supporteddirections": ["left","right","centre"],
2325           "direction": "left",
2326           "speed": 4,
2327           "range": [1,7],
2328           "automode": "Off"
2329         }
2330       }
2331     ],
2332     "schema": { "$ref": "#/definitions/AirFlowControlBatch-Retrieve" }
2333   }
2334 }
2335 },
2336 "/AirFlowControlResURI?if=oic.if.baseline" : {
2337   "get": {
2338     "description": "This Resource describes the attributes associated with control of air
2339 flow,\nfor example as modelled by a Thermostat (fan), Room A/C or other device.\nThe Resource is a
2340 Collection of:\n AirFlow Resource\n BinarySwitch Resource\n",
2341     "parameters": [
2342       { "$ref": "#/parameters/interface-all" }
2343     ],
2344     "responses": {
2345       "200": {
2346         "description": "",
2347         "x-example": {
2348           "rt": ["oic.r.airflowcontrol"],
2349           "rts": ["oic.r.airflow","oic.r.switch.binary"],
2350           "if": ["oic.if.ll","oic.if.b","oic.if.baseline"],
2351           "links": [
2352             { "href": "/BinarySwitchResURI", "rt": ["oic.r.switch.binary"],
2353               "if": ["oic.if.a","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"} }],
2354             { "href": "/AirFlowResURI", "rt": ["oic.r.airflow"],
2355               "if": ["oic.if.a","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"} } ]
2356           },
2357         "schema": { "$ref": "#/definitions/AirFlowControl-baseline" }
2358       }
2359     }
2360   }
2361 },
2362 },
2363 },
2364 },
2365 "parameters": {
2366   "interface-b" : {
2367     "in" : "query",
2368     "name" : "if",
2369     "type" : "string",
2370     "enum" : ["oic.if.b"]
2371   },
2372   "interface-all" : {
2373     "in" : "query",
2374     "name" : "if",
2375     "type" : "string",
2376     "enum" : ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
2377   }
2378 },
2379 },

```

```

2379     "definitions": {
2380         "AirFlowControl-ll" : {
2381             "type": "array",
2382             "minItems": 2,
2383             "uniqueItems": true,
2384             "readOnly": true,
2385             "items": {
2386                 "$ref": "#/definitions/oic.oic-link"
2387             }
2388         },
2389         "oic.oic-link": {
2390             "type": "object",
2391             "properties": {
2392                 "anchor": {
2393                     "$ref":
2394 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2395 schema.json#/definitions/anchor"
2396                 },
2397                 "di": {
2398                     "$ref":
2399 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2400 schema.json#/definitions/di"
2401                 },
2402                 "eps": {
2403                     "$ref":
2404 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2405 schema.json#/definitions/eps"
2406                 },
2407                 "href": {
2408                     "$ref":
2409 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2410 schema.json#/definitions/href"
2411                 },
2412                 "ins": {
2413                     "$ref":
2414 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2415 schema.json#/definitions/ins"
2416                 },
2417                 "p": {
2418                     "$ref":
2419 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2420 schema.json#/definitions/p"
2421                 },
2422                 "rel": {
2423                     "$ref":
2424 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2425 schema.json#/definitions/rel_array"
2426                 },
2427                 "title": {
2428                     "$ref":
2429 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2430 schema.json#/definitions/title"
2431                 },
2432                 "type": {
2433                     "$ref":
2434 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2435 schema.json#/definitions/type"
2436                 },
2437                 "if": {
2438                     "description": "The OCF Interfaces supported by the target Resource",
2439                     "items": {
2440                         "enum": [
2441                             "oic.if.a",
2442                             "oic.if.baseline"
2443                         ],
2444                         "type": "string",
2445                         "maxLength": 64
2446                     },
2447                     "minItems": 2,
2448                     "uniqueItems": true,
2449                     "type": "array",
2450                     "readOnly": true

```

```

2451     },
2452     "rt": {
2453         "description": "Resource Type of the target Resource",
2454         "items": {
2455             "maxLength": 64,
2456             "type": "string",
2457             "enum": ["oic.r.switch.binary", "oic.r.airflow"]
2458         },
2459         "minItems": 1,
2460         "type": "array",
2461         "uniqueItems": true,
2462         "readOnly": true
2463     }
2464 },
2465 "required": [
2466     "href",
2467     "rt",
2468     "if"
2469 ],
2470 },
2471 "AirFlowControl-baseline" : {
2472     "properties": {
2473         "n": {
2474             "$ref" :
2475 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2476 schema.json#/definitions/n"
2477         },
2478         "id": {
2479             "$ref" :
2480 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2481 schema.json#/definitions/id"
2482         },
2483         "rt": {
2484             "description": "Resource Type of this Resource",
2485             "items": {
2486                 "maxLength": 64,
2487                 "type": "string",
2488                 "enum": ["oic.r.airflowcontrol"]
2489             },
2490             "minItems": 1,
2491             "uniqueItems": true,
2492             "readOnly": true,
2493             "type": "array"
2494         },
2495         "rts": {
2496             "items": {
2497                 "type": "string",
2498                 "enum": ["oic.r.airflow", "oic.r.switch.binary"],
2499                 "maxLength": 64
2500             },
2501             "minItems": 1,
2502             "type": "array",
2503             "uniqueItems": true,
2504             "readOnly": true
2505         },
2506         "if": {
2507             "description": "The OCF Interfaces supported by this Resource",
2508             "items": {
2509                 "enum": [
2510                     "oic.if.ll",
2511                     "oic.if.b",
2512                     "oic.if.baseline"
2513                 ],
2514                 "type": "string",
2515                 "maxLength": 64
2516             },
2517             "minItems": 1,
2518             "readOnly": true,
2519             "uniqueItems": true,
2520             "type": "array"
2521         },
2522         "links": {

```



```

2523         "description": "A set of simple or individual OCF Links.",
2524         "items": {
2525             "$ref": "#/definitions/oic.oic-link"
2526         },
2527         "type": "array",
2528         "minItems": 2,
2529         "uniqueItems": true,
2530         "readOnly": true
2531     }
2532 },
2533 "type" : "object",
2534 "required": ["rt", "rts", "if", "links"]
2535 },
2536 "AirFlowControlBatch-Retrieve" : {
2537     "type": "array",
2538     "minItems": 2,
2539     "uniqueItems": true,
2540     "items": {
2541         "type": "object",
2542         "additionalProperties": true,
2543         "properties": {
2544             "href": {
2545                 "$ref":
2546 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2547 schema.json#/definitions/href"
2548             },
2549             "rep": {
2550                 "anyOf": [
2551                     {
2552                         "$ref":
2553 "https://openconnectivityfoundation.github.io/IoTDataModels/AirFlowResURI.swagger.json#/definitions/
2554 AirFlow" },
2555                     {
2556                         "$ref":
2557 "https://openconnectivityfoundation.github.io/IoTDataModels/BinarySwitchResURI.swagger.json#/definit
2558 ions/BinarySwitch" }
2559                 ]
2560             },
2561             "required": [
2562                 "href",
2563                 "rep"
2564             ]
2565         },
2566     "AirFlowControlBatch-Update" : {
2567         "type": "array",
2568         "minItems": 1,
2569         "uniqueItems": true,
2570         "items": {
2571             "type": "object",
2572             "additionalProperties": true,
2573             "properties": {
2574                 "href": {
2575                     "$ref":
2576 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
2577 schema.json#/definitions/href"
2578                 },
2579                 "rep": {
2580                     "anyOf": [
2581                         {
2582                             "$ref":
2583 "https://openconnectivityfoundation.github.io/IoTDataModels/AirFlowResURI.swagger.json#/definitions/
2584 AirFlow" },
2585                         {
2586                             "$ref":
2587 "https://openconnectivityfoundation.github.io/IoTDataModels/BinarySwitchResURI.swagger.json#/definit
2588 ions/BinarySwitch" }
2589                     ]
2590                 },
2591                 "required": [
2592                     "href",
2593                     "rep"
2594                 ]
2595             }
2596         }
2597     }

```

2595 }
 2596 }
 2597 }
 2598 }

2599 6.3.5 Property definition

2600 Table 9 defines the Properties that are part of the "oic.r.airflowcontrol" Resource Type.

2601 **Table 9 – The Property definitions of the Resource with type "rt" = "oic.r.airflowcontrol".**

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

6.3.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get			observe

6.4 Battery

6.4.1 Introduction

This Resource describes the attributes associated with a battery. The Property "charge" is an integer showing the current battery charge level as a percentage in the range 0 (fully discharged) to 100 (fully charged). The Property "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.

6.4.2 Example URI

/BatteryResURI

6.4.3 Resource type

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

6.4.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Battery",
    "version": "20190618",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/BatteryResURI" : {
      "get": {
        "description": "This Resource describes the attributes associated with a battery. The
Property \"charge\" is an integer showing the current battery charge level as a percentage in the
range 0 (fully discharged) to 100 (fully charged). The Property \"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.",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.energy.battery"],
              "if": ["oic.if.rw", "oic.if.baseline"],

```

```

2657         "charge": 50,
2658         "capacity": 3000,
2659         "charging": true,
2660         "discharging": false,
2661         "lowbattery": false,
2662         "batterythreshold": 20,
2663         "defect": false,
2664         "timestamp": "2015-11-05T14:30:00.20Z"
2665     },
2666     "schema": { "$ref": "#/definitions/Battery" }
2667 },
2668 },
2669 },
2670 "post": {
2671     "description": "Sets current battery values\n",
2672     "parameters": [
2673         { "$ref": "#/parameters/interface" },
2674         {
2675             "name": "body",
2676             "in": "body",
2677             "required": true,
2678             "schema": { "$ref": "#/definitions/BatteryUpdate" },
2679             "x-example":
2680             {
2681                 "batterythreshold": 20
2682             }
2683         }
2684     ],
2685     "responses": {
2686         "200": {
2687             "description": "",
2688             "x-example":
2689             {
2690                 "batterythreshold": 20
2691             },
2692             "schema": { "$ref": "#/definitions/BatteryUpdate" }
2693         }
2694     }
2695 },
2696 },
2697 },
2698 "parameters": {
2699     "interface": {
2700         "in": "query",
2701         "name": "if",
2702         "type": "string",
2703         "enum": ["oic.if.rw", "oic.if.baseline"]
2704     }
2705 },
2706 "definitions": {
2707     "Battery": {
2708         "properties": {
2709             "rt": {
2710                 "description": "The Resource Type.",
2711                 "items": {
2712                     "enum": ["oic.r.energy.battery"],
2713                     "maxLength": 64,
2714                     "type": "string"
2715                 },
2716                 "minItems": 1,
2717                 "uniqueItems": true,
2718                 "readOnly": true,
2719                 "type": "array"
2720             },
2721             "discharging": {
2722                 "description": "The status of discharging.",
2723                 "readOnly": true,
2724                 "type": "boolean"
2725             },
2726             "lowbattery": {
2727                 "description": "The status of the low battery warning based upon the defined threshold.",
2728                 "readOnly": true,

```

```

2729         "type": "boolean"
2730     },
2731     "capacity": {
2732         "description": "The total capacity in Amp-hours (Ah).",
2733         "readOnly": true,
2734         "type": "number"
2735     },
2736     "batterythreshold": {
2737         "description": "The threshold percentage for the low battery warning.",
2738         "maximum": 100,
2739         "minimum": 0,
2740         "type": "integer"
2741     },
2742     "charge": {
2743         "description": "The current charge percentage.",
2744         "maximum": 100,
2745         "minimum": 0,
2746         "readOnly": true,
2747         "type": "integer"
2748     },
2749     "charging": {
2750         "description": "The status of charging.",
2751         "readOnly": true,
2752         "type": "boolean"
2753     },
2754     "defect": {
2755         "description": "Battery defect detected. True = defect, False = no defect",
2756         "readOnly": true,
2757         "type": "boolean"
2758     },
2759     "timestamp": {
2760         "description": "An RFC3339 formatted time indicating when the data was observed (e.g.:
2761 2016-02-15T09:19Z, 1996-12-19T16:39:57-08:00). Note that 1/100 time resolution should be used.",
2762         "format": "date-time",
2763         "readOnly": true,
2764         "type": "string"
2765     },
2766     "n": {
2767         "$ref":
2768 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2769 schema.json#/definitions/n"
2770     },
2771     "id": {
2772         "$ref":
2773 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2774 schema.json#/definitions/id"
2775     },
2776     "if": {
2777         "description": "The OCF Interface set supported by this Resource.",
2778         "items": {
2779             "enum": [
2780                 "oic.if.rw",
2781                 "oic.if.baseline"
2782             ],
2783             "type": "string"
2784         },
2785         "minItems": 2,
2786         "uniqueItems": true,
2787         "readOnly": true,
2788         "type": "array"
2789     }
2790 },
2791 "type" : "object",
2792 "required": ["charge"]
2793 },
2794 "BatteryUpdate": {
2795     "properties": {
2796         "batterythreshold": {
2797             "description": "The threshold percentage for the low battery warning.",
2798             "maximum": 100,
2799             "minimum": 0,
2800             "type": "integer"

```

```

2801     },
2802     },
2803     "type" : "object",
2804     "required": ["batterythreshold"]
2805   }
2806 }
2807 }
2808

```

2809 6.4.5 Property definition

2810 Table 11 defines the Properties that are part of the "oic.r.energy.battery" Resource Type.

2811 **Table 11 – The Property definitions of the Resource with type "rt" = "oic.r.energy.battery".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
discharging	boolean	No	Read Only	The status of discharging.
lowbattery	boolean	No	Read Only	The status of the low battery warning based upon the defined threshold.
capacity	number	No	Read Only	The total capacity in Amp-hours (Ah).
batterythreshold	integer	No	Read Write	The threshold percentage for the low battery warning.
charge	integer	Yes	Read Only	The current charge percentage.
charging	boolean	No	Read Only	The status of charging.
defect	boolean	No	Read Only	Battery defect detected. True = defect, False = no defect
timestamp	string	No	Read Only	An RFC3339 formatted time indicating when the data was observed (e.g.: 2016-02-15T09:19Z, 1996-12-19T16:39:57-08:00). Note that 1/100 time resolution should be used.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
batterythreshold	integer	Yes	Read Write	The threshold percentage for the low battery warning.

2812 6.4.6 CRUDN behaviour

2813 Table 12 defines the CRUDN operations that are supported on the "oic.r.energy.battery" Resource
2814 Type.

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

Create	Read	Update	Delete	Notify
	get	post		observe

6.5 Binary Switch

6.5.1 Introduction

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

The Property "value" is a boolean.

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

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

6.5.2 Example URI

/BinarySwitchResURI

6.5.3 Resource type

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

6.5.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Binary Switch",
    "version": "20190222",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/BinarySwitchResURI" : {
      "get": {
        "description": "This Resource describes a binary switch (on/off).\n\nThe Property \"value\" is
a boolean.\n\nA value of 'true' means that the switch is on.\n\nA value of 'false' means that the switch
is off.\n\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.switch.binary"],
              "if": ["oic.if.a", "oic.if.baseline"],
              "value": false
            },
            "schema": { "$ref": "#/definitions/BinarySwitch" }
          }
        }
      },
      "post": {
        "description": "",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
```

```

2873         "in": "body",
2874         "required": true,
2875         "schema": { "$ref": "#/definitions/BinarySwitch" },
2876         "x-example":
2877         {
2878             "value": true
2879         }
2880     },
2881 ],
2882 "responses": {
2883     "200": {
2884         "description": "",
2885         "x-example":
2886         {
2887             "value": true
2888         },
2889         "schema": { "$ref": "#/definitions/BinarySwitch" }
2890     }
2891 },
2892 },
2893 },
2894 },
2895 "parameters": {
2896     "interface": {
2897         "in": "query",
2898         "name": "if",
2899         "type": "string",
2900         "enum": ["oic.if.a", "oic.if.baseline"]
2901     }
2902 },
2903 "definitions": {
2904     "BinarySwitch": {
2905         "properties": {
2906             "rt": {
2907                 "description": "The Resource Type.",
2908                 "items": {
2909                     "enum": ["oic.r.switch.binary"],
2910                     "maxLength": 64,
2911                     "type": "string"
2912                 },
2913                 "minItems": 1,
2914                 "uniqueItems": true,
2915                 "readOnly": true,
2916                 "type": "array"
2917             },
2918             "value": {
2919                 "description": "The status of the switch.",
2920                 "type": "boolean"
2921             },
2922             "n": {
2923                 "$ref":
2924                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2925                 schema.json#/definitions/n"
2926             },
2927             "id": {
2928                 "$ref":
2929                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
2930                 schema.json#/definitions/id"
2931             },
2932             "if": {
2933                 "description": "The OCF Interface set supported by this Resource.",
2934                 "items": {
2935                     "enum": [
2936                         "oic.if.a",
2937                         "oic.if.baseline"
2938                     ],
2939                     "type": "string"
2940                 },
2941                 "minItems": 2,
2942                 "uniqueItems": true,
2943                 "readOnly": true,
2944                 "type": "array"

```



```

2945     },
2946     },
2947     "type": "object",
2948     "required": ["value"]
2949   }
2950 }
2951 }
2952

```

2953 6.5.5 Property definition

2954 Table 13 defines the Properties that are part of the "oic.r.switch.binary" Resource Type.

2955 **Table 13 – The Property definitions of the Resource with type "rt" = "oic.r.switch.binary".**

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

2956 6.5.6 CRUDN behaviour

2957 Table 14 defines the CRUDN operations that are supported on the "oic.r.switch.binary" Resource
2958 Type.

2959 **Table 14 – The CRUDN operations of the Resource with type "rt" = "oic.r.switch.binary".**

Create	Read	Update	Delete	Notify
	get	post		observe

2960 6.6 Brightness

2961 6.6.1 Introduction

2962 This Resource describes the brightness of a light or lamp.

2963 The Property "brightness" is an integer showing the current brightness level as a quantized
2964 representation in the range 0-100.

2965 A brightness of 0 is the minimum for the resource.

2966 A brightness of 100 is the maximum for the resource.

2967 6.6.2 Example URI

2968 /BrightnessResURI

2969 6.6.3 Resource type

2970 The Resource Type is defined as: "oic.r.light.brightness".

2971 6.6.4 OpenAPI 2.0 definition

```

2972 {
2973   "swagger": "2.0",
2974   "info": {
2975     "title": "Brightness",
2976     "version": "20190222",
2977     "license": {
2978       "name": "OCF Data Model License",
2979       "url":

```

```

2980 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
2981 CENSE.md",
2982     "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
2983 },
2984     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
2985 },
2986     "schemes": ["http"],
2987     "consumes": ["application/json"],
2988     "produces": ["application/json"],
2989     "paths": {
2990         "/BrightnessResURI" : {
2991             "get": {
2992                 "description": "This Resource describes the brightness of a light or lamp.\n\nThe Property
2993 \n\"brightness\" is an integer showing the current brightness level as a quantized representation in
2994 the range 0-100.\n\nA brightness of 0 is the minimum for the resource.\n\nA brightness of 100 is the
2995 maximum for the resource.",
2996                 "parameters": [
2997                     { "$ref": "#/parameters/interface" }
2998                 ],
2999                 "responses": {
3000                     "200": {
3001                         "description": "",
3002                         "x-example":
3003                             {
3004                                 "rt": ["oic.r.light.brightness"],
3005                                 "if": ["oic.if.a", "oic.if.baseline"],
3006                                 "brightness": 50
3007                             },
3008                         "schema": { "$ref": "#/definitions/Brightness" }
3009                     }
3010                 }
3011             },
3012             "post": {
3013                 "description": "Sets the desired brightness level.\n",
3014                 "parameters": [
3015                     { "$ref": "#/parameters/interface" },
3016                     {
3017                         "name": "body",
3018                         "in": "body",
3019                         "required": true,
3020                         "schema": { "$ref": "#/definitions/Brightness" },
3021                         "x-example":
3022                             {
3023                                 "brightness": 10
3024                             }
3025                     }
3026                 ],
3027                 "responses": {
3028                     "200": {
3029                         "description": "Indicates that the brightness was changed.\n\nThe new brightness level
3030 is provided in the response.\n",
3031                         "x-example":
3032                             {
3033                                 "brightness": 10
3034                             },
3035                         "schema": { "$ref": "#/definitions/Brightness" }
3036                     }
3037                 }
3038             }
3039         }
3040     },
3041     "parameters": {
3042         "interface" : {
3043             "in": "query",
3044             "name": "if",
3045             "type": "string",
3046             "enum": ["oic.if.a", "oic.if.baseline"]
3047         }
3048     },
3049     "definitions": {
3050         "Brightness" : {
3051             "properties": {

```

```

3052     "rt": {
3053         "description": "The Resource Type.",
3054         "items": {
3055             "enum": ["oic.r.light.brightness"],
3056             "maxLength": 64,
3057             "type": "string"
3058         },
3059         "minItems": 1,
3060         "uniqueItems": true,
3061         "readOnly": true,
3062         "type": "array"
3063     },
3064     "brightness": {
3065         "description": "The Quantized representation in the range 0-100 of the current sensed or
3066 set value for Brightness.",
3067         "maximum": 100,
3068         "minimum": 0,
3069         "type": "integer"
3070     },
3071     "n": {
3072         "$ref":
3073 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3074 schema.json#/definitions/n"
3075     },
3076     "id": {
3077         "$ref":
3078 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3079 schema.json#/definitions/id"
3080     },
3081     "if": {
3082         "description": "The OCF Interface set supported by this Resource.",
3083         "items": {
3084             "enum": [
3085                 "oic.if.a",
3086                 "oic.if.baseline"
3087             ],
3088             "type": "string"
3089         },
3090         "minItems": 2,
3091         "uniqueItems": true,
3092         "readOnly": true,
3093         "type": "array"
3094     }
3095 },
3096 "type": "object",
3097 "required": ["brightness"]
3098 }
3099 }
3100 }
3101

```

6.6.5 Property definition

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

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

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

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

6.6.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get	post		observe

6.7 Colour Chroma

6.7.1 Introduction

This Resource describes the colour using chroma conventions.

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

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

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

The Property "maximumsaturation" is the upper bound on the saturation supported by the Device. If not present the maximum value for "saturation" is 32767.

The Property "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.

The Property "nct" is the Mired colour temperature.

The Resource provides the colour using chroma conventions.

6.7.2 Example URI

/example/ColourChromaResURI

6.7.3 Resource type

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

6.7.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Colour Chroma",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/example/ColourChromaResURI" : {
      "get": {
        "description": "This Resource describes the colour using chroma conventions.\nProperties are
```

```

3152 \ "hue\", \"saturation\", \"csc\", and \"ct\".\nThe Property \"hue\" is the hue angle, it is an
3153 integer value as defined by the CIECAM02 model definition (see reference [CIE CIE159:2004]).\nThe
3154 Property \"saturation\" is an integer value as defined by the CIECAM02 model definition (see
3155 reference [CIE CIE159:2004]).\nThe Property \"maximumsaturation\" is the upper bound on the
3156 saturation supported by the Device.\nIf not present the maximum value for \"saturation\" is
3157 32767.\nThe Property \"csc\" is the colour space coordinates in CIE colour space.\n The first item
3158 in the array is the X coordinate.\n The second item in the array is the Y coordinate.\nThe Property
3159 \"nct\" is the Mired colour temperature.\nThe Resource provides the colour using chroma
3160 conventions.",
3161     "parameters": [
3162         {"$ref": "#/parameters/interface"}
3163     ],
3164     "responses": {
3165         "200": {
3166             "description": "",
3167             "x-example":
3168                 {
3169                     "rt": ["oic.r.colour.chroma"],
3170                     "if": ["oic.if.a", "oic.if.baseline"],
3171                     "hue": 256.0,
3172                     "saturation": 212,
3173                     "maximumsaturation": 1000,
3174                     "csc": [0.41, 0.51],
3175                     "ct": 457
3176                 },
3177             "schema": { "$ref": "#/definitions/ColourChroma" }
3178         }
3179     },
3180 },
3181 "post": {
3182     "description": "Sets current colour chroma values\n",
3183     "parameters": [
3184         {"$ref": "#/parameters/interface"},
3185         {
3186             "name": "body",
3187             "in": "body",
3188             "required": true,
3189             "schema": { "$ref": "#/definitions/ColourChroma" },
3190             "x-example":
3191                 {
3192                     "hue": 300.0,
3193                     "saturation": 212,
3194                     "csc": [0.41, 0.51],
3195                     "ct": 457
3196                 }
3197         }
3198     ],
3199     "responses": {
3200         "200": {
3201             "description": "",
3202             "x-example":
3203                 {
3204                     "hue": 300.0,
3205                     "saturation": 212,
3206                     "csc": [0.41, 0.51],
3207                     "ct": 467
3208                 },
3209             "schema": { "$ref": "#/definitions/ColourChroma" }
3210         }
3211     }
3212 },
3213 },
3214 },
3215 "parameters": {
3216     "interface": {
3217         "in": "query",
3218         "name": "if",
3219         "type": "string",
3220         "enum": ["oic.if.a", "oic.if.baseline"]
3221     }
3222 },
3223 "definitions": {

```

```

3224 "ColourChroma" : {
3225     "properties": {
3226         "rt" : {
3227             "description": "The Resource Type.",
3228             "items": {
3229                 "enum": ["oic.r.colour.chroma"],
3230                 "maxLength": 64,
3231                 "type": "string"
3232             },
3233             "minItems": 1,
3234             "uniqueItems": true,
3235             "readOnly": true,
3236             "type": "array"
3237         },
3238         "ct" : {
3239             "description": "The Mired colour temperature.",
3240             "minimum": 0,
3241             "type": "integer"
3242         },
3243         "hue" : {
3244             "description": "The hue angle as defined by the CIECAM02 model definition.",
3245             "maximum": 360.0,
3246             "minimum": 0.0,
3247             "type": "number"
3248         },
3249         "saturation" : {
3250             "description": "The saturation as defined by the CIECAM02 model definition.",
3251             "maximum": 32767,
3252             "minimum": 0,
3253             "type": "integer"
3254         },
3255         "maximumsaturation" : {
3256             "description": "The maximum supported value of \"saturation\" for this Device.",
3257             "maximum": 32767,
3258             "minimum": 0,
3259             "readOnly": true,
3260             "type": "integer"
3261         },
3262         "csc" : {
3263             "description": "The X and Y coordinates of the colour in CIE colour space",
3264             "items": {
3265                 "maximum": 1,
3266                 "minimum": 0,
3267                 "type": "number"
3268             },
3269             "maxItems": 2,
3270             "minItems": 2,
3271             "type": "array"
3272         },
3273         "n" : {
3274             "$ref":
3275 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3276 schema.json#/definitions/n",
3277         },
3278         "id" : {
3279             "$ref":
3280 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3281 schema.json#/definitions/id",
3282         },
3283         "if" : {
3284             "description": "The OCF Interface set supported by this Resource.",
3285             "items": {
3286                 "enum": [
3287                     "oic.if.a",
3288                     "oic.if.baseline"
3289                 ],
3290                 "maxLength": 64,
3291                 "type": "string"
3292             },
3293             "minItems": 2,
3294             "uniqueItems": true,
3295             "readOnly": true,

```

```

3296         "type": "array"
3297     },
3298 },
3299     "type": "object",
3300     "required": ["hue", "saturation", "csc"]
3301 }
3302 }
3303 }
3304

```

3305 6.7.5 Property definition

3306 Table 17 defines the Properties that are part of the "oic.r.colour.chroma" Resource Type.

3307 **Table 17 – The Property definitions of the Resource with type "rt" = "oic.r.colour.chroma".**

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

3308 6.7.6 CRUDN behaviour

3309 Table 18 defines the CRUDN operations that are supported on the "oic.r.colour.chroma" Resource
3310 Type.

3311 **Table 18 – The CRUDN operations of the Resource with type "rt" = "oic.r.colour.chroma".**

Create	Read	Update	Delete	Notify
	get	post		observe

3312 6.8 Colour RGB

3313 6.8.1 Introduction

3314 This Resource specifies the actual colour in the RGB space represented as an array of integers.

3315 Each colour value is described with a Red, Green, Blue component.

3316 These colour values are encoded as an array of integer values ([R,G,B]).

3317 The minimum and maximum colour value per component may be described by the Property

3318 "range".
3319 When "range" is omitted, then the "range" is [0,255].

3320 6.8.2 Example URI

3321 /ColourRGBResURI

3322 6.8.3 Resource type

3323 The Resource Type is defined as: "oic.r.colour.rgb".

3324 6.8.4 OpenAPI 2.0 definition

```
3325 {  
3326   "swagger": "2.0",  
3327   "info": {  
3328     "title": "Colour RGB",  
3329     "version": "20190215",  
3330     "license": {  
3331       "name": "OCF Data Model License",  
3332       "url":  
3333         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
3334         CENSE.md",  
3335       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
3336       reserved."  
3337     },  
3338     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
3339   },  
3340   "schemes": ["http"],  
3341   "consumes": ["application/json"],  
3342   "produces": ["application/json"],  
3343   "paths": {  
3344     "/ColourRGBResURI" : {  
3345       "get": {  
3346         "description": "This Resource specifies the actual colour in the RGB space represented as an  
3347         array of integers.\nEach colour value is described with a Red, Green, Blue component.\nThese colour  
3348         values are encoded as an array of integer values ([R,G,B]).\nThe minimum and maximum colour value  
3349         per component may be described by the Property \"range\".\nWhen \"range\" is omitted, then the  
3350         \"range\" is [0,255].",  
3351         "parameters": [  
3352           { "$ref": "#/parameters/interface" }  
3353         ],  
3354         "responses": {  
3355           "200": {  
3356             "description": "",  
3357             "x-example":  
3358               {  
3359                 "rt": ["oic.r.colour.rgb"],  
3360                 "if": ["oic.if.a", "oic.if.baseline"],  
3361                 "rgbValue": [255, 255, 255],  
3362                 "range": [0, 255]  
3363               },  
3364             "schema": { "$ref": "#/definitions/ColourRGB" }  
3365           }  
3366         },  
3367       },  
3368       "post": {  
3369         "description": "Sets the current colourRGB value\n",  
3370         "parameters": [  
3371           { "$ref": "#/parameters/interface" },  
3372           {  
3373             "name": "body",  
3374             "in": "body",  
3375             "required": true,  
3376             "schema": { "$ref": "#/definitions/ColourRGB" },  
3377             "x-example":  
3378               {  
3379                 "rgbValue": [255, 0, 0]  
3380               }  
3381           }  
3382         ],
```



```

3383     "responses": {
3384         "200": {
3385             "description": "",
3386             "x-example":
3387                 {
3388                     "rgbValue": [255, 0, 0]
3389                 },
3390             "schema": { "$ref": "#/definitions/ColourRGB" }
3391         }
3392     }
3393 }
3394 },
3395 },
3396 "parameters": {
3397     "interface": {
3398         "in": "query",
3399         "name": "if",
3400         "type": "string",
3401         "enum": ["oic.if.a", "oic.if.baseline"]
3402     }
3403 },
3404 "definitions": {
3405     "ColourRGB": {
3406         "properties": {
3407             "rt": {
3408                 "description": "The Resource Type.",
3409                 "items": {
3410                     "enum": ["oic.r.colour.rgb"],
3411                     "maxLength": 64,
3412                     "type": "string"
3413                 },
3414                 "minItems": 1,
3415                 "uniqueItems": true,
3416                 "readOnly": true,
3417                 "type": "array"
3418             },
3419             "rgbValue": {
3420                 "description": "The RGB value; the first item is the R, second the G, third the B.",
3421                 "items": {
3422                     "type": "integer"
3423                 },
3424                 "maxItems": 3,
3425                 "minItems": 3,
3426                 "type": "array"
3427             },
3428             "n": {
3429                 "$ref":
3430 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3431 schema.json#/definitions/n"
3432             },
3433             "id": {
3434                 "$ref":
3435 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3436 schema.json#/definitions/id"
3437             },
3438             "range": {
3439                 "$ref":
3440 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
3441 schema.json#/definitions/range_integer"
3442             },
3443             "step": {
3444                 "$ref":
3445 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
3446 schema.json#/definitions/step_integer"
3447             },
3448             "if": {
3449                 "description": "The OCF Interface set supported by this Resource.",
3450                 "items": {
3451                     "enum": [
3452                         "oic.if.a",
3453                         "oic.if.baseline"
3454                     ],

```

```

3455         "type": "string"
3456     },
3457     "minItems": 2,
3458     "uniqueItems": true,
3459     "readOnly": true,
3460     "type": "array"
3461 }
3462 },
3463 "type": "object",
3464 "required": ["rgbValue"]
3465 }
3466 }
3467 }
3468

```

3469 6.8.5 Property definition

3470 Table 19 defines the Properties that are part of the "oic.r.colour.rgb" Resource Type.

3471 **Table 19 – The Property definitions of the Resource with type "rt" = "oic.r.colour.rgb".**

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

3472 6.8.6 CRUDN behaviour

3473 Table 20 defines the CRUDN operations that are supported on the "oic.r.colour.rgb" Resource Type.

3474 **Table 20 – The CRUDN operations of the Resource with type "rt" = "oic.r.colour.rgb".**

Create	Read	Update	Delete	Notify
	get	post		observe

3475 6.9 Dimming

3476 6.9.1 Introduction

3477 This Resource describes a dimming function.

3478 The Property "dimmingSetting" is an integer showing the current dimming level.

3479 If Property "step" is present then it represents the increment between dimmer values.

3480 When the Property "range" is omitted, then the range is [0,100].

3481 A value of 0 means total dimming; a value of 100 means no dimming.

3482 6.9.2 Example URI

3483 /DimmingResURI

6.9.3 Resource type

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

6.9.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Dimming",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/DimmingResURI" : {
      "get": {
        "description": "This Resource describes a dimming function.\n\nThe Property \"dimmingSetting\"
is an integer showing the current dimming level.\n\nIf Property \"step\" is present then it represents
the increment between dimmer values.\n\nWhen the Property \"range\" is omitted, then the range is
[0,100].\n\nA value of 0 means total dimming; a value of 100 means no dimming.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.light.dimming"],
              "if": ["oic.if.a", "oic.if.baseline"],
              "dimmingSetting": 30,
              "step": 5,
              "range": [0, 100]
            },
            "schema": { "$ref": "#/definitions/Dimming" }
          }
        }
      },
      "post": {
        "description": "Sets the desired dimming level.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/Dimming" },
            "x-example": {
              "dimmingSetting": 40
            }
          }
        ],
        "responses": {
          "200": {
            "description": "Indicates that the dimming was changed.\n\nThe new dimming level is
provided in the response.\n",
            "x-example": {
              "dimmingSetting": 40
            }
          }
        }
      }
    }
  }
}
```

```

3553         "schema": { "$ref": "#/definitions/Dimming" }
3554     },
3555     "403": {
3556         "description": "This response is generated by the OCF Server when the client sends:\n
3557 An update with an out of range property value for dimmingSetting.\nThe server responds with the
3558 current resource representation.\n",
3559         "x-example":
3560             {
3561                 "dimmingSetting": 40
3562             },
3563         "schema": { "$ref": "#/definitions/Dimming" }
3564     }
3565 }
3566 }
3567 },
3568 },
3569 "parameters": {
3570     "interface": {
3571         "in": "query",
3572         "name": "if",
3573         "type": "string",
3574         "enum": ["oic.if.a", "oic.if.baseline"]
3575     }
3576 },
3577 "definitions": {
3578     "Dimming" : {
3579         "properties": {
3580             "rt": {
3581                 "description": "The Resource Type.",
3582                 "items": {
3583                     "enum": ["oic.r.light.dimming"],
3584                     "maxLength": 64,
3585                     "type": "string"
3586                 },
3587                 "minItems": 1,
3588                 "uniqueItems": true,
3589                 "readOnly": true,
3590                 "type": "array"
3591             },
3592             "dimmingSetting": {
3593                 "description": "The current dimming value.",
3594                 "type": "integer"
3595             },
3596             "n": {
3597                 "$ref":
3598 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3599 schema.json#/definitions/n"
3600             },
3601             "id": {
3602                 "$ref":
3603 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3604 schema.json#/definitions/id"
3605             },
3606             "range": {
3607                 "$ref":
3608 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
3609 schema.json#/definitions/range_integer"
3610             },
3611             "step": {
3612                 "$ref":
3613 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
3614 schema.json#/definitions/step_integer"
3615             },
3616             "if": {
3617                 "description": "The OCF Interface set supported by this Resource.",
3618                 "items": {
3619                     "enum": [
3620                         "oic.if.a",
3621                         "oic.if.baseline"
3622                     ],
3623                     "type": "string"
3624                 }

```

```

3625         "minItems": 2,
3626         "uniqueItems": true,
3627         "readOnly": true,
3628         "type": "array"
3629     },
3630 },
3631 "type": "object",
3632 "required": ["dimmingSetting"]
3633 }
3634 }
3635 }
3636

```

3637 6.9.5 Property definition

3638 Table 21 defines the Properties that are part of the "oic.r.light.dimming" Resource Type.

3639 **Table 21 – The Property definitions of the Resource with type "rt" = "oic.r.light.dimming".**

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

3640 6.9.6 CRUDN behaviour

3641 Table 22 defines the CRUDN operations that are supported on the "oic.r.light.dimming" Resource
3642 Type.

3643 **Table 22 – The CRUDN operations of the Resource with type "rt" = "oic.r.light.dimming".**

Create	Read	Update	Delete	Notify
	get	post		observe

3644 6.10 Door

3645 6.10.1 Introduction

3646 This Resource describes the open state of the door.
3647 A door is modelled by means of openState (Open/Closed), openDuration (ISO 8601 Time), and
3648 openAlarm (boolean).
3649 For Property "openState", the value 'Open' indicates the door is open.
3650 The value 'Closed' indicates the door is closed.
3651 The type of Property "openDuration" is an RFC Time encoded string.
3652 The Property "openAlarm" value 'true' indicates that the open alarm is active.
3653 The openAlarm value 'false' indicates that open alarm is not active.
3654 retrieves the state of the Door.

3655 6.10.2 Example URI

3656 /DoorResURI

6.10.3 Resource type

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

6.10.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Door",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/DoorResURI" : {
      "get": {
        "description": "This Resource describes the open state of the door.\nA door is modelled by
means of openState (Open/Closed), openDuration (ISO 8601 Time), and openAlarm (boolean).\nFor
Property \"openState\", the value 'Open' indicates the door is open.\nThe value 'Closed' indicates
the door is closed.\nThe type of Property \"openDuration\" is an RFC Time encoded string.\nThe
Property \"openAlarm\" value 'true' indicates that the open alarm is active.\nThe openAlarm value
'false' indicates that open alarm is not active.\nretrieves the state of the Door.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.door"],
              "if": ["oic.if.a", "oic.if.baseline"],
              "openState": "Open",
              "openDuration": "P0Y0M0DT2H25M5S",
              "openAlarm": true
            },
            "schema": { "$ref": "#/definitions/Door" }
          }
        }
      },
      "post": {
        "description": "Sets the current Door properties.\nThe only property that can be set as part
of an update operation is\n the openAlarm.\nThis can be made active (true) or inactive (false)\n",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/DoorUpdate" },
            "x-example": {
              "openAlarm": false
            }
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "openAlarm": false
            },
            "schema": { "$ref": "#/definitions/DoorUpdate" }
          }
        }
      }
    }
  }
}
```

```

3726     }
3727   }
3728 }
3729 },
3730 },
3731 "parameters": {
3732   "interface": {
3733     "in": "query",
3734     "name": "if",
3735     "type": "string",
3736     "enum": ["oic.if.a", "oic.if.baseline"]
3737   }
3738 },
3739 "definitions": {
3740   "Door": {
3741     "properties": {
3742       "rt": {
3743         "description": "The Resource Type.",
3744         "items": {
3745           "enum": ["oic.r.door"],
3746           "maxLength": 64,
3747           "type": "string"
3748         },
3749         "minItems": 1,
3750         "uniqueItems": true,
3751         "readOnly": true,
3752         "type": "array"
3753       },
3754       "openDuration": {
3755         "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
3756 schema.json#/definitions/duration"
3757       },
3758       "openState": {
3759         "description": "The state of the door (open or closed).",
3760         "enum": [
3761           "Open",
3762           "Closed"
3763         ],
3764         "readOnly": true,
3765         "type": "string"
3766       },
3767       "openAlarm": {
3768         "description": "The state of the door open alarm.",
3769         "type": "boolean"
3770       },
3771       "n": {
3772         "$ref":
3773 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3774 schema.json#/definitions/n"
3775       },
3776       "id": {
3777         "$ref":
3778 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3779 schema.json#/definitions/id"
3780       },
3781       "if": {
3782         "description": "The OCF Interface set supported by this Resource.",
3783         "items": {
3784           "enum": [
3785             "oic.if.a",
3786             "oic.if.baseline"
3787           ],
3788           "type": "string"
3789         },
3790         "minItems": 2,
3791         "uniqueItems": true,
3792         "readOnly": true,
3793         "type": "array"
3794       }
3795     },
3796     "type": "object",
3797     "required": ["openState"]

```

```

3798     },
3799     "DoorUpdate" : {
3800       "properties": {
3801         "openAlarm": {
3802           "description": "The state of the door open alarm.",
3803           "type": "boolean"
3804         }
3805       },
3806       "type": "object",
3807       "required": ["openAlarm"]
3808     }
3809   }
3810 }
3811

```

3812 6.10.5 Property definition

3813 Table 23 defines the Properties that are part of the "oic.r.door" Resource Type.

3814 **Table 23 – The Property definitions of the Resource with type "rt" = "oic.r.door".**

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

3815 6.10.6 CRUDN behaviour

3816 Table 24 defines the CRUDN operations that are supported on the "oic.r.door" Resource Type.

3817 **Table 24 – The CRUDN operations of the Resource with type "rt" = "oic.r.door".**

Create	Read	Update	Delete	Notify
	get	post		observe

3818 6.11 Energy Consumption

3819 6.11.1 Introduction

3820 This Resource describes the energy consumed by the Device since power up (the energy value is in Watt Hours [Wh])

3821 and the instantaneous power draw of the device (the power value is in Watts [W]) at the time the resource was queried.

3822 The Property "power" value is in Watts [W].

3823 The Property "energy" value is in Watt Hours [Wh].

3824 The Resource provides the current power draw and cumulative energy usage.

6.11.2 Example URI

/EnergyConsumptionResURI

6.11.3 Resource type

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

6.11.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Energy Consumption",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
        "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
        CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
        reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/EnergyConsumptionResURI" : {
      "get": {
        "description": "This Resource describes the energy consumed by the Device since power up
        (the energy value is in Watt Hours [Wh]) \nand the instantaneous power draw of the device (the power
        value is in Watts [W]) at the time the resource was queried.\nThe Property \"power\" value is in
        Watts [W].\nThe Property \"energy\" value is in Watt Hours [Wh].\nThe Resource provides the current
        power draw and cumulative energy usage.",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.energy.consumption"],
              "if": ["oic.if.s", "oic.if.baseline"],
              "power": 2000.1,
              "energy": 3500.4
            },
            "schema": { "$ref": "#/definitions/Consumption" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface" : {
      "in" : "query",
      "name" : "if",
      "type" : "string",
      "enum" : ["oic.if.s", "oic.if.baseline"]
    }
  },
  "definitions": {
    "Consumption" : {
      "properties": {
        "rt": {
          "description": "The Resource Type.",
          "items": {
            "enum": ["oic.r.energy.consumption"],
            "maxLength": 64,
            "type": "string"
          }
        }
      }
    }
  }
}
```

```

3894     },
3895     "minItems": 1,
3896     "uniqueItems": true,
3897     "readOnly": true,
3898     "type": "array"
3899   },
3900   "power": {
3901     "description": "The instantaneous Power.",
3902     "readOnly": true,
3903     "type": "number"
3904   },
3905   "energy": {
3906     "description": "The energy consumed.",
3907     "readOnly": true,
3908     "type": "number"
3909   },
3910   "n": {
3911     "$ref":
3912     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3913     schema.json#/definitions/n"
3914   },
3915   "id": {
3916     "$ref":
3917     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
3918     schema.json#/definitions/id"
3919   },
3920   "if": {
3921     "description": "The OCF Interface set supported by this Resource.",
3922     "items": {
3923       "enum": [
3924         "oic.if.s",
3925         "oic.if.baseline"
3926       ],
3927       "type": "string"
3928     },
3929     "minItems": 2,
3930     "uniqueItems": true,
3931     "readOnly": true,
3932     "type": "array"
3933   }
3934 },
3935 "type": "object",
3936 "required": ["power", "energy"]
3937 }
3938 }
3939 }
3940

```

3941 6.11.5 Property definition

3942 Table 25 defines the Properties that are part of the "oic.r.energy.consumption" Resource Type.

3943 **Table 25 – The Property definitions of the Resource with type "rt" =**
3944 **"oic.r.energy.consumption".**

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

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

6.11.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get			observe

6.12 Energy Usage

6.12.1 Introduction

This Resource describes a cumulative time-based energy usage query..

The Resource is a Collection of:

TimePeriod Resource

EnergyConsumption Resource

6.12.2 Example URI

/EnergyUsageResURI

6.12.3 Resource type

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

6.12.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Energy Usage",
    "version": "20190307",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/EnergyUsageResURI?if=oic.if.ll": {
      "get": {
        "description": "This Resource describes a cumulative time-based energy usage query.\nThe
Resource is a Collection of:\n TimePeriod Resource\n EnergyConsumption Resource\n",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example":
[
  {"href": "/TimePeriodResURI", "rt":["oic.r.time.period"],
  "if":["oic.if.a","oic.if.baseline"], "eps":[{"ep": "coaps://[fe80::b1d6]:1122}"}],
          {"href": "/EnergyConsumptionResURI", "rt":["oic.r.energy.consumption"],
```

```

3995 "if":["oic.if.s","oic.if.baseline"], "eps":[{"ep": "coaps://[fe80::b1d6]:1122"}]]
3996     ],
3997     "schema": { "$ref": "#/definitions/Usage-11" }
3998   }
3999 }
4000 }
4001 },
4002 "/EnergyUsageResURI?if=oic.if.b" : {
4003   "get": {
4004     "description": "This Resource describes a cumulative time-based energy usage query.\nThe
4005 Resource is a Collection of:\n TimePeriod Resource\n EnergyConsumption Resource\n",
4006     "parameters": [
4007       {"$ref": "#/parameters/interface"}
4008     ],
4009     "responses": {
4010       "200": {
4011         "description" : "",
4012         "x-example": [
4013           {
4014             "href": "/TimePeriodResURI",
4015             "rep": {
4016               "startTime": "2015-01-09T14:30Z",
4017               "stopTime": "2015-01-09T14:45Z"
4018             }
4019           },
4020           {
4021             "href": "/EnergyConsumptionResURI",
4022             "rep": {
4023               "power": 2000.1,
4024               "energy": 3500.4
4025             }
4026           }
4027         ],
4028         "schema": { "$ref": "#/definitions/EnergyUsageBatch-Retrieve" }
4029       }
4030     }
4031   },
4032   "post": {
4033     "description": "Sets the timer period of the query using the batch OCF Interface\n",
4034     "parameters": [
4035       {"$ref": "#/parameters/interface-b"},
4036       {
4037         "name": "body",
4038         "in": "body",
4039         "required": true,
4040         "schema": { "$ref": "#/definitions/EnergyUsageBatch-Update" },
4041         "x-example": [
4042           {
4043             "href": "/TimePeriodResURI",
4044             "rep": {
4045               "startTime": "2015-03-15T10:30Z",
4046               "stopTime": "2015-03-15T10:45Z"
4047             }
4048           }
4049         ]
4050       }
4051     ],
4052     "responses": {
4053       "200": {
4054         "description" : "",
4055         "x-example": [
4056           {
4057             "href": "/TimePeriodResURI",
4058             "rep": {
4059               "startTime": "2015-03-15T10:30Z",
4060               "stopTime": "2015-03-15T10:45Z"
4061             }
4062           },
4063           {
4064             "href": "/EnergyConsumptionResURI",
4065             "rep": {
4066               "power": 1500.1,

```

```

4067         "energy": 2200.4
4068     }
4069 }
4070 ],
4071 "schema": { "$ref": "#/definitions/EnergyUsageBatch-Retrieve" }
4072 }
4073 }
4074 }
4075 },
4076 "/EnergyUsageResURI?if=oic.if.baseline" : {
4077     "get": {
4078         "description": "This Resource describes a cumulative time-based energy usage query..\nThe
4079 Resource is a Collection of:\n TimePeriod Resource\n EnergyConsumption Resource\n",
4080         "parameters": [
4081             { "$ref": "#/parameters/interface" }
4082         ],
4083         "responses": {
4084             "200": {
4085                 "description": "",
4086                 "x-example":
4087                     {
4088                         "rt": ["oic.r.energy.usage"],
4089                         "if": ["oic.if.ll", "oic.if.b", "oic.if.baseline"],
4090                         "rts": ["oic.r.time.period", "oic.r.energy.consumption"],
4091                         "links": [
4092                             { "href": "/TimePeriodResURI", "rt": ["oic.r.time.period"],
4093                               "if": ["oic.if.a", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122}"} },
4094                             { "href": "/EnergyConsumptionResURI", "rt": ["oic.r.energy.consumption"],
4095                               "if": ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122}"} }
4096                         ]
4097                     },
4098                 "schema": { "$ref": "#/definitions/Usage-baseline" }
4099             }
4100         }
4101     }
4102 }
4103 },
4104 "parameters": {
4105     "interface" : {
4106         "in" : "query",
4107         "name" : "if",
4108         "type" : "string",
4109         "enum" : ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
4110     },
4111     "interface-b" : {
4112         "in" : "query",
4113         "name" : "if",
4114         "type" : "string",
4115         "enum" : ["oic.if.b"]
4116     }
4117 },
4118 "definitions": {
4119     "Usage-ll": {
4120         "items": {
4121             "$ref": "#/definitions/oic.oic-link"
4122         },
4123         "type": "array"
4124     },
4125     "oic.oic-link": {
4126         "type": "object",
4127         "properties": {
4128             "anchor": {
4129                 "$ref":
4130                 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
4131                 schema.json#/definitions/anchor"
4132             },
4133             "di": {
4134                 "$ref":
4135                 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
4136                 schema.json#/definitions/di"
4137             },
4138             "eps": {

```

```

4139         "$ref":
4140         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
4141         schema.json#/definitions/eps"
4142     },
4143     "href": {
4144         "$ref":
4145         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
4146         schema.json#/definitions/href"
4147     },
4148     "ins": {
4149         "$ref":
4150         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
4151         schema.json#/definitions/ins"
4152     },
4153     "p": {
4154         "$ref":
4155         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
4156         schema.json#/definitions/p"
4157     },
4158     "rel": {
4159         "$ref":
4160         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
4161         schema.json#/definitions/rel_array"
4162     },
4163     "title": {
4164         "$ref":
4165         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
4166         schema.json#/definitions/title"
4167     },
4168     "type": {
4169         "$ref":
4170         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
4171         schema.json#/definitions/type"
4172     },
4173     "if": {
4174         "description": "The OCF Interfaces supported by the target Resource",
4175         "items": {
4176             "enum": [
4177                 "oic.if.a",
4178                 "oic.if.s",
4179                 "oic.if.baseline"
4180             ],
4181             "type": "string",
4182             "maxLength": 64
4183         },
4184         "minItems": 2,
4185         "uniqueItems": true,
4186         "type": "array",
4187         "readOnly": true
4188     },
4189     "rt": {
4190         "description": "Resource Type of the target Resource",
4191         "items": {
4192             "maxLength": 64,
4193             "type": "string",
4194             "enum": ["oic.r.time.period", "oic.r.energy.consumption"]
4195         },
4196         "minItems": 1,
4197         "type": "array",
4198         "uniqueItems": true,
4199         "readOnly": true
4200     }
4201 },
4202 "required": [
4203     "href",
4204     "rt",
4205     "if"
4206 ]
4207 },
4208 "Usage-baseline": {
4209     "properties": {
4210         "rt": {

```

```

4211         "description": "Resource Type of this Resource",
4212         "items": {
4213             "maxLength": 64,
4214             "type": "string",
4215             "enum": ["oic.r.energy.usage"]
4216         },
4217         "minItems": 1,
4218         "readOnly": true,
4219         "uniqueItems": true,
4220         "type": "array"
4221     },
4222     "rts": {
4223         "items": {
4224             "enum": [
4225                 "oic.r.time.period",
4226                 "oic.r.energy.consumption"
4227             ],
4228             "type": "string",
4229             "maxLength": 64
4230         },
4231         "minItems": 1,
4232         "type": "array",
4233         "readOnly": true,
4234         "uniqueItems": true
4235     },
4236     "links": {
4237         "description": "A set of simple or individual OCF Links.",
4238         "type": "array",
4239         "items": {
4240             "$ref": "#/definitions/oic.oic-link"
4241         }
4242     },
4243     "n": {
4244         "$ref":
4245         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4246         schema.json#/definitions/n"
4247     },
4248     "id": {
4249         "$ref":
4250         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4251         schema.json#/definitions/id"
4252     },
4253     "if": {
4254         "description": "The OCF Interfaces supported by this Resource",
4255         "items": {
4256             "enum": [
4257                 "oic.if.ll",
4258                 "oic.if.b",
4259                 "oic.if.baseline"
4260             ],
4261             "type": "string",
4262             "maxLength": 64
4263         },
4264         "minItems": 1,
4265         "readOnly": true,
4266         "uniqueItems": true,
4267         "type": "array"
4268     }
4269 },
4270 "type": "object",
4271 "required": ["rt", "if", "links"]
4272 },
4273 "EnergyUsageBatch-Retrieve" : {
4274     "type": "array",
4275     "minItems": 2,
4276     "uniqueItems": true,
4277     "items": {
4278         "type": "object",
4279         "additionalProperties": true,
4280         "properties": {
4281             "href": {
4282                 "$ref":

```

```

4283 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
4284 schema.json#/definitions/href"
4285     },
4286     "rep": {
4287         "anyOf": [
4288             {"$ref":
4289 "https://openconnectivityfoundation.github.io/IoTDataModels/TimePeriodResURI.swagger.json#/definitio
4290 ns/TimePeriod"},
4291             {"$ref":
4292 "https://openconnectivityfoundation.github.io/IoTDataModels/EnergyConsumptionResURI.swagger.json#/de
4293 finitions/Consumption"}
4294         ]
4295     },
4296     },
4297     "required": [
4298         "href",
4299         "rep"
4300     ]
4301 }
4302 },
4303 "EnergyUsageBatch-Update" : {
4304     "type": "array",
4305     "minItems": 1,
4306     "uniqueItems": true,
4307     "items": {
4308         "type": "object",
4309         "additionalProperties": true,
4310         "properties": {
4311             "href": {
4312                 "$ref":
4313 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
4314 schema.json#/definitions/href"
4315             },
4316             "rep": {
4317                 "anyOf": [
4318                     {"$ref":
4319 "https://openconnectivityfoundation.github.io/IoTDataModels/TimePeriodResURI.swagger.json#/definitio
4320 ns/TimePeriod"}
4321                 ]
4322             }
4323         },
4324         "required": [
4325             "href",
4326             "rep"
4327         ]
4328     }
4329 }
4330 }
4331 }
4332

```

6.12.5 Property definition

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

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

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

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

6.12.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get			observe

6.13 Humidity

6.13.1 Introduction

This Resource describes a sensed or desired humidity.

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

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

6.13.2 Example URI

/HumidityResURI

6.13.3 Resource type

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

6.13.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Humidity",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/HumidityResURI" : {
      "get": {
        "description": "This Resource describes a sensed or desired humidity.\n\nThe Property
\"humidity\" is an integer describing the percentage measured relative humidity.\n\nThe Property
\"desiredHumidity\" is an integer showing the desired target relative humidity.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "RETRIEVES the current (relative) humidity level.",
            "x-example":
            {
              "rt": ["oic.r.humidity"],
              "if": ["oic.if.a", "oic.if.baseline"],
              "humidity": 40,
              "desiredHumidity": 40
            },
            "schema": { "$ref": "#/definitions/Humidity" }
          }
        }
      },
      "post": {
        "description": "Sets the desired relative humidity level.",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/HumidityUpdate" },
            "x-example":
            {
              "desiredHumidity" : 45
            }
          }
        ],
        "responses": {
          "200": {
            "description": "Indicates that the relative humidity level was changed.\n\nThe new
relative humidity level is provided in the response.",
            "x-example":
            {
              "desiredHumidity": 45
            },
            "schema": { "$ref": "#/definitions/HumidityUpdate" }
          }
        }
      }
    }
  }
}
```

```

4416     }
4417   }
4418 }
4419 },
4420 "parameters": {
4421   "interface": {
4422     "in": "query",
4423     "name": "if",
4424     "type": "string",
4425     "enum": ["oic.if.a", "oic.if.s", "oic.if.baseline"]
4426   }
4427 },
4428 "definitions": {
4429   "Humidity" : {
4430     "properties": {
4431       "rt": {
4432         "description": "The Resource Type.",
4433         "items": {
4434           "enum": ["oic.r.humidity"],
4435           "maxLength": 64,
4436           "type": "string"
4437         },
4438         "minItems": 1,
4439         "uniqueItems": true,
4440         "readOnly": true,
4441         "type": "array"
4442       },
4443       "desiredHumidity": {
4444         "description": "The desired value for humidity.",
4445         "maximum": 100,
4446         "minimum": 0,
4447         "type": "integer"
4448       },
4449       "humidity": {
4450         "description": "The current sensed value for humidity.",
4451         "maximum": 100,
4452         "minimum": 0,
4453         "readOnly": true,
4454         "type": "integer"
4455       },
4456       "n": {
4457         "$ref":
4458         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4459         schema.json#/definitions/n"
4460       },
4461       "id": {
4462         "$ref":
4463         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4464         schema.json#/definitions/id"
4465       },
4466       "if": {
4467         "description": "The OCF Interface set supported by this Resource.",
4468         "items": {
4469           "enum": [
4470             "oic.if.a",
4471             "oic.if.s",
4472             "oic.if.baseline"
4473           ],
4474           "type": "string"
4475         },
4476         "minItems": 2,
4477         "uniqueItems": true,
4478         "readOnly": true,
4479         "type": "array"
4480       }
4481     },
4482     "type": "object",
4483     "required": ["humidity"]
4484   },
4485   "HumidityUpdate" : {
4486     "properties": {
4487       "desiredHumidity": {

```

```

4488         "description": "Desired value for Humidity",
4489         "maximum": 100,
4490         "minimum": 0,
4491         "type": "integer"
4492     },
4493 },
4494 "type": "object",
4495 "required": ["desiredHumidity"]
4496 }
4497 }
4498 }
4499

```

4500 6.13.5 Property definition

4501 Table 29 defines the Properties that are part of the "oic.r.humidity" Resource Type.

4502 **Table 29 – The Property definitions of the Resource with type "rt" = "oic.r.humidity".**

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

4503 6.13.6 CRUDN behaviour

4504 Table 30 defines the CRUDN operations that are supported on the "oic.r.humidity" Resource Type.

4505 **Table 30 – The CRUDN operations of the Resource with type "rt" = "oic.r.humidity".**

Create	Read	Update	Delete	Notify
	get	post		observe

4506 6.14 Ice Maker

4507 6.14.1 Introduction

4508 This Resource describes an the operational state of an Ice Maker.

4509 The Property "status" is a string containing a value from the set of possible ice maker statuses.

4510 The possible statuses are defined by the enumeration ["on", "off", "full"]

4511 A status of "on" means that the Ice Maker is operating.

4512 A status of "off" means that the Ice Maker is not operating.

4513 A status of "full" means that the ice collection bin is full (Ice Maker is operating).

4514 6.14.2 Example URI

4515 /IceMakerResURI

4516 6.14.3 Resource type

4517 The Resource Type is defined as: "oic.r.icemaker".

6.14.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Ice Maker",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/IceMakerResURI" : {
      "get": {
        "description": "This Resource describes an the operational state of an Ice Maker.\n\nThe
Property \"status\" is a string containing a value from the set of possible ice maker statuses.\n\nThe
possible statuses are defined by the enumeration [\"on\", \"off\", \"full\"]\n\nA status of \"on\"
means that the Ice Maker is operating.\n\nA status of \"off\" means that the Ice Maker is not
operating.\n\nA status of \"full\" means that the ice collection bin is full (Ice Maker is
operating).",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "RETRIEVES the current Ice Maker status.",
            "x-example":
{
  "rt": ["oic.r.icemaker"],
  "if": ["oic.if.a", "oic.if.baseline"],
  "status": "on"
},
            "schema": { "$ref": "#/definitions/IceMaker" }
          }
        }
      },
      "post": {
        "description": "Sets the desired Ice Maker status.\n\nOnly valid settings for \"status\" in a
UPDATE shall be \"on\" or \"off\".",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/IceMakerUpdate" },
            "x-example":
{
  "status": "off"
}
          }
        ],
        "responses": {
          "200": {
            "description": "Indicates that the Ice Maker status was changed.\n\nThe new status is
provided in the response.\n",
            "x-example":
{
  "status": "off"
},
            "schema": { "$ref": "#/definitions/IceMakerUpdate" }
          },
          "403": {
```

```

4589         "description" : "This response is generated by the OCF Server when the client sends:\n
4590 An UPDATE with an invalid property value for \"status\".\n\nThe OCF Server responds with the current
4591 resource representation.\n",
4592         "x-example":
4593         {
4594             "status": "off"
4595         },
4596         "schema": { "$ref": "#/definitions/IceMakerUpdate" }
4597     }
4598 }
4599 }
4600 }
4601 },
4602 "parameters": {
4603     "interface": {
4604         "in": "query",
4605         "name": "if",
4606         "type": "string",
4607         "enum": ["oic.if.a", "oic.if.baseline"]
4608     }
4609 },
4610 "definitions": {
4611     "IceMaker" : {
4612         "properties": {
4613             "rt": {
4614                 "description": "The Resource Type.",
4615                 "items": {
4616                     "enum": ["oic.r.icemaker"],
4617                     "maxLength": 64,
4618                     "type": "string"
4619                 },
4620                 "minItems": 1,
4621                 "uniqueItems": true,
4622                 "readOnly": true,
4623                 "type": "array"
4624             },
4625             "status": {
4626                 "description": "The status of the Ice Maker.",
4627                 "enum": [
4628                     "on",
4629                     "off",
4630                     "full"
4631                 ],
4632                 "type": "string"
4633             },
4634             "n": {
4635                 "$ref":
4636 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4637 schema.json#/definitions/n"
4638             },
4639             "id": {
4640                 "$ref":
4641 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4642 schema.json#/definitions/id"
4643             },
4644             "if": {
4645                 "description": "The OCF Interface set supported by this Resource.",
4646                 "items": {
4647                     "enum": [
4648                         "oic.if.a",
4649                         "oic.if.baseline"
4650                     ],
4651                     "type": "string"
4652                 },
4653                 "minItems": 2,
4654                 "uniqueItems": true,
4655                 "readOnly": true,
4656                 "type": "array"
4657             }
4658         },
4659         "type": "object",
4660         "required": ["status"]

```

```

4661     },
4662     "IceMakerUpdate" : {
4663       "properties": {
4664         "status": {
4665           "description": "Set the status of the Ice Maker.",
4666           "enum": [
4667             "on",
4668             "off"
4669           ]
4670         }
4671       },
4672       "type": "object",
4673       "required": ["status"]
4674     }
4675   }
4676 }
4677

```

4678 6.14.5 Property definition

4679 Table 31 defines the Properties that are part of the "oic.r.icemaker" Resource Type.

4680 **Table 31 – The Property definitions of the Resource with type "rt" = "oic.r.icemaker".**

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

4681 6.14.6 CRUDN behaviour

4682 Table 32 defines the CRUDN operations that are supported on the "oic.r.icemaker" Resource Type.

4683 **Table 32 – The CRUDN operations of the Resource with type "rt" = "oic.r.icemaker".**

Create	Read	Update	Delete	Notify
	get	post		observe

4684 6.15 Lock

4685 6.15.1 Introduction

4686 The Resource describing a lock.

4687 The Property "lockState" is a string. The value 'Locked' indicates that the door is Locked.

4688 The value 'Unlocked' indicates that the door is Unlocked.

4689 6.15.2 Example URI

4690 /LockStatusResURI

4691 6.15.3 Resource type

4692 The Resource Type is defined as: "oic.r.lock.status".

6.15.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Lock",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/LockStatusResURI" : {
      "get": {
        "description": "The Resource describing a lock.\nThe Property \"lockState\" is a string. The
value 'Locked' indicates that the door is Locked.\nThe value 'Unlocked' indicates that the door is
Unlocked.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "RETRIEVES the state of the lock.",
            "x-example":
            {
              "rt": ["oic.r.lock.status"],
              "if": ["oic.if.a", "oic.if.baseline"],
              "lockState": "Locked"
            },
            "schema": { "$ref": "#/definitions/Lock" }
          }
        }
      },
      "post": {
        "description": "Sets the current lock state.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/Lock" },
            "x-example":
            {
              "lockState": "Unlocked"
            }
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example":
            {
              "lockState": "Unlocked"
            },
            "schema": { "$ref": "#/definitions/Lock" }
          },
          "403": {
            "description": "This response is generated by the OCF Server when the client sends:\n
An UPDATE with an invalid property value for \"lockState\".\nThe server responds with the current
resource representation.\n",
            "x-example":
            {

```



```

4764         "lockState": "Unlocked"
4765     },
4766     "schema": { "$ref": "#/definitions/Lock" }
4767 }
4768 }
4769 }
4770 }
4771 },
4772 "parameters": {
4773     "interface" : {
4774         "in" : "query",
4775         "name" : "if",
4776         "type" : "string",
4777         "enum" : ["oic.if.a", "oic.if.baseline"]
4778     }
4779 },
4780 "definitions": {
4781     "Lock" : {
4782         "properties": {
4783             "rt": {
4784                 "description": "Resource Type",
4785                 "items": {
4786                     "enum": ["oic.r.lock.status"],
4787                     "maxLength": 64,
4788                     "type": "string"
4789                 },
4790                 "minItems": 1,
4791                 "uniqueItems": true,
4792                 "readOnly": true,
4793                 "type": "array"
4794             },
4795             "lockState": {
4796                 "description": "The state of the lock.",
4797                 "enum": [
4798                     "Locked",
4799                     "Unlocked"
4800                 ],
4801                 "type": "string"
4802             },
4803             "n": {
4804                 "$ref":
4805 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4806 schema.json#/definitions/n"
4807             },
4808             "id": {
4809                 "$ref":
4810 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4811 schema.json#/definitions/id"
4812             },
4813             "if": {
4814                 "description": "The OCF Interface set supported by this Resource.",
4815                 "items": {
4816                     "enum": [
4817                         "oic.if.a",
4818                         "oic.if.baseline"
4819                     ],
4820                     "type": "string"
4821                 },
4822                 "minItems": 2,
4823                 "uniqueItems": true,
4824                 "readOnly": true,
4825                 "type": "array"
4826             }
4827         },
4828         "type": "object",
4829         "required": ["lockState"]
4830     }
4831 }
4832 }
4833

```

6.15.5 Property definition

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

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

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

6.15.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get	post		observe

6.16 Lock Code

6.16.1 Introduction

The Resource describing a lock code.

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

The codes are all presented as strings.

6.16.2 Example URI

/LockCodeResURI

6.16.3 Resource type

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

6.16.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Lock Code",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
```

```

4870     "/LockCodeResURI" : {
4871       "get": {
4872         "description": "The Resource describing a lock code.\nThe Property \"lockCodeList\" is an
4873 array of possible codes that may be associated with a lock.\nThe codes are all presented as
4874 strings.",
4875         "parameters": [
4876           { "$ref": "#/parameters/interface" }
4877         ],
4878         "responses": {
4879           "200": {
4880             "description": "RETRIEVES the current lock code values.",
4881             "x-example":
4882               {
4883                 "rt": ["oic.r.lock.code"],
4884                 "if": ["oic.if.a", "oic.if.baseline"],
4885                 "lockCodeList": ["012345", "112233"]
4886               },
4887             "schema": { "$ref": "#/definitions/LockCode" }
4888           }
4889         },
4890       },
4891       "post": {
4892         "description": "Updates the current lock code values. e.g. all value in the property
4893 \"lockCodeList\"",
4894         "parameters": [
4895           { "$ref": "#/parameters/interface" },
4896           {
4897             "name": "body",
4898             "in": "body",
4899             "required": true,
4900             "schema": { "$ref": "#/definitions/LockCode" },
4901             "x-example":
4902               {
4903                 "lockCodeList": ["543210", "332211"]
4904               }
4905           }
4906         ],
4907         "responses": {
4908           "200": {
4909             "description": "",
4910             "x-example":
4911               {
4912                 "lockCodeList": ["543210", "332211"]
4913               },
4914             "schema": { "$ref": "#/definitions/LockCode" }
4915           }
4916         },
4917       },
4918     },
4919   },
4920   "parameters": {
4921     "interface" : {
4922       "in" : "query",
4923       "name" : "if",
4924       "type" : "string",
4925       "enum" : ["oic.if.a", "oic.if.baseline"]
4926     }
4927   },
4928   "definitions": {
4929     "LockCode" : {
4930       "properties": {
4931         "rt": {
4932           "description": "The Resource Type.",
4933           "items": {
4934             "enum": ["oic.r.lock.code"],
4935             "maxLength": 64,
4936             "type": "string"
4937           },
4938           "minItems": 1,
4939           "uniqueItems": true,
4940           "readOnly": true,
4941           "type": "array"

```

```

4942     },
4943     "lockCodeList": {
4944         "items": {
4945             "description": "The value for the lock code.",
4946             "type": "string"
4947         },
4948         "type": "array"
4949     },
4950     "n": {
4951         "$ref":
4952         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4953         schema.json#/definitions/n"
4954     },
4955     "id": {
4956         "$ref":
4957         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
4958         schema.json#/definitions/id"
4959     },
4960     "if": {
4961         "description": "The OCF Interface set supported by this Resource.",
4962         "items": {
4963             "enum": [
4964                 "oic.if.a",
4965                 "oic.if.baseline"
4966             ],
4967             "type": "string"
4968         },
4969         "minItems": 2,
4970         "uniqueItems": true,
4971         "readOnly": true,
4972         "type": "array"
4973     }
4974 },
4975 "type": "object",
4976 "required": ["lockCodeList"]
4977 }
4978 }
4979 }
4980

```

4981 6.16.5 Property definition

4982 Table 35 defines the Properties that are part of the "oic.r.lock.code" Resource Type.

4983 **Table 35 – The Property definitions of the Resource with type "rt" = "oic.r.lock.code".**

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

4984 6.16.6 CRUDN behaviour

4985 Table 36 defines the CRUDN operations that are supported on the "oic.r.lock.code" Resource Type.

4986 **Table 36 – The CRUDN operations of the Resource with type "rt" = "oic.r.lock.code".**

Create	Read	Update	Delete	Notify
	get	post		observe

6.17 Mode

6.17.1 Introduction

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

The mode can be read or set.

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

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

6.17.2 Example URI

/ModeResURI

6.17.3 Resource type

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

6.17.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Mode",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
        "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
        CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
        reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/ModeResURI" : {
      "get": {
        "description": "This Resource describes the modes of operation that a Device can
        provide.\n\nThe mode can be read or set.\n\nThe Property \"supportedModes\" is an array of possible
        modes the device supports.\n\nThe Property \"modes\" is an array of the currently active mode(s).",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "RETRIEVES the current mode.",
            "x-example":
              {
                "rt": ["oic.r.mode"],
                "if": ["oic.if.a", "oic.if.baseline"],
                "supportedModes": ["active", "armedAway", "armedStay", "armedInstant"],
                "modes": ["active"]
              },
            "schema": { "$ref": "#/definitions/Mode" }
          }
        }
      },
      "post": {
        "description": "Sets the desired mode.",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/ModeUpdate" },
            "x-example":
              {
```

```

5050         "modes": ["armedAway"]
5051     }
5052 }
5053 ],
5054 "responses": {
5055     "200": {
5056         "description": "",
5057         "x-example":
5058             {
5059                 "modes": ["armedAway"]
5060             }
5061         ,
5062         "schema": { "$ref": "#/definitions/ModeUpdate" }
5063     },
5064     "403": {
5065         "description": "This response is generated by the OCF Server when the client sends:\n
5066 An UPDATE with an value for \"modes\" that is not found in \"supportedModes\".\n
5067 The server responds with the current resource representation.\n",
5068         "x-example":
5069             {
5070                 "supportedModes": ["active","armedAway","armedStay","armedInstant"],
5071                 "modes": ["active"]
5072             },
5073         "schema": { "$ref": "#/definitions/Mode" }
5074     }
5075 }
5076 }
5077 }
5078 },
5079 "parameters": {
5080     "interface": {
5081         "in": "query",
5082         "name": "if",
5083         "type": "string",
5084         "enum": ["oic.if.a", "oic.if.baseline"]
5085     }
5086 },
5087 "definitions": {
5088     "Mode" : {
5089         "properties": {
5090             "rt": {
5091                 "description": "The Resource Type.",
5092                 "items": {
5093                     "enum": ["oic.r.mode"],
5094                     "maxLength": 64,
5095                     "type": "string"
5096                 },
5097                 "minItems": 1,
5098                 "uniqueItems": true,
5099                 "readOnly": true,
5100                 "type": "array"
5101             },
5102             "modes": {
5103                 "description": "The array of the currently active mode(s).",
5104                 "items": {
5105                     "type": "string"
5106                 },
5107                 "type": "array"
5108             },
5109             "supportedModes": {
5110                 "description": "The array of possible modes the device supports.",
5111                 "items": {
5112                     "type": "string"
5113                 },
5114                 "readOnly": true,
5115                 "type": "array"
5116             },
5117             "n": {
5118                 "$ref":
5119 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5120 schema.json#/definitions/n"
5121             },

```

```

5122         "id": {
5123             "$ref":
5124             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5125             schema.json#/definitions/id"
5126         },
5127         "if": {
5128             "description": "The OCF Interface set supported by this Resource.",
5129             "items": {
5130                 "enum": [
5131                     "oic.if.a",
5132                     "oic.if.baseline"
5133                 ],
5134                 "type": "string"
5135             },
5136             "minItems": 2,
5137             "uniqueItems": true,
5138             "readOnly": true,
5139             "type": "array"
5140         }
5141     },
5142     "type": "object",
5143     "required": ["supportedModes", "modes"]
5144 },
5145 "ModeUpdate" : {
5146     "properties": {
5147         "modes": {
5148             "description": "Desired mode",
5149             "items": {
5150                 "type": "string"
5151             },
5152             "type": "array"
5153         }
5154     },
5155     "type": "object",
5156     "required": ["modes"]
5157 }
5158 }
5159 }
5160

```

6.17.5 Property definition

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

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

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

6.17.6 CRUDN behaviour

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

5166 **Table 38 – The CRUDN operations of the Resource with type "rt" = "oic.r.mode".**

Create	Read	Update	Delete	Notify
	get	post		observe

5167 **6.18 Open Level**

5168 **6.18.1 Introduction**

5169 This Resource describes how open or ajar an entity such as a window, door, blind or shutter is.
5170 The Property "openLevel" can be read (acting as a sensor).
5171 The "openLevel" can also be set (acting as an actuator).
5172 The "openLevel" is device dependent across the range provided.
5173 When the Property "range" is omitted then 0 to 100 is assumed where 0 means closed, 100
5174 means fully open.
5175 If a "range" is provided then the lower bound=closed, upper bound=open.
5176 If Property "step" is present then it represents the increment between possible values; if not
5177 provided 1 is assumed.

5178 **6.18.2 Example URI**

5179 /OpenLevelResURI

5180 **6.18.3 Resource type**

5181 The Resource Type is defined as: "oic.r.openlevel".

5182 **6.18.4 OpenAPI 2.0 definition**

```

5183 {
5184   "swagger": "2.0",
5185   "info": {
5186     "title": "Open Level",
5187     "version": "20190215",
5188     "license": {
5189       "name": "OCF Data Model License",
5190       "url":
5191         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
5192         CENSE.md",
5193       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
5194       reserved."
5195     },
5196     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
5197   },
5198   "schemes": ["http"],
5199   "consumes": ["application/json"],
5200   "produces": ["application/json"],
5201   "paths": {
5202     "/OpenLevelResURI" : {
5203       "get": {
5204         "description": "This Resource describes how open or ajar an entity such as a window, door,
5205         blind or shutter is.\nThe Property \"openLevel\" can be read (acting as a sensor).\nThe
5206         \"openLevel\" can also be set (acting as an actuator).\nThe \"openLevel\" is device dependent across
5207         the range provided.\nWhen the Property \"range\" is omitted then 0 to 100 is assumed where 0 means
5208         closed, 100 means fully open.\nIf a \"range\" is provided then the lower bound=closed, upper
5209         bound=open.\nIf Property \"step\" is present then it represents the increment between possible
5210         values; if not provided 1 is assumed.",
5211         "parameters": [
5212           {"$ref": "#/parameters/interface"}
5213         ],
5214         "responses": {
5215           "200": {
5216             "description": "RETRIEVES the current openLevel.",
5217             "x-example":
5218               {
5219                 "rt": ["oic.r.openlevel"],
5220                 "if": ["oic.if.a", "oic.if.baseline"],
5221                 "openLevel": 50,

```



```

5222         "step": 2,
5223         "range": [0, 100]
5224     },
5225     "schema": { "$ref": "#/definitions/OpenLevel" }
5226 }
5227 },
5228 },
5229 "post": {
5230     "description": "Sets the desired openLevel.",
5231     "parameters": [
5232         { "$ref": "#/parameters/interface" },
5233         {
5234             "name": "body",
5235             "in": "body",
5236             "required": true,
5237             "schema": { "$ref": "#/definitions/OpenLevel" },
5238             "x-example":
5239                 {
5240                     "openLevel": 0
5241                 }
5242         },
5243     ],
5244     "responses": {
5245         "200": {
5246             "description": "",
5247             "x-example":
5248                 {
5249                     "openLevel": 0
5250                 },
5251             "schema": { "$ref": "#/definitions/OpenLevel" }
5252         },
5253         "403": {
5254             "description": "This response is generated by the OCF Server when the client sends:\n
5255 An UPDATE with an out of range property value for \"openLevel\".\n
5256 The OCF Server responds with the
5257 current resource representation.\n",
5258             "x-example":
5259                 {
5260                     "openLevel": 50,
5261                     "step": 2,
5262                     "range": [0, 100]
5263                 },
5264             "schema": { "$ref": "#/definitions/OpenLevel" }
5265         }
5266     },
5267 },
5268 },
5269 "parameters": {
5270     "interface": {
5271         "in": "query",
5272         "name": "if",
5273         "type": "string",
5274         "enum": ["oic.if.a", "oic.if.baseline"]
5275     }
5276 },
5277 "definitions": {
5278     "OpenLevel": {
5279         "properties": {
5280             "rt": {
5281                 "description": "The Resource Type.",
5282                 "items": {
5283                     "maxLength": 64,
5284                     "type": "string",
5285                     "enum": ["oic.r.openlevel"]
5286                 },
5287                 "minItems": 1,
5288                 "uniqueItems": true,
5289                 "readOnly": true,
5290                 "type": "array"
5291             },
5292             "openLevel": {
5293                 "description": "How open or ajar the entity is.",

```

```

5294         "type": "integer"
5295     },
5296     "n": {
5297         "$ref":
5298 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5299 schema.json#/definitions/n"
5300     },
5301     "id": {
5302         "$ref":
5303 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5304 schema.json#/definitions/id"
5305     },
5306     "range": {
5307         "$ref":
5308 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
5309 schema.json#/definitions/range_integer"
5310     },
5311     "step": {
5312         "$ref":
5313 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
5314 schema.json#/definitions/step_integer"
5315     },
5316     "if": {
5317         "description": "The OCF Interface set supported by this Resource.",
5318         "items": {
5319             "enum": [
5320                 "oic.if.a",
5321                 "oic.if.baseline"
5322             ],
5323             "type": "string"
5324         },
5325         "minItems": 2,
5326         "uniqueItems": true,
5327         "readOnly": true,
5328         "type": "array"
5329     }
5330 },
5331 "type": "object",
5332 "required": ["openLevel"]
5333 }
5334 }
5335 }
5336

```

5337 6.18.5 Property definition

5338 Table 39 defines the Properties that are part of the "oic.r.openlevel" Resource Type.

5339 **Table 39 – The Property definitions of the Resource with type "rt" = "oic.r.openlevel".**

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

6.18.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get	post		observe

6.19 Operational State

6.19.1 Introduction

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

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

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

in adverse operational characteristics.

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

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

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

The Property "currentJobState" is the currently active jobState.

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

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

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

6.19.2 Example URI

/OperationalStateResURI

6.19.3 Resource type

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

6.19.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Operational State",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/OperationalStateResURI": {
      "get": {
        "description": "This Resource describes the operational and job states on a device.\n\nThe
states can be read or set, setting indicates a desired state.\n\nA device may reject an attempt to set
a state that would result\n\nin adverse operational characteristics.\n\nThe Property \"machineStates\"
is an array of the possible operational states.\n\nThe Property \"currentMachineState\" is the current
state of operation of the device.\n\nThe Property \"jobStates\" is an array of the possible job
states.\n\nThe Property \"currentJobState\" is the currently active jobState.\n\nThe Property
\"runningTime\" is the ISO8601 encoded elapsed time in the current operational state.\n\nThe Property
\"remainingTime\" is the ISO8601 encoded time till completion of the current operational state.\n\nThe
Property \"progressPercentage\" is the percentage completeness of the current jobState.",
```

```

5393     "parameters": [
5394         { "$ref": "#/parameters/interface" }
5395     ],
5396     "responses": {
5397         "200": {
5398             "description": "RETRIEVES the current operational and job states.",
5399             "x-example": {
5400                 "rt": ["oic.r.operational.state"],
5401                 "if": ["oic.if.a", "oic.if.baseline"],
5402                 "machineStates": ["pause", "stopped", "idle", "active"],
5403                 "currentMachineState": "active",
5404                 "jobStates": ["preWash", "wash", "rinse", "spin", "dry", "airDry", "wrinklePrevent"],
5405                 "currentJobState": "rinse",
5406                 "runningTime": "PT15M20S",
5407                 "remainingTime": "PT10M40S",
5408                 "progressPercentage": 75
5409             },
5410             "schema": { "$ref": "#/definitions/Operation" }
5411         }
5412     },
5413 },
5414 "post": {
5415     "description": "Sets the desired operational or job state.",
5416     "parameters": [
5417         { "$ref": "#/parameters/interface" },
5418         {
5419             "name": "body",
5420             "in": "body",
5421             "required": true,
5422             "schema": { "$ref": "#/definitions/OperationUpdate" },
5423             "x-example": {
5424                 "currentMachineState": "pause",
5425                 "currentJobState": "wash"
5426             }
5427         }
5428     ],
5429     "responses": {
5430         "200": {
5431             "description": "",
5432             "x-example": {
5433                 "currentMachineState": "pause",
5434                 "currentJobState": "wash"
5435             },
5436             "schema": { "$ref": "#/definitions/OperationUpdate" }
5437         },
5438         "403": {
5439             "description": "This response is generated by the OCF Server when the client sends:\n
5440 An UPDATE with an value for \"currentMachineState\" that is not found in \"machineStates\".\n An
5441 UPDATE with an value for \"currentJobState\" that is not found in \"jobStates\".\n\nThe OCF Server
5442 responds with the current resource representation.\n",
5443             "x-example": {
5444                 "machineStates": ["pause", "stopped", "idle", "active"],
5445                 "currentMachineState": "active",
5446                 "jobStates": ["preWash", "wash", "rinse", "spin", "dry", "airDry", "wrinklePrevent"],
5447                 "currentJobState": "rinse",
5448                 "runningTime": "PT15M20S",
5449                 "remainingTime": "PT10M40S",
5450                 "progressPercentage": 75
5451             },
5452             "schema": { "$ref": "#/definitions/Operation" }
5453         }
5454     }
5455 },
5456 },
5457 },
5458 "parameters": {
5459     "interface": {
5460         "in": "query",
5461         "name": "if",
5462         "type": "string",
5463         "enum": ["oic.if.a", "oic.if.baseline"]
5464     }

```

```

5465 },
5466 "definitions": {
5467   "Operation": {
5468     "properties": {
5469       "rt": {
5470         "description": "The Resource Type.",
5471         "items": {
5472           "enum": ["oic.r.operational.state"],
5473           "maxLength": 64,
5474           "type": "string"
5475         },
5476         "minItems": 1,
5477         "uniqueItems": true,
5478         "readOnly": true,
5479         "type": "array"
5480       },
5481       "currentMachineState": {
5482         "description": "The current state of operation of the device.",
5483         "type": "string"
5484       },
5485       "currentJobState": {
5486         "description": "The currently active jobState.",
5487         "type": "string"
5488       },
5489       "machineStates": {
5490         "description": "The array of the possible operational states.",
5491         "items": {
5492           "type": "string"
5493         },
5494         "readOnly": true,
5495         "type": "array"
5496       },
5497       "runningTime": {
5498         "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
5499 schema.json#/definitions/duration"
5500       },
5501       "remainingTime": {
5502         "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
5503 schema.json#/definitions/duration"
5504       },
5505       "progressPercentage": {
5506         "description": "The percentage completeness of the current jobState.",
5507         "maximum": 100,
5508         "minimum": 0,
5509         "readOnly": true,
5510         "type": "integer"
5511       },
5512       "jobStates": {
5513         "description": "The Array of the possible job states.",
5514         "items": {
5515           "type": "string"
5516         },
5517         "readOnly": true,
5518         "type": "array"
5519       },
5520       "n": {
5521         "$ref":
5522 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5523 schema.json#/definitions/n"
5524       },
5525       "id": {
5526         "$ref":
5527 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5528 schema.json#/definitions/id"
5529       },
5530       "if": {
5531         "description": "The OCF Interface set supported by this Resource.",
5532         "items": {
5533           "enum": [
5534             "oic.if.a",
5535             "oic.if.baseline"
5536           ],

```

```

5537         "type": "string"
5538     },
5539     "minItems": 2,
5540     "uniqueItems": true,
5541     "readOnly": true,
5542     "type": "array"
5543 }
5544 },
5545 "type": "object",
5546 "required": ["machineStates", "currentMachineState"]
5547 },
5548 "OperationUpdate" : {
5549     "properties": {
5550         "currentMachineState": {
5551             "description": "The current state of operation of the device.",
5552             "type": "string"
5553         },
5554         "currentJobState": {
5555             "description": "The currently active jobState.",
5556             "type": "string"
5557         }
5558     },
5559     "type": "object"
5560 }
5561 }
5562 }
5563

```

6.19.5 Property definition

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

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

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

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

6.19.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get	post		observe

6.20 Ramp Time

6.20.1 Introduction

This Resource that describes the ramp time of a dimming function.

It specifies the actual speed of changing between 2 dimming values.

The Property "ramptime" is specified in milliseconds [ms].

When range is omitted the maximum value is 100 ms.

The ramp time of 0ms indicates the minimal delay possible by the implementation.

6.20.2 Example URI

/RampTimeResURI

6.20.3 Resource type

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

6.20.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Ramp Time",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/RampTimeResURI" : {
      "get": {
        "description": "This Resource that describes the ramp time of a dimming function.\nIt
specifies the actual speed of changing between 2 dimming values.\nThe Property \"ramptime\" is
specified in milliseconds [ms].\nWhen range is omitted the maximum value is 100 ms.\nThe ramp time
of 0ms indicates the minimal delay possible by the implementation.",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
            "description": "RETRIEVES the current RampTime.",
            "x-example":
```

```

5616         {
5617             "rt": ["oic.r.light.ramptime"],
5618             "if": ["oic.if.a", "oic.if.baseline"],
5619             "ramptime": 40,
5620             "range": [0, 100]
5621         },
5622         "schema": { "$ref": "#/definitions/RampTime" }
5623     }
5624 },
5625 },
5626 "post": {
5627     "description": "Sets the current RampTime.\n",
5628     "parameters": [
5629         { "$ref": "#/parameters/interface" },
5630         {
5631             "name": "body",
5632             "in": "body",
5633             "required": true,
5634             "schema": { "$ref": "#/definitions/RampTime" },
5635             "x-example":
5636             {
5637                 "ramptime": 50
5638             }
5639         }
5640     ],
5641     "responses": {
5642         "200": {
5643             "description": "This response is generated by the OCF Server when the client sends an
5644 UPDATE with an in range Property value for \"ramptime\". The OCF Server responds with the current
5645 resource representation.",
5646             "x-example":
5647             {
5648                 "ramptime": 50,
5649                 "range": [0, 100]
5650             },
5651             "schema": { "$ref": "#/definitions/RampTime" }
5652         },
5653         "403": {
5654             "description": "Error response. This response is generated by the OCF Server when the
5655 client sends an UPDATE with an out of range Property value for \"ramptime\".",
5656             "x-example":
5657             {
5658                 "ramptime": 40,
5659                 "range": [0, 100]
5660             },
5661             "schema": { "$ref": "#/definitions/RampTime" }
5662         }
5663     }
5664 }
5665 },
5666 },
5667 "parameters": {
5668     "interface": {
5669         "in": "query",
5670         "name": "if",
5671         "type": "string",
5672         "enum": ["oic.if.a", "oic.if.baseline"]
5673     }
5674 },
5675 "definitions": {
5676     "RampTime": {
5677         "properties": {
5678             "rt": {
5679                 "description": "The Resource Type.",
5680                 "items": {
5681                     "enum": ["oic.r.light.ramptime"],
5682                     "maxLength": 64,
5683                     "type": "string"
5684                 },
5685                 "minItems": 1,
5686                 "uniqueItems": true,
5687                 "readOnly": true,

```



```

5688         "type": "array"
5689     },
5690     "rampTime" :
5691     {
5692         "description": "The actual speed of changing between 2 dimming values.",
5693         "type": "integer"
5694     },
5695     "n": {
5696         "$ref":
5697         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5698         schema.json#/definitions/n"
5699     },
5700     "id": {
5701         "$ref":
5702         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5703         schema.json#/definitions/id"
5704     },
5705     "range": {
5706         "$ref":
5707         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
5708         schema.json#/definitions/range_integer"
5709     },
5710     "step": {
5711         "$ref":
5712         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
5713         schema.json#/definitions/step_integer"
5714     },
5715     "precision": {
5716         "$ref":
5717         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
5718         schema.json#/definitions/precision"
5719     },
5720     "if": {
5721         "description": "The OCF Interface set supported by this Resource.",
5722         "items": {
5723             "enum": [
5724                 "oic.if.a",
5725                 "oic.if.baseline"
5726             ],
5727             "type": "string"
5728         },
5729         "minItems": 2,
5730         "uniqueItems": true,
5731         "readOnly": true,
5732         "type": "array"
5733     }
5734 },
5735 "type": "object",
5736 "required": [ "rampTime" ]
5737 }
5738 }
5739 }
5740

```

5741 6.20.5 Property definition

5742 Table 43 defines the Properties that are part of the "oic.r.light.ramptime" Resource Type.

5743 **Table 43 – The Property definitions of the Resource with type "rt" = "oic.r.light.ramptime".**

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

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

6.20.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get	post		observe

6.21 Refrigeration

6.21.1 Introduction

This Resource describes a refrigeration function.

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

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

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

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

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

6.21.2 Example URI

/RefrigerationResURI

6.21.3 Resource type

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

6.21.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Refrigeration",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url": "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/RefrigerationResURI" : {
      "get": {
```

```

5783         "description": "This Resource describes a refrigeration function.\nThe Property \"filter\"
5784 is a read-only value providing the percentage life time remaining for the water filter.\nThe
5785 Property \"rapidFreeze\" is a boolean that controls the rapid freeze capability if present.\nThe
5786 Property \"rapidCool\" is a boolean that controls the rapid cool capability if present.\nThe
5787 Property \"defrost\" is a boolean that controls the defrost cycle if present.\nAt least one of the
5788 listed Properties shall be present in a Resource Instance.",
5789         "parameters": [
5790             { "$ref": "#/parameters/interface" }
5791         ],
5792         "responses": {
5793             "200": {
5794                 "description": "Retrieves the current Refrigeration function status; all Properties
5795 supported by the Device are returned.",
5796                 "x-example":
5797                     {
5798                         "rt": ["oic.r.refrigeration"],
5799                         "if": ["oic.if.a", "oic.if.baseline"],
5800                         "filter": 75,
5801                         "rapidFreeze": false,
5802                         "rapidCool": false,
5803                         "defrost": true
5804                     },
5805                 "schema": { "$ref": "#/definitions/Refrigeration" }
5806             }
5807         },
5808     },
5809     "post": {
5810         "description": "Activates the desired Refrigeration functions.\nSuported values are
5811 \"rapidFreeze\", \"rapidCool\" and \"defrost\".\nAt least on of the supported values shall be
5812 provided.\n",
5813         "parameters": [
5814             { "$ref": "#/parameters/interface" },
5815             {
5816                 "name": "body",
5817                 "in": "body",
5818                 "required": true,
5819                 "schema": { "$ref": "#/definitions/RefrigerationUpdate" },
5820                 "x-example":
5821                     {
5822                         "rapidFreeze": true
5823                     }
5824             }
5825         ],
5826         "responses": {
5827             "200": {
5828                 "description": "Indicates that the Refrigeration function was changed.\nThe new
5829 status can be provided in the response.\n",
5830                 "x-example":
5831                     {
5832                         "rapidFreeze": true
5833                     },
5834                 "schema": { "$ref": "#/definitions/RefrigerationUpdate" }
5835             }
5836         }
5837     }
5838 },
5839 },
5840 "parameters": {
5841     "interface": {
5842         "in": "query",
5843         "name": "if",
5844         "type": "string",
5845         "enum": ["oic.if.a", "oic.if.baseline"]
5846     }
5847 },
5848 "definitions": {
5849     "Refrigeration" : {
5850         "properties": {
5851             "rt": {
5852                 "description": "The Resource Type.",
5853                 "items": {
5854                     "enum": ["oic.r.refrigeration"],

```

```

5855         "maxLength": 64,
5856         "type": "string"
5857     },
5858     "minItems": 1,
5859     "uniqueItems": true,
5860     "readOnly": true,
5861     "type": "array"
5862 },
5863 "rapidFreeze": {
5864     "description": "Indicates whether the unit has a rapid freeze capability active.",
5865     "type": "boolean"
5866 },
5867 "defrost": {
5868     "description": "Indicates whether a defrost cycle is currently active.",
5869     "type": "boolean"
5870 },
5871 "filter": {
5872     "description": "Percentage life time remaining for the water filter.",
5873     "maximum": 100,
5874     "minimum": 0,
5875     "readOnly": true,
5876     "type": "integer"
5877 },
5878 "rapidCool": {
5879     "description": "Indicates whether the unit has a rapid cool capability active.",
5880     "type": "boolean"
5881 },
5882 "n": {
5883     "$ref":
5884     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5885     schema.json#/definitions/n"
5886 },
5887 "id": {
5888     "$ref":
5889     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
5890     schema.json#/definitions/id"
5891 },
5892 "if": {
5893     "description": "The OCF Interface set supported by this Resource.",
5894     "items": {
5895         "enum": [
5896             "oic.if.a",
5897             "oic.if.baseline"
5898         ],
5899         "type": "string"
5900     },
5901     "minItems": 2,
5902     "readOnly": true,
5903     "type": "array"
5904 },
5905 },
5906 "anyOf": [
5907     {
5908         "required": ["filter"]
5909     },
5910     {
5911         "required": ["rapidFreeze"]
5912     },
5913     {
5914         "required": ["rapidCool"]
5915     },
5916     {
5917         "required": ["defrost"]
5918     }
5919 ],
5920 "type": "object"
5921 },
5922 "RefrigerationUpdate": {
5923     "properties": {
5924         "rapidFreeze": {
5925             "description": "Indicates whether the unit has a rapid freeze capability active.",
5926             "type": "boolean"

```

```

5927     },
5928     "defrost": {
5929         "description": "Indicates whether a defrost cycle is currently active.",
5930         "type": "boolean"
5931     },
5932     "rapidCool": {
5933         "description": "Indicates whether the unit has a rapid cool capability active.",
5934         "type": "boolean"
5935     }
5936 },
5937 "anyOf": [
5938     {
5939         "required": ["rapidFreeze"]
5940     },
5941     {
5942         "required": ["rapidCool"]
5943     },
5944     {
5945         "required": ["defrost"]
5946     }
5947 ],
5948 "type": "object"
5949 }
5950 }
5951 }
5952

```

5953 6.21.5 Property definition

5954 Table 45 defines the Properties that are part of the "oic.r.refrigeration" Resource Type.

5955 **Table 45 – The Property definitions of the Resource with type "rt" = "oic.r.refrigeration".**

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

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

6.21.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get	post		observe

6.22 Temperature

6.22.1 Introduction

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

6.22.2 Example URI

/TemperatureResURI

6.22.3 Resource type

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

6.22.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Temperature",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/TemperatureResURI" : {
      "get": {
        "description": "This Resource describes a sensed or actuated Temperature value.\n
The Property \"temperature\" describes the current value measured.\n
The Property \"units\" is a single value that is one of \"C\", \"F\" or \"K\".\n
It provides the unit of measurement for the \"temperature\" value.\n
It is a read-only value that is provided by the server.\n
If the \"units\" Property is missing the default is Celsius [C].\n
When the Property \"range\" is omitted the default is +/- MAXINT.\n
A client can specify the units for the requested temperature by use of a query
```

```

6004 parameter.\nIf no query parameter is provided the server provides its default measure or set
6005 value.\nIt is recommended to return always the units Property in the result.",
6006     "parameters": [
6007         {"$ref": "#/parameters/interface"},
6008         {"$ref": "#/parameters/unit"}
6009     ],
6010     "responses": {
6011         "200": {
6012             "description": "Retrieves the current temperature value.",
6013             "x-example":
6014                 {
6015                     "rt": ["oic.r.temperature"],
6016                     "if": [ "oic.if.a", "oic.if.baseline"],
6017                     "temperature": 20.0,
6018                     "units": "C"
6019                 },
6020             ,
6021             "schema": { "$ref": "#/definitions/Temperature" }
6022         },
6023         "403": {
6024             "description": "This response is generated by the OCF Server when the client sends:\n
6025 A RETRIEVE with queryParameter indicating a unit that the server does not support.\nThe server
6026 responds with the current resource representation including the\n\"units\" property illustrating the
6027 supported units and the error.",
6028             "x-example":
6029                 {
6030                     "temperature": 20.0,
6031                     "units": "C"
6032                 },
6033             "schema": { "$ref": "#/definitions/Temperature" }
6034         }
6035     },
6036 },
6037 "post": {
6038     "description": "Sets the desired temperature value.\nIf a \"unit\" is included and the
6039 server may not support the unit indicated the request will fail.\nIf the units are omitted value is
6040 taken to be in C.",
6041     "parameters": [
6042         {"$ref": "#/parameters/interface"},
6043         {
6044             "name": "body",
6045             "in": "body",
6046             "required": true,
6047             "schema": { "$ref": "#/definitions/Temperature" },
6048             "x-example":
6049                 {
6050                     "temperature": 18.0,
6051                     "units": "F"
6052                 }
6053         }
6054     ],
6055     "responses": {
6056         "200": {
6057             "description": "",
6058             "x-example":
6059                 {
6060                     "temperature": 18.0,
6061                     "units": "F"
6062                 }
6063             ,
6064             "schema": { "$ref": "#/definitions/Temperature" }
6065         },
6066         "403": {
6067             "description": "This response is generated by the OCF Server when the client sends:\n
6068 An UPDATE with an out of range property value for temperature.\n An UPDATE with an unsupported unit
6069 for this server.\nThe OCF Server responds with the current resource representation including\nthe
6070 \"range\" property illustrating the supported range and the error.",
6071             "x-example":
6072                 {
6073                     "temperature": 20.0,
6074                     "units": "C"
6075                 }

```

```

6076         ,
6077         "schema": { "$ref": "#/definitions/Temperature" }
6078     }
6079 }
6080 }
6081 }
6082 },
6083 "parameters": {
6084     "interface" : {
6085         "in" : "query",
6086         "name" : "if",
6087         "type" : "string",
6088         "enum" : ["oic.if.a", "oic.if.s", "oic.if.baseline"]
6089     },
6090     "unit" : {
6091         "in": "query",
6092         "description": "Units",
6093         "type": "string",
6094         "enum": ["C", "F", "K"],
6095         "name": "units",
6096         "x-queryexample" : "/TemperatureResURI?units=C"
6097     }
6098 },
6099 "definitions": {
6100     "Temperature" : {
6101         "properties": {
6102             "rt" : {
6103                 "description": "The Resource Type.",
6104                 "items": {
6105                     "maxLength": 64,
6106                     "type": "string",
6107                     "enum": ["oic.r.temperature"]
6108                 },
6109                 "minItems": 1,
6110                 "uniqueItems": true,
6111                 "readOnly": true,
6112                 "type": "array"
6113             },
6114             "temperature" : {
6115                 "description": "The current temperature setting or measurement.",
6116                 "type": "number"
6117             },
6118             "units" : {
6119                 "description": "The unit for the conveyed temperature value, Note that when doing an
6120 UPDATE, the unit on the device does NOT change, it only indicates the unit of the conveyed value
6121 during the UPDATE operation.",
6122                 "enum": [
6123                     "C",
6124                     "F",
6125                     "K"
6126                 ],
6127                 "type": "string"
6128             },
6129             "n": {
6130                 "$ref":
6131 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6132 schema.json#/definitions/n"
6133             },
6134             "id": {
6135                 "$ref":
6136 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6137 schema.json#/definitions/id"
6138             },
6139             "range" : {
6140                 "$ref":
6141 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6142 schema.json#/definitions/range_number"
6143             },
6144             "step" : {
6145                 "$ref":
6146 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6147 schema.json#/definitions/step_number"

```



```

6148         },
6149         "precision" : {
6150             "$ref":
6151             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6152             schema.json#/definitions/precision"
6153         },
6154         "if" : {
6155             "description": "The OCF Interface set supported by this Resource.",
6156             "items": {
6157                 "enum": [
6158                     "oic.if.baseline",
6159                     "oic.if.s",
6160                     "oic.if.a"
6161                 ],
6162                 "maxLength": 64,
6163                 "type": "string"
6164             },
6165             "minItems": 2,
6166             "uniqueItems": true,
6167             "readOnly": true,
6168             "type": "array"
6169         },
6170     },
6171     "type" : "object",
6172     "required": ["temperature"]
6173 }
6174 }
6175 }

```

6176 6.22.5 Property definition

6177 Table 47 defines the Properties that are part of the "oic.r.temperature" Resource Type.

6178 **Table 47 – The Property definitions of the Resource with type "rt" = "oic.r.temperature".**

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

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

6.22.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get	post		observe

6.23 Time Period

6.23.1 Introduction

This Resource describes the time period over which any additionally provided information is derived or bounded.

The Property "startTime" and "stopTime" are RFC3339 encoded strings. The Property "startTime" must be present.

The interval is the interval of the time period in minutes, if present this value must be no less than 0 minute.

The intervalsecond is the interval of the time period in seconds, if present this value must be numerical zero or greater.

The repeat is the number of the time period's iteration, which means how many times to repeat the time period. The Property "repeat" accepts only negative one, numerical zero, and positive number. When this value is numerical zero, the time period will be repeated infinitely until a client makes it stop by inputting negative one for the value.

The Property "stoptime" and "interval" are mutually exclusive; both Properties cannot be present in a Resource instance.

The Property "intervalsecond" cannot be presented with the Property "stopTime". In case of both the Property "interval" and "intervalsecond" are presented together, the total time interval is the sum of "interval" and "intervalsecond".

The Property "triggertiming" describes a specific time to execute an action. This property must have one of the values among "startTime", "stopTime", and "totalInterval". The totalInterval means the sum of the Property "interval" and "intervalsecond". If one of the properties does not exist, the value of the unexpressed property is taken as a numerical zero.

The Property "state" describes a state of time interval. This property must have one of the values among "preInterval", "inInterval", and "postInterval".

The Resource defines a time period for information retrieval, action or other behaviour.

6.23.2 Example URI

/TimePeriodResURI

6.23.3 Resource type

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

6.23.4 OpenAPI 2.0 definition

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

```

6225 reserved."
6226 },
6227 "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
6228 },
6229 "schemes": ["http"],
6230 "consumes": ["application/json"],
6231 "produces": ["application/json"],
6232 "paths": {
6233     "/TimePeriodResURI" : {
6234         "get": {
6235             "description": "This Resource describes the time period over which any additionally provided
6236 information is derived or bounded.\nThe Property \"startTime\" and \"stopTime\" are RFC3339 encoded
6237 strings. The Property \"startTime\" must be present.\nThe interval is the interval of the time
6238 period in minutes, if present this value must be no less than 0 minute.\nThe intervalsecond is the
6239 interval of the time period in seconds, if present this value must be numerical zero or
6240 greater.\nThe repeat is the number of the time period's iteration, which means how many times to
6241 repeat the time period. The Property \"repeat\" accepts only negative one, numerical zero, and
6242 positive number. When this value is numerical zero, the time period will be repeated infinitely
6243 until a client makes it stop by inputting negative one for the value.\nThe Property \"stoptime\" and
6244 \"interval\" are mutually exclusive; both Properties cannot be present in a Resource instance.\nThe
6245 Property \"intervalsecond\" cannot be presented with the Property \"stopTime\". In case of both the
6246 Property \"interval\" and \"intervalsecond\" are presented together, the total time interval is the
6247 sum of \"interval\" and \"intervalsecond\".\nThe Property \"triggertiming\" describes a specific
6248 time to execute an action. This property must have one of the values among \"startTime\",
6249 \"stopTime\", and \"totalInterval\". The totalInterval means the sum of the Property \"interval\"
6250 and \"intervalsecond\". If one of the properties does not exist, the value of the unexpressed
6251 property is taken as a numerical zero.\nThe Property \"state\" describes a state of time interval.
6252 This property must have one of the values among \"preInterval\", \"inInterval\", and
6253 \"postInterval\".\nThe Resource defines a time period for information retrieval, action or other
6254 behaviour.",
6255         "parameters": [
6256             { "$ref": "#/parameters/interface" }
6257         ],
6258         "responses": {
6259             "200": {
6260                 "description": "",
6261                 "x-example":
6262                     {
6263                         "rt": ["oic.r.time.period"],
6264                         "if": ["oic.if.a", "oic.if.baseline"],
6265                         "startTime": "2015-01-09T14:30:00Z",
6266                         "stopTime": "2015-01-09T14:45:00Z"
6267                     },
6268                 "schema": { "$ref": "#/definitions/TimePeriod" }
6269             }
6270         }
6271     },
6272     "post": {
6273         "description": "Sets or updates a time period for information retrieval, action or other
6274 behavior.",
6275         "parameters": [
6276             { "$ref": "#/parameters/interface" },
6277             {
6278                 "name": "body",
6279                 "in": "body",
6280                 "required": true,
6281                 "schema": { "$ref": "#/definitions/TimePeriod" },
6282                 "x-example":
6283                     {
6284                         "startTime": "2015-01-09T14:30:00Z",
6285                         "stopTime": "2015-01-09T14:45:00Z"
6286                     }
6287             }
6288         ],
6289         "responses": {
6290             "200": {
6291                 "description": "",
6292                 "x-example":
6293                     {
6294                         "startTime": "2015-01-09T14:30:00Z",
6295                         "stopTime": "2015-01-09T14:45:00Z"
6296                     },

```

```

6297         "schema": { "$ref": "#/definitions/TimePeriod" }
6298     }
6299 }
6300 }
6301 }
6302 },
6303 "parameters": {
6304     "interface": {
6305         "in": "query",
6306         "name": "if",
6307         "type": "string",
6308         "enum": ["oic.if.a", "oic.if.baseline"]
6309     }
6310 },
6311 "definitions": {
6312     "TimePeriod" : {
6313         "properties": {
6314             "rt": {
6315                 "description": "The Resource Type.",
6316                 "items": {
6317                     "enum": ["oic.r.time.period"],
6318                     "maxLength": 64,
6319                     "type": "string"
6320                 },
6321                 "minItems": 1,
6322                 "uniqueItems": true,
6323                 "readOnly": true,
6324                 "type": "array"
6325             },
6326             "interval": {
6327                 "description": "The time interval in minutes after the \"startTime\", if present the
6328 Property \"stopTime\" cannot be present.",
6329                 "type": "integer",
6330                 "minimum": 0
6331             },
6332             "intervalsecond": {
6333                 "description": "The time interval in seconds after the \"startTime\", if present the
6334 Property \"stopTime\" cannot be present.",
6335                 "type": "integer",
6336                 "minimum": 0
6337             },
6338             "stopTime": {
6339                 "description": "The stop time for the time period, if present the Property \"interval\" or
6340 \"intervalsecond\" cannot be present.",
6341                 "type": "string",
6342                 "format": "date-time"
6343             },
6344             "startTime": {
6345                 "description": "The start time for the time period.",
6346                 "type": "string",
6347                 "format": "date-time"
6348             },
6349             "repeat": {
6350                 "description": "The number of times to repeat the time period",
6351                 "type": "integer",
6352                 "minimum": -1
6353             },
6354             "triggertiming": {
6355                 "description": "The desired timing to trigger an action execution",
6356                 "type": "string",
6357                 "enum": [
6358                     "startTime",
6359                     "stopTime",
6360                     "totalInterval"
6361                 ]
6362             },
6363             "state": {
6364                 "description": "The current state of the time interval",
6365                 "type": "string",
6366                 "readOnly": true,
6367                 "enum": [
6368                     "preInterval",

```

```

6369         "inInterval",
6370         "postInterval"
6371     ],
6372 },
6373 "n": {
6374     "$ref":
6375     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6376     schema.json#/definitions/n"
6377 },
6378 "id": {
6379     "$ref":
6380     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6381     schema.json#/definitions/id"
6382 },
6383 "if": {
6384     "description": "The OCF Interface set supported by this Resource.",
6385     "items": {
6386         "enum": [
6387             "oic.if.a",
6388             "oic.if.baseline"
6389         ],
6390         "type": "string"
6391     },
6392     "minItems": 2,
6393     "uniqueItems": true,
6394     "readOnly": true,
6395     "type": "array"
6396 },
6397 },
6398 "type": "object",
6399 "required": ["startTime"]
6400 }
6401 }
6402 }
6403

```

6.23.5 Property definition

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

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

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

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

6.23.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get	post		observe

6.24 Activity Count

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

6.24.2 Example URI

/ActivityCountResURI

6.24.3 Resource type

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

6.24.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Activity Count",
    "version": "20190222",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/ActivityCountResURI" : {
      "get": {
        "description": "This Resource specifies an activity count.\nThe Resource can be readonly
```

```

6445 (oic.if.s interface) in which instance it represents a count.\n\nThe Resource can be readwrite
6446 (oic.if.a interface) in which instance it represents a goal or target for a count.\n\nThe Property
6447 \"count\" is an integer representing either the current count or goal value.\",
6448     \"parameters\": [
6449         { \"$ref\": \"#/parameters/interface\" }
6450     ],
6451     \"responses\": {
6452         \"200\": {
6453             \"description\" : \"\",
6454             \"x-example\":
6455                 {
6456                     \"rt\": [\"oic.r.sensor.activity.count\"],
6457                     \"if\": [\"oic.if.a\", \"oic.if.baseline\"],
6458                     \"count\": 2500
6459                 },
6460             \"schema\": { \"$ref\": \"#/definitions/Count\" }
6461         }
6462     },
6463     \"post\": {
6464         \"description\": \"Sets the \"count\" target.\",
6465         \"parameters\": [
6466             { \"$ref\": \"#/parameters/interface\" },
6467             {
6468                 \"name\": \"body\",
6469                 \"in\": \"body\",
6470                 \"required\": true,
6471                 \"schema\": { \"$ref\": \"#/definitions/Count\" },
6472                 \"x-example\":
6473                     {
6474                         \"count\": 5000
6475                     }
6476             }
6477         ],
6478         \"responses\": {
6479             \"200\": {
6480                 \"description\" : \"\",
6481                 \"x-example\":
6482                     {
6483                         \"count\": 5000
6484                     },
6485                 \"schema\": { \"$ref\": \"#/definitions/Count\" }
6486             }
6487         }
6488     }
6489 },
6490 },
6491 },
6492 \"parameters\": {
6493     \"interface\" : {
6494         \"in\": \"query\",
6495         \"name\": \"if\",
6496         \"type\": \"string\",
6497         \"enum\": [\"oic.if.a\", \"oic.if.s\", \"oic.if.baseline\"]
6498     }
6499 },
6500 \"definitions\": {
6501     \"Count\" : {
6502         \"properties\": {
6503             \"rt\": {
6504                 \"description\": \"The Resource Type.\",
6505                 \"items\": {
6506                     \"maxLength\": 64,
6507                     \"type\": \"string\",
6508                     \"enum\": [\"oic.r.sensor.activity.count\"]
6509                 },
6510                 \"minItems\": 1,
6511                 \"uniqueItems\" : true,
6512                 \"readOnly\": true,
6513                 \"type\": \"array\"
6514             },
6515             \"count\": {
6516                 \"description\": \"The current or Target count.\",

```

```

6517         "type": "integer"
6518     },
6519     "n": {
6520         "$ref":
6521 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6522 schema.json#/definitions/n"
6523     },
6524     "id": {
6525         "$ref":
6526 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6527 schema.json#/definitions/id"
6528     },
6529     "range": {
6530         "$ref":
6531 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6532 schema.json#/definitions/range_integer"
6533     },
6534     "step": {
6535         "$ref":
6536 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6537 schema.json#/definitions/step_integer"
6538     },
6539     "if": {
6540         "description": "The OCF Interface set supported by this Resource.",
6541         "items": {
6542             "enum": [
6543                 "oic.if.a",
6544                 "oic.if.s",
6545                 "oic.if.baseline"
6546             ],
6547             "type": "string"
6548         },
6549         "minItems": 2,
6550         "readOnly": true,
6551         "uniqueItems": true,
6552         "type": "array"
6553     }
6554 },
6555 "type": "object",
6556 "required": ["count"]
6557 }
6558 }
6559 }
6560

```

6.24.5 Property definition

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

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

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

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

6.24.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get	post		observe

6.25 Atmospheric Pressure Sensor

6.25.1 Introduction

This Resource provides a measurement of Mean Sea Level Pressure experienced at the measuring point expressed in millibars.

The Property "atmosphericPressure" is a float which describes the atmospheric pressure in hPa (hectoPascals).

Note that hPa and the also commonly used unit of millibars (mbar) are numerically equivalent.

6.25.2 Example URI

/AtmosphericPressureResURI

6.25.3 Resource type

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

6.25.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Atmospheric Pressure Sensor",
    "version": "20190225",
    "license": {
      "name": "OCF Data Model License",
      "url": "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/AtmosphericPressureResURI" : {
      "get": {
        "description": "This Resource provides a measurement of Mean Sea Level Pressure experienced
at the measuring point expressed in millibars.\nThe Property \"atmosphericPressure\" is a float
which describes the atmospheric pressure in hPa (hectoPascals).\nNote that hPa and the also commonly
used unit of millibars (mbar) are numerically equivalent.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {}
          }
        }
      }
    }
  }
}
```

```

6615         "rt": ["oic.r.sensor.atmosphericpressure"],
6616         "if": ["oic.if.s", "oic.if.baseline"],
6617         "atmosphericPressure": 1000.4
6618     },
6619     "schema": { "$ref": "#/definitions/atmosphericPressure" }
6620 }
6621 }
6622 }
6623 }
6624 },
6625 "parameters": {
6626     "interface" : {
6627         "in": "query",
6628         "name": "if",
6629         "type": "string",
6630         "enum": ["oic.if.s", "oic.if.baseline"]
6631     }
6632 },
6633 "definitions": {
6634     "atmosphericPressure" : {
6635         "properties": {
6636             "rt" : {
6637                 "description": "The Resource Type.",
6638                 "items": {
6639                     "enum": ["oic.r.sensor.atmosphericpressure"],
6640                     "maxLength": 64,
6641                     "type": "string"
6642                 },
6643                 "minItems": 1,
6644                 "uniqueItems": true,
6645                 "readOnly": true,
6646                 "type": "array"
6647             },
6648             "atmosphericPressure": {
6649                 "description": "The current atmospheric pressure in hPa.",
6650                 "readOnly": true,
6651                 "type": "number"
6652             },
6653             "n": {
6654                 "$ref":
6655 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6656 schema.json#/definitions/n"
6657             },
6658             "id": {
6659                 "$ref":
6660 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6661 schema.json#/definitions/id"
6662             },
6663             "precision": {
6664                 "$ref":
6665 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6666 schema.json#/definitions/precision"
6667             },
6668             "range": {
6669                 "$ref":
6670 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6671 schema.json#/definitions/range_number"
6672             },
6673             "step": {
6674                 "$ref":
6675 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6676 schema.json#/definitions/step_number"
6677             },
6678             "if": {
6679                 "description": "The OCF Interface set supported by this Resource.",
6680                 "items": {
6681                     "enum": [
6682                         "oic.if.s",
6683                         "oic.if.baseline"
6684                     ],
6685                     "type": "string"
6686                 }

```

```

6687         "minItems": 2,
6688         "uniqueItems": true,
6689         "readOnly": true,
6690         "type": "array"
6691     },
6692 },
6693 "type": "object",
6694 "required": ["atmosphericPressure"]
6695 }
6696 }
6697 }
6698

```

6.25.5 Property definition

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

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

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

6.25.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get			observe

6.26 Audio Controls

6.26.1 Introduction

This Resource defines basic audio control functions.
The Property "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 Property "mute" 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).

6.26.2 Example URI

/AudioResURI

6.26.3 Resource type

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

6.26.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Audio Controls",
    "version": "20190620",
    "license": {
      "name": "OCF Data Model License",
      "url":
        "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
        CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
        reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/AudioResURI" : {
      "get": {
        "description": "This Resource defines basic audio control functions.\nThe Property
        \"volume\" is an integer containing a percentage [0,100].\nA volume of 0 (zero) means no sound
        produced.\nA volume of 100 means maximum sound production.\nThe Property \"mute\" is implemented as
        a boolean.\nA mute value of true means that the device is muted (no audio).\nA mute value of false
        means that the device is not muted (audio).",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.audio"],
              "if": ["oic.if.a", "oic.if.baseline"],
              "volume": 50,
              "mute": false
            },
            "schema": { "$ref": "#/definitions/Audio" }
          }
        }
      },
      "post": {
        "description": "",
        "parameters": [
          {"$ref": "#/parameters/interface"},
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/Audio-update" },
            "x-example": {
              "volume": 75
            }
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
```

```

6785         {
6786             "volume": 75,
6787             "mute": false
6788         },
6789         "schema": { "$ref": "#/definitions/Audio" }
6790     }
6791 }
6792 }
6793 },
6794 },
6795 "parameters": {
6796     "interface" : {
6797         "in": "query",
6798         "name": "if",
6799         "type": "string",
6800         "enum": ["oic.if.a", "oic.if.baseline"]
6801     }
6802 },
6803 "definitions": {
6804     "Audio" : {
6805         "properties": {
6806             "rt": {
6807                 "description": "The Resource Type.",
6808                 "items": {
6809                     "enum": ["oic.r.audio"],
6810                     "maxLength": 64,
6811                     "type": "string"
6812                 },
6813                 "minItems": 1,
6814                 "uniqueItems": true,
6815                 "readOnly": true,
6816                 "type": "array"
6817             },
6818             "mute": {
6819                 "description": "The mute setting of an audio rendering device.",
6820                 "type": "boolean"
6821             },
6822             "volume": {
6823                 "description": "The volume setting of an audio rendering device.",
6824                 "maximum": 100,
6825                 "minimum": 0,
6826                 "type": "integer"
6827             },
6828             "n": {
6829                 "$ref":
6830 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6831 schema.json#/definitions/n"
6832             },
6833             "id": {
6834                 "$ref":
6835 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
6836 schema.json#/definitions/id"
6837             },
6838             "range": {
6839                 "$ref":
6840 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6841 schema.json#/definitions/range_integer"
6842             },
6843             "step": {
6844                 "$ref":
6845 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
6846 schema.json#/definitions/step_integer"
6847             },
6848             "if": {
6849                 "description": "The OCF Interface set supported by this Resource.",
6850                 "items": {
6851                     "enum": [
6852                         "oic.if.a",
6853                         "oic.if.baseline"
6854                     ],
6855                     "type": "string"
6856                 }

```

```

6857         "minItems": 2,
6858         "uniqueItems": true,
6859         "readOnly": true,
6860         "type": "array"
6861     },
6862 },
6863     "type" : "object",
6864     "required": ["volume", "mute"]
6865 },
6866 "Audio-update" : {
6867     "properties": {
6868         "mute": {
6869             "description": "The mute setting of an audio rendering device.",
6870             "type": "boolean"
6871         },
6872         "volume": {
6873             "description": "The volume setting of an audio rendering device.",
6874             "maximum": 100,
6875             "minimum": 0,
6876             "type": "integer"
6877         }
6878     }
6879 }
6880 }
6881 }
6882

```

6.26.5 Property definition

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

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

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

6.26.6 CRUDN behaviour

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

6888 **Table 56 – The CRUDN operations of the Resource with type "rt" = "oic.r.audio".**

Create	Read	Update	Delete	Notify
	get	post		observe

6889 **6.27 Auto Focus**

6890 **6.27.1 Introduction**

6891 This Resource describes an auto focus on/off feature.

6892 The Property "autoFocus" is a boolean.

6893 An "autoFocus" value of 'true' means that the auto focus feature is on.

6894 An "autoFocus" value of 'false' means that the auto focus feature is off.

6895 Note that when Pan Tilt Zoom (see 'Pan Tilt Zoom' Resource definition) is used the autofocus works only in the selected area.

6897 **6.27.2 Example URI**

6898 /AutoFocusResURI

6899 **6.27.3 Resource type**

6900 The Resource Type is defined as: "oic.r.autofocus".

6901 **6.27.4 OpenAPI 2.0 definition**

```

6902 {
6903   "swagger": "2.0",
6904   "info": {
6905     "title": "Auto Focus",
6906     "version": "20190222",
6907     "license": {
6908       "name": "OCF Data Model License",
6909       "url":
6910 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
6911 CENSE.md",
6912     "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
6913   },
6914   "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
6915 },
6916   "schemes": ["http"],
6917   "consumes": ["application/json"],
6918   "produces": ["application/json"],
6919   "paths": {
6920     "/AutoFocusResURI" : {
6921       "get": {
6922         "description": "This Resource describes an auto focus on/off feature.\nThe Property
6923 \"autoFocus\" is a boolean.\nAn \"autoFocus\" value of 'true' means that the auto focus feature is
6924 on.\nAn \"autoFocus\" value of 'false' means that the auto focus feature is off.\nNote that when Pan
6925 Tilt Zoom (see 'Pan Tilt Zoom' Resource definition) is used the autofocus works only in the selected
6926 area.",
6927         "parameters": [
6928           { "$ref": "#/parameters/interface" }
6929         ],
6930         "responses": {
6931           "200": {
6932             "description": "",
6933             "x-example":
6934             {
6935               "rt": ["oic.r.autofocus"],
6936               "if": ["oic.if.a", "oic.if.baseline"],
6937               "autoFocus": false
6938             },
6939             "schema": { "$ref": "#/definitions/AutoFocus" }
6940           }
6941         }
6942       },
6943       "post": {
6944         "description": "",

```

```

6945     "parameters": [
6946       { "$ref": "#/parameters/interface" },
6947       {
6948         "name": "body",
6949         "in": "body",
6950         "required": true,
6951         "schema": { "$ref": "#/definitions/AutoFocus" },
6952         "x-example":
6953           {
6954             "autoFocus": true
6955           }
6956       },
6957     ],
6958     "responses": {
6959       "200": {
6960         "description": "",
6961         "x-example":
6962           {
6963             "autoFocus": true
6964           },
6965         "schema": { "$ref": "#/definitions/AutoFocus" }
6966       }
6967     }
6968   }
6969 },
6970 {
6971   "parameters": {
6972     "interface": {
6973       "in": "query",
6974       "name": "if",
6975       "type": "string",
6976       "enum": ["oic.if.a", "oic.if.baseline"]
6977     }
6978   },
6979   "definitions": {
6980     "AutoFocus": {
6981       "properties": {
6982         "rt": {
6983           "description": "The Resource Type.",
6984           "items": {
6985             "enum": ["oic.r.autofocus"],
6986             "maxLength": 64,
6987             "type": "string"
6988           },
6989           "minItems": 1,
6990           "uniqueItems": true,
6991           "readOnly": true,
6992           "type": "array"
6993         },
6994         "autoFocus": {
6995           "description": "The status of the Auto Focus feature.",
6996           "type": "boolean"
6997         },
6998         "n": {
6999           "$ref":
7000             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7001             schema.json#/definitions/n"
7002         },
7003         "id": {
7004           "$ref":
7005             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7006             schema.json#/definitions/id"
7007         },
7008         "if": {
7009           "description": "The OCF Interface set supported by this Resource.",
7010           "items": {
7011             "enum": [
7012               "oic.if.a",
7013               "oic.if.baseline"
7014             ],
7015             "type": "string"
7016           }
7017         }
7018       }
7019     }
7020   }
7021 }

```



```

7017         "minItems": 2,
7018         "readOnly": true,
7019         "uniqueItems": true,
7020         "type": "array"
7021     },
7022     },
7023     "type": "object",
7024     "required": ["autoFocus"]
7025 }
7026 }
7027 }
7028

```

7029 6.27.5 Property definition

7030 Table 57 defines the Properties that are part of the "oic.r.autofocus" Resource Type.

7031 **Table 57 – The Property definitions of the Resource with type "rt" = "oic.r.autofocus".**

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

7032 6.27.6 CRUDN behaviour

7033 Table 58 defines the CRUDN operations that are supported on the "oic.r.autofocus" Resource Type.

7034 **Table 58 – The CRUDN operations of the Resource with type "rt" = "oic.r.autofocus".**

Create	Read	Update	Delete	Notify
	get	post		observe

7035 6.28 Automatic Document Feeder

7036 6.28.1 Introduction

7037 This Resource describes the state of an automatic document feeder, typically used with a scanner.

7038 The Property "adfstates" and "currentAdfState" are read only.

7039 The Property "adfStates" is an array of the possible operational states.

7040 The Property "adfProcessing" is the OK state, other states are errors or require 'user attention'.

7041 The currentAdfState is the current value of the ADF state on the device.

7043 6.28.2 Example URI

7044 /AutomaticDocumentFeederResURI

7045 6.28.3 Resource type

7046 The Resource Type is defined as: "oic.r.automaticdocumentfeeder".

7047 6.28.4 OpenAPI 2.0 definition

```

7048 {
7049     "swagger": "2.0",
7050     "info": {
7051         "title": "Automatic Document Feeder",

```

```

7052     "version": "20190222",
7053     "license": {
7054         "name": "OCF Data Model License",
7055         "url":
7056 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
7057 CENSE.md",
7058         "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
7059     },
7060     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
7061 },
7062     "schemes": ["http"],
7063     "consumes": ["application/json"],
7064     "produces": ["application/json"],
7065     "paths": {
7066         "/AutomaticDocumentFeederResURI" : {
7067             "get": {
7068                 "description": "This Resource describes the state of an automatic document feeder, typically
7069 used with a scanner.\n\nThe Property \"adfstates\" and \"currentAdfState\" are read only.\n\nThe
7070 Property \"adfStates\" is an array of the possible operational states.\n\nThe Property
7071 \"adfProcessing\" is the OK state, other states are errors or require 'user attention'.\n\nThe
7072 currentAdfState is the current value of the ADF state on the device.",
7073                 "parameters": [
7074                     { "$ref": "#/parameters/interface" }
7075                 ],
7076                 "responses": {
7077                     "200": {
7078                         "description": "",
7079                         "x-example":
7080 {
7081                 "rt": ["oic.r.automaticdocumentfeeder"],
7082                 "if": ["oic.if.s", "oic.if.baseline"],
7083                 "adfStates": ["adfProcessing", "adfEmpty", "adfJam", "adfLoaded", "adfMispick",
7084 "adfHatchOpen", "adfDuplexPageTooShort", "adfDuplexPageTooLong", "adfMultipickDetected",
7085 "adfInputTrayFailed", "adfInputTrayOverloaded"],
7086                 "currentAdfState": "adfProcessing"
7087             },
7088                 "schema": { "$ref": "#/definitions/AutomaticDocumentFeeder" }
7089             }
7090         }
7091     }
7092 },
7093 },
7094     "parameters": {
7095         "interface" : {
7096             "in": "query",
7097             "name": "if",
7098             "type": "string",
7099             "enum": ["oic.if.s", "oic.if.baseline"]
7100         }
7101     },
7102     "definitions": {
7103         "AutomaticDocumentFeeder" : {
7104             "properties": {
7105                 "rt": {
7106                     "description": "The Resource Type.",
7107                     "items": {
7108                         "enum": ["oic.r.automaticdocumentfeeder"],
7109                         "maxLength": 64,
7110                         "type": "string"
7111                     },
7112                     "minItems": 1,
7113                     "uniqueItems": true,
7114                     "readOnly": true,
7115                     "type": "array"
7116                 },
7117                 "adfStates": {
7118                     "description": "The array of the possible adf states.",
7119                     "items": {
7120                         "type": "string"
7121                     },
7122                     "readOnly": true,
7123                     "uniqueItems": true,

```

```

7124         "type": "array"
7125     },
7126     "currentAdfState": {
7127         "description": "The current adf state.",
7128         "readOnly": true,
7129         "type": "string"
7130     },
7131     "n": {
7132         "$ref":
7133         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7134         schema.json#/definitions/n"
7135     },
7136     "id": {
7137         "$ref":
7138         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7139         schema.json#/definitions/id"
7140     },
7141     "if": {
7142         "description": "The OCF Interface set supported by this Resource.",
7143         "items": {
7144             "enum": [
7145                 "oic.if.s",
7146                 "oic.if.baseline"
7147             ],
7148             "type": "string"
7149         },
7150         "minItems": 2,
7151         "uniqueItems": true,
7152         "readOnly": true,
7153         "type": "array"
7154     }
7155 },
7156 "type": "object",
7157 "required": ["adfStates", "currentAdfState"]
7158 }
7159 }
7160 }
7161

```

7162 6.28.5 Property definition

7163 Table 59 defines the Properties that are part of the "oic.r.automaticdocumentfeeder" Resource
7164 Type.

7165 **Table 59 – The Property definitions of the Resource with type "rt" =**
7166 **"oic.r.automaticdocumentfeeder".**

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

7167 6.28.6 CRUDN behaviour

7168 Table 60 defines the CRUDN operations that are supported on the "oic.r.automaticdocumentfeeder"
7169 Resource Type.

7170
7171

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

Create	Read	Update	Delete	Notify
	get			observe

7172

6.29 Button Switch

7173

6.29.1 Introduction

7174

This Resource describes the operation of a button style switch.

7175

The Property "value" is a boolean.

7176

A value of 'true' means that the button is being pushed/pressed.

7177

A value of 'false' means that the button is not being pushed/pressed.

7178

6.29.2 Example URI

7179

/ButtonResURI

7180

6.29.3 Resource type

7181

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

7182

6.29.4 OpenAPI 2.0 definition

7183

```
{
  "swagger": "2.0",
  "info": {
    "title": "Button Switch",
    "version": "20190222",
    "license": {
      "name": "OCF Data Model License",
      "url":
        "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
        CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/ButtonResURI" : {
      "get": {
        "description": "This Resource describes the operation of a button style switch.\n\nThe
        Property \"value\" is a boolean.\n\nA value of 'true' means that the button is being
        pushed/pressed.\n\nA value of 'false' means that the button is not being pushed/pressed.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.button"],
              "if": ["oic.if.s", "oic.if.baseline"],
              "value": true
            }
          }
        },
        "schema": { "$ref": "#/definitions/Button" }
      }
    }
  },
  "parameters": {
    "interface" : {
      "in": "query",
```

7227

```

7228     "name": "if",
7229     "type": "string",
7230     "enum": ["oic.if.s", "oic.if.baseline"]
7231   }
7232 },
7233 "definitions": {
7234   "Button" : {
7235     "properties": {
7236       "rt": {
7237         "description": "The Resource Type.",
7238         "items": {
7239           "enum": ["oic.r.button"],
7240           "maxLength": 64,
7241           "type": "string"
7242         },
7243         "minItems": 1,
7244         "uniqueItems": true,
7245         "readOnly": true,
7246         "type": "array"
7247       },
7248       "value": {
7249         "description": "The status of the button",
7250         "readOnly": true,
7251         "type": "boolean"
7252       },
7253       "n": {
7254         "$ref":
7255         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7256         schema.json#/definitions/n"
7257       },
7258       "id": {
7259         "$ref":
7260         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7261         schema.json#/definitions/id"
7262       },
7263       "if": {
7264         "description": "The OCF Interface set supported by this Resource.",
7265         "items": {
7266           "enum": [
7267             "oic.if.s",
7268             "oic.if.baseline"
7269           ],
7270           "type": "string"
7271         },
7272         "minItems": 2,
7273         "uniqueItems": true,
7274         "readOnly": true,
7275         "type": "array"
7276       }
7277     },
7278     "type": "object",
7279     "required": ["value"]
7280   }
7281 }
7282 }
7283

```

7284 6.29.5 Property definition

7285 Table 61 defines the Properties that are part of the "oic.r.button" Resource Type.

7286 **Table 61 – The Property definitions of the Resource with type "rt" = "oic.r.button".**

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

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

6.29.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get			observe

6.30 Carbon Dioxide Sensor

6.30.1 Introduction

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

The Property "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.

6.30.2 Example URI

/CarbonDioxideResURI

6.30.3 Resource type

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

6.30.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Carbon Dioxide Sensor",
    "version": "20191118",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/CarbonDioxideResURI" : {
      "get": {
        "description": "This Resource describes whether carbon dioxide has been sensed or not.\nThe
Property \"value\" is a boolean.\nA value of 'true' means that carbon dioxide has been detected.\nA
value of 'false' means that carbon dioxide has not been detected.",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example":
{
  "rt":    ["oic.r.sensor.carbondioxide"],
  "id":    "unique_example_id",
  "value": true
}
          }
        }
      }
    }
  }
}
```

```

7335         },
7336         "schema": { "$ref": "#/definitions/CO2" }
7337     }
7338 }
7339 }
7340 }
7341 },
7342 "parameters": {
7343     "interface" : {
7344         "in" : "query",
7345         "name" : "if",
7346         "type" : "string",
7347         "enum" : ["oic.if.s", "oic.if.baseline"]
7348     }
7349 },
7350 "definitions": {
7351     "CO2": {
7352         "properties": {
7353             "rt": {
7354                 "description": "The Resource Type",
7355                 "items": {
7356                     "maxLength": 64,
7357                     "type": "string",
7358                     "enum": ["oic.r.sensor.carbondioxide"]
7359                 },
7360                 "minItems": 1,
7361                 "readOnly": true,
7362                 "uniqueItems": true,
7363                 "type": "array"
7364             },
7365             "value": {
7366                 "description": "The carbon dioxide indicator, true = sensed, false = not sensed.",
7367                 "readOnly": true,
7368                 "type": "boolean"
7369             },
7370             "measurement": {
7371                 "type": "number",
7372                 "description": "Measured value for this sensor, units are in ppm",
7373                 "readOnly": true
7374             },
7375             "precision": {
7376                 "$ref":
7377 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
7378 schema.json#/definitions/precision"
7379             },
7380             "n": {
7381                 "$ref":
7382 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7383 schema.json#/definitions/n"
7384             },
7385             "range": {
7386                 "$ref":
7387 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
7388 schema.json#/definitions/range_number"
7389             },
7390             "step": {
7391                 "$ref":
7392 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
7393 schema.json#/definitions/step_number"
7394             },
7395             "id": {
7396                 "$ref":
7397 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7398 schema.json#/definitions/id"
7399             },
7400             "if": {
7401                 "description": "The OCF Interface set supported by this Resource",
7402                 "items": {
7403                     "enum": [
7404                         "oic.if.baseline",
7405                         "oic.if.s"
7406                     ],

```

```

7407         "maxLength": 64,
7408         "type": "string"
7409     },
7410     "minItems": 2,
7411     "readOnly": true,
7412     "uniqueItems": true,
7413     "type": "array"
7414 }
7415 },
7416 "type" : "object",
7417 "required": ["value"]
7418 }
7419 }
7420 }
7421

```

7422 6.30.5 Property definition

7423 Table 63 defines the Properties that are part of the "oic.r.sensor.carbondioxide" Resource Type.

7424 **Table 63 – The Property definitions of the Resource with type "rt" =**
7425 **"oic.r.sensor.carbondioxide".**

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

7426 6.30.6 CRUDN behaviour

7427 Table 64 defines the CRUDN operations that are supported on the "oic.r.sensor.carbondioxide"
7428 Resource Type.

7429 **Table 64 – The CRUDN operations of the Resource with type "rt" =**
7430 **"oic.r.sensor.carbondioxide".**

Create	Read	Update	Delete	Notify
	get			observe

6.31 Carbon Monoxide Sensor

6.31.1 Introduction

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

The Property "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.

6.31.2 Example URI

/CarbonMonoxideResURI

6.31.3 Resource type

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

6.31.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Carbon Monoxide Sensor",
    "version": "20191118",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/CarbonMonoxideResURI" : {
      "get": {
        "description": "This Resource describes whether carbon monoxide has been sensed or not.\n\nThe
Property \"value\" is a boolean.\n\nA value of 'true' means that carbon monoxide has been detected.\n\nA
value of 'false' means that carbon monoxide has not been detected.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example":
              {
                "rt": ["oic.r.sensor.carbonmonoxide"],
                "id": "unique_example_id",
                "value": true
              },
            "schema": { "$ref": "#/definitions/CO" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface" : {
      "in" : "query",
      "name" : "if",
      "type" : "string",
      "enum" : ["oic.if.s", "oic.if.baseline"]
    }
  },
  "definitions": {
    "CO": {
```

```

7494     "properties": {
7495         "rt": {
7496             "description": "Resource Type",
7497             "items": {
7498                 "maxLength": 64,
7499                 "type": "string",
7500                 "enum": ["oic.r.sensor.carbonmonoxide"]
7501             },
7502             "minItems": 1,
7503             "readOnly": true,
7504             "uniqueItems": true,
7505             "type": "array"
7506         },
7507         "value": {
7508             "description": "The carbon monoxide indicator, true = sensed, false = not sensed.",
7509             "readOnly": true,
7510             "type": "boolean"
7511         },
7512         "measurement": {
7513             "type": "number",
7514             "description": "Measured value for this sensor, units are in ppm",
7515             "readOnly": true
7516         },
7517         "precision": {
7518             "$ref":
7519 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
7520 schema.json#/definitions/precision"
7521         },
7522         "n": {
7523             "$ref":
7524 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7525 schema.json#/definitions/n"
7526         },
7527         "range": {
7528             "$ref":
7529 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
7530 schema.json#/definitions/range_number"
7531         },
7532         "step": {
7533             "$ref":
7534 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
7535 schema.json#/definitions/step_number"
7536         },
7537         "id": {
7538             "$ref":
7539 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7540 schema.json#/definitions/id"
7541         },
7542         "if": {
7543             "description": "The OCF Interface set supported by this Resource",
7544             "items": {
7545                 "enum": [
7546                     "oic.if.baseline",
7547                     "oic.if.s"
7548                 ],
7549                 "maxLength": 64,
7550                 "type": "string"
7551             },
7552             "minItems": 1,
7553             "uniqueItems": true,
7554             "readOnly": true,
7555             "type": "array"
7556         }
7557     },
7558     "type": "object",
7559     "required": ["value"]
7560 }
7561 }
7562 }
7563

```

6.31.5 Property definition

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

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

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

6.31.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get			observe

6.32 Auto White Balance

6.32.1 Introduction

This Resource describes an auto balance on/off feature.

The Property "autoWhiteBalance" is a boolean.

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

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

6.32.2 Example URI

/AutoWhiteBalanceResURI

6.32.3 Resource type

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

6.32.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Auto White Balance",
    "version": "20190222",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/AutoWhiteBalanceResURI" : {
      "get": {
        "description": "This Resource describes an auto balance on/off feature.\nThe Property
\"autoWhiteBalance\" is a boolean.\nAn AutoWhiteBalance value of 'true' means that the auto white
balance feature is on.\nAn AutoWhiteBalance value of 'false' means that the auto white balance
feature is off.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example":
              {
                "rt": ["oic.r.colour.autowhitebalance"],
                "if": ["oic.if.a", "oic.if.baseline"],
                "autoWhiteBalance": false
              },
            "schema": { "$ref": "#/definitions/AutoWhiteBalance" }
          }
        }
      },
      "post": {
        "description": "",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/AutoWhiteBalance" },
            "x-example":
              {
                "autoWhiteBalance": true
              }
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example":
              {
                "autoWhiteBalance": true
              },
            "schema": { "$ref": "#/definitions/AutoWhiteBalance" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface" : {
```

```

7655     "in": "query",
7656     "name": "if",
7657     "type": "string",
7658     "enum": ["oic.if.a", "oic.if.baseline"]
7659   }
7660 },
7661 "definitions": {
7662   "AutoWhiteBalance" : {
7663     "properties": {
7664       "rt": {
7665         "description": "The Resource Type.",
7666         "items": {
7667           "enum": ["oic.r.colour.autowhitebalance"],
7668           "maxLength": 64,
7669           "type": "string"
7670         },
7671         "minItems": 1,
7672         "uniqueItems": true,
7673         "readOnly": true,
7674         "type": "array"
7675       },
7676       "autoWhiteBalance": {
7677         "description": "The status of the Auto White balance feature.",
7678         "type": "boolean"
7679       },
7680       "n": {
7681         "$ref":
7682         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7683         schema.json#/definitions/n"
7684       },
7685       "id": {
7686         "$ref":
7687         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7688         schema.json#/definitions/id"
7689       },
7690       "if": {
7691         "description": "The OCF Interface set supported by this Resource.",
7692         "items": {
7693           "enum": [
7694             "oic.if.a",
7695             "oic.if.baseline"
7696           ],
7697           "type": "string"
7698         },
7699         "minItems": 2,
7700         "uniqueItems": true,
7701         "readOnly": true,
7702         "type": "array"
7703       }
7704     },
7705     "type": "object",
7706     "required": ["autoWhiteBalance"]
7707   }
7708 }
7709 }
7710

```

6.32.5 Property definition

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

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

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

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

6.32.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get	post		observe

6.33 Colour Saturation

6.33.1 Introduction

This Resource describes a Colour saturation value.

The Property "colourSaturation" 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.

6.33.2 Example URI

/ColourSaturationResURI

6.33.3 Resource type

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

6.33.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Colour Saturation",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/ColourSaturationResURI" : {
      "get": {
        "description": "This Resource describes a Colour saturation value.\nThe Property
\"colourSaturation\" is an integer.\nA \"colourSaturation\" has a range of [0,100].\nA
\"colourSaturation\" value of 0 means producing black and white images.\nA \"colourSaturation\"
value of 50 means producing device specific normal colour images.\nA \"colourSaturation\" value of
```

```

7759 100 means producing device very full colour images.\n",
7760     "parameters": [
7761         {"$ref": "#/parameters/interface"}
7762     ],
7763     "responses": {
7764         "200": {
7765             "description": "",
7766             "x-example":
7767                 {
7768                     "rt": ["oic.r.colour.saturation"],
7769                     "if": ["oic.if.a", "oic.if.baseline"],
7770                     "colourSaturation": 50
7771                 },
7772             "schema": { "$ref": "#/definitions/Saturation" }
7773         }
7774     },
7775 },
7776 "post": {
7777     "description": "",
7778     "parameters": [
7779         {"$ref": "#/parameters/interface"},
7780         {
7781             "name": "body",
7782             "in": "body",
7783             "required": true,
7784             "schema": { "$ref": "#/definitions/Saturation" },
7785             "x-example":
7786                 {
7787                     "colourSaturation": 60
7788                 }
7789         }
7790     ],
7791     "responses": {
7792         "200": {
7793             "description": "",
7794             "x-example":
7795                 {
7796                     "colourSaturation": 60
7797                 }
7798             ,
7799             "schema": { "$ref": "#/definitions/Saturation" }
7800         }
7801     }
7802 },
7803 },
7804 },
7805 "parameters": {
7806     "interface": {
7807         "in": "query",
7808         "name": "if",
7809         "type": "string",
7810         "enum": ["oic.if.a", "oic.if.baseline"]
7811     }
7812 },
7813 "definitions": {
7814     "Saturation": {
7815         "properties": {
7816             "rt": {
7817                 "description": "The Resource Type.",
7818                 "items": {
7819                     "enum": ["oic.r.colour.saturation"],
7820                     "maxLength": 64,
7821                     "type": "string"
7822                 },
7823                 "minItems": 1,
7824                 "uniqueItems": true,
7825                 "readOnly": true,
7826                 "type": "array"
7827             },
7828             "colourSaturation": {
7829                 "description": "The colour saturation value.",
7830                 "maximum": 100,

```

```

7831         "minimum": 0,
7832         "type": "integer"
7833     },
7834     "n": {
7835         "$ref":
7836         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7837         schema.json#/definitions/n"
7838     },
7839     "id": {
7840         "$ref":
7841         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7842         schema.json#/definitions/id"
7843     },
7844     "if": {
7845         "description": "The OCF Interface set supported by this Resource.",
7846         "items": {
7847             "enum": [
7848                 "oic.if.a",
7849                 "oic.if.baseline"
7850             ],
7851             "type": "string"
7852         },
7853         "minItems": 2,
7854         "uniqueItems": true,
7855         "readOnly": true,
7856         "type": "array"
7857     }
7858 },
7859 "type": "object",
7860 "required": ["colourSaturation"]
7861 }
7862 }
7863 }
7864

```

7865 6.33.5 Property definition

7866 Table 69 defines the Properties that are part of the "oic.r.colour.saturation" Resource Type.

7867 **Table 69 – The Property definitions of the Resource with type "rt" =**
7868 **"oic.r.colour.saturation".**

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

7869 6.33.6 CRUDN behaviour

7870 Table 70 defines the CRUDN operations that are supported on the "oic.r.colour.saturation"
7871 Resource Type.

7872 **Table 70 – The CRUDN operations of the Resource with type "rt" =**
7873 **"oic.r.colour.saturation".**

Create	Read	Update	Delete	Notify
	get	post		observe

6.34 Contact Sensor

6.34.1 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 Property "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).

6.34.2 Example URI

/ContactResURI

6.34.3 Resource type

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

6.34.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Contact Sensor",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/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 Property \"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": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example":
{
  "rt": ["oic.r.sensor.contact"],
  "if": ["oic.if.s", "oic.if.baseline"],
  "value": true
},
            "schema": { "$ref": "#/definitions/Contact" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface" : {
      "in": "query",
      "name": "if",
      "type": "string",
      "enum": ["oic.if.s", "oic.if.baseline"]
    }
  }
}
```

```

7937 },
7938 "definitions": {
7939   "Contact" : {
7940     "properties": {
7941       "rt": {
7942         "description": "The Resource Type.",
7943         "items": {
7944           "enum": ["oic.r.sensor.contact"],
7945           "maxLength": 64,
7946           "type": "string"
7947         },
7948         "minItems": 1,
7949         "uniqueItems": true,
7950         "readOnly": true,
7951         "type": "array"
7952       },
7953       "value": {
7954         "description": "The contact indication, true = broken (open), false = in place (closed).",
7955         "readOnly": true,
7956         "type": "boolean"
7957       },
7958       "n": {
7959         "$ref":
7960 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7961 schema.json#/definitions/n"
7962       },
7963       "id": {
7964         "$ref":
7965 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
7966 schema.json#/definitions/id"
7967       },
7968       "if": {
7969         "description": "The OCF Interface set supported by this Resource.",
7970         "items": {
7971           "enum": [
7972             "oic.if.s",
7973             "oic.if.baseline"
7974           ],
7975           "type": "string"
7976         },
7977         "minItems": 2,
7978         "uniqueItems": true,
7979         "readOnly": true,
7980         "type": "array"
7981       }
7982     },
7983     "type": "object",
7984     "required": ["value"]
7985   }
7986 }
7987 }
7988

```

6.34.5 Property definition

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

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

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

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

6.34.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get			observe

6.35 Demand Response Load Control (DRLC).

6.35.1 Introduction

This Resource describes any to be applied or currently being applied DRLC signal.

The Property "DRType" is the ApplianceLoadReductionType defined in Zigbee/HA Smart Energy Profile 2.0.

The Property "start" is a string containing an RFC3339 encoded start time.

The Property "duration" value is in minutes.

The Property "Override" indicates whether the consumer has overridden the request (true) or not (false).

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

A duration of 0 (zero) means that no DRLC is currently active.

6.35.2 Example URI

/DRLCResURI

6.35.3 Resource type

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

6.35.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Demand Response Load Control (DRLC).",
    "version": "20190709",
    "license": {
      "name": "OCF Data Model License",
      "url":
        "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
        CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
        reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/DRLCResURI" : {
      "get": {
        "description": "This Resource describes any to be applied or currently being applied DRLC
          signal.\n
          The Property \"DRType\" is the ApplianceLoadReductionType defined in Zigbee/HA Smart Energy
          Profile 2.0.\n
          The Property \"start\" is a string containing an RFC3339 encoded start time.\n
          The Property \"duration\" value is in minutes.\n
          The Property \"Override\" indicates whether the consumer
          has overridden the request (true) or not (false).\n
          The Resource provides the current DRLC action
          that is being applied.\n
          A duration of 0 (zero) means that no DRLC is currently active."

```

```

8039     "parameters": [
8040         { "$ref": "#/parameters/interface" }
8041     ],
8042     "responses": {
8043         "200": {
8044             "description": "",
8045             "x-example":
8046                 {
8047                     "rt": ["oic.r.energy.drlc"],
8048                     "if": ["oic.if.a", "oic.if.baseline"],
8049                     "DRType": 1,
8050                     "start": "2015-01-09T16:45:00Z",
8051                     "duration": 10,
8052                     "override": false,
8053                     "drlevel": 2,
8054                     "mandate": true
8055                 },
8056             "schema": { "$ref": "#/definitions/DRLC" }
8057         }
8058     },
8059 },
8060 "post": {
8061     "description": "Provides the DRLC action to be applied to the device or updates an existing
8062 action.",
8063     "parameters": [
8064         { "$ref": "#/parameters/interface" },
8065         {
8066             "name": "body",
8067             "in": "body",
8068             "required": true,
8069             "schema": { "$ref": "#/definitions/DRLC" },
8070             "x-example": {
8071                 "DRType": 1,
8072                 "start": "2015-01-09T17:00:00Z",
8073                 "duration": 10
8074             }
8075         }
8076     ],
8077     "responses": {
8078         "200": {
8079             "description": "Indicates that the target DRLC resource was changed.\n\nThe new resource
8080 attributes are provided in the response.",
8081             "x-example": {
8082                 "DRType": 1,
8083                 "start": "2015-01-09T17:00:00Z",
8084                 "duration": 15,
8085                 "override": false
8086             },
8087             "schema": { "$ref": "#/definitions/DRLC" }
8088         }
8089     }
8090 },
8091 },
8092 },
8093 "parameters": {
8094     "interface": {
8095         "in": "query",
8096         "name": "if",
8097         "type": "string",
8098         "enum": ["oic.if.a", "oic.if.baseline"]
8099     }
8100 },
8101 "definitions": {
8102     "DRLC": {
8103         "properties": {
8104             "rt": {
8105                 "description": "The Resource Type.",
8106                 "items": {
8107                     "enum": ["oic.r.energy.drlc"],
8108                     "maxLength": 64,
8109                     "type": "string"
8110                 }

```

```

8111         "minItems": 1,
8112         "uniqueItems": true,
8113         "readOnly": true,
8114         "type": "array"
8115     },
8116     "start": {
8117         "description": "The start time for the application of DR.",
8118         "type": "string",
8119         "format": "date-time"
8120     },
8121     "duration": {
8122         "description": "The duration of the to be applied DR type in minutes. A value of 0 means
8123 no applied DR.",
8124         "type": "integer",
8125         "minimum": 0
8126     },
8127     "override": {
8128         "description": "Whether the consumer has overridden the application of DR.",
8129         "type": "boolean"
8130     },
8131     "DRType": {
8132         "description": "The to be applied demand-response type.",
8133         "type": "integer"
8134     },
8135     "drlevel": {
8136         "type": "integer",
8137         "minimum": 0,
8138         "maximum": 3,
8139         "description": "Indicator of the strength of the DR response that is requested; 0-0%, 1-
8140 30%, 2-50%, 3-70%"
8141     },
8142     "mandate" : {
8143         "type": "boolean",
8144         "description": "Whether overriding the DR request by the consumer is allowed"
8145     },
8146     "n": {
8147         "$ref":
8148 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8149 schema.json#/definitions/n"
8150     },
8151     "id": {
8152         "$ref":
8153 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8154 schema.json#/definitions/id"
8155     },
8156     "if": {
8157         "description": "The OCF Interface set supported by this Resource.",
8158         "items": {
8159             "enum": [
8160                 "oic.if.a",
8161                 "oic.if.baseline"
8162             ],
8163             "type": "string"
8164         },
8165         "minItems": 2,
8166         "uniqueItems": true,
8167         "readOnly": true,
8168         "type": "array"
8169     }
8170 },
8171 "type": "object",
8172 "required": [ "DRType" ]
8173 }
8174 }
8175 }
8176

```

6.35.5 Property definition

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

8179 **Table 73 – The Property definitions of the Resource with type "rt" = "oic.r.energy.drlc".**

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

8180 **6.35.6 CRUDN behaviour**

8181 Table 74 defines the CRUDN operations that are supported on the "oic.r.energy.drlc" Resource
8182 Type.

8183 **Table 74 – The CRUDN operations of the Resource with type "rt" = "oic.r.energy.drlc".**

Create	Read	Update	Delete	Notify
	get	post		observe

8184 **6.36 Energy Overload/Circuit Breaker**

8185 **6.36.1 Introduction**

8186 This Resource describes whether an energy overload detector/circuit breaker is currently tripped.
8187 The Property "value" is a boolean.
8188 A value of 'true' means that energy overload has been tripped.
8189 A value of 'false' means that energy overload has not been tripped.
8190

8191 **6.36.2 Example URI**

8192 /EnergyOverloadResURI

6.36.3 Resource type

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

6.36.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Energy Overload/Circuit Breaker",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/EnergyOverloadResURI" : {
      "get": {
        "description": "This Resource describes whether an energy overload detector/circuit breaker
is currently tripped.\n\nThe Property \"value\" is a boolean.\n\nA value of 'true' means that energy
overload has been tripped.\n\nA value of 'false' means that energy overload has not been tripped.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.energy.overload"],
              "if": ["oic.if.s", "oic.if.baseline"],
              "value": true
            },
            "schema": { "$ref": "#/definitions/EnergyOverload" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface": {
      "in": "query",
      "name": "if",
      "type": "string",
      "enum": ["oic.if.s", "oic.if.baseline"]
    }
  },
  "definitions": {
    "EnergyOverload" : {
      "properties": {
        "rt": {
          "description": "The Resource Type.",
          "items": {
            "enum": ["oic.r.energy.overload"],
            "maxLength": 64,
            "type": "string"
          },
          "minItems": 1,
          "uniqueItems": true,
          "readOnly": true,
          "type": "array"
        },
        "value": {
```

```

8262         "description": "The energy overload indication,true = tripped, false = not tripped.",
8263         "readOnly": true,
8264         "type": "boolean"
8265     },
8266     "n": {
8267         "$ref":
8268         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8269         schema.json#/definitions/n"
8270     },
8271     "id": {
8272         "$ref":
8273         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8274         schema.json#/definitions/id"
8275     },
8276     "if": {
8277         "description": "The OCF Interface set supported by this Resource.",
8278         "items": {
8279             "enum": [
8280                 "oic.if.s",
8281                 "oic.if.baseline"
8282             ],
8283             "type": "string"
8284         },
8285         "minItems": 2,
8286         "uniqueItems": true,
8287         "readOnly": true,
8288         "type": "array"
8289     }
8290 },
8291 "type": "object",
8292 "required": ["value"]
8293 }
8294 }
8295 }
8296

```

8297 6.36.5 Property definition

8298 Table 75 defines the Properties that are part of the "oic.r.energy.overload" Resource Type.

8299 **Table 75 – The Property definitions of the Resource with type "rt" =**
8300 **"oic.r.energy.overload".**

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

8301 6.36.6 CRUDN behaviour

8302 Table 76 defines the CRUDN operations that are supported on the "oic.r.energy.overload"
8303 Resource Type.

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

Create	Read	Update	Delete	Notify
	get			observe

6.37 Generic Sensor

6.37.1 Introduction

This Resource describes whether some value or property or entity has been sensed or not.

The Property "value" is a boolean.

A value of 'true' means that the target has been sensed.

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

6.37.2 Example URI

/GenericSensorResURI

6.37.3 Resource type

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

6.37.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Generic Sensor",
    "version": "20191118",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/GenericSensorResURI" : {
      "get": {
        "description": "This Resource describes whether some value or property or entity has been
sensed or not.\n\nThe Property \"value\" is a boolean.\n\nA value of 'true' means that the target has
been sensed.\n\nA value of 'false' means that the target has not been sensed.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.sensor"],
              "id": "unique_example_id",
              "value": true
            },
            "schema": { "$ref": "#/definitions/Sensor" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface" : {
      "in": "query",
      "name": "if",
      "type": "string",
```

```

8362         "enum" : ["oic.if.s", "oic.if.baseline"]
8363     }
8364 },
8365 "definitions": {
8366     "Sensor": {
8367         "properties": {
8368             "rt": {
8369                 "description": "The Resource Type",
8370                 "items": {
8371                     "maxLength": 64,
8372                     "type": "string",
8373                     "enum": ["oic.r.sensor"]
8374                 },
8375                 "minItems": 1,
8376                 "uniqueItems": true,
8377                 "readOnly": true,
8378                 "type": "array"
8379             },
8380             "value": {
8381                 "description": "true = sensed, false = not sensed.",
8382                 "readOnly": true,
8383                 "type": "boolean"
8384             },
8385             "measurement": {
8386                 "type": "number",
8387                 "description": "Measured value for this sensor, units depend on the specific type of
8388 sensor",
8389                 "readOnly": true
8390             },
8391             "precision": {
8392                 "$ref":
8393 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
8394 schema.json#/definitions/precision"
8395             },
8396             "n": {
8397                 "$ref":
8398 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8399 schema.json#/definitions/n"
8400             },
8401             "range": {
8402                 "$ref":
8403 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
8404 schema.json#/definitions/range_number"
8405             },
8406             "step": {
8407                 "$ref":
8408 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
8409 schema.json#/definitions/step_number"
8410             },
8411             "id": {
8412                 "$ref":
8413 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8414 schema.json#/definitions/id"
8415             },
8416             "if" : {
8417                 "description": "The OCF Interface set supported by this Resource",
8418                 "items": {
8419                     "enum": [
8420                         "oic.if.baseline",
8421                         "oic.if.s"
8422                     ],
8423                     "maxLength": 64,
8424                     "type": "string"
8425                 },
8426                 "minItems": 1,
8427                 "uniqueItems": true,
8428                 "readOnly": true,
8429                 "type": "array"
8430             }
8431         },
8432         "type" : "object",
8433         "required": ["value"]

```

8434 }
 8435 }
 8436 }
 8437 }

8438 6.37.5 Property definition

8439 Table 77 defines the Properties that are part of the "oic.r.sensor" Resource Type.

8440 **Table 77 – The Property definitions of the Resource with type "rt" = "oic.r.sensor".**

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

8441 6.37.6 CRUDN behaviour

8442 Table 78 defines the CRUDN operations that are supported on the "oic.r.sensor" Resource Type.

8443 **Table 78 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor".**

Create	Read	Update	Delete	Notify
	get			observe

8444 6.38 Glass Break Sensor

8445 6.38.1 Introduction

8446 This Resource describes a glass break sensor.

8447 The Property "value" is a boolean.

8448 A value of 'true' means that glass break has been sensed.

8449 A value of 'false' means that glass break not been sensed.

8450 6.38.2 Example URI

8451 /GlassBreakResURI

8452 6.38.3 Resource type

8453 The Resource Type is defined as: "oic.r.sensor.glassbreak".

6.38.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Glass Break Sensor",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/GlassBreakResURI" : {
      "get": {
        "description": "This Resource describes a glass break sensor.\n\nThe Property \"value\" is a
boolean.\n\nA value of 'true' means that glass break has been sensed.\n\nA value of 'false' means that
glass break not been sensed.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example":
              {
                "rt": ["oic.r.sensor.glassbreak"],
                "if": ["oic.if.s", "oic.if.baseline"],
                "value": true
              },
            "schema": { "$ref": "#/definitions/GlassBreak" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface": {
      "in": "query",
      "name": "if",
      "type": "string",
      "enum": ["oic.if.s", "oic.if.baseline"]
    }
  },
  "definitions": {
    "GlassBreak" : {
      "properties": {
        "rt": {
          "description": "The Resource Type.",
          "items": {
            "enum": ["oic.r.sensor.glassbreak"],
            "maxLength": 64,
            "type": "string"
          },
          "minItems": 1,
          "uniqueItems": true,
          "readOnly": true,
          "type": "array"
        },
        "value": {
          "description": "The glassbreak indication, true = glass break sensed, false = glass break
not sensed.",
          "readOnly": true,
          "type": "boolean"
        }
      }
    }
  }
}
```

```

8525     },
8526     "n": {
8527         "$ref":
8528         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8529         schema.json#/definitions/n"
8530     },
8531     "id": {
8532         "$ref":
8533         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8534         schema.json#/definitions/id"
8535     },
8536     "if": {
8537         "description": "The OCF Interface set supported by this Resource.",
8538         "items": {
8539             "enum": [
8540                 "oic.if.s",
8541                 "oic.if.baseline"
8542             ],
8543             "type": "string"
8544         },
8545         "minItems": 2,
8546         "uniqueItems": true,
8547         "readOnly": true,
8548         "type": "array"
8549     }
8550 },
8551 "type": "object",
8552 "required": ["value"]
8553 }
8554 }
8555 }
8556

```

8557 6.38.5 Property definition

8558 Table 79 defines the Properties that are part of the "oic.r.sensor.glassbreak" Resource Type.

8559 **Table 79 – The Property definitions of the Resource with type "rt" =**
8560 **"oic.r.sensor.glassbreak".**

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

8561 6.38.6 CRUDN behaviour

8562 Table 80 defines the CRUDN operations that are supported on the "oic.r.sensor.glassbreak"
8563 Resource Type.

8564 **Table 80 – The CRUDN operations of the Resource with type "rt" =**
8565 **"oic.r.sensor.glassbreak".**

Create	Read	Update	Delete	Notify
	get			observe

6.39 Heart Rate Zone

6.39.1 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", and "Zone5".

6.39.2 Example URI

/HeartRateZoneResURI

6.39.3 Resource type

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

6.39.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Heart Rate Zone",
    "version": "2019-03-28",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/HeartRateZoneResURI" : {
      "get": {
        "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.\nThe heartRateZone is an enumeration containing one of: \"Zone1\", \"Zone2\",
\"Zone3\", \"Zone4\", and \"Zone5\".\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.sensor.heart.zone"],
              "heartRateZone": "Zone3"
            },
            "schema": { "$ref": "#/definitions/heartRateZone" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface" : {
      "in" : "query",
      "name" : "if",
      "type" : "string",
      "enum" : ["oic.if.s", "oic.if.baseline"]
    }
  }
}
```

```

8629     "definitions": {
8630         "heartRateZone" : {
8631             "properties": {
8632                 "rt": {
8633                     "description": "Resource Type",
8634                     "items": {
8635                         "enum": ["oic.r.sensor.heart.zone"],
8636                         "maxLength": 64,
8637                         "type": "string"
8638                     },
8639                     "minItems": 1,
8640                     "readOnly": true,
8641                     "uniqueItems": true,
8642                     "type": "array"
8643                 },
8644                 "n": {
8645                     "$ref":
8646 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8647 schema.json#/definitions/n"
8648                 },
8649                 "id": {
8650                     "$ref":
8651 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8652 schema.json#/definitions/id"
8653                 },
8654                 "heartRateZone": {
8655                     "description": "Current heart rate zone based on the Zoladz system.",
8656                     "enum": [
8657                         "Zone1",
8658                         "Zone2",
8659                         "Zone3",
8660                         "Zone4",
8661                         "Zone5"
8662                     ],
8663                     "readOnly": true,
8664                     "type": "string"
8665                 },
8666                 "if": {
8667                     "description": "The OCF Interface set supported by this Resource",
8668                     "items": {
8669                         "enum": [
8670                             "oic.if.s",
8671                             "oic.if.baseline"
8672                         ],
8673                         "type": "string",
8674                         "maxLength": 64
8675                     },
8676                     "minItems": 1,
8677                     "readOnly": true,
8678                     "uniqueItems": true,
8679                     "type": "array"
8680                 }
8681             },
8682             "type" : "object",
8683             "required": ["heartRateZone"]
8684         }
8685     }
8686 }
8687

```

6.39.5 Property definition

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

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

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

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

6.39.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get			observe

6.40 Illuminance Sensor

6.40.1 Introduction

This Resource describes an illuminance sensor.

The Property "illuminance" is a float and represents the sensed luminous flux per unit area in lux.

6.40.2 Example URI

/IlluminanceSensorResURI

6.40.3 Resource type

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

6.40.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Illuminance Sensor",
    "version": "20190808",
    "license": {
      "name": "OCF Data Model License",
      "url": "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc.
All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/IlluminanceSensorResURI": {
      "get": {
        "description": "This Resource describes an illuminance sensor.\n\nThe
Property \"illuminance\" is a float and represents the sensed luminous flux per unit area in lux.",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ],
        "responses": {
          "200": {
```



```

8734         "description": "",
8735         "x-example": {
8736             "rt": ["oic.r.sensor.illuminance"],
8737             "if": ["oic.if.s", "oic.if.baseline"],
8738             "illuminance": 450.0,
8739             "range": [100.0, 500.0]
8740         },
8741         "schema": {"$ref": "#/definitions/Illuminance"}
8742     }
8743 }
8744 }
8745 }
8746 },
8747 "parameters": {
8748     "interface": {
8749         "in": "query",
8750         "name": "if",
8751         "type": "string",
8752         "enum": ["oic.if.s", "oic.if.baseline"]
8753     }
8754 },
8755 "definitions": {
8756     "Illuminance": {
8757         "properties": {
8758             "rt": {
8759                 "description": "The Resource Type.",
8760                 "items": {
8761                     "enum": ["oic.r.sensor.illuminance"],
8762                     "maxLength": 64,
8763                     "type": "string"
8764                 },
8765                 "minItems": 1,
8766                 "uniqueItems": true,
8767                 "readOnly": true,
8768                 "type": "array"
8769             },
8770             "illuminance": {
8771                 "description": "The sensed luminous flux per unit area in
8772 lux.",
8773                 "readOnly": true,
8774                 "type": "number"
8775             },
8776             "n": {
8777                 "$ref":
8778 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8779 schema.json#/definitions/n"
8780             },
8781             "id": {
8782                 "$ref":
8783 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8784 schema.json#/definitions/id"
8785             },
8786             "range": {
8787                 "$ref":
8788 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
8789 schema.json#/definitions/range_number"
8790             },
8791             "if": {
8792                 "description": "The OCF Interface set supported by this
8793 Resource.",
8794                 "items": {
8795                     "enum": [
8796                         "oic.if.s",
8797                         "oic.if.baseline"
8798                     ],
8799                     "type": "string"
8800                 },
8801                 "minItems": 2,
8802                 "uniqueItems": true,
8803                 "readOnly": true,
8804                 "type": "array"
8805             }
8806         }
8807     }
8808 }

```

```

8806     },
8807     "type": "object",
8808     "required": ["illuminance"]
8809   }
8810 }
8811 }

```

8812 6.40.5 Property definition

8813 Table 83 defines the Properties that are part of the "oic.r.sensor.illuminance" Resource Type.

8814 **Table 83 – The Property definitions of the Resource with type "rt" =**
8815 **"oic.r.sensor.illuminance".**

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

8816 6.40.6 CRUDN behaviour

8817 Table 84 defines the CRUDN operations that are supported on the "oic.r.sensor.illuminance"
8818 Resource Type.

8819 **Table 84 – The CRUDN operations of the Resource with type "rt" =**
8820 **"oic.r.sensor.illuminance".**

Create	Read	Update	Delete	Notify
	get			observe

8821 6.41 Magnetic Field Direction Sensor

8822 6.41.1 Introduction

8823 This Resource describes the direction of the Earth's magnetic field at the observer's current point
8824 in space.

8825 Typical use case includes measurement of compass readings on a personal device.

8826 The Property "value" is an array containing Hx, Hy, Hz (in that order) each of which are floats.

8827 Each of Hx, Hy and Hz are expressed in A/m (Amperes per metre).

8828 6.41.2 Example URI

8829 /MagneticFieldDirectionResURI

8830 6.41.3 Resource type

8831 The Resource Type is defined as: "oic.r.sensor.magneticfielddirection".

8832 6.41.4 OpenAPI 2.0 definition

```

8833 {
8834   "swagger": "2.0",
8835   "info": {
8836     "title": "Magnetic Field Direction Sensor",

```

```

8837     "version": "20190215",
8838     "license": {
8839         "name": "OCF Data Model License",
8840         "url":
8841 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
8842 CENSE.md",
8843         "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
8844 reserved."
8845     },
8846     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
8847 },
8848     "schemes": ["http"],
8849     "consumes": ["application/json"],
8850     "produces": ["application/json"],
8851     "paths": {
8852         "/MagneticFieldDirectionResURI" : {
8853             "get": {
8854                 "description": "This Resource describes the direction of the Earth's magnetic field at the
8855 observer's current point in space.\nTypical use case includes measurement of compass readings on a
8856 personal device.\nThe Property \"value\" is an array containing Hx, Hy, Hz (in that order) each of
8857 which are floats.\nEach of Hx, Hy and Hz are expressed in A/m (Amperes per metre).",
8858                 "parameters": [
8859                     {"$ref": "#/parameters/interface"}
8860                 ],
8861                 "responses": {
8862                     "200": {
8863                         "description": "",
8864                         "x-example":
8865 {
8866     "rt": ["oic.r.sensor.magneticfielddirection"],
8867     "if": ["oic.if.s", "oic.if.baseline"],
8868     "value": [100.0, 15.0, 90.0]
8869 },
8870                     "schema": { "$ref": "#/definitions/magneticFieldDirection" }
8871                 }
8872             }
8873         }
8874     },
8875     "parameters": {
8876         "interface" : {
8877             "in" : "query",
8878             "name" : "if",
8879             "type" : "string",
8880             "enum" : ["oic.if.s", "oic.if.baseline"]
8881         }
8882     },
8883     "definitions": {
8884         "magneticFieldDirection" : {
8885             "properties": {
8886                 "rt": {
8887                     "description": "The Resource Type.",
8888                     "items": {
8889                         "enum": ["oic.r.sensor.magneticfielddirection"],
8890                         "maxLength": 64,
8891                         "type": "string"
8892                     },
8893                     "minItems": 1,
8894                     "uniqueItems": true,
8895                     "readOnly": true,
8896                     "type": "array"
8897                 },
8898                 "value": {
8899                     "description": "The array containing Hx, Hy, Hz.",
8900                     "items": {
8901                         "type": "number"
8902                     },
8903                     "maxItems": 3,
8904                     "minItems": 3,
8905                     "readOnly": true,
8906                     "type": "array"
8907                 }
8908             }

```

```

8909         "n": {
8910             "$ref":
8911             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8912             schema.json#/definitions/n"
8913         },
8914         "id": {
8915             "$ref":
8916             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
8917             schema.json#/definitions/id"
8918         },
8919         "if": {
8920             "description": "The OCF Interface set supported by this Resource.",
8921             "items": {
8922                 "enum": [
8923                     "oic.if.s",
8924                     "oic.if.baseline"
8925                 ],
8926                 "type": "string"
8927             },
8928             "minItems": 2,
8929             "uniqueItems": true,
8930             "readOnly": true,
8931             "type": "array"
8932         }
8933     },
8934     "type": "object",
8935     "required": ["value"]
8936 }
8937 }
8938 }
8939

```

8940 6.41.5 Property definition

8941 Table 85 defines the Properties that are part of the "oic.r.sensor.magneticfielddirection" Resource
8942 Type.

8943 **Table 85 – The Property definitions of the Resource with type "rt" =**
8944 **"oic.r.sensor.magneticfielddirection".**

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

8945 6.41.6 CRUDN behaviour

8946 Table 86 defines the CRUDN operations that are supported on the
8947 "oic.r.sensor.magneticfielddirection" Resource Type.

8948 **Table 86 – The CRUDN operations of the Resource with type "rt" =**
8949 **"oic.r.sensor.magneticfielddirection".**

Create	Read	Update	Delete	Notify
	get			observe

6.42 Media

6.42.1 Introduction

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

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

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

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

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

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

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

6.42.2 Example URI

/MediaResURI

6.42.3 Resource type

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

6.42.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Media",
    "version": "20190508",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/MediaResURI" : {
      "get": {
        "description": "This Resource specifies the media types that an OCF Server supports.\nThe
resource is an array of media elements. Each element contains:\n  A URL at which the specified
media type can be accessed.\n  A string array containing the definition of the media using SDP.\nEach entry in the sdp array is an SDP line.\n  Each line shall follow the SDP description syntax
as defined in the SDP specification.\nThe SDP specification can be found at
http://tools.ietf.org/html/rfc4566.",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
            "description": "RETRIEVES the current media resource.",
            "x-example": {
              "rt": ["oic.r.media"],
              "if": ["oic.if.a", "oic.if.baseline"],
              "media": [
                {
                  "url": "some example url",
                  "sdp": [
                    "m=video 1 RTP/AVP 96",
                    "a=rtpmap:96 H264/9000",
                    "a=fmtp:96 profile-level-id=42A028;packetization-mode=1"
                  ]
                }
              ],
              "url": "some other example1 url",
            }
          }
        }
      }
    }
  }
}
```

```

9012         "sdp": [
9013             "m=audio 2 RTP/AVP 97",
9014             "a=rtpmap:97 MP4A-LATM/90000"
9015         ],
9016     },
9017     {
9018         "url": "some other example2 url",
9019         "sdp": [
9020             "m=video 3 RTP/AVP 98",
9021             "a=rtpmap:98 jpeg/90000",
9022             "a=fmtp:98 sampling=YCbCr-4:2:0;width=256;height=256"
9023         ]
9024     }
9025 ],
9026 },
9027 "schema": { "$ref": "#/definitions/Media" }
9028 }
9029 },
9030 },
9031 "post": {
9032     "description": "This is to change the URL that can be played back by the device. Note that
9033 some devices do not have the capability to set the URL to be played back",
9034     "parameters": [
9035         { "$ref": "#/parameters/interface" },
9036         {
9037             "name": "body",
9038             "in": "body",
9039             "required": true,
9040             "schema": { "$ref": "#/definitions/Media" },
9041             "x-example":
9042                 {
9043                     "media": [
9044                         {
9045                             "url": "new example url for playback",
9046                             "sdp": [
9047                                 "m=video 1 RTP/AVP 100",
9048                                 "a=rtpmap:100 H264/9000",
9049                                 "a=fmtp:100 profile-level-id=42A028;packetization-mode=1"
9050                             ]
9051                         }
9052                     ]
9053                 }
9054         },
9055     ],
9056     "responses": {
9057         "200": {
9058             "description": "The current media resource.",
9059             "x-example":
9060                 {
9061                     "rt": ["oic.r.media"],
9062                     "if": ["oic.if.a", "oic.if.baseline"],
9063                     "media": [
9064                         {
9065                             "url": "new example url for playback",
9066                             "sdp": [
9067                                 "m=video 1 RTP/AVP 100",
9068                                 "a=rtpmap:100 H264/9000",
9069                                 "a=fmtp:100 profile-level-id=42A028;packetization-mode=1"
9070                             ]
9071                         }
9072                     ]
9073                 },
9074             "schema": { "$ref": "#/definitions/Media" }
9075         }
9076     }
9077 },
9078 },
9079 },
9080 "parameters": {
9081     "interface": {
9082         "in": "query",
9083         "name": "if",

```

```

9084         "type": "string",
9085         "enum": ["oic.if.a", "oic.if.baseline"]
9086     },
9087 },
9088 "definitions": {
9089     "Media": {
9090         "properties": {
9091             "rt": {
9092                 "description": "The Resource Type.",
9093                 "items": {
9094                     "enum": ["oic.r.media"],
9095                     "maxLength": 64,
9096                     "type": "string"
9097                 },
9098                 "minItems": 1,
9099                 "uniqueItems": true,
9100                 "readOnly": true,
9101                 "type": "array"
9102             },
9103             "media": {
9104                 "items": {
9105                     "properties": {
9106                         "sdp": {
9107                             "description": "The array of strings, one per SDP line.",
9108                             "items": {
9109                                 "description": "SDP media or attribute line",
9110                                 "type": "string"
9111                             },
9112                             "type": "array"
9113                         },
9114                         "url": {
9115                             "description": "The url for the media instance.",
9116                             "type": "string"
9117                         }
9118                     },
9119                     "type": "object"
9120                 },
9121                 "type": "array"
9122             },
9123             "n": {
9124                 "$ref":
9125 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9126 schema.json#/definitions/n"
9127             },
9128             "id": {
9129                 "$ref":
9130 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9131 schema.json#/definitions/id"
9132             },
9133             "if": {
9134                 "description": "The OCF Interface set supported by this Resource.",
9135                 "items": {
9136                     "enum": [
9137                         "oic.if.a",
9138                         "oic.if.s",
9139                         "oic.if.baseline"
9140                     ],
9141                     "type": "string"
9142                 },
9143                 "minItems": 2,
9144                 "uniqueItems": true,
9145                 "readOnly": true,
9146                 "type": "array"
9147             }
9148         },
9149         "type": "object",
9150         "required": ["media"]
9151     }
9152 }
9153 }
9154

```

6.42.5 Property definition

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

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

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

6.42.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get	post		observe

6.43 Media Source

6.43.1 Introduction

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

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

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

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

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

The Property "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.

6.43.2 Example URI

/mediaSourceResURI

6.43.3 Resource type

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

6.43.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Media Source",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
        "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
        CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
        reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
}
```



```

9191     },
9192     "schemes": ["http"],
9193     "consumes": ["application/json"],
9194     "produces": ["application/json"],
9195     "paths": {
9196         "/mediaSourceResURI" : {
9197             "get": {
9198                 "description": "This Resource defines a single media source that exists on a device.\nThe
9199 source can be an input source or output source, this resource is agnostic of that.\nThe Property
9200 \"sourceName\" specifies a pre-defined media input or output (e.g.\n\"HDMI\", \"DVI\").\nThe Property
9201 \"sourceNumber\" is a label to specify the instance (e.g.\n\"PC\", \"1\").\nThe Property
9202 \"sourceType\" is an enumeration defining whether the source is audio, video or both.\nThe Property
9203 \"status\" is a boolean that determines if the specific source instance is selected or not.\nA
9204 status of true means that the source instance is selected.\nA status of false means that the source
9205 instance is not selected.",
9206                 "parameters": [
9207                     { "$ref": "#/parameters/interface" }
9208                 ],
9209                 "responses": {
9210                     "200": {
9211                         "description": "",
9212                         "x-example":
9213                             {
9214                                 "rt": ["oic.r.mediasource"],
9215                                 "if": ["oic.if.a", "oic.if.baseline"],
9216                                 "sourceName": "HDMI-CEC",
9217                                 "sourceNumber": "1",
9218                                 "sourceType": "audioPlusVideo",
9219                                 "status": true
9220                             },
9221                         "schema": { "$ref": "#/definitions/mediaSource" }
9222                     }
9223                 }
9224             },
9225             "post": {
9226                 "description": "Changes the status of the source.\nAllows changes of the \"sourceName\" and
9227 the \"status\".",
9228                 "parameters": [
9229                     { "$ref": "#/parameters/interface" },
9230                     {
9231                         "name": "body",
9232                         "in": "body",
9233                         "required": true,
9234                         "schema": { "$ref": "#/definitions/mediaSource" },
9235                         "x-example":
9236                             {
9237                                 "sourceName": "my new name",
9238                                 "status": true
9239                             }
9240                     }
9241                 ],
9242                 "responses": {
9243                     "200": {
9244                         "description": "",
9245                         "x-example":
9246                             {
9247                                 "sourceName": "my new name",
9248                                 "sourceNumber": "1",
9249                                 "sourceType": "audioPlusVideo",
9250                                 "status": true
9251                             },
9252                         "schema": { "$ref": "#/definitions/mediaSource" }
9253                     }
9254                 }
9255             }
9256         }
9257     },
9258     "parameters": {
9259         "interface": {
9260             "in": "query",
9261             "name": "if",
9262             "type": "string",

```

```

9263         "enum": ["oic.if.a", "oic.if.baseline"]
9264     },
9265 },
9266 "definitions": {
9267     "mediaSource": {
9268         "properties": {
9269             "rt": {
9270                 "description": "The Resource Type.",
9271                 "items": {
9272                     "enum": ["oic.r.mediasource"],
9273                     "maxLength": 64,
9274                     "type": "string"
9275                 },
9276                 "minItems": 1,
9277                 "uniqueItems": true,
9278                 "readOnly": true,
9279                 "type": "array"
9280             },
9281             "status": {
9282                 "description": "Specifies if the specific source instance is selected or not.",
9283                 "type": "boolean"
9284             },
9285             "sourceType": {
9286                 "description": "Specifies the type of the source.",
9287                 "enum": [
9288                     "audioOnly",
9289                     "videoOnly",
9290                     "audioPlusVideo"
9291                 ],
9292                 "readOnly": true,
9293                 "type": "string"
9294             },
9295             "sourceName": {
9296                 "description": "Specifies a pre-defined media input or output.",
9297                 "type": "string"
9298             },
9299             "sourceNumber": {
9300                 "description": "Label to specify the instance.",
9301                 "type": "string"
9302             },
9303             "n": {
9304                 "$ref":
9305                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9306                 schema.json#/definitions/n"
9307             },
9308             "id": {
9309                 "$ref":
9310                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9311                 schema.json#/definitions/id"
9312             },
9313             "if": {
9314                 "description": "The OCF Interface set supported by this Resource.",
9315                 "items": {
9316                     "enum": [
9317                         "oic.if.a",
9318                         "oic.if.baseline"
9319                     ],
9320                     "type": "string"
9321                 },
9322                 "minItems": 2,
9323                 "uniqueItems": true,
9324                 "readOnly": true,
9325                 "type": "array"
9326             }
9327         },
9328         "type": "object",
9329         "required": ["sourceName", "status"]
9330     }
9331 }
9332 }
9333

```

6.43.5 Property definition

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

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

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

6.43.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get	post		observe

6.44 Media Source List

6.44.1 Introduction

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

6.44.2 Example URI

/mediaSourceListResURI

6.44.3 Resource type

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

6.44.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Media Source List",
    "version": "20190729",
    "license": {
      "name": "OCF Data Model License",
      "url":
```

```

9359 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
9360 CENSE.md",
9361 "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
9362 reserved.",
9363 },
9364 "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
9365 },
9366 "schemes": ["http"],
9367 "consumes": ["application/json"],
9368 "produces": ["application/json"],
9369 "paths": {
9370   "/mediaSourceListResURI" : {
9371     "get": {
9372       "description": "This Resource provides the list of all media sources available on the Device
9373 (input and/or output).\nThe sources are an array of mediaSource(s) as separately defined see
9374 Resource Type \"oic.r.mediasource\"",
9375       "parameters": [
9376         {"$ref": "#/parameters/interface"}
9377       ],
9378       "responses": {
9379         "200": {
9380           "description": "",
9381           "x-example":
9382             {
9383               "rt": ["oic.r.mediasourcelist"],
9384               "if": ["oic.if.a", "oic.if.baseline"],
9385               "sources": [
9386                 {
9387                   "sourceName": "HDMI-CEC",
9388                   "sourceNumber": "1",
9389                   "sourceType": "audioPlusVideo",
9390                   "status": true
9391                 },
9392                 {
9393                   "sourceName": "dualRCA",
9394                   "sourceNumber": "1",
9395                   "sourceType": "audioOnly",
9396                   "status": false
9397                 }
9398               ]
9399             },
9400           "schema": { "$ref": "#/definitions/mediaSourceList" }
9401         }
9402       }
9403     },
9404     "post": {
9405       "description": "Changes the status of the source(s).\nAllows changes of the sourceName and
9406 the status.",
9407       "parameters": [
9408         {"$ref": "#/parameters/interface"},
9409         {
9410           "name": "body",
9411           "in": "body",
9412           "required": true,
9413           "schema": { "$ref": "#/definitions/mediaSourceList" },
9414           "x-example":
9415             {
9416               "sources": [
9417                 {
9418                   "sourceName": "my new name",
9419                   "status": true
9420                 },
9421                 {
9422                   "sourceName": "dualRCA"
9423                 }
9424               ]
9425             }
9426         }
9427       ],
9428       "responses": {
9429         "200": {
9430           "description": "",

```

```

9431         "x-example":
9432             {
9433                 "sources": [
9434                     {
9435                         "sourceName": "my new name",
9436                         "sourceNumber": "1",
9437                         "sourceType": "audioPlusVideo",
9438                         "status": true
9439                     },
9440                     {
9441                         "sourceName": "dualRCA",
9442                         "sourceNumber": "1",
9443                         "sourceType": "audioOnly",
9444                         "status": false
9445                     }
9446                 ]
9447             },
9448             "schema": { "$ref": "#/definitions/mediaSourceList" }
9449         }
9450     }
9451 }
9452 },
9453 },
9454 "parameters": {
9455     "interface": {
9456         "in": "query",
9457         "name": "if",
9458         "type": "string",
9459         "enum": ["oic.if.a", "oic.if.baseline"]
9460     }
9461 },
9462 "definitions": {
9463     "mediaSourceList" : {
9464         "properties": {
9465             "rt": {
9466                 "description": "The Resource Type.",
9467                 "items": {
9468                     "enum": ["oic.r.mediasourcelist"],
9469                     "maxLength": 64,
9470                     "type": "string"
9471                 },
9472                 "minItems": 1,
9473                 "uniqueItems": true,
9474                 "readOnly": true,
9475                 "type": "array"
9476             },
9477             "sources": {
9478                 "items": {
9479                     "properties": {
9480                         "sourceName": {
9481                             "description": "Specifies a pre-defined media input or output.",
9482                             "type": "string"
9483                         },
9484                         "sourceNumber": {
9485                             "description": "Label to specify the instance.",
9486                             "readOnly": true,
9487                             "type": "string"
9488                         },
9489                         "sourceType": {
9490                             "description": "Specifies the type of the source.",
9491                             "enum": [
9492                                 "audioOnly",
9493                                 "videoOnly",
9494                                 "audioPlusVideo"
9495                             ],
9496                             "readOnly": true,
9497                             "type": "string"
9498                         },
9499                         "status": {
9500                             "description": "Specifies if the specific source instance is selected or not.",
9501                             "type": "boolean"
9502                         }

```

```

9503         },
9504         "type": "object"
9505     },
9506     "type": "array"
9507 },
9508 "n": {
9509     "$ref":
9510 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9511 schema.json#/definitions/n"
9512 },
9513 "id": {
9514     "$ref":
9515 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9516 schema.json#/definitions/id"
9517 },
9518 "if": {
9519     "description": "The OCF Interface set supported by this Resource.",
9520     "items": {
9521         "enum": [
9522             "oic.if.a",
9523             "oic.if.baseline"
9524         ],
9525         "type": "string"
9526     },
9527     "minItems": 2,
9528     "uniqueItems": true,
9529     "readOnly": true,
9530     "type": "array"
9531 },
9532 },
9533 "type": "object",
9534 "required": ["sources"]
9535 }
9536 }
9537 }
9538

```

9539 6.44.5 Property definition

9540 Table 91 defines the Properties that are part of the "oic.r.mediasourcelist" Resource Type.

9541 **Table 91 – The Property definitions of the Resource with type "rt" =**
9542 **"oic.r.mediasourcelist".**

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

9543 6.44.6 CRUDN behaviour

9544 Table 92 defines the CRUDN operations that are supported on the "oic.r.mediasourcelist" Resource
9545 Type.

9546 **Table 92 – The CRUDN operations of the Resource with type "rt" = "oic.r.mediasourcelist".**

Create	Read	Update	Delete	Notify
	get	post		observe

6.45 Media Source Input

6.45.1 Introduction

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

6.45.2 Example URI

/mediaSourceInputResURI

6.45.3 Resource type

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

6.45.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Media Source Input",
    "version": "20190729",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/mediaSourceInputResURI" : {
      "get": {
        "description": "This Resource provides the list of input media sources available on the
device.\nThe sources are an array of Media Source(s) see Resource Type \"oic.r.mediasource\"\\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description" : "",
            "x-example": {
              "rt": ["oic.r.media.input"],
              "if": ["oic.if.a", "oic.if.baseline"],
              "sources": [
                {
                  "sourceName": "HDMI-CEC",
                  "sourceNumber": "1",
                  "sourceType": "audioPlusVideo",
                  "status": true
                },
                {
                  "sourceName": "dualRCA",
                  "sourceNumber": "1",
                  "sourceType": "audioOnly",
                  "status": false
                }
              ]
            }
          }
        },
        "schema": { "$ref": "#/definitions/mediaSourceList" }
      },
      "post": {
        "description": "Changes the status of the source(s).\nAllows changes of the sourceName and
the status."
      }
    }
  }
}
```

```

9611     "parameters": [
9612         { "$ref": "#/parameters/interface" },
9613         {
9614             "name": "body",
9615             "in": "body",
9616             "required": true,
9617             "schema": { "$ref": "#/definitions/mediaSourceList" },
9618             "x-example": {
9619                 "sources": [
9620                     {
9621                         "sourceName": "my new name",
9622                         "status": true
9623                     },
9624                     {
9625                         "sourceName": "dualRCA"
9626                     }
9627                 ]
9628             }
9629         }
9630     ],
9631     "responses": {
9632         "200": {
9633             "description": "",
9634             "x-example": {
9635                 "sources": [
9636                     {
9637                         "sourceName": "my new name",
9638                         "sourceNumber": "1",
9639                         "sourceType": "audioPlusVideo",
9640                         "status": true
9641                     },
9642                     {
9643                         "sourceName": "dualRCA",
9644                         "sourceNumber": "1",
9645                         "sourceType": "audioOnly",
9646                         "status": false
9647                     }
9648                 ]
9649             },
9650             "schema": { "$ref": "#/definitions/mediaSourceList" }
9651         }
9652     }
9653 },
9654 },
9655 },
9656 "parameters": {
9657     "interface": {
9658         "in": "query",
9659         "name": "if",
9660         "type": "string",
9661         "enum": ["oic.if.a", "oic.if.baseline"]
9662     }
9663 },
9664 "definitions": {
9665     "mediaSourceList": {
9666         "properties": {
9667             "rt": {
9668                 "description": "Resource Type",
9669                 "items": {
9670                     "enum": ["oic.r.media.input"],
9671                     "maxLength": 64,
9672                     "type": "string"
9673                 },
9674                 "minItems": 1,
9675                 "uniqueItems": true,
9676                 "readOnly": true,
9677                 "type": "array"
9678             },
9679             "sources": {
9680                 "items": {
9681                     "properties": {
9682                         "sourceName": {

```



```

9683         "description": "Specifies a pre-defined media input or output",
9684         "type": "string"
9685     },
9686     "sourceNumber": {
9687         "description": "Label to specify the instance",
9688         "readOnly": true,
9689         "type": "string"
9690     },
9691     "sourceType": {
9692         "description": "Specifies the type of the source",
9693         "enum": [
9694             "audioOnly",
9695             "videoOnly",
9696             "audioPlusVideo"
9697         ],
9698         "readOnly": true,
9699         "type": "string"
9700     },
9701     "status": {
9702         "description": "Specifies if the specific source instance is selected or not",
9703         "type": "boolean"
9704     }
9705 },
9706 "type": "object"
9707 },
9708 "type": "array"
9709 },
9710 "n": {
9711     "$ref":
9712     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9713     schema.json#/definitions/n"
9714 },
9715 "id": {
9716     "$ref":
9717     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9718     schema.json#/definitions/id"
9719 },
9720 "if": {
9721     "description": "The OCF Interface set supported by this Resource",
9722     "items": {
9723         "enum": [
9724             "oic.if.a",
9725             "oic.if.baseline"
9726         ],
9727         "type": "string"
9728     },
9729     "minItems": 2,
9730     "uniqueItems": true,
9731     "readOnly": true,
9732     "type": "array"
9733 }
9734 },
9735 "type": "object",
9736 "required": ["sources"]
9737 }
9738 }
9739 }
9740

```

9741 6.45.5 Property definition

9742 Table 93 defines the Properties that are part of the "oic.r.media.input" Resource Type.

9743 **Table 93 – The Property definitions of the Resource with type "rt" = "oic.r.media.input".**

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

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

6.45.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get	post		observe

6.46 Media Source Output

6.46.1 Introduction

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

6.46.2 Example URI

/mediaSourceOutputResURI

6.46.3 Resource type

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

6.46.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Media Source Output",
    "version": "20190729",
    "license": {
      "name": "OCF Data Model License",
      "url": "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/mediaSourceOutputResURI" : {
      "get": {
        "description": "This Resource provides the list of output media sources available on the
device.\nThe sources are an array of Media Source(s) see Resource Type \"oic.r.mediasource\"\\n\",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.media.output"],
              "if": ["oic.if.a", "oic.if.baseline"],

```

```

9790         "sources": [
9791             {
9792                 "sourceName": "HDMI-CEC",
9793                 "sourceNumber": "1",
9794                 "sourceType": "audioPlusVideo",
9795                 "status": true
9796             },
9797             {
9798                 "sourceName": "dualRCA",
9799                 "sourceNumber": "1",
9800                 "sourceType": "audioOnly",
9801                 "status": false
9802             }
9803         ],
9804     },
9805     "schema": { "$ref": "#/definitions/mediaSourceList" }
9806 },
9807 ],
9808 },
9809 "post": {
9810     "description": "Changes the status of the source(s).\nAllows changes of the sourceName and
9811 the status.",
9812     "parameters": [
9813         { "$ref": "#/parameters/interface" },
9814         {
9815             "name": "body",
9816             "in": "body",
9817             "required": true,
9818             "schema": { "$ref": "#/definitions/mediaSourceList" },
9819             "x-example": {
9820                 "sources": [
9821                     {
9822                         "sourceName": "my new name",
9823                         "status": true
9824                     },
9825                     {
9826                         "sourceName": "dualRCA"
9827                     }
9828                 ]
9829             }
9830         }
9831     ],
9832     "responses": {
9833         "200": {
9834             "description": "",
9835             "x-example": {
9836                 "sources": [
9837                     {
9838                         "sourceName": "my new name",
9839                         "sourceNumber": "1",
9840                         "sourceType": "audioPlusVideo",
9841                         "status": true
9842                     },
9843                     {
9844                         "sourceName": "dualRCA",
9845                         "sourceNumber": "1",
9846                         "sourceType": "audioOnly",
9847                         "status": false
9848                     }
9849                 ]
9850             },
9851             "schema": { "$ref": "#/definitions/mediaSourceList" }
9852         }
9853     }
9854 },
9855 ],
9856 },
9857 "parameters": {
9858     "interface": {
9859         "in": "query",
9860         "name": "if",
9861         "type": "string",

```

```

9862         "enum": ["oic.if.a", "oic.if.baseline"]
9863     }
9864 },
9865 "definitions": {
9866     "mediaSourceList" : {
9867         "properties": {
9868             "rt": {
9869                 "description": "Resource Type",
9870                 "items": {
9871                     "enum": ["oic.r.media.output"],
9872                     "maxLength": 64,
9873                     "type": "string"
9874                 },
9875                 "minItems": 1,
9876                 "uniqueItems": true,
9877                 "readOnly": true,
9878                 "type": "array"
9879             },
9880             "sources": {
9881                 "items": {
9882                     "properties": {
9883                         "sourceName": {
9884                             "description": "Specifies a pre-defined media input or output",
9885                             "type": "string"
9886                         },
9887                         "sourceNumber": {
9888                             "description": "Label to specify the instance",
9889                             "readOnly": true,
9890                             "type": "string"
9891                         },
9892                         "sourceType": {
9893                             "description": "Specifies the type of the source",
9894                             "enum": [
9895                                 "audioOnly",
9896                                 "videoOnly",
9897                                 "audioPlusVideo"
9898                             ],
9899                             "readOnly": true,
9900                             "type": "string"
9901                         },
9902                         "status": {
9903                             "description": "Specifies if the specific source instance is selected or not",
9904                             "type": "boolean"
9905                         }
9906                     },
9907                     "type": "object"
9908                 },
9909                 "type": "array"
9910             },
9911             "n": {
9912                 "$ref":
9913                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9914                 schema.json#/definitions/n"
9915             },
9916             "id": {
9917                 "$ref":
9918                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
9919                 schema.json#/definitions/id"
9920             },
9921             "if": {
9922                 "description": "The OCF Interface set supported by this Resource",
9923                 "items": {
9924                     "enum": [
9925                         "oic.if.a",
9926                         "oic.if.baseline"
9927                     ],
9928                     "type": "string"
9929                 },
9930                 "minItems": 2,
9931                 "uniqueItems": true,
9932                 "readOnly": true,
9933                 "type": "array"

```

```

9934     },
9935     },
9936     "type": "object",
9937     "required": ["sources"]
9938   }
9939 }
9940 }
9941

```

9942 6.46.5 Property definition

9943 Table 95 defines the Properties that are part of the "oic.r.media.output" Resource Type.

9944 **Table 95 – The Property definitions of the Resource with type "rt" = "oic.r.media.output".**

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

9945 6.46.6 CRUDN behaviour

9946 Table 96 defines the CRUDN operations that are supported on the "oic.r.media.output" Resource
9947 Type.

9948 **Table 96 – The CRUDN operations of the Resource with type "rt" = "oic.r.media.output".**

Create	Read	Update	Delete	Notify
	get	post		observe

9949 6.47 Motion Sensor

9950 6.47.1 Introduction

9951 This Resource describes whether motion has been sensed or not.

9952 The Property "value" is a boolean.

9953 A value of 'true' means that motion has been sensed.

9954 A value of 'false' means that motion not been sensed.

9955

9956 6.47.2 Example URI

9957 /MotionResURI

9958 6.47.3 Resource type

9959 The Resource Type is defined as: "oic.r.sensor.motion".

9960 6.47.4 OpenAPI 2.0 definition

```

9961 {
9962   "swagger": "2.0",
9963   "info": {
9964     "title": "Motion Sensor",
9965     "version": "20190215",
9966     "license": {
9967       "name": "OCF Data Model License",
9968       "url":
9969         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI

```

```

9970 CENSE.md",
9971     "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
9972 reserved."
9973 },
9974     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
9975 },
9976     "schemes": ["http"],
9977     "consumes": ["application/json"],
9978     "produces": ["application/json"],
9979     "paths": {
9980         "/MotionResURI" : {
9981             "get": {
9982                 "description": "This Resource describes whether motion has been sensed or not.\n
9983 The Property \"value\" is a boolean.\n
9984 A value of 'true' means that motion has been sensed.\n
9985 A value of 'false' means that motion not been sensed.\n",
9986                 "parameters": [
9987                     { "$ref": "#/parameters/interface" }
9988                 ],
9989                 "responses": {
9990                     "200": {
9991                         "description": "",
9992                         "x-example": {
9993                             "rt": ["oic.r.sensor.motion"],
9994                             "if": ["oic.if.s", "oic.if.baseline"],
9995                             "value": true
9996                         },
9997                         "schema": { "$ref": "#/definitions/Motion" }
9998                     }
9999                 }
10000             }
10001         }
10002     },
10003     "parameters": {
10004         "interface" : {
10005             "in" : "query",
10006             "name" : "if",
10007             "type" : "string",
10008             "enum" : ["oic.if.s", "oic.if.baseline"]
10009         }
10010     },
10011     "definitions": {
10012         "Motion" : {
10013             "properties": {
10014                 "rt": {
10015                     "description": "The Resource Type.",
10016                     "items": {
10017                         "enum": ["oic.r.sensor.motion"],
10018                         "maxLength": 64,
10019                         "type": "string"
10020                     },
10021                     "minItems": 1,
10022                     "uniqueItems": true,
10023                     "readOnly": true,
10024                     "type": "array"
10025                 },
10026                 "value": {
10027                     "description": "The motion sensor, true = motion sensed, false = motion not sensed.",
10028                     "readOnly": true,
10029                     "type": "boolean"
10030                 },
10031                 "n": {
10032                     "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-schema.json#/definitions/n"
10033                 },
10034                 "id": {
10035                     "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-schema.json#/definitions/id"
10036                 },
10037                 "if": {

```

```

10042         "description": "The OCF Interface set supported by this Resource.",
10043         "items": {
10044             "enum": [
10045                 "oic.if.s",
10046                 "oic.if.baseline"
10047             ],
10048             "type": "string"
10049         },
10050         "minItems": 2,
10051         "uniqueItems": true,
10052         "readOnly": true,
10053         "type": "array"
10054     },
10055 },
10056 "type": "object",
10057 "required": ["value"]
10058 }
10059 }
10060 }
10061

```

10062 6.47.5 Property definition

10063 Table 97 defines the Properties that are part of the "oic.r.sensor.motion" Resource Type.

10064 **Table 97 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.motion".**

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

10065 6.47.6 CRUDN behaviour

10066 Table 98 defines the CRUDN operations that are supported on the "oic.r.sensor.motion" Resource
10067 Type.

10068 **Table 98 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.motion".**

Create	Read	Update	Delete	Notify
	get			observe

10069 6.48 Night Mode

10070 6.48.1 Introduction

10071 This Resource describes a night mode on/off feature.
10072 A nightMode value of 'true' means that the feature is on.
10073 A nightMode value of 'false' means that the feature is off.

10074 6.48.2 Example URI

10075 /NightModeResURI

6.48.3 Resource type

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

6.48.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Night Mode",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/NightModeResURI" : {
      "get": {
        "description": "This Resource describes a night mode on/off feature.\nA nightMode value of
'true' means that the feature is on.\nA nightMode value of 'false' means that the feature is off.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example":
            {
              "rt": ["oic.r.nightmode"],
              "if": ["oic.if.a", "oic.if.baseline"],
              "nightMode": false
            },
            "schema": { "$ref": "#/definitions/NightMode" }
          }
        }
      },
      "post": {
        "description": "",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/NightMode" },
            "x-example":
            {
              "nightMode": true
            }
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example":
            {
              "nightMode": true
            },
            "schema": { "$ref": "#/definitions/NightMode" }
          }
        }
      }
    }
  }
}
```



```

10145 },
10146 "parameters": {
10147   "interface": {
10148     "in": "query",
10149     "name": "if",
10150     "type": "string",
10151     "enum": ["oic.if.a", "oic.if.baseline"]
10152   }
10153 },
10154 "definitions": {
10155   "NightMode": {
10156     "properties": {
10157       "rt": {
10158         "description": "The Resource Type.",
10159         "items": {
10160           "enum": ["oic.r.nightmode"],
10161           "maxLength": 64,
10162           "type": "string"
10163         },
10164         "minItems": 1,
10165         "uniqueItems": true,
10166         "readOnly": true,
10167         "type": "array"
10168       },
10169       "nightMode": {
10170         "description": "The status of the Night Mode.",
10171         "type": "boolean"
10172       },
10173       "n": {
10174         "$ref":
10175         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10176         schema.json#/definitions/n"
10177       },
10178       "id": {
10179         "$ref":
10180         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10181         schema.json#/definitions/id"
10182       },
10183       "if": {
10184         "description": "The OCF Interface set supported by this Resource.",
10185         "items": {
10186           "enum": [
10187             "oic.if.a",
10188             "oic.if.baseline"
10189           ],
10190           "type": "string"
10191         },
10192         "minItems": 2,
10193         "uniqueItems": true,
10194         "readOnly": true,
10195         "type": "array"
10196       }
10197     },
10198     "type": "object",
10199     "required": ["nightMode"]
10200   }
10201 }
10202 }
10203

```

10204 6.48.5 Property definition

10205 Table 99 defines the Properties that are part of the "oic.r.nightmode" Resource Type.

10206 **Table 99 – The Property definitions of the Resource with type "rt" = "oic.r.nightmode".**

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

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

6.48.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get	post		observe

6.49 Presence Sensor

6.49.1 Introduction

This Resource describes whether presence has been sensed or not.

The Property "value" is a boolean.

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

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

6.49.2 Example URI

/PresenceResURI

6.49.3 Resource type

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

6.49.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Presence Sensor",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url": "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/PresenceResURI" : {
      "get": {
        "description": "This Resource describes whether presence has been sensed or not.\nThe
Property \"value\" is a boolean.\nA value of 'true' means that presence has been sensed.\nA value of
'false' means that presence not been sensed.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": ""
          }
        }
      }
    }
  }
}
```

```

10252         "x-example":
10253         {
10254             "rt": ["oic.r.sensor.presence"],
10255             "if": ["oic.if.s", "oic.if.baseline"],
10256             "value": true
10257         },
10258         "schema": { "$ref": "#/definitions/Presence" }
10259     }
10260 }
10261 }
10262 }
10263 },
10264 "parameters": {
10265     "interface": {
10266         "in": "query",
10267         "name": "if",
10268         "type": "string",
10269         "enum": ["oic.if.s", "oic.if.baseline"]
10270     }
10271 },
10272 "definitions": {
10273     "Presence": {
10274         "properties": {
10275             "rt": {
10276                 "description": "The Resource Type.",
10277                 "items": {
10278                     "enum": ["oic.r.sensor.presence"],
10279                     "maxLength": 64,
10280                     "type": "string"
10281                 },
10282                 "minItems": 1,
10283                 "uniqueItems": true,
10284                 "readOnly": true,
10285                 "type": "array"
10286             },
10287             "value": {
10288                 "description": "The presences sensor, true = precense sensed, false = precensenot
10289 sensed.",
10290                 "readOnly": true,
10291                 "type": "boolean"
10292             },
10293             "n": {
10294                 "$ref":
10295 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10296 schema.json#/definitions/n"
10297             },
10298             "id": {
10299                 "$ref":
10300 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10301 schema.json#/definitions/id"
10302             },
10303             "if": {
10304                 "description": "The OCF Interface set supported by this Resource.",
10305                 "items": {
10306                     "enum": [
10307                         "oic.if.s",
10308                         "oic.if.baseline"
10309                     ],
10310                     "type": "string"
10311                 },
10312                 "minItems": 2,
10313                 "uniqueItems": true,
10314                 "readOnly": true,
10315                 "type": "array"
10316             }
10317         },
10318         "type": "object",
10319         "required": ["value"]
10320     }
10321 }
10322 }
10323

```

6.49.5 Property definition

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

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

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

6.49.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get			observe

6.50 Pan Tilt Zoom Movement

6.50.1 Introduction

This Resource specifies the pan tilt and zoom capabilities of a device.

The Resource Type is dynamic and reflects whether the values apply to physical movement of the device or digital/virtual enhancements to the image.

For physical movement the Resource Type is "oic.r.movement.ptz".

For digital/virtual image enhancements the Resource Type is "oic.r.image.ptz".

The Properties "pan" and "tilt" are specified in degrees.

The Property "zoomFactor" 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 a vendor defined setting.

Note that this resource also can be used to create an offset for physical movement.

When that is the case, the Resource Type 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 Resource Type value is: "oic.r.image.offset.ptz".

When the Property "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 Property "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].

6.50.2 Example URI

/PanTiltZoomResURI

6.50.3 Resource type

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

6.50.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Pan Tilt Zoom Movement",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/PanTiltZoomResURI" : {
      "get": {
        "description": "This Resource specifies the pan tilt and zoom capabilities of a device.\n\nThe
Resource Type is dynamic and reflects whether the values apply to\n physical movement of the device
or digital/virtual enhancements to the image.\n\nFor physical movement the Resource Type is
\"oic.r.movement.ptz\".\n\nFor digital/virtual image enhancements the Resource Type is
\"oic.r.image.ptz\".\n\nThe Properties \"pan\" and \"tilt\" are specified in degrees.\n\nThe Property
\"zoomFactor\" is a value in the range 1-100 for linear (optical) zoom.\n\nThe zoom factor is a value
in the range [1x, 2x, 4x, 8x, 16x, 32x] for digital zoom.\n\nIf there is no zoom value to set the zoom
factor shall be '1x'. \n\nThe value 0 degrees means neutral, this is a vendor defined setting.\n\nNote
that this resource also can be used to create an offset for physical movement.\n\nWhen that is the
case, the Resource Type value is: \"oic.r.movement.offset.ptz\".\n\nNote that this resource also can be
used to create an offset for image movement.\n\nWhen that is the case, the Resource Type value is:
\"oic.r.image.offset.ptz\".\n\nWhen the Property \"pan_range\" value is omitted, then the range is [-
180.0,180.0].\n\nIf \"pan\" is not supported then the range shall be [0.0,0.0]\n\nWhen the Property
\"tilt_range\" value is omitted, then the range is [-180.0,180.0].\n\nIf \"tilt\" is not supported
then the range shall be [0.0,0.0].",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "Retrieves the current pan, tilt and zoom setting.",
            "x-example": {
              "rt": ["oic.r.ptz"],
              "if": ["oic.if.a", "oic.if.baseline"],
              "pan": 0.0,
              "tilt": 0.0,
              "zoomFactor": "2x"
            },
            "schema": { "$ref": "#/definitions/PanTiltZoom" }
          }
        }
      },
      "post": {
        "description": "Sets the current pan, tilt and zoom value.",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/PanTiltZoom" },
            "x-example": {
              "pan": 10.0,
```

```

10424         "tilt": -10.0,
10425         "zoomFactor": "4x"
10426     }
10427 },
10428 ],
10429 "responses": {
10430     "200": {
10431         "description": "",
10432         "x-example":
10433             {
10434                 "pan": 10.0,
10435                 "tilt": -10.0,
10436                 "zoomFactor": "4x"
10437             },
10438         "schema": { "$ref": "#/definitions/PanTiltZoom" }
10439     }
10440 }
10441 },
10442 },
10443 },
10444 "parameters": {
10445     "interface": {
10446         "in": "query",
10447         "name": "if",
10448         "type": "string",
10449         "enum": ["oic.if.a", "oic.if.baseline"]
10450     }
10451 },
10452 "definitions": {
10453     "PanTiltZoom": {
10454         "properties": {
10455             "rt": {
10456                 "description": "The Resource Type.",
10457                 "items": {
10458                     "enum": ["oic.r.ptz"],
10459                     "maxLength": 64,
10460                     "type": "string"
10461                 },
10462                 "minItems": 1,
10463                 "uniqueItems": true,
10464                 "readOnly": true,
10465                 "type": "array"
10466             },
10467             "tilt_range": {
10468                 "$ref":
10469 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
10470 schema.json#/definitions/range_number"
10471             },
10472             "zoomFactor": {
10473                 "description": "The zoom factor value.",
10474                 "type": "string"
10475             },
10476             "tilt": {
10477                 "description": "The vertical tilt in degrees.",
10478                 "type": "number"
10479             },
10480             "precision": {
10481                 "$ref":
10482 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
10483 schema.json#/definitions/precision"
10484             },
10485             "pan_range": {
10486                 "$ref":
10487 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
10488 schema.json#/definitions/range_number"
10489             },
10490             "zoomFactorRange": {
10491                 "description": "The allowed Zoom Factor values. Linear equates to a 1-100 min/max.",
10492                 "enum": [
10493                     "linear",
10494                     "1x",
10495                     "2x",

```

```

10496         "4x",
10497         "8x",
10498         "16x",
10499         "32x"
10500     ],
10501     "readOnly": true,
10502     "type": "string"
10503 },
10504     "pan": {
10505         "description": "The horizontal pan in degrees.",
10506         "type": "number"
10507     },
10508     "n": {
10509         "$ref":
10510         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10511         schema.json#/definitions/n"
10512     },
10513     "id": {
10514         "$ref":
10515         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10516         schema.json#/definitions/id"
10517     },
10518     "if": {
10519         "description": "The OCF Interface set supported by this Resource.",
10520         "items": {
10521             "enum": [
10522                 "oic.if.a",
10523                 "oic.if.baseline"
10524             ],
10525             "type": "string"
10526         },
10527         "minItems": 2,
10528         "uniqueItems": true,
10529         "readOnly": true,
10530         "type": "array"
10531     }
10532 },
10533     "type": "object",
10534     "required": ["pan", "tilt", "zoomFactor"]
10535 }
10536 }
10537 }
10538

```

6.50.5 Property definition

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

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

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

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

6.50.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get	post		observe

6.51 Signal Strength

6.51.1 Introduction

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

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

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

6.51.2 Example URI

/SignalStrengthResURI

6.51.3 Resource type

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

6.51.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Signal Strength",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/SignalStrengthResURI" : {
      "get": {
        "description": "This Resource describes the strength of a signal by means of lqi and
rssi.\n\nThe Property \"lqi\" is a floating point number that represents Link Quality Indicator.\n\nThe
Property \"rssi\" is a floating point number that represents the received signal strength
indicator.",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ],
        "responses": {
```



```

10585         "200": {
10586             "description": "",
10587             "x-example":
10588                 {
10589                     "rt": ["oic.r.signalstrength"],
10590                     "if": ["oic.if.s", "oic.if.baseline"],
10591                     "lqi": 10.0,
10592                     "rssi": 55.0
10593                 }
10594             ,
10595             "schema": { "$ref": "#/definitions/SignalStrength" }
10596         }
10597     }
10598 }
10599 },
10600 },
10601 "parameters": {
10602     "interface": {
10603         "in": "query",
10604         "name": "if",
10605         "type": "string",
10606         "enum": ["oic.if.s", "oic.if.baseline"]
10607     }
10608 },
10609 "definitions": {
10610     "SignalStrength" : {
10611         "properties": {
10612             "rt": {
10613                 "description": "The Resource Type.",
10614                 "items": {
10615                     "enum": ["oic.r.signalstrength"],
10616                     "maxLength": 64,
10617                     "type": "string"
10618                 },
10619                 "minItems": 1,
10620                 "uniqueItems": true,
10621                 "readOnly": true,
10622                 "type": "array"
10623             },
10624             "lqi": {
10625                 "description": "The current value of Link Quality Indicator.",
10626                 "readOnly": true,
10627                 "type": "number"
10628             },
10629             "rssi": {
10630                 "description": "The current value of Received Signal Strength Indicator.",
10631                 "readOnly": true,
10632                 "type": "number"
10633             },
10634             "n": {
10635                 "$ref":
10636                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10637                 schema.json#/definitions/n"
10638             },
10639             "id": {
10640                 "$ref":
10641                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10642                 schema.json#/definitions/id"
10643             },
10644             "if": {
10645                 "description": "The OCF Interface set supported by this Resource.",
10646                 "items": {
10647                     "enum": [
10648                         "oic.if.s",
10649                         "oic.if.baseline"
10650                     ],
10651                     "type": "string"
10652                 },
10653                 "minItems": 2,
10654                 "uniqueItems": true,
10655                 "readOnly": true,
10656                 "type": "array"

```

```

10657     },
10658     },
10659     "type": "object",
10660     "required": ["lqi", "rssi"]
10661   }
10662 }
10663 }
10664

```

6.51.5 Property definition

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

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

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

6.51.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get			observe

6.52 Speech Synthesis-TTS

6.52.1 Introduction

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

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

The utterance is an SSML document.

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

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

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

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

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

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

```

10690
10691
10692     xsi:schemaLocation="http://www.w3.org/2001/10/synthesis
10693
10694
10695     http://www.w3.org/TR/speech-synthesis11/synthesis.xsd"
10696
10697
10698     xml:lang="en-US">
10699
10700
10701
10702
10703

```

The title of the movie is:

"Monty Pythons The Meaning of Life"

which is directed by Terry Jones.

```
</speak"
```

6.52.2 Example URI

/SpeechTTSTResURI

6.52.3 Resource type

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

6.52.4 OpenAPI 2.0 definition

```

10720 {
10721   "swagger": "2.0",
10722   "info": {
10723     "title": "Speech Synthesis-TTS",
10724     "version": "20190215",
10725     "license": {
10726       "name": "OCF Data Model License",
10727       "url":
10728         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
10729         CENSE.md",
10730       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
10731         reserved."
10732     },
10733     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
10734   },
10735   "schemes": ["http"],
10736   "consumes": ["application/json"],
10737   "produces": ["application/json"],
10738   "paths": {
10739     "/SpeechTTSTResURI" : {
10740       "get": {
10741         "description": "This Resource may be created on the OCF Server that is capable of rendering
10742         speech by an OCF Client and allows the client to provide an SSML document with text to render\n or
10743         may be created on the OIC Server by some resident application.\nThe audio rendered is at this stage
10744         local to the Server (i.e. not streamed).\nThe utterance is an SSML document.\nThe supportedLanguages
10745         is an array of the RFC5646 defined language tags that are supported.\nThe supportedVoices is an SSML
10746         document fragment indicating the voices that are supported.\nUtterance in the example shall be a
10747         properly escaped (JSON rules) SSML document. An example:\n  \n<?xml version=\\"1.0\\" encoding=\\"ISO-
10748         8859-1\\"?>\n\r\n  <speak version=\\"1.1\\" xmlns=\\"http://www.w3.org/2001/10/synthesis\\">\n\r\n

```

```

10749 \xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"\n\r\n
10750 \txsi:schemaLocation="http://www.w3.org/2001/10/synthesis\n\r\n
10751 \thttp://www.w3.org/TR/speech-synthesis11/synthesis.xsd"\n\r\n \txml:lang="en-US">\n\r\n
10752 \n\r\n \tThe title of the movie is:\n\r\n \t"Monty Pythons The Meaning of Life"\n\r\n \twhich
10753 is directed by Terry Jones.\n\r\n <\speak"\n",
10754     "parameters": [
10755         {"$ref": "#/parameters/interface"}
10756     ],
10757     "responses": {
10758         "200": {
10759             "description": "",
10760             "x-example":
10761                 {
10762                     "rt": ["oic.r.speech.tts"],
10763                     "if": ["oic.if.a", "oic.if.baseline"],
10764                     "utterance": "Strange women lying in ponds distributing swords is no basis for a
10765 system of government.",
10766                     "supportedLanguages": ["en-US", "en-GB", "fr-CA"],
10767                     "supportedVoices": "<voice gender=\"female\" variant=\"2\"></voice>\n\r<voice
10768 name=\"Mike\"></voice>"
10769                 },
10770             "schema": { "$ref": "#/definitions/Speech" }
10771         }
10772     },
10773     "post": {
10774         "description": "Changes the utterance being rendered.\nExample shows a change in language
10775 selected.\n",
10776         "parameters": [
10777             {"$ref": "#/parameters/interface"},
10778             {
10779                 "name": "body",
10780                 "in": "body",
10781                 "required": true,
10782                 "schema": { "$ref": "#/definitions/Speech" },
10783                 "x-example":
10784                     {
10785                         "utterance": "Alright, but apart from the sanitation, the medicine, education, wine,
10786 public order, irrigation, roads, the fresh-water system, and public health, what have the Romans
10787 ever done for us?"
10788                     }
10789             },
10790             {
10791                 "responses": {
10792                     "200": {
10793                         "description": "",
10794                         "x-example":
10795                             {
10796                                 "utterance": "Alright, but apart from the sanitation, the medicine, education,
10797 wine, public order, irrigation, roads, the fresh-water system, and public health, what have the
10798 Romans ever done for us?"
10799                             }
10800                     },
10801                     "schema": { "$ref": "#/definitions/Speech" }
10802                 }
10803             }
10804         ],
10805         "parameters": {
10806             "interface": {
10807                 "in": "query",
10808                 "name": "if",
10809                 "type": "string",
10810                 "enum": ["oic.if.a", "oic.if.baseline"]
10811             }
10812         },
10813     },
10814     "definitions": {
10815         "Speech": {
10816             "properties": {
10817                 "rt": {
10818                     "description": "The Resource Type.",
10819                     "items": {

```

```

10821         "enum": ["oic.r.speech.tts"],
10822         "maxLength": 64,
10823         "type": "string"
10824     },
10825     "minItems": 1,
10826     "uniqueItems": true,
10827     "readOnly": true,
10828     "type": "array"
10829 },
10830 "supportedLanguages": {
10831     "description": "The array of supported language tags.",
10832     "items": {
10833         "type": "string"
10834     },
10835     "readOnly": true,
10836     "type": "array"
10837 },
10838 "supportedVoices": {
10839     "description": "The SSML document fragment indicating supported voices.",
10840     "readOnly": true,
10841     "maxLength": 1024,
10842     "type": "string"
10843 },
10844 "utterance": {
10845     "description": "The SSML document including the speech body.",
10846     "maxLength": 1024,
10847     "type": "string"
10848 },
10849 "n": {
10850     "$ref":
10851 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10852 schema.json#/definitions/n"
10853 },
10854 "id": {
10855     "$ref":
10856 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10857 schema.json#/definitions/id"
10858 },
10859 "if": {
10860     "description": "The OCF Interface set supported by this Resource.",
10861     "items": {
10862         "enum": [
10863             "oic.if.a",
10864             "oic.if.baseline"
10865         ],
10866         "type": "string"
10867     },
10868     "minItems": 2,
10869     "uniqueItems": true,
10870     "readOnly": true,
10871     "type": "array"
10872 }
10873 },
10874 "type": "object",
10875 "required": ["utterance"]
10876 }
10877 }
10878 }
10879

```

6.52.5 Property definition

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

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

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

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

6.52.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get	post		observe

6.53 Touch Sensor

6.53.1 Introduction

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

The Property "value" is a boolean.

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

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

6.53.2 Example URI

/TouchResURI

6.53.3 Resource type

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

6.53.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Touch Sensor",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
```

```

10917     "paths": {
10918         "/TouchResURI" : {
10919             "get": {
10920                 "description": "This Resource describes whether a touch has been sensed or not.\n\nThe
10921 Property \"value\" is a boolean.\n\nA value of 'true' means that touch has been sensed.\n\nA value of
10922 'false' means that touch not been sensed.\n\n",
10923                 "parameters": [
10924                     { "$ref": "#/parameters/interface" }
10925                 ],
10926                 "responses": {
10927                     "200": {
10928                         "description": "",
10929                         "x-example":
10930                         {
10931                             "rt": ["oic.r.sensor.touch"],
10932                             "if": ["oic.if.s", "oic.if.baseline"],
10933                             "value": true
10934                         },
10935                         "schema": { "$ref": "#/definitions/Touch" }
10936                     }
10937                 }
10938             }
10939         },
10940     },
10941     "parameters": {
10942         "interface" : {
10943             "in" : "query",
10944             "name" : "if",
10945             "type" : "string",
10946             "enum" : ["oic.if.s", "oic.if.baseline"]
10947         }
10948     },
10949     "definitions": {
10950         "Touch" : {
10951             "properties": {
10952                 "rt": {
10953                     "description": "The Resource Type.",
10954                     "items": {
10955                         "enum": ["oic.r.sensor.touch"],
10956                         "maxLength": 64,
10957                         "type": "string"
10958                     },
10959                     "minItems": 1,
10960                     "uniqueItems": true,
10961                     "readOnly": true,
10962                     "type": "array"
10963                 },
10964                 "value": {
10965                     "description": "The touch sensor, true = sensed, false = not sensed.",
10966                     "readOnly": true,
10967                     "type": "boolean"
10968                 },
10969                 "n": {
10970                     "$ref":
10971                     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10972 schema.json#/definitions/n"
10973                 },
10974                 "id": {
10975                     "$ref":
10976                     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
10977 schema.json#/definitions/id"
10978                 },
10979                 "if": {
10980                     "description": "The OCF Interface set supported by this Resource.",
10981                     "items": {
10982                         "enum": [
10983                             "oic.if.s",
10984                             "oic.if.baseline"
10985                         ],
10986                         "type": "string"
10987                     },
10988                     "minItems": 2,

```

```

10989         "uniqueItems": true,
10990         "readOnly": true,
10991         "type": "array"
10992     },
10993 },
10994 "type": "object",
10995 "required": ["value"]
10996 }
10997 }
10998 }
10999

```

11000 6.53.5 Property definition

11001 Table 109 defines the Properties that are part of the "oic.r.sensor.touch" Resource Type.

11002 **Table 109 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.touch".**

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

11003 6.53.6 CRUDN behaviour

11004 Table 110 defines the CRUDN operations that are supported on the "oic.r.sensor.touch" Resource
11005 Type.

11006 **Table 110 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.touch".**

Create	Read	Update	Delete	Notify
	get			observe

11007 6.54 UV Radiation

11008 6.54.1 Introduction

11009 This Resource specifies UV radiation measurement.

11010 The Property "measurement" is the current measured UV Index

11011 6.54.2 Example URI

11012 /UVRadiationResURI

11013 6.54.3 Resource type

11014 The Resource Type is defined as: "oic.r.sensor.radiation.uv".

11015 6.54.4 OpenAPI 2.0 definition

```

11016 {
11017   "swagger": "2.0",
11018   "info": {
11019     "title": "UV Radiation",
11020     "version": "20190215",
11021     "license": {
11022       "name": "OCF Data Model License",
11023       "url":

```



```

11024 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
11025 CENSE.md",
11026 "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
11027 reserved."
11028 },
11029 "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
11030 },
11031 "schemes": ["http"],
11032 "consumes": ["application/json"],
11033 "produces": ["application/json"],
11034 "paths": {
11035   "/UVRadiationResURI" : {
11036     "get": {
11037       "description": "This Resource specifies UV radiation measurement.\n\nThe Property
11038 \\"measurement\\" is the current measured UV Index",
11039       "parameters": [
11040         {"$ref": "#/parameters/interface"}
11041       ],
11042       "responses": {
11043         "200": {
11044           "description": "",
11045           "x-example":
11046             {
11047               "rt": ["oic.r.sensor.radiation.uv"],
11048               "if": ["oic.if.s", "oic.if.baseline"],
11049               "measurement": 3.5
11050             }
11051           ,
11052           "schema": { "$ref": "#/definitions/UVRadiation" }
11053         }
11054       }
11055     }
11056   }
11057 },
11058 "parameters": {
11059   "interface": {
11060     "in": "query",
11061     "name": "if",
11062     "type": "string",
11063     "enum": ["oic.if.s", "oic.if.baseline"]
11064   }
11065 },
11066 "definitions": {
11067   "UVRadiation" : {
11068     "properties": {
11069       "rt": {
11070         "description": "The Resource Type.",
11071         "items": {
11072           "enum": ["oic.r.sensor.radiation.uv"],
11073           "maxLength": 64,
11074           "type": "string"
11075         },
11076         "minItems": 1,
11077         "uniqueItems": true,
11078         "readOnly": true,
11079         "type": "array"
11080       },
11081       "measurement": {
11082         "description": "The measured UV Index.",
11083         "readOnly": true,
11084         "type": "number"
11085       },
11086       "n": {
11087         "$ref":
11088 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11089 schema.json#/definitions/n"
11090       },
11091       "id": {
11092         "$ref":
11093 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11094 schema.json#/definitions/id"
11095       }
11096     }
11097   }
11098 }

```

```

11096         "if" :
11097             {
11098                 "description": "The OCF Interface set supported by this Resource.",
11099                 "items": {
11100                     "enum": [
11101                         "oic.if.s",
11102                         "oic.if.baseline"
11103                     ],
11104                     "type": "string"
11105                 },
11106                 "minItems": 2,
11107                 "uniqueItems": true,
11108                 "readOnly": true,
11109                 "type": "array"
11110             }
11111     },
11112     "type": "object",
11113     "required": ["measurement"]
11114 }
11115 }
11116 }
11117

```

11118 6.54.5 Property definition

11119 Table 111 defines the Properties that are part of the "oic.r.sensor.radiation.uv" Resource Type.

11120 **Table 111 – The Property definitions of the Resource with type "rt" =**
11121 **"oic.r.sensor.radiation.uv".**

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

11122 6.54.6 CRUDN behaviour

11123 Table 112 defines the CRUDN operations that are supported on the "oic.r.sensor.radiation.uv"
11124 Resource Type.

11125 **Table 112 – The CRUDN operations of the Resource with type "rt" =**
11126 **"oic.r.sensor.radiation.uv".**

Create	Read	Update	Delete	Notify
	get			observe

11127 6.55 Water Sensor

11128 6.55.1 Introduction

11129 This Resource describes whether water has been sensed or not.

11130 The Property "value" is a boolean.

11131 A value of 'true' means that water has been sensed.

11132 A value of 'false' means that water not been sensed.

11133 6.55.2 Example URI

11134 /WaterResURI

6.55.3 Resource type

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

6.55.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Water Sensor",
    "version": "20191118",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/WaterResURI" : {
      "get": {
        "description": "This Resource describes whether water has been sensed or not.\nThe Property
\"value\" is a boolean.\nA value of 'true' means that water has been sensed.\nA value of 'false'
means that water not been sensed.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description" : "",
            "x-example": {
              "rt": ["oic.r.sensor.water"],
              "id": "unique_example_id",
              "value": true
            },
            "schema": { "$ref": "#/definitions/Water" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface" : {
      "in" : "query",
      "name" : "if",
      "type" : "string",
      "enum" : ["oic.if.s", "oic.if.baseline"]
    }
  },
  "definitions": {
    "Water": {
      "properties": {
        "rt": {
          "description": "The Resource Type",
          "items": {
            "maxLength": 64,
            "type": "string",
            "enum": ["oic.r.sensor.water"]
          },
          "minItems": 1,
          "uniqueItems": true,
          "readOnly": true,
          "type": "array"
        }
      },
      "value": {
        "description": "true = sensed, false = not sensed.",

```

```

11204         "readOnly": true,
11205         "type": "boolean"
11206     },
11207     "measurement": {
11208         "type": "number",
11209         "description": "Measured value for this sensor in units of litres/hr",
11210         "readOnly": true
11211     },
11212     "precision": {
11213         "$ref":
11214         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11215         schema.json#/definitions/precision"
11216     },
11217     "n": {
11218         "$ref":
11219         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11220         schema.json#/definitions/n"
11221     },
11222     "range": {
11223         "$ref":
11224         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11225         schema.json#/definitions/range_number"
11226     },
11227     "step": {
11228         "$ref":
11229         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11230         schema.json#/definitions/step_number"
11231     },
11232     "id": {
11233         "$ref":
11234         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11235         schema.json#/definitions/id"
11236     },
11237     "if": {
11238         "description": "The OCF Interface set supported by this Resource",
11239         "items": {
11240             "enum": [
11241                 "oic.if.baseline",
11242                 "oic.if.s"
11243             ],
11244             "maxLength": 64,
11245             "type": "string"
11246         },
11247         "minItems": 1,
11248         "uniqueItems": true,
11249         "readOnly": true,
11250         "type": "array"
11251     }
11252 },
11253 "type" : "object",
11254 "required": ["value"]
11255 }
11256 }
11257 }
11258

```

6.55.5 Property definition

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

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

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

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

6.55.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get			observe

6.56 Acceleration Sensor

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

6.56.2 Example URI

/AccelerationResURI

6.56.3 Resource type

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

6.56.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Acceleration Sensor",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/AccelerationResURI" : {
      "get": {
        "description": "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).\nThe
Property \"value\" is a float which describes the acceleration experienced by the object in \"g\".",
```

```

11299     "parameters": [
11300       { "$ref": "#/parameters/interface" }
11301     ],
11302     "responses": {
11303       "200": {
11304         "description": "",
11305         "x-example":
11306           {
11307             "rt": ["oic.r.sensor.acceleration"],
11308             "if": ["oic.if.s", "oic.if.baseline"],
11309             "acceleration": 0.5
11310           },
11311         "schema": { "$ref": "#/definitions/acceleration" }
11312       }
11313     }
11314   }
11315 },
11316 {
11317   "parameters": {
11318     "interface": {
11319       "in": "query",
11320       "name": "if",
11321       "type": "string",
11322       "enum": ["oic.if.s", "oic.if.baseline"]
11323     }
11324   },
11325   "definitions": {
11326     "acceleration": {
11327       "properties": {
11328         "rt": {
11329           "description": "Resource Type",
11330           "items": {
11331             "maxLength": 64,
11332             "type": "string",
11333             "enum": ["oic.r.sensor.acceleration"]
11334           },
11335           "minItems": 1,
11336           "uniqueItems": true,
11337           "readOnly": true,
11338           "type": "array"
11339         },
11340         "acceleration": {
11341           "description": "The sensed acceleration experienced in 'g'.",
11342           "readOnly": true,
11343           "type": "number"
11344         },
11345         "n": {
11346           "$ref":
11347             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11348             schema.json#/definitions/n"
11349         },
11350         "id": {
11351           "$ref":
11352             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11353             schema.json#/definitions/id"
11354         },
11355         "range": {
11356           "$ref":
11357             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11358             schema.json#/definitions/range_number"
11359         },
11360         "step": {
11361           "$ref":
11362             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11363             schema.json#/definitions/step_number"
11364         },
11365         "precision": {
11366           "$ref":
11367             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11368             schema.json#/definitions/precision"
11369         },
11370         "if": {

```

```

11371         "description": "The OCF Interface set supported by this Resource.",
11372         "items": {
11373             "enum": [
11374                 "oic.if.s",
11375                 "oic.if.baseline"
11376             ],
11377             "type": "string"
11378         },
11379         "minItems": 2,
11380         "readOnly": true,
11381         "uniqueItems": true,
11382         "type": "array"
11383     },
11384 },
11385 "type": "object",
11386 "required": ["acceleration"]
11387 }
11388 }
11389 }
11390

```

11391 6.56.5 Property definition

11392 Table 115 defines the Properties that are part of the "oic.r.sensor.acceleration" Resource Type.

11393 **Table 115 – The Property definitions of the Resource with type "rt" =**
11394 **"oic.r.sensor.acceleration".**

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

11395 6.56.6 CRUDN behaviour

11396 Table 116 defines the CRUDN operations that are supported on the "oic.r.sensor.acceleration"
11397 Resource Type.

11398 **Table 116 – The CRUDN operations of the Resource with type "rt" =**
11399 **"oic.r.sensor.acceleration".**

Create	Read	Update	Delete	Notify
	get			observe

11400 **6.57 Movement**

11401 **6.57.1 Introduction**

11402 This Resource specifies linear movement.

11403 The Property "movementSettings" is an array of strings containing possible movement values
11404 (e.g. spin, stop, left, right).

11405 The Property "movement" is the currently selected movement value.

11406 The Property "movementModifier" is a modifier to the movement value (e.g. "spin", "90")

11407

11408 **6.57.2 Example URI**

11409 /MovementResURI

11410 **6.57.3 Resource type**

11411 The Resource Type is defined as: "oic.r.movement.linear".

11412 **6.57.4 OpenAPI 2.0 definition**

```
11413 {
11414   "swagger": "2.0",
11415   "info": {
11416     "title": "Movement",
11417     "version": "20190215",
11418     "license": {
11419       "name": "OCF Data Model License",
11420       "url":
11421         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
11422         CENSE.md",
11423       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
11424         reserved."
11425     },
11426     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
11427   },
11428   "schemes": ["http"],
11429   "consumes": ["application/json"],
11430   "produces": ["application/json"],
11431   "paths": {
11432     "/MovementResURI" : {
11433       "get": {
11434         "description": "This Resource specifies linear movement.\nThe Property \"movementSettings\"
11435         is an array of strings containing possible movement values (e.g. spin, stop, left, right).\nThe
11436         Property \"movement\" is the currently selected movement value.\nThe Property \"movementModifier\"
11437         is a modifier to the movement value (e.g. \"spin\", \"90\")\n",
11438         "parameters": [
11439           {"$ref": "#/parameters/interface"}
11440         ],
11441         "responses": {
11442           "200": {
11443             "description": "",
11444             "x-example":
11445               {
11446                 "rt": ["oic.r.movement.linear"],
11447                 "if": ["oic.if.s", "oic.if.baseline"],
11448                 "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
11449                 "movement": "rotate",
11450                 "movementModifier": "90"
11451               },
11452             "schema": { "$ref": "#/definitions/movement" }
11453           }
11454         }
11455       },
11456       "post": {
11457         "description": "Sets the current device movement.",
11458         "parameters": [
11459           {"$ref": "#/parameters/interface"},
11460           {
11461             "name": "body",
11462             "in": "body",
```



```

11463         "required": true,
11464         "schema": { "$ref": "#/definitions/movement" },
11465         "x-example":
11466         {
11467             "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
11468             "movement": "stop"
11469         }
11470     },
11471 ],
11472 "responses": {
11473     "200": {
11474         "description": "",
11475         "x-example":
11476         {
11477             "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
11478             "movement": "stop"
11479         },
11480         "schema": { "$ref": "#/definitions/movement" }
11481     }
11482 },
11483 },
11484 },
11485 },
11486 "parameters": {
11487     "interface": {
11488         "in": "query",
11489         "name": "if",
11490         "type": "string",
11491         "enum": ["oic.if.s", "oic.if.baseline"]
11492     }
11493 },
11494 "definitions": {
11495     "movement": {
11496         "properties": {
11497             "rt": {
11498                 "description": "The Resource Type.",
11499                 "items": {
11500                     "enum": ["oic.r.movement.linear"],
11501                     "maxLength": 64,
11502                     "type": "string"
11503                 },
11504                 "minItems": 1,
11505                 "uniqueItems": true,
11506                 "readOnly": true,
11507                 "type": "array"
11508             },
11509             "movementSettings": {
11510                 "description": "The array of possible movement values.",
11511                 "items": {
11512                     "type": "string"
11513                 },
11514                 "readOnly": true,
11515                 "type": "array"
11516             },
11517             "movementModifier": {
11518                 "description": "The modifier to the movement value (e.g. spin-90, left-20), units are
11519 device dependent.",
11520                 "type": "string"
11521             },
11522             "movement": {
11523                 "description": "The current movement value.",
11524                 "type": "string"
11525             },
11526             "n": {
11527                 "$ref":
11528                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11529                 schema.json#/definitions/n"
11530             },
11531             "id": {
11532                 "$ref":
11533                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11534                 schema.json#/definitions/id"

```

```

11535     },
11536     "if": {
11537         "description": "The OCF Interface set supported by this Resource.",
11538         "items": {
11539             "enum": [
11540                 "oic.if.s",
11541                 "oic.if.baseline"
11542             ],
11543             "type": "string"
11544         },
11545         "minItems": 2,
11546         "uniqueItems": true,
11547         "readOnly": true,
11548         "type": "array"
11549     }
11550 },
11551 "type": "object",
11552 "required": ["movementSettings", "movement"]
11553 }
11554 }
11555 }
11556

```

11557 6.57.5 Property definition

11558 Table 117 defines the Properties that are part of the "oic.r.movement.linear" Resource Type.

11559 **Table 117 – The Property definitions of the Resource with type "rt" =**
11560 **"oic.r.movement.linear".**

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

11561 6.57.6 CRUDN behaviour

11562 Table 118 defines the CRUDN operations that are supported on the "oic.r.movement.linear"
11563 Resource Type.

11564 **Table 118 – The CRUDN operations of the Resource with type "rt" =**
11565 **"oic.r.movement.linear".**

Create	Read	Update	Delete	Notify
	get	post		observe

11566 6.58 Sleep Sensor

11567 6.58.1 Introduction

11568 This Resource describes whether human sleep has been sensed or not.

11569 The Property "value" is a boolean.

11570 A value of 'true' means that sleep has been sensed.

11571 A value of 'false' means that sleep not been sensed.

11572

11573 6.58.2 Example URI

11574 /SleepSensorResURI

11575 6.58.3 Resource type

11576 The Resource Type is defined as: "oic.r.sensor.sleep".

11577 6.58.4 OpenAPI 2.0 definition

```
11578 {
11579   "swagger": "2.0",
11580   "info": {
11581     "title": "Sleep Sensor",
11582     "version": "20190215",
11583     "license": {
11584       "name": "OCF Data Model License",
11585       "url":
11586         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
11587         CENSE.md",
11588       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
11589         reserved."
11590     },
11591     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
11592   },
11593   "schemes": ["http"],
11594   "consumes": ["application/json"],
11595   "produces": ["application/json"],
11596   "paths": {
11597     "/SleepSensorResURI" : {
11598       "get": {
11599         "description": "This Resource describes whether human sleep has been sensed or not.\nThe
11600         Property \"value\" is a boolean.\nA value of 'true' means that sleep has been sensed.\nA value of
11601         'false' means that sleep not been sensed.\n",
11602         "parameters": [
11603           {"$ref": "#/parameters/interface"}
11604         ],
11605         "responses": {
11606           "200": {
11607             "description": "",
11608             "x-example":
11609               {
11610                 "rt": ["oic.r.sensor.sleep"],
11611                 "if": ["oic.if.s", "oic.if.baseline"],
11612                 "value": true
11613               },
11614             "schema": { "$ref": "#/definitions/sleep" }
11615           }
11616         }
11617       }
11618     }
11619   },
11620   "parameters": {
11621     "interface": {
11622       "in": "query",
11623       "name": "if",
11624       "type": "string",
11625       "enum": ["oic.if.s", "oic.if.baseline"]
11626     }
11627   },
11628   "definitions": {
```

```

11629     "sleep" : {
11630       "properties": {
11631         "rt": {
11632           "description": "The Resource Type.",
11633           "items": {
11634             "enum": ["oic.r.sensor.sleep"],
11635             "maxLength": 64,
11636             "type": "string"
11637           },
11638           "minItems": 1,
11639           "uniqueItems": true,
11640           "readOnly": true,
11641           "type": "array"
11642         },
11643         "value": {
11644           "description": "The sleep sensor, true = sleep sensed, false = sleep not sensed.",
11645           "readOnly": true,
11646           "type": "boolean"
11647         },
11648         "n": {
11649           "$ref":
11650             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11651             schema.json#/definitions/n"
11652         },
11653         "id": {
11654           "$ref":
11655             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11656             schema.json#/definitions/id"
11657         },
11658         "if": {
11659           "description": "The OCF Interface set supported by this Resource.",
11660           "items": {
11661             "enum": [
11662               "oic.if.s",
11663               "oic.if.baseline"
11664             ],
11665             "type": "string"
11666           },
11667           "minItems": 2,
11668           "uniqueItems": true,
11669           "readOnly": true,
11670           "type": "array"
11671         }
11672       },
11673       "type": "object",
11674       "required": ["value"]
11675     }
11676   }
11677 }
11678

```

6.58.5 Property definition

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

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

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

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

6.58.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get			observe

6.59 Smoke Sensor

6.59.1 Introduction

This Resource describes whether smoke has been sensed or not.

The Property "value" is a boolean.

A value of 'true' means that smoke has been sensed.

A value of 'false' means that smoke not been sensed.

6.59.2 Example URI

/SmokeSensorResURI

6.59.3 Resource type

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

6.59.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Smoke Sensor",
    "version": "20191118",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/SmokeSensorResURI" : {
      "get": {
        "description": "This Resource describes whether smoke has been sensed or not.\n\nThe Property
'value' is a boolean.\n\nA value of 'true' means that smoke has been sensed.\n\nA value of 'false'
means that smoke not been sensed.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.sensor.smoke"],
              "id": "unique_example_id",
              "value": true
            },
            "schema": { "$ref": "#/definitions/smoke" }
          }
        }
      }
    }
  }
}
```

```

11733     }
11734   }
11735 }
11736 },
11737 },
11738 "parameters": {
11739   "interface": {
11740     "in": "query",
11741     "name": "if",
11742     "type": "string",
11743     "enum": ["oic.if.s", "oic.if.baseline"]
11744   }
11745 },
11746 "definitions": {
11747   "smoke": {
11748     "properties": {
11749       "rt": {
11750         "description": "The Resource Type",
11751         "items": {
11752           "maxLength": 64,
11753           "type": "string",
11754           "enum": ["oic.r.sensor.smoke"]
11755         },
11756         "minItems": 1,
11757         "uniqueItems": true,
11758         "readOnly": true,
11759         "type": "array"
11760       },
11761       "value": {
11762         "description": "The smoke indicator, true = sensed, false = not sensed.",
11763         "readOnly": true,
11764         "type": "boolean"
11765       },
11766       "measurement": {
11767         "type": "number",
11768         "description": "Measured value for this sensor, this is a percentage",
11769         "readOnly": true
11770       },
11771       "precision": {
11772         "$ref":
11773 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11774 schema.json#/definitions/precision"
11775       },
11776       "n": {
11777         "$ref":
11778 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11779 schema.json#/definitions/n"
11780       },
11781       "range": {
11782         "$ref":
11783 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11784 schema.json#/definitions/range_number"
11785       },
11786       "step": {
11787         "$ref":
11788 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
11789 schema.json#/definitions/step_number"
11790       },
11791       "id": {
11792         "$ref":
11793 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11794 schema.json#/definitions/id"
11795       },
11796       "if": {
11797         "description": "The OCF Interface set supported by this Resource",
11798         "items": {
11799           "enum": [
11800             "oic.if.baseline",
11801             "oic.if.s"
11802           ],
11803           "type": "string",
11804           "maxLength": 64

```

```

11805         },
11806         "minItems": 1,
11807         "readOnly": true,
11808         "uniqueItems": true,
11809         "type": "array"
11810     },
11811     },
11812     "type" : "object",
11813     "required": ["value"]
11814 }
11815 }
11816 }
11817

```

11818 6.59.5 Property definition

11819 Table 121 defines the Properties that are part of the "oic.r.sensor.smoke" Resource Type.

11820 **Table 121 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.smoke".**

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

11821 6.59.6 CRUDN behaviour

11822 Table 122 defines the CRUDN operations that are supported on the "oic.r.sensor.smoke" Resource
 11823 Type.

11824 **Table 122 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.smoke".**

Create	Read	Update	Delete	Notify
	get			observe

11825 6.60 Three Axis Sensor

11826 6.60.1 Introduction

11827 This Resource provides a representation of the measurement from a three-axis sensor.
 11828 The Property "orientation" is an array of numbers representing x-plane, y-plane and z-plane
 11829 values.
 11830 The unit of measurement for each pane is 'g'.

11831 6.60.2 Example URI

11832 /ThreeAxisResURI

11833 6.60.3 Resource type

11834 The Resource Type is defined as: "oic.r.sensor.threeaxis".

11835 6.60.4 OpenAPI 2.0 definition

```
11836 {
11837   "swagger": "2.0",
11838   "info": {
11839     "title": "Three Axis Sensor",
11840     "version": "20190215",
11841     "license": {
11842       "name": "OCF Data Model License",
11843       "url":
11844         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
11845         CENSE.md",
11846       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
11847         reserved."
11848     },
11849     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
11850   },
11851   "schemes": ["http"],
11852   "consumes": ["application/json"],
11853   "produces": ["application/json"],
11854   "paths": {
11855     "/ThreeAxisResURI" : {
11856       "get": {
11857         "description": "This Resource provides a representation of the measurement from a three-axis
11858         sensor.\n\nThe Property \"orientation\" is an array of numbers representing x-plane, y-plane and z-
11859         plane values.\n\nThe unit of measurement for each pane is 'g'.",
11860         "parameters": [
11861           { "$ref": "#/parameters/interface" }
11862         ],
11863         "responses": {
11864           "200": {
11865             "description": "",
11866             "x-example":
11867               {
11868                 "rt": ["oic.r.sensor.threeaxis"],
11869                 "if": ["oic.if.s", "oic.if.baseline"],
11870                 "orientation": [0.7, 1.1, -0.2]
11871               },
11872             "schema": { "$ref": "#/definitions/threeAxis" }
11873           }
11874         }
11875       }
11876     },
11877     "parameters": {
11878       "interface": {
11879         "in": "query",
11880         "name": "if",
11881         "type": "string",
11882         "enum": ["oic.if.s", "oic.if.baseline"]
11883       }
11884     },
11885     "definitions": {
11886       "threeAxis" : {
11887         "properties": {
11888           "rt": {
11889             "description": "The Resource Type.",
11890             "items": {
11891               "enum": ["oic.r.sensor.threeaxis"],
11892               "maxLength": 64,
11893               "type": "string"
11894             },
11895             "minItems": 1,
11896             "uniqueItems": true,
```



```

11898         "readOnly": true,
11899         "type": "array"
11900     },
11901     "orientation": {
11902         "description": "The array containing x-plane, y-plane and z-plane orientation in 'g'.",
11903         "items": {
11904             "type": "number"
11905         },
11906         "maxItems": 3,
11907         "minItems": 3,
11908         "readOnly": true,
11909         "type": "array"
11910     },
11911     "n": {
11912         "$ref":
11913         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11914         schema.json#/definitions/n"
11915     },
11916     "id": {
11917         "$ref":
11918         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
11919         schema.json#/definitions/id"
11920     },
11921     "if": {
11922         "description": "The OCF Interface set supported by this Resource.",
11923         "items": {
11924             "enum": [
11925                 "oic.if.s",
11926                 "oic.if.baseline"
11927             ],
11928             "type": "string"
11929         },
11930         "minItems": 2,
11931         "uniqueItems": true,
11932         "readOnly": true,
11933         "type": "array"
11934     }
11935 },
11936 "type": "object",
11937 "required": ["orientation"]
11938 }
11939 }
11940 }
11941

```

6.60.5 Property definition

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

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

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

6.60.6 CRUDN behaviour

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

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

Create	Read	Update	Delete	Notify
	get			observe

6.61 Altimeter

6.61.1 Introduction

This Resource describes the properties associated with altimeter.

The Property "alt" is the distance (metres) above or below 'local' sea-level.

6.61.2 Example URI

/AltimeterResURI

6.61.3 Resource type

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

6.61.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Altimeter",
    "version": "20190225",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/AltimeterResURI" : {
      "get": {
        "description": "This Resource describes the properties associated with altimeter.\n\nThe
Property \"alt\" is the distance (metres) above or below 'local' sea-level.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "RETRIEVES the current the distance (metres) above or below 'local'
sea-level.",
            "x-example":
              {
                "rt": ["oic.r.altimeter"],
                "if": ["oic.if.s", "oic.if.baseline"],
                "alt": 1500.0
              },
            "schema": { "$ref": "#/definitions/Altimeter" }
          }
        }
      }
    }
  }
},
```

```

12002     "parameters": {
12003         "interface" : {
12004             "in": "query",
12005             "name": "if",
12006             "type": "string",
12007             "enum": ["oic.if.s", "oic.if.baseline"]
12008         }
12009     },
12010     "definitions": {
12011         "Altimeter" : {
12012             "properties": {
12013                 "rt": {
12014                     "description": "The Resource Type.",
12015                     "items": {
12016                         "enum": ["oic.r.altimeter"],
12017                         "maxLength": 64,
12018                         "type": "string"
12019                     },
12020                     "minItems": 1,
12021                     "uniqueItems": true,
12022                     "readOnly": true,
12023                     "type": "array"
12024                 },
12025                 "alt" :
12026                     {
12027                         "description": "The current distance (metres) above or below 'local' sea-level.",
12028                         "readOnly": true,
12029                         "type": "number"
12030                     },
12031                 "n": {
12032                     "$ref":
12033                     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12034                     schema.json#/definitions/n"
12035                 },
12036                 "id": {
12037                     "$ref":
12038                     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12039                     schema.json#/definitions/id"
12040                 },
12041                 "precision": {
12042                     "$ref":
12043                     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
12044                     schema.json#/definitions/precision"
12045                 },
12046                 "range": {
12047                     "$ref":
12048                     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
12049                     schema.json#/definitions/range_number"
12050                 },
12051                 "step": {
12052                     "$ref":
12053                     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
12054                     schema.json#/definitions/step_number"
12055                 },
12056                 "if": {
12057                     "description": "The OCF Interface set supported by this Resource.",
12058                     "items": {
12059                         "enum": [
12060                             "oic.if.s",
12061                             "oic.if.baseline"
12062                         ],
12063                         "type": "string"
12064                     },
12065                     "minItems": 2,
12066                     "uniqueItems": true,
12067                     "readOnly": true,
12068                     "type": "array"
12069                 }
12070             },
12071             "type": "object",
12072             "required": ["alt"]
12073         }

```

12074 }
 12075 }
 12076 }

12077 6.61.5 Property definition

12078 Table 125 defines the Properties that are part of the "oic.r.altimeter" Resource Type.

12079 **Table 125 – The Property definitions of the Resource with type "rt" = "oic.r.altimeter".**

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

12080 6.61.6 CRUDN behaviour

12081 Table 126 defines the CRUDN operations that are supported on the "oic.r.altimeter" Resource Type.

12082 **Table 126 – The CRUDN operations of the Resource with type "rt" = "oic.r.altimeter".**

Create	Read	Update	Delete	Notify
	get			observe

12083 6.62 Clock

12084 6.62.1 Introduction

12085 This Resource describes the properties associated with clock and time.

12086 Clock is a time information.

12087 The Property "datetime" is using RFC3339 datetime format (e.g: "2007-04-05T14:30Z")
 12088 (Time+Date+Timezone)

12089 The Property "countdown" is the desired total seconds for countdown.

12090 6.62.2 Example URI

12091 /ClockResURI

12092 6.62.3 Resource type

12093 The Resource Type is defined as: "oic.r.clock".

12094 6.62.4 OpenAPI 2.0 definition

```
12095 {
12096   "swagger": "2.0",
12097   "info": {
12098     "title": "Clock",
```

```

12099     "version": "20190327",
12100     "license": {
12101         "name": "OCF Data Model License",
12102         "url":
12103 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
12104 CENSE.md",
12105         "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
12106 reserved."
12107     },
12108     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
12109 },
12110     "schemes": ["http"],
12111     "consumes": ["application/json"],
12112     "produces": ["application/json"],
12113     "paths": {
12114         "/ClockResURI" : {
12115             "get": {
12116                 "description": "This Resource describes the properties associated with clock and
12117 time.\nClock is a time information.\nThe Property \"datetime\" is using RFC3339 datetime format
12118 (e.g: \"2007-04-05T14:30Z\") (Time+Date+Timezone)\nThe Property \"countdown\" is the desired total
12119 seconds for countdown.",
12120                 "parameters": [
12121                     { "$ref": "#/parameters/interface" }
12122                 ],
12123                 "responses": {
12124                     "200": {
12125                         "description": "",
12126                         "x-example":
12127                         {
12128                             "rt": ["oic.r.clock"],
12129                             "if": ["oic.if.a", "oic.if.baseline"],
12130                             "datetime": "2015-11-05T14:30:00Z",
12131                             "countdown": 0.0
12132                         },
12133                         "schema": { "$ref": "#/definitions/Clock" }
12134                     }
12135                 }
12136             },
12137             "post": {
12138                 "description": "Sets the desired datetime.\n",
12139                 "parameters": [
12140                     { "$ref": "#/parameters/interface" },
12141                     {
12142                         "name": "body",
12143                         "in": "body",
12144                         "required": true,
12145                         "schema": { "$ref": "#/definitions/Clock" },
12146                         "x-example":
12147                         {
12148                             "datetime": "2015-11-05T14:30:00Z",
12149                             "countdown": 0.0
12150                         }
12151                     }
12152                 ],
12153                 "responses": {
12154                     "200": {
12155                         "description": "Indicates that the datetime value was successfully changed.\nThe new
12156 datetime value is provided in the response.\n",
12157                         "x-example":
12158                         {
12159                             "datetime": "2015-11-05T14:30:00Z",
12160                             "countdown": 0.0
12161                         },
12162                         "schema": { "$ref": "#/definitions/Clock" }
12163                     },
12164                     "403": {
12165                         "description": "Indicates that OIC client sent an invalid property value to the
12166 server.\nThe server responds with the required input representation.\n",
12167                         "x-example":
12168                         {
12169                             "datetime": "2015-11-05T14:30:00Z",

```

```

12171         "countdown": 0.0
12172     }
12173     ,
12174     "schema": { "$ref": "#/definitions/Clock" }
12175 }
12176 }
12177 }
12178 }
12179 },
12180 "parameters": {
12181     "interface" : {
12182         "in": "query",
12183         "name": "if",
12184         "type": "string",
12185         "enum": ["oic.if.a", "oic.if.baseline"]
12186     }
12187 },
12188 "definitions": {
12189     "Clock": {
12190         "properties": {
12191             "rt": {
12192                 "description": "The Resource Type.",
12193                 "items": {
12194                     "enum": ["oic.r.clock"],
12195                     "maxLength": 64,
12196                     "type": "string"
12197                 },
12198                 "minItems": 1,
12199                 "readOnly": true,
12200                 "type": "array"
12201             },
12202             "countdown": {
12203                 "description": "The desired total seconds for countdown.",
12204                 "minimum": 0,
12205                 "type": "number"
12206             },
12207             "datetime": {
12208                 "description": "Rhe date time using RFC3339 datetime format (e.g: 2007-04-05T14:30:00Z,
12209 2007-04-05T14:30:00+09:00).",
12210                 "type": "string",
12211                 "format" : "date-time"
12212             },
12213             "n": {
12214                 "$ref":
12215 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12216 schema.json#/definitions/n"
12217             },
12218             "id": {
12219                 "$ref":
12220 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12221 schema.json#/definitions/id"
12222             },
12223             "if": {
12224                 "description": "The OCF Interface set supported by this Resource.",
12225                 "items": {
12226                     "enum": [
12227                         "oic.if.a",
12228                         "oic.if.baseline"
12229                     ],
12230                     "type": "string"
12231                 },
12232                 "minItems": 2,
12233                 "uniqueItems": true,
12234                 "readOnly": true,
12235                 "type": "array"
12236             }
12237         },
12238         "type": "object",
12239         "required": ["datetime"]
12240     }
12241 }

```

12242 }
12243

12244 6.62.5 Property definition

12245 Table 127 defines the Properties that are part of the "oic.r.clock" Resource Type.

12246 **Table 127 – The Property definitions of the Resource with type "rt" = "oic.r.clock".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
countdown	number	No	Read Write	The desired total seconds for countdown.
datetime	string	Yes	Read Write	The date time using RFC3339 datetime format (e.g: 2007-04-05T14:30:00Z, 2007-04-05T14:30:00+09:00).
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

12247 6.62.6 CRUDN behaviour

12248 Table 128 defines the CRUDN operations that are supported on the "oic.r.clock" Resource Type.

12249 **Table 128 – The CRUDN operations of the Resource with type "rt" = "oic.r.clock".**

Create	Read	Update	Delete	Notify
	get	post		observe

12250 6.63 Geolocation

12251 6.63.1 Introduction

12252 This Resource describes the properties associated with the current geolocation coordinate.

12253 Geolocation is a geolocation coordinate data.

12254 The Property "latitude" is a device's current Latitude coordinate (degrees).

12255 The Property "longitude" is a device's current Longitude coordinate (degrees).

12256 The Property "alt" is a device's current distance (metres) above or below 'local' sea-level.

12257 The Property "accuracy" is the accuracy level of the latitude and longitude coordinates (metres).

12258 The Property "altitudeAccuracy" is the accuracy level of the altitude coordinates (metres).

12259 The Property "heading" is a direction of travel of device (degree).

12260 The Property "speed" is a device's current velocity (metres per second).

12261 6.63.2 Example URI

12262 /GeolocationResURI

12263 6.63.3 Resource type

12264 The Resource Type is defined as: "oic.r.sensor.geolocation".

12265 6.63.4 OpenAPI 2.0 definition

12266 {
12267 "swagger": "2.0",

```

12268     "info": {
12269         "title": "Geolocation",
12270         "version": "20190215",
12271         "license": {
12272             "name": "OCF Data Model License",
12273             "url":
12274 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
12275 CENSE.md",
12276             "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
12277 reserved."
12278         },
12279         "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
12280     },
12281     "schemes": ["http"],
12282     "consumes": ["application/json"],
12283     "produces": ["application/json"],
12284     "paths": {
12285         "/GeolocationResURI" : {
12286             "get": {
12287                 "description": "This Resource describes the properties associated with the current
12288 geolocation coordinate.\nGeolocation is a geolocation coordinate data.\nThe Property \"latitude\" is
12289 a device's current Latitude coordinate (degrees).\nThe Property \"longitude\" is a device's current
12290 Longitude coordinate (degrees).\nThe Property \"alt\" is a device's current distance (metres) above
12291 or below 'local' sea-level.\nThe Property \"accuracy\" is the accuracy level of the latitude and
12292 longitude coordinates (metres).\nThe Property \"altitudeAccuracy\" is the accuracy level of the
12293 altitude coordinates (metres).\nThe Property \"heading\" is a direction of travel of device
12294 (degree).\nThe Property \"speed\" is a device's current velocity (metres per second).",
12295                 "parameters": [
12296                     {"$ref": "#/parameters/interface"}
12297                 ],
12298                 "responses": {
12299                     "200": {
12300                         "description": "RETRIEVES the current geolocation coordinates.",
12301                         "x-example":
12302 {
12303                 "rt": ["oic.r.sensor.geolocation"],
12304                 "if": ["oic.if.s", "oic.if.baseline"],
12305                 "latitude": 55.070859,
12306                 "longitude": -3.60512,
12307                 "alt": 12.07,
12308                 "accuracy": 65.0,
12309                 "altitudeAccuracy": 0.0,
12310                 "heading": 90.0,
12311                 "speed": 0.0
12312             },
12313                         "schema": { "$ref": "#/definitions/Geolocation" }
12314                     }
12315                 }
12316             }
12317         },
12318     },
12319     "parameters": {
12320         "interface": {
12321             "in": "query",
12322             "name": "if",
12323             "type": "string",
12324             "enum": ["oic.if.s", "oic.if.baseline"]
12325         }
12326     },
12327     "definitions": {
12328         "Geolocation" : {
12329             "properties": {
12330                 "rt": {
12331                     "description": "The Resource Type.",
12332                     "items": {
12333                         "enum": ["oic.r.sensor.geolocation"],
12334                         "maxLength": 64,
12335                         "type": "string"
12336                     },
12337                     "minItems": 1,
12338                     "uniqueItems": true,
12339                     "readOnly": true,

```



```

12340         "type": "array"
12341     },
12342     "longitude": {
12343         "description": "The Device's Current Longitude coordinate (degrees).",
12344         "readOnly": true,
12345         "type": "number"
12346     },
12347     "heading": {
12348         "description": "The direction of travel of the Device (degree).",
12349         "maximum": 360,
12350         "minimum": 0,
12351         "readOnly": true,
12352         "type": "number"
12353     },
12354     "latitude": {
12355         "description": "The Device's Current Latitude coordinate (degrees).",
12356         "readOnly": true,
12357         "type": "number"
12358     },
12359     "altitudeAccuracy": {
12360         "description": "The accuracy level of the altitude coordinates (metres).",
12361         "minimum": 0,
12362         "readOnly": true,
12363         "type": "number"
12364     },
12365     "alt": {
12366         "description": "The current distance (metres) above or below 'local' sea-level.",
12367         "readOnly": true,
12368         "type": "number"
12369     },
12370     "accuracy": {
12371         "description": "The accuracy level of the latitude and longitude coordinates (metres).",
12372         "minimum": 0,
12373         "readOnly": true,
12374         "type": "number"
12375     },
12376     "speed": {
12377         "description": "The Device's current velocity (metres per second).",
12378         "minimum": 0,
12379         "readOnly": true,
12380         "type": "number"
12381     },
12382     "n": {
12383         "$ref":
12384         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12385         schema.json#/definitions/n"
12386     },
12387     "id": {
12388         "$ref":
12389         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12390         schema.json#/definitions/id"
12391     },
12392     "if": {
12393         "description": "The OCF Interface set supported by this Resource.",
12394         "items": {
12395             "enum": [
12396                 "oic.if.s",
12397                 "oic.if.baseline"
12398             ],
12399             "type": "string"
12400         },
12401         "minItems": 2,
12402         "uniqueItems": true,
12403         "readOnly": true,
12404         "type": "array"
12405     }
12406 },
12407 "type": "object",
12408 "required": ["latitude", "longitude", "alt"]
12409 }
12410 }

```

12411 }
12412

12413 6.63.5 Property definition

12414 Table 129 defines the Properties that are part of the "oic.r.sensor.geolocation" Resource Type.

12415 **Table 129 – The Property definitions of the Resource with type "rt" =**
12416 **"oic.r.sensor.geolocation".**

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

12417 6.63.6 CRUDN behaviour

12418 Table 130 defines the CRUDN operations that are supported on the "oic.r.sensor.geolocation"
12419 Resource Type.

12420 **Table 130 – The CRUDN operations of the Resource with type "rt" =**
12421 **"oic.r.sensor.geolocation".**

Create	Read	Update	Delete	Notify
	get			observe

12422 **6.64 Height**

12423 **6.64.1 Introduction**

12424 This Resource describes the Properties associated with height of an object's physical size.

12425 The unit is a single value that is one of m, cm, ft or in.

12426 If the unit Property is missing the default is meters [m].

12427 The unit Property is a read-only value that is provided by the server.

12428 When range is omitted the default is 0 to +MAXFLOAT.

12429 **6.64.2 Example URI**

12430 /HeightResURI

12431 **6.64.3 Resource type**

12432 The Resource Type is defined as: "oic.r.height".

12433 **6.64.4 OpenAPI 2.0 definition**

```
12434 {
12435   "swagger": "2.0",
12436   "info": {
12437     "title": "Height",
12438     "version": "2019-03-22",
12439     "license": {
12440       "name": "OCF Data Model License",
12441       "url":
12442         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
12443         CENSE.md",
12444       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
12445     },
12446     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
12447   },
12448   "schemes": [
12449     "http"
12450   ],
12451   "consumes": [
12452     "application/json"
12453   ],
12454   "produces": [
12455     "application/json"
12456   ],
12457   "paths": {
12458     "/HeightResURI": {
12459       "get": {
12460         "description": "This Resource describes the Properties associated with height of an object's
12461         physical size.\n\nThe unit is a single value that is one of m, cm, ft or in.\n\nIf the unit Property is
12462         missing the default is meters [m].\n\nThe unit Property is a read-only value that is provided by the
12463         server.\n\nWhen range is omitted the default is 0 to +MAXFLOAT.",
12464         "parameters": [
12465           {
12466             "$ref": "#/parameters/interface"
12467           }
12468         ],
12469         "responses": {
12470           "200": {
12471             "description": "",
12472             "x-example": {
12473               "rt": [
12474                 "oic.r.height"
12475               ],
12476               "height": 1.8,
12477               "units": "m"
12478             },
12479             "schema": {
12480               "$ref": "#/definitions/Height"
12481             }
12482           }
12483         }
12484       }
12485     }
12486   }
12487 }
```

```

12485     "post": {
12486         "description": "Sets the height.",
12487         "parameters": [
12488             {
12489                 "$ref": "#/parameters/interface"
12490             },
12491             {
12492                 "name": "body",
12493                 "in": "body",
12494                 "required": true,
12495                 "schema": {
12496                     "$ref": "#/definitions/Height"
12497                 },
12498                 "x-example": {
12499                     "height": 1.75,
12500                     "units": "m"
12501                 }
12502             }
12503         ],
12504         "responses": {
12505             "200": {
12506                 "description": "Indicates that the height was successfully changed.\nThe new height is
12507 provided in the response.",
12508                 "x-example": {
12509                     "height": 1.75,
12510                     "units": "m"
12511                 },
12512                 "schema": {
12513                     "$ref": "#/definitions/Height"
12514                 }
12515             },
12516             "403": {
12517                 "description": "Indicates that OCF Client sent an invalid Property value to the
12518 Server.\nThe Server responds with the current Resource representation.",
12519                 "x-example": {
12520                     "height": 1.8,
12521                     "units": "m"
12522                 },
12523                 "schema": {
12524                     "$ref": "#/definitions/Height"
12525                 }
12526             }
12527         }
12528     }
12529 },
12530 },
12531 "parameters": {
12532     "interface": {
12533         "in": "query",
12534         "name": "if",
12535         "type": "string",
12536         "enum": [
12537             "oic.if.a",
12538             "oic.if.s",
12539             "oic.if.baseline"
12540         ]
12541     }
12542 },
12543 "definitions": {
12544     "Height": {
12545         "properties": {
12546             "rt": {
12547                 "description": "Resource Type",
12548                 "items": {
12549                     "enum": [
12550                         "oic.r.height"
12551                     ],
12552                     "type": "string",
12553                     "maxLength": 64
12554                 },
12555                 "minItems": 1,
12556                 "uniqueItems": true,

```

```

12557         "readOnly": true,
12558         "type": "array"
12559     },
12560     "height": {
12561         "description": "Height of an object",
12562         "minimum": 0,
12563         "type": "number"
12564     },
12565     "units": {
12566         "description": "Height unit",
12567         "enum": [
12568             "m",
12569             "cm",
12570             "ft",
12571             "in"
12572         ],
12573         "readOnly": true,
12574         "type": "string",
12575         "default": "m"
12576     },
12577     "range": {
12578         "$ref":
12579         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
12580         schema.json#/definitions/range_number"
12581     },
12582     "step": {
12583         "$ref":
12584         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
12585         schema.json#/definitions/step_number"
12586     },
12587     "precision": {
12588         "$ref":
12589         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
12590         schema.json#/definitions/precision"
12591     },
12592     "n": {
12593         "$ref":
12594         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12595         schema.json#/definitions/n"
12596     },
12597     "id": {
12598         "$ref":
12599         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12600         schema.json#/definitions/id"
12601     },
12602     "if": {
12603         "description": "The OCF Interface set supported by this Resource",
12604         "items": {
12605             "enum": [
12606                 "oic.if.a",
12607                 "oic.if.s",
12608                 "oic.if.baseline"
12609             ],
12610             "type": "string",
12611             "maxLength": 64
12612         },
12613         "minItems": 1,
12614         "readOnly": true,
12615         "uniqueItems": true,
12616         "type": "array"
12617     }
12618 },
12619 "type": "object",
12620 "required": [
12621     "height"
12622 ]
12623 }
12624 }
12625 }
12626

```

6.64.5 Property definition

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

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

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
height	number	Yes	Read Write	Height of an object
units	string	No	Read Only	Height unit
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

6.64.6 CRUDN behaviour

Table 132 defines the CRUDN operations that are supported on the "oic.r.height" Resource Type.

Table 132 – The CRUDN operations of the Resource with type "rt" = "oic.r.height".

Create	Read	Update	Delete	Notify
	get	post		observe

6.65 Weight

6.65.1 Introduction

This Resource describes the Properties associated with weight of an object.

The unit is a single value that is one of kg, g, lb or oz.

If the unit Property is missing the default is kilograms [kg].

The unit Property is a read-only value that is provided by the server.

When range is omitted the default is 0 to +MAXFLOAT.

6.65.2 Example URI

/WeightResURI

6.65.3 Resource type

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

6.65.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Weight",
    "version": "2019-03-22",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
```

```

12654 CENSE.md",
12655   "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
12656 },
12657   "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
12658 },
12659   "schemas": [
12660     "http"
12661   ],
12662   "consumes": [
12663     "application/json"
12664   ],
12665   "produces": [
12666     "application/json"
12667   ],
12668   "paths": {
12669     "/WeightResURI": {
12670       "get": {
12671         "description": "This Resource describes the Properties associated with weight of an
12672 object.\nThe unit is a single value that is one of kg, g, lb or oz.\nIf the unit Property is missing
12673 the default is kilograms [kg].\nThe unit Property is a read-only value that is provided by the
12674 server.\nWhen range is omitted the default is 0 to +MAXFLOAT.",
12675         "parameters": [
12676           {
12677             "$ref": "#/parameters/interface"
12678           }
12679         ],
12680         "responses": {
12681           "200": {
12682             "description": "",
12683             "x-example": {
12684               "rt": [
12685                 "oic.r.weight"
12686               ],
12687               "weight": 80.0,
12688               "units": "kg"
12689             },
12690             "schema": {
12691               "$ref": "#/definitions/Weight"
12692             }
12693           }
12694         }
12695       },
12696       "post": {
12697         "description": "Sets the Weight.",
12698         "parameters": [
12699           {
12700             "$ref": "#/parameters/interface"
12701           },
12702           {
12703             "name": "body",
12704             "in": "body",
12705             "required": true,
12706             "schema": {
12707               "$ref": "#/definitions/Weight"
12708             },
12709             "x-example": {
12710               "weight": 75.0,
12711               "units": "kg"
12712             }
12713           }
12714         ],
12715         "responses": {
12716           "200": {
12717             "description": "Indicates that the weight was successfully changed.\nThe new weight is
12718 provided in the response.",
12719             "x-example": {
12720               "weight": 75.0,
12721               "units": "kg"
12722             },
12723             "schema": {
12724               "$ref": "#/definitions/Weight"
12725             }
12726           }
12727         }
12728       }
12729     }
12730   }

```

```

12726         },
12727         "403": {
12728             "description": "Indicates that OCF client sent an invalid Property value to the
12729 Server.\nThe Server responds with the current resource representation.",
12730             "x-example": {
12731                 "weight": 80.0,
12732                 "units": "kg"
12733             },
12734             "schema": {
12735                 "$ref": "#/definitions/Weight"
12736             }
12737         }
12738     }
12739 }
12740 },
12741 "parameters": {
12742     "interface": {
12743         "in": "query",
12744         "name": "if",
12745         "type": "string",
12746         "enum": [
12747             "oic.if.s",
12748             "oic.if.a",
12749             "oic.if.baseline"
12750         ]
12751     }
12752 },
12753 "definitions": {
12754     "Weight": {
12755         "properties": {
12756             "rt": {
12757                 "description": "Resource Type",
12758                 "items": {
12759                     "enum": [
12760                         "oic.r.weight"
12761                     ],
12762                     "type": "string",
12763                     "maxLength": 64
12764                 },
12765                 "minItems": 1,
12766                 "uniqueItems": true,
12767                 "readOnly": true,
12768                 "type": "array"
12769             },
12770             "weight": {
12771                 "description": "Weight of an object",
12772                 "minimum": 0.0,
12773                 "type": "number"
12774             },
12775             "units": {
12776                 "description": "Weight unit",
12777                 "enum": [
12778                     "kg",
12779                     "g",
12780                     "lb",
12781                     "oz"
12782                 ],
12783                 "readOnly": true,
12784                 "type": "string",
12785                 "default": "kg"
12786             },
12787             "range": {
12788                 "$ref":
12789 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
12790 schema.json#/definitions/range_number"
12791             },
12792             "step": {
12793                 "$ref":
12794 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
12795 schema.json#/definitions/step_number"
12796             }
12797         }

```



```

12798         "precision": {
12799             "$ref":
12800             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
12801             schema.json#/definitions/precision"
12802         },
12803         "n": {
12804             "$ref":
12805             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12806             schema.json#/definitions/n"
12807         },
12808         "id": {
12809             "$ref":
12810             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12811             schema.json#/definitions/id"
12812         },
12813         "if": {
12814             "description": "The OCF Interface set supported by this Resource",
12815             "items": {
12816                 "enum": [
12817                     "oic.if.s",
12818                     "oic.if.a",
12819                     "oic.if.baseline"
12820                 ],
12821                 "type": "string",
12822                 "maxLength": 64
12823             },
12824             "minItems": 1,
12825             "readOnly": true,
12826             "uniqueItems": true,
12827             "type": "array"
12828         }
12829     },
12830     "type": "object",
12831     "required": [
12832         "weight",
12833         "units"
12834     ]
12835 }
12836 }
12837 }
12838

```

12839 6.65.5 Property definition

12840 Table 133 defines the Properties that are part of the "oic.r.weight" Resource Type.

12841 **Table 133 – The Property definitions of the Resource with type "rt" = "oic.r.weight".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
weight	number	Yes	Read Write	Weight of an object
units	string	Yes	Read Only	Weight unit
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

6.65.6 CRUDN behaviour

Table 134 defines the CRUDN operations that are supported on the "oic.r.weight" Resource Type.

Table 134 – The CRUDN operations of the Resource with type "rt" = "oic.r.weight".

Create	Read	Update	Delete	Notify
	get	post		observe

6.66 Air Quality

6.66.1 Introduction

This Resource describes a qualitative or measured contaminant that can be used to infer Air Quality.

The Property "valueType" indicates a qualitative or measured reading within the contaminantvalue Property.

The Property "contaminantvalue" can contain the actual sensed value with units per contaminant type.

Qualitative is a representative value within the range provided where the minimum value is minimum contamination and maximum value is maximum contamination for the specific contaminant.

The Property "contaminantvalue" contains the actual measured or qualitative level.

The Property "range" contains the allowed range for the value that is being reported.

If valueType is 'Measured' then the units for the contaminant types are as follows:

Methanol (also known as Formaldehyde): CH₂O (ug/m³),

Carbon Dioxide: CO₂ (ppm),

Carbon Monoxide: CO (ppm),

Particulate Matter (less than 1 micron in diameter): PM₁ (ug/m³),

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).

6.66.2 Example URI

/AirQualityResURI

6.66.3 Resource type

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

6.66.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Air Quality",
    "version": "20190613",
    "license": {
      "name": "OCF Data Model License",
      "url":
        "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
        CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
        reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/AirQualityResURI" : {
      "get": {
        "description": "This Resource describes a qualitative or measured contaminant that can be
        used to infer Air Quality.\n\nThe Property \"valueType\" indicates a qualitative or measured reading
```

```

12894 within the contaminantvalue Property.\nThe Property \"contaminantvalue\" can contain the actual
12895 sensed value with units per contaminant type.\nQualitative is a representative value within the
12896 range provided where the minimum value is minimum contamination and maximum value is maximum
12897 contamination for the specific contaminant.\nThe Property \"contaminantvalue\" contains the actual
12898 measured or qualitative level.\nThe Property \"range\" contains the allowed range for the value that
12899 is being reported.\nIf valueType is 'Measured' then the units for the contaminant types are as
12900 follows:\nMethanol (also known as Formaldehyde): CH2O (ug/m^3),\nCarbon Dioxide: CO2 (ppm),\n
12901 Carbon Monoxide: CO (ppm),\nParticulate Matter (less than 1 micron in diameter): PM1 (ug/m^3),\n
12902 Particulate Matter (less than 2.5 microns in diameter): PM2.5 (ug/m^3),\nParticulate Matter (less
12903 than 10 microns in diameter): PM10 (ug/m^3),\nVolatile Organic Compounds: VOC (ug/m^3).\",
12904     \"parameters\": [
12905         { \"$ref\": \"#/parameters/interface\" }
12906     ],
12907     \"responses\": {
12908         \"200\": {
12909             \"description\" : \"\",
12910             \"x-example\":
12911                 {
12912                     \"rt\": [\"oic.r.airquality\"],
12913                     \"if\": [\"oic.if.s\", \"oic.if.baseline\"],
12914                     \"contaminanttype\": \"CO\",
12915                     \"valuetype\": \"Measured\",
12916                     \"contaminantvalue\": 10,
12917                     \"range\": [0,500]
12918                 },
12919             \"schema\": { \"$ref\": \"#/definitions/AirQuality\" }
12920         }
12921     }
12922 },
12923 },
12924 },
12925 \"parameters\": {
12926     \"interface\" : {
12927         \"in\" : \"query\",
12928         \"name\" : \"if\",
12929         \"type\" : \"string\",
12930         \"enum\" : [\"oic.if.s\", \"oic.if.baseline\"]
12931     }
12932 },
12933 \"definitions\": {
12934     \"AirQuality\" : {
12935         \"properties\": {
12936             \"rt\" : {
12937                 \"description\": \"The Resource Type.\",
12938                 \"items\": {
12939                     \"enum\": [\"oic.r.airquality\"],
12940                     \"maxLength\": 64,
12941                     \"type\": \"string\"
12942                 },
12943                 \"minItems\": 1,
12944                 \"uniqueItems\": true,
12945                 \"readOnly\": true,
12946                 \"type\": \"array\"
12947             },
12948             \"contaminanttype\": {
12949                 \"description\": \"The contaminant being measured.\",
12950                 \"enum\": [
12951                     \"CH2O\",
12952                     \"CO2\",
12953                     \"CO\",
12954                     \"PM1\",
12955                     \"PM2.5\",
12956                     \"PM10\",
12957                     \"VOC\",
12958                     \"Smoke\",
12959                     \"Odor\",
12960                     \"AirPollution\"
12961                 ],
12962                 \"readOnly\": true,
12963                 \"type\": \"string\"
12964             },
12965             \"valuetype\": {

```

```

12966         "description": "The property that indicates whether the provided value is qualitative or
12967 measured.",
12968         "enum": [
12969             "Qualitative",
12970             "Measured"
12971         ],
12972         "readOnly": true,
12973         "type": "string"
12974     },
12975     "contaminantvalue": {
12976         "description": "The measured or qualitative value for the contaminant.",
12977         "readOnly": true,
12978         "type": "integer"
12979     },
12980     "n": {
12981         "$ref":
12982 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12983 schema.json#/definitions/n"
12984     },
12985     "id": {
12986         "$ref":
12987 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
12988 schema.json#/definitions/id"
12989     },
12990     "range": {
12991         "$ref":
12992 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
12993 schema.json#/definitions/range_integer"
12994     },
12995     "if" : {
12996         "description": "The OCF Interface set supported by this Resource.",
12997         "items": {
12998             "enum": [
12999                 "oic.if.s",
13000                 "oic.if.baseline"
13001             ],
13002             "type": "string"
13003         },
13004         "minItems": 2,
13005         "uniqueItems": true,
13006         "readOnly": true,
13007         "type": "array"
13008     }
13009 },
13010 "type": "object",
13011 "required": ["contaminantvalue", "contaminanttype", "valuetype"]
13012 }
13013 }
13014 }
13015

```

13016 6.66.5 Property definition

13017 Table 135 defines the Properties that are part of the "oic.r.airquality" Resource Type.

13018 **Table 135 – The Property definitions of the Resource with type "rt" = "oic.r.airquality".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
contaminanttype	string	Yes	Read Only	The contaminant being measured.
valuetype	string	Yes	Read Only	The property that indicates whether the provided value is qualitative or measured.

contaminantvalue	integer	Yes	Read Only	The measured or qualitative value for the contaminant.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

6.66.6 CRUDN behaviour

Table 136 defines the CRUDN operations that are supported on the "oic.r.airquality" Resource Type.

Table 136 – The CRUDN operations of the Resource with type "rt" = "oic.r.airquality".

Create	Read	Update	Delete	Notify
	get			observe

6.67 Air Quality Collection

6.67.1 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.

6.67.2 Example URI

/AirQualityCollectionResURI

6.67.3 Resource type

The Resource Type is defined as: "oic.r.airqualitycollection, oic.wk.col".

6.67.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Air Quality Collection",
    "version": "20190307",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/AirQualityCollectionResURI?if=oic.if.ll" : {
      "get": {
```

```

13057         "description": "This resource describes a sensor that provides the qualitative or measured
13058 Air Quality.\nThe resource is a collection of instances of oic.r.airquality detailing the individual
13059 exposed contaminant measures\nThere is one collection entry per contaminant type supported by the
13060 device. A device must expose at least one measured or qualitative value.\nRetrieves the current air
13061 quality.\n",
13062         "parameters": [
13063             {"$ref": "#/parameters/interface-all"}
13064         ],
13065         "responses": {
13066             "200": {
13067                 "description": "",
13068                 "x-example":
13069                     [
13070                         {"href": "/myCOMeasureResURI", "rt": ["oic.r.airquality"], "if":
13071 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
13072                         {"href": "/myCO2ResURI", "rt": ["oic.r.airquality"], "if":
13073 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
13074                     ],
13075                 "schema": { "$ref": "#/definitions/AirQuality-11" }
13076             }
13077         }
13078     },
13079     "/AirQualityCollectionResURI?if=oic.if.b": {
13080         "get": {
13081             "description": "This resource describes a sensor that provides the qualitative or measured
13082 Air Quality.\nThe resource is a collection of instances of oic.r.airquality detailing the individual
13083 exposed contaminant measures\nThere is one collection entry per contaminant type supported by the
13084 device. A device must expose at least one measured or qualitative value.\nRetrieves the current air
13085 quality.\n",
13086             "parameters": [
13087                 {"$ref": "#/parameters/interface-all"}
13088             ],
13089             "responses": {
13090                 "200": {
13091                     "description": "",
13092                     "x-example": [
13093                         {
13094                             "href": "/AirQualityCOResURI",
13095                             "rep": {
13096                                 "contaminanttype": "CO",
13097                                 "valuetype": "Measured",
13098                                 "contaminantvalue": 10,
13099                                 "range": [0,500]
13100                             }
13101                         },
13102                         {
13103                             "href": "/AirQualitySmokeResURI",
13104                             "rep": {
13105                                 "contaminanttype": "Smoke",
13106                                 "valuetype": "Measured",
13107                                 "contaminantvalue": 100,
13108                                 "range": [0,5000]
13109                             }
13110                         }
13111                     ]
13112                 },
13113                 "schema": { "$ref": "#/definitions/AirQualityCollectionBatch-Retrieve" }
13114             }
13115         }
13116     },
13117 },
13118 "/AirQualityCollectionResURI?if=oic.if.baseline" : {
13119     "get": {
13120         "description": "This resource describes a sensor that provides the qualitative or measured
13121 Air Quality.\nThe resource is a collection of instances of oic.r.airquality detailing the individual
13122 exposed contaminant measures\nThere is one collection entry per contaminant type supported by the
13123 device. A device must expose at least one measured or qualitative value.\nRetrieves the current air
13124 quality.\n",
13125         "parameters": [
13126             {"$ref": "#/parameters/interface-all"}
13127         ],
13128         "responses": {

```

```

13129         "200": {
13130             "description" : "",
13131             "x-example":
13132                 {
13133                     "rt": ["oic.r.airqualitycollection","oic.wk.col"],
13134                     "if": ["oic.if.baseline","oic.if.ll"],
13135                     "links": [
13136                         { "href": "/myCOMeasureResURI", "rt": ["oic.r.airquality"], "if":
13137 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
13138                         { "href": "/myCO2ResURI", "rt": ["oic.r.airquality"], "if":
13139 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
13140                     ]
13141                 },
13142             "schema": { "$ref": "#/definitions/AirQuality" }
13143         }
13144     }
13145 }
13146 },
13147 },
13148 "parameters": {
13149     "interface-all" : {
13150         "in" : "query",
13151         "name" : "if",
13152         "type" : "string",
13153         "enum" : ["oic.if.ll", "oic.if.b","oic.if.baseline"]
13154     }
13155 },
13156 "definitions": {
13157     "AirQuality-ll": {
13158         "items": {
13159             "$ref": "#/definitions/oic.oic-link"
13160         },
13161         "type": "array"
13162     },
13163     "oic.oic-link": {
13164         "type": "object",
13165         "properties": {
13166             "anchor": {
13167                 "$ref":
13168 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13169 schema.json#/definitions/anchor"
13170             },
13171             "di": {
13172                 "$ref":
13173 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13174 schema.json#/definitions/di"
13175             },
13176             "eps": {
13177                 "$ref":
13178 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13179 schema.json#/definitions/eps"
13180             },
13181             "href": {
13182                 "$ref":
13183 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13184 schema.json#/definitions/href"
13185             },
13186             "ins": {
13187                 "$ref":
13188 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13189 schema.json#/definitions/ins"
13190             },
13191             "p": {
13192                 "$ref":
13193 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13194 schema.json#/definitions/p"
13195             },
13196             "rel": {
13197                 "$ref":
13198 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13199 schema.json#/definitions/rel_array"
13200             },

```

```

13201         "title": {
13202             "$ref":
13203 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13204 schema.json#/definitions/title"
13205         },
13206         "type": {
13207             "$ref":
13208 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13209 schema.json#/definitions/type"
13210         },
13211         "if": {
13212             "description": "The OCF Interfaces supported by the target Resource",
13213             "items": {
13214                 "enum": [
13215                     "oic.if.s",
13216                     "oic.if.baseline"
13217                 ],
13218                 "type": "string",
13219                 "maxLength": 64
13220             },
13221             "minItems": 2,
13222             "uniqueItems": true,
13223             "type": "array",
13224             "readOnly": true
13225         },
13226         "rt": {
13227             "description": "Resource Type of the target Resource",
13228             "items": {
13229                 "maxLength": 64,
13230                 "type": "string",
13231                 "enum": ["oic.r.airquality"]
13232             },
13233             "minItems": 1,
13234             "type": "array",
13235             "uniqueItems": true,
13236             "readOnly": true
13237         }
13238     },
13239     "required": [
13240         "href",
13241         "rt",
13242         "if"
13243     ]
13244 },
13245 "AirQuality": {
13246     "type": "object",
13247     "properties": {
13248         "rt": {
13249             "items": {
13250                 "enum": [
13251                     "oic.r.airqualitycollection",
13252                     "oic.wk.col"
13253                 ],
13254                 "type": "string",
13255                 "maxLength": 64
13256             },
13257             "minItems": 2,
13258             "type": "array",
13259             "uniqueItems": true
13260         },
13261         "links": {
13262             "description": "A set of simple or individual OCF Links.",
13263             "type": "array",
13264             "items": {
13265                 "$ref": "#/definitions/oic.oic-link"
13266             }
13267         },
13268         "n": {
13269             "$ref":
13270 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13271 schema.json#/definitions/n"
13272         },

```



```

13273         "id": {
13274             "$ref" :
13275             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13276             schema.json#/definitions/id"
13277         },
13278         "rts": {
13279             "items": {
13280                 "enum": ["oic.r.airquality"],
13281                 "type": "string",
13282                 "maxLength": 64
13283             },
13284             "minItems": 1,
13285             "type": "array",
13286             "uniqueItems": true
13287         },
13288         "if": {
13289             "description": "The OCF Interfaces supported by this Resource",
13290             "items": {
13291                 "enum": [
13292                     "oic.if.ll",
13293                     "oic.if.b",
13294                     "oic.if.baseline"
13295                 ],
13296                 "type": "string",
13297                 "maxLength": 64
13298             },
13299             "minItems": 1,
13300             "readOnly": true,
13301             "uniqueItems": true,
13302             "type": "array"
13303         }
13304     },
13305     "AirQualityCollectionBatch-Retrieve" : {
13306         "type": "array",
13307         "minItems": 1,
13308         "uniqueItems": true,
13309         "items": {
13310             "type": "object",
13311             "additionalProperties": true,
13312             "properties": {
13313                 "href": {
13314                     "$ref":
13315                     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13316                     schema.json#/definitions/href"
13317                 },
13318                 "rep": {
13319                     "$ref":
13320                     "https://openconnectivityfoundation.github.io/IoTDataModels/AirQualityResURI.swagger.json#/definitio
13321                     ns/AirQuality"
13322                 }
13323             },
13324             "required": [
13325                 "href",
13326                 "rep"
13327             ]
13328         }
13329     }
13330 }
13331 }
13332 }
13333

```

6.67.5 Property definition

Table 137 defines the Properties that are part of the "oic.r.airqualitycollection, oic.wk.col" Resource Type.

13337
13338

Table 137 – The Property definitions of the Resource with type "rt" = "oic.r.airqualitycollection, oic.wk.col".

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

13339 6.67.6 CRUDN behaviour

13340 Table 138 defines the CRUDN operations that are supported on the "oic.r.airqualitycollection,
13341 oic.wk.col" Resource Type.

Table 138 – The CRUDN operations of the Resource with type "rt" = "oic.r.airqualitycollection, oic.wk.col".

Create	Read	Update	Delete	Notify
	get			observe

13342
13343

13344 6.68 Consumable

13345 6.68.1 Introduction

13346 This Resource specifies a thing that can be consumed such as filter material, printer toner etc
13347 The Property "typeofconsumable" is an enumeration defining the thing being consumed as defined
13348 by the Smart Home Device Specification

13349 The Property "remaining" is an integer capturing the percentatge remaining life

13350 The Property "orderpercentage" is an integer capturing the percentage life at which replacement
13351 or replenishment is recommended by the manufacturer

13352 The Property "url" is a string containing a URL at which further information may be obtained with
13353 respect to the consumable.

13354 6.68.2 Example URI

13355 /ConsumableResURI

13356 6.68.3 Resource type

13357 The Resource Type is defined as: "oic.r.consumable".

13358 6.68.4 OpenAPI 2.0 definition

```
13359 {  
13360   "swagger": "2.0",  
13361   "info": {  
13362     "title": "Consumable",  
13363     "version": "20190215",  
13364     "license": {  
13365       "name": "OCF Data Model License",  
13366       "url":  
13367         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
13368         CENSE.md",  
13369       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights  
13370       reserved."  
13371     },  
13372     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
13373   },  
13374   "schemes": ["http"],  
13375   "consumes": ["application/json"],  
13376   "produces": ["application/json"],  
13377   "paths": {  
13378     "/ConsumableResURI" : {  
13379       "get": {  
13380         "description": "This Resource specifies a thing that can be consumed such as filter  
13381         material, printer toner etc\nThe Property \"typeofconsumable\" is an enumeration defining the thing  
13382         being consumed as defined by the Smart Home Device Specification\nThe Property \"remaining\" is an  
13383         integer capturing the percentatge remaining life\nThe Property \"orderpercentage\" is an integer  
13384         capturing the percentage life at which replacement or replenishment is recommended by the  
13385         manufacturer\nThe Property \"url\" is a string containing a URL at which further information may be  
13386         obtained with respect to the consumable.",  
13387         "parameters": [  
13388           {"$ref": "#/parameters/interface"}  
13389         ],  
13390         "responses": {  
13391           "200": {  
13392             "description": "",  
13393             "x-example":  
13394               {  
13395                 "rt": ["oic.r.consumable"],  
13396                 "if": ["oic.if.s", "oic.if.baseline"],  
13397                 "typeofconsumable": "tonerBlack",  
13398                 "remaining": 20,  
13399                 "orderpercentage": 10,  
1400                 "url": "http://myreorderURL"  
1401               },  
1402             "schema": { "$ref": "#/definitions/consumable" }  
1403           }  
1404         }  
1405       }  
1406     }  
1407   }
```

```

13406     }
13407   },
13408   "parameters": {
13409     "interface": {
13410       "in": "query",
13411       "name": "if",
13412       "type": "string",
13413       "enum": ["oic.if.s", "oic.if.baseline"]
13414     }
13415   },
13416   "definitions": {
13417     "consumable" : {
13418       "properties": {
13419         "rt": {
13420           "description": "The Resource Type.",
13421           "items": {
13422             "enum": ["oic.r.consumable"],
13423             "maxLength": 64,
13424             "type": "string"
13425           },
13426           "minItems": 1,
13427           "uniqueItems": true,
13428           "readOnly": true,
13429           "type": "array"
13430         },
13431         "remaining": {
13432           "description": "The percentage remaining lifespan.",
13433           "maximum": 100,
13434           "minimum": 0,
13435           "readOnly": true,
13436           "type": "integer"
13437         },
13438         "typeofconsumable": {
13439           "description": "The thing that is being consumed.",
13440           "readOnly": true,
13441           "type": "string"
13442         },
13443         "url": {
13444           "description": "The URL at which additional ordering information may be found.",
13445           "format": "uri",
13446           "readOnly": true,
13447           "type": "string"
13448         },
13449         "orderpercentage": {
13450           "description": "The percentage at which re-ordering is recommended by the manufacturer.",
13451           "maximum": 100,
13452           "minimum": 0,
13453           "readOnly": true,
13454           "type": "integer"
13455         },
13456         "n": {
13457           "$ref":
13458             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13459             schema.json#/definitions/n"
13460         },
13461         "id": {
13462           "$ref":
13463             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13464             schema.json#/definitions/id"
13465         },
13466         "if": {
13467           "description": "The OCF Interface set supported by this Resource.",
13468           "items": {
13469             "enum": [
13470               "oic.if.s",
13471               "oic.if.baseline"
13472             ],
13473             "type": "string"
13474           },
13475           "minItems": 2,
13476           "uniqueItems": true,
13477           "readOnly": true,

```

```

13478         "type": "array"
13479     },
13480 },
13481     "type": "object",
13482     "required": ["typeofconsumable", "remaining"]
13483 }
13484 }
13485 }
13486

```

13487 6.68.5 Property definition

13488 Table 139 defines the Properties that are part of the "oic.r.consumable" Resource Type.

13489 **Table 139 – The Property definitions of the Resource with type "rt" = "oic.r.consumable".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
remaining	integer	Yes	Read Only	The percentage remaining lifespan.
typeofconsumable	string	Yes	Read Only	The thing that is being consumed.
url	string	No	Read Only	The URL at which additional ordering information may be found.
orderpercentage	integer	No	Read Only	The percentage at which re-ordering is recommended by the manufacturer.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

13490 6.68.6 CRUDN behaviour

13491 Table 140 defines the CRUDN operations that are supported on the "oic.r.consumable" Resource
 13492 Type.

13493 **Table 140 – The CRUDN operations of the Resource with type "rt" = "oic.r.consumable".**

Create	Read	Update	Delete	Notify
	get			observe

13494 6.69 Consumables

13495 6.69.1 Introduction

13496 This Resource specifies things that can be consumed such as filter material, printer toner etc
 13497 The resource is a Collection of instances of oic.r.consumable detailing the individual consumed
 13498 items

13499 supportedconsumables is the set of consumable types that this instance of the Resource
 13500 supports

13501

13502 6.69.2 Example URI

13503 /ConsumablesResURI

6.69.3 Resource type

The Resource Type is defined as: "oic.r.consumablecollection, oic.wk.col".

6.69.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Consumables",
    "version": "20190613",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/ConsumablesResURI?if=oic.if.ll" : {
      "get": {
        "description": "This Resource specifies things that can be consumed such as filter material,
printer toner etc\nThe resource is a Collection of instances of oic.r.consumable detailing the
individual consumed items\nsupportedconsumables is the set of consumable types that this instance of
the Resource supports\n",
        "parameters": [
          {"$ref": "#/parameters/interface-all"}
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": [
              {
                "href": "/myTonerBlackResURI", "rt": ["oic.r.consumable"], "if":
["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
              {
                "href": "/myTonerCyanResURI", "rt": ["oic.r.consumable"], "if":
["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
              {
                "href": "/myTonerMagentaResURI", "rt": ["oic.r.consumable"], "if":
["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
              {
                "href": "/myTonerYellowResURI", "rt": ["oic.r.consumable"], "if":
["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
            ],
            "schema": { "$ref": "#/definitions/consumables-ll" }
          }
        }
      }
    },
    "/ConsumablesResURI?if=oic.if.b": {
      "get": {
        "description": "This Resource specifies things that can be consumed such as filter material,
printer toner etc\nThe resource is a Collection of instances of oic.r.consumable detailing the
individual consumed items\nsupportedconsumables is the set of consumable types that this instance of
the Resource supports\n",
        "parameters": [
          {"$ref": "#/parameters/interface-all"}
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": [
              {
                "href": "/tonerCyanResURI",
                "rep": {
                  "typeofconsumable": "tonerCyan",
                  "remaining": 70,
                  "orderpercentage": 10,
                  "url": "http://myreorderURL"
                }
              }
            ]
          }
        }
      }
    }
  }
}
```

```

13573         }
13574     },
13575     {
13576         "href": "/tonerBlackResURI",
13577         "rep": {
13578             "typeofconsumable": "tonerBlack",
13579             "remaining": 20,
13580             "orderpercentage": 10,
13581             "url": "http://myreorderURL"
13582         }
13583     }
13584 ],
13585 "schema": { "$ref": "#/definitions/ConsumableCollectionBatch-Retrieve" }
13586 }
13587 }
13588 },
13589 "/ConsumablesResURI?if=oic.if.baseline" : {
13590     "get": {
13591         "description": "This Resource specifies things that can be consumed such as filter material,
13592 printer toner etc\nThe resource is a Collection of instances of oic.r.consumable detailing the
13593 individual consumed items\nsupportedconsumables is the set of consumable types that this instance of
13594 the Resource supports\n",
13595         "parameters": [
13596             { "$ref": "#/parameters/interface-all" }
13597         ],
13598         "responses": {
13599             "200": {
13600                 "description": "",
13601                 "x-example": {
13602                     "rt": [ "oic.r.consumablecollection", "oic.wk.col" ],
13603                     "if": [ "oic.if.ll", "oic.if.b", "oic.if.baseline" ],
13604                     "rts": [ "oic.r.consumable" ],
13605                     "supportedconsumables": [ "tonerBlack", "tonerCyan", "tonerMagenta", "tonerYellow" ],
13606                     "links": [
13607                         { "href": "/myTonerBlackResURI", "rt": [ "oic.r.consumable" ], "if":
13608 [ "oic.if.s", "oic.if.baseline" ], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] },
13609                         { "href": "/myTonerCyanResURI", "rt": [ "oic.r.consumable" ], "if":
13610 [ "oic.if.s", "oic.if.baseline" ], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] },
13611                         { "href": "/myTonerMagentaResURI", "rt": [ "oic.r.consumable" ], "if":
13612 [ "oic.if.s", "oic.if.baseline" ], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] },
13613                         { "href": "/myTonerYellowResURI", "rt": [ "oic.r.consumable" ], "if":
13614 [ "oic.if.s", "oic.if.baseline" ], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] }
13615                     ]
13616                 },
13617                 "schema": { "$ref": "#/definitions/consumables" }
13618             }
13619         }
13620     }
13621 },
13622 },
13623 },
13624 "parameters": {
13625     "interface-all" : {
13626         "in" : "query",
13627         "name" : "if",
13628         "type" : "string",
13629         "enum" : [ "oic.if.ll", "oic.if.b", "oic.if.baseline" ]
13630     }
13631 },
13632 "definitions": {
13633     "consumables-ll" : {
13634         "items": {
13635             "$ref": "#/definitions/oic.oic-link"
13636         },
13637         "type": "array"
13638     },
13639     "consumables": {
13640         "properties": {
13641             "rt": {
13642                 "items": {
13643                     "enum": [
13644                         "oic.r.consumablecollection",

```

```

13645         "oic.wk.col"
13646     ],
13647     "type": "string",
13648     "maxLength": 64
13649 },
13650     "minItems": 2,
13651     "type": "array",
13652     "readOnly": true,
13653     "uniqueItems": true
13654 },
13655     "supportedconsumables": {
13656         "description": "Array of possible consumables the device measures.",
13657         "items": {
13658             "type": "string"
13659         },
13660         "readOnly": true,
13661         "type": "array"
13662     },
13663     "links": {
13664         "description": "A set of simple or individual OCF Links.",
13665         "items": {
13666             "$ref": "#/definitions/oic.oic-link"
13667         },
13668         "type": "array"
13669     },
13670     "n": {
13671         "$ref": :
13672         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13673         schema.json#/definitions/n"
13674     },
13675     "id": {
13676         "$ref": :
13677         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13678         schema.json#/definitions/id"
13679     },
13680     "rts": {
13681         "items": {
13682             "enum": ["oic.r.consumable"],
13683             "type": "string",
13684             "maxLength": 64
13685         },
13686         "minItems": 1,
13687         "type": "array",
13688         "readOnly": true,
13689         "uniqueItems": true
13690     },
13691     "if": {
13692         "description": "The OCF Interfaces supported by this Resource",
13693         "items": {
13694             "enum": [
13695                 "oic.if.ll",
13696                 "oic.if.b",
13697                 "oic.if.baseline"
13698             ],
13699             "type": "string",
13700             "maxLength": 64
13701         },
13702         "minItems": 1,
13703         "readOnly": true,
13704         "uniqueItems": true,
13705         "type": "array"
13706     }
13707 },
13708     "type" : "object"
13709 },
13710     "ConsumableCollectionBatch-Retrieve" : {
13711         "type": "array",
13712         "minItems": 1,
13713         "uniqueItems": true,
13714         "items": {
13715             "type": "object",
13716             "additionalProperties": true,

```



```

13717         "properties": {
13718             "href": {
13719                 "$ref":
13720 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13721 schema.json#/definitions/href"
13722             },
13723             "rep": {
13724                 "$ref":
13725 "https://openconnectivityfoundation.github.io/IoTDataModels/ConsumableResURI.swagger.json#/definitio
13726 ns/consumable"
13727             }
13728         },
13729         "required": [
13730             "href",
13731             "rep"
13732         ]
13733     },
13734 },
13735     "oic.oic-link": {
13736         "type": "object",
13737         "properties": {
13738             "anchor": {
13739                 "$ref":
13740 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13741 schema.json#/definitions/anchor"
13742             },
13743             "di": {
13744                 "$ref":
13745 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13746 schema.json#/definitions/di"
13747             },
13748             "eps": {
13749                 "$ref":
13750 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13751 schema.json#/definitions/eps"
13752             },
13753             "href": {
13754                 "$ref":
13755 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13756 schema.json#/definitions/href"
13757             },
13758             "ins": {
13759                 "$ref":
13760 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13761 schema.json#/definitions/ins"
13762             },
13763             "p": {
13764                 "$ref":
13765 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13766 schema.json#/definitions/p"
13767             },
13768             "rel": {
13769                 "$ref":
13770 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13771 schema.json#/definitions/rel_array"
13772             },
13773             "title": {
13774                 "$ref":
13775 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13776 schema.json#/definitions/title"
13777             },
13778             "type": {
13779                 "$ref":
13780 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
13781 schema.json#/definitions/type"
13782             },
13783             "if": {
13784                 "description": "The OCF Interfaces supported by the target Resource",
13785                 "items": {
13786                     "enum": [
13787                         "oic.if.s",
13788                         "oic.if.baseline"

```

```

13789         ],
13790         "type": "string",
13791         "maxLength": 64
13792     },
13793     "minItems": 2,
13794     "uniqueItems": true,
13795     "type": "array",
13796     "readOnly": true
13797 },
13798 "rt": {
13799     "description": "Resource Type of the target Resource",
13800     "items": {
13801         "maxLength": 64,
13802         "type": "string",
13803         "enum": ["oic.r.consumable"]
13804     },
13805     "minItems": 1,
13806     "type": "array",
13807     "uniqueItems": true,
13808     "readOnly": true
13809 },
13810 },
13811 "required": [
13812     "href",
13813     "rt",
13814     "if"
13815 ]
13816 }
13817 }
13818 }
13819

```

13820 6.69.5 Property definition

13821 Table 141 defines the Properties that are part of the "oic.r.consumablecollection, oic.wk.col"
13822 Resource Type.

13823 **Table 141 – The Property definitions of the Resource with type "rt" =**
13824 **"oic.r.consumablecollection, oic.wk.col".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema		Read Only	
supportedconsumables	array: see schema		Read Only	Array of possible consumables the device measures.
links	array: see schema		Read Write	A set of simple or individual OCF Links.
n	multiple types: see schema		Read Write	
id	multiple types: see schema		Read Write	
rts	array: see schema		Read Only	
if	array: see schema		Read Only	The OCF Interfaces supported by this Resource
href	multiple types: see schema	Yes	Read Write	
rep	multiple types: see schema	Yes	Read Write	
anchor	multiple types: see schema	No	Read Write	

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

6.69.6 CRUDN behaviour

Table 142 defines the CRUDN operations that are supported on the "oic.r.consumablecollection, oic.wk.col" Resource Type.

Table 142 – The CRUDN operations of the Resource with type "rt" = "oic.r.consumablecollection, oic.wk.col".

Create	Read	Update	Delete	Notify
	get			observe

6.70 Delay Defrost

6.70.1 Introduction

This Resource describes the delay defrost function as defined by the US Energy Star Specifications.

See Energy Star Refrigerator Requirements Version 5 Section 4).

(<https://www.energystar.gov/sites/default/files/specs//private/ENERGY%20STAR%20Final%20Version%205.0%20Residential%20Refrigerators%20and%20Freezers%20Program%20Requirements.pdf>)

The Property "status" is a boolean indicating whether the function is on, if off then defrost is scheduled as part of normal device operation.

The Property "startTime" is an ISO8601 encoded start time for the interval in which defrost shall not occur.

The Property "stopTime" is an ISO8601 encoded stop time for the interval in which defrost shall not occur.

The Property "interval" with additional range restrictions is the time in minutes of the period that starts at starttime (if not present the default is 240).

The Properties "stopTime" and "interval" are mutually exclusive; they cannot both be present in a Resource instance.

6.70.2 Example URI

/DelayDefrostResURI

6.70.3 Resource type

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

6.70.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Delay Defrost",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/DelayDefrostResURI" : {
      "get": {
        "description": "This Resource describes the delay defrost function as defined by the US
Energy Star Specifications.\nSee Energy Star Refrigerator Requirements Version 5 Section
4).\n(https://www.energystar.gov/sites/default/files/specs//private/ENERGY%20STAR%20Final%20Version%
205.0%20Residential%20Refrigerators%20and%20Freezers%20Program%20Requirements.pdf)\nThe Property
\"status\" is a boolean indicating whether the function is on, if off then defrost is scheduled as
part of normal device operation.\nThe Property \"startTime\" is an ISO8601 encoded start time for
the interval in which defrost shall not occur.\nThe Property \"stopTime\" is an ISO8601 encoded stop
time for the interval in which defrost shall not occur.\nThe Property \"interval\" with additional
range restrictions is the time in minutes of the period that starts at starttime (if not present the
default is 240).\nThe Properties \"stopTime\" and \"interval\" are mutually exclusive; they cannot
both be present in a Resource instance.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example":
{
  "rt": ["oic.r.delaydefrost"],
  "if": ["oic.if.a", "oic.if.baseline"],
  "startTime": "T06:00:00Z",
  "status": false
},
            "schema": { "$ref": "#/definitions/DelayDefrost" }
          }
        }
      },
      "post": {
        "description": "Activates the desired Delay Defrost functions\n",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/DelayDefrost" },
            "x-example":
{
  "status": true,
  "startTime": "T06:00:00Z",
  "interval": 180
}
          }
        ]
      }
    }
  }
}
```

```

13919         "responses": {
13920             "200": {
13921                 "description": "Indicates that the DelayDefrost function was changed.\n\nThe new
13922 representation may be provided in the response.\n",
13923                 "x-example":
13924                     {
13925                         "status": true,
13926                         "startTime": "T06:00:00Z",
13927                         "interval": 180
13928                     },
13929                 ,
13930                 "schema": { "$ref": "#/definitions/DelayDefrost" }
13931             },
13932             "403": {
13933                 "description": "Indicates the update to the time properties was rejected.\n\nReasons
13934 for rejection:\n\n invalid time entry\n\nThe current unchanged representation may be provided in the
13935 response.\n",
13936                 "x-example":
13937                     {
13938                         "status": true,
13939                         "startTime": "T06:00:00Z",
13940                         "interval": 180
13941                     },
13942                 "schema": { "$ref": "#/definitions/DelayDefrost" }
13943             }
13944         }
13945     }
13946 },
13947 },
13948 "parameters": {
13949     "interface": {
13950         "in": "query",
13951         "name": "if",
13952         "type": "string",
13953         "enum": ["oic.if.a", "oic.if.baseline"]
13954     }
13955 },
13956 "definitions": {
13957     "DelayDefrost" : {
13958         "properties": {
13959             "rt": {
13960                 "description": "The Resource Type.",
13961                 "items": {
13962                     "enum": ["oic.r.delaydefrost"],
13963                     "maxLength": 64,
13964                     "type": "string"
13965                 },
13966                 "minItems": 1,
13967                 "uniqueItems": true,
13968                 "readOnly": true,
13969                 "type": "array"
13970             },
13971             "status": {
13972                 "description": "Indicates whether any supported delay defrost function is active.",
13973                 "type": "boolean"
13974             },
13975             "interval": {
13976                 "description": "Defrost interval as defined by Energy Star.",
13977                 "minimum": 1,
13978                 "maximum": 1440,
13979                 "default": 240,
13980                 "type": "integer"
13981             },
13982             "stopTime": {
13983                 "description": "Stop time for the time period, if present interval cannot be present.
13984 This is the time of day at which the delay interval stops.",
13985                 "type": "string",
13986                 "pattern": "^[T]([0-2][0-9]:[0-5][0-9]:[0-5][0-9])([zZ]|([\\+|-])([01]\\d|2[0-3]):?([0-
13987 5]\\d|\\d))$"
13988             },
13989             "startTime": {
13990                 "description": "Start time for the time period. This is the time of day at which the delay

```

```

13991 interval starts.",
13992     "type": "string",
13993     "pattern": "^[T]([0-2][0-9]:[0-5][0-9]:[0-5][0-9])([zZ]|([\\+|-])([01]\\d|2[0-3]))?([0-
13994 5]\\d))$"
13995   },
13996   "n": {
13997     "$ref":
13998     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
13999     schema.json#/definitions/n"
14000   },
14001   "id": {
14002     "$ref":
14003     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14004     schema.json#/definitions/id"
14005   },
14006   "if": {
14007     "description": "The OCF Interface set supported by this Resource.",
14008     "items": {
14009       "enum": [
14010         "oic.if.a",
14011         "oic.if.baseline"
14012       ],
14013       "type": "string"
14014     },
14015     "minItems": 2,
14016     "uniqueItems": true,
14017     "readOnly": true,
14018     "type": "array"
14019   }
14020 },
14021 "type": "object"
14022 }
14023 }
14024 }
14025

```

6.70.5 Property definition

Table 143 defines the Properties that are part of the "oic.r.delaydefrost" Resource Type.

Table 143 – The Property definitions of the Resource with type "rt" = "oic.r.delaydefrost".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema		Read Only	The Resource Type.
status	boolean		Read Write	Indicates whether any supported delay defrost function is active.
interval	integer		Read Write	Defrost interval as defined by Energy Star.
stopTime	string		Read Write	Stop time for the time period, if present interval cannot be present. This is the time of day at which the delay interval stops.
startTime	string		Read Write	Start time for the time period. This is the time of day at which the delay interval starts.
n	multiple types: see schema		Read Write	

id	multiple types: see schema		Read Write	
if	array: see schema		Read Only	The OCF Interface set supported by this Resource.

6.70.6 CRUDN behaviour

Table 144 defines the CRUDN operations that are supported on the "oic.r.delaydefrost" Resource Type.

Table 144 – The CRUDN operations of the Resource with type "rt" = "oic.r.delaydefrost".

Create	Read	Update	Delete	Notify
	get	post		observe

6.71 Eco Mode

6.71.1 Introduction

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

6.71.2 Example URI

/EcomodeResURI

6.71.3 Resource type

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

6.71.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Eco Mode",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/EcomodeResURI" : {
      "get": {
        "description": "This Resource specifies the supported and currently active Eco Mode of a
Device\nThe Resource is a derivative of the Mode Resource (oic.r.mode) with a restriction that the
population of supportedmodes and modes Properties is restricted to the set of
values:\n\n\"disabled\", \"enabled\", \"notsupported\".\n\nThe adminforced Property indicates that the
value has been set by another party (e.g. via some offboard Smart Energy interaction)\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ]
      }
    }
  }
}
```

```

14076     "responses": {
14077         "200": {
14078             "description": "",
14079             "x-example":
14080                 {
14081                     "rt": ["oic.r.ecomode"],
14082                     "if": ["oic.if.a", "oic.if.baseline"],
14083                     "supportedModes": ["disabled", "enabled"],
14084                     "modes": ["disabled"],
14085                     "adminforced": false
14086                 },
14087             "schema": { "$ref": "#/definitions/ecomode" }
14088         }
14089     },
14090 },
14091 "post": {
14092     "description": "",
14093     "parameters": [
14094         { "$ref": "#/parameters/interface" },
14095         {
14096             "name": "body",
14097             "in": "body",
14098             "required": true,
14099             "schema": { "$ref": "#/definitions/ecomode-update" },
14100             "x-example":
14101                 {
14102                     "modes": ["enabled"]
14103                 }
14104         }
14105     ],
14106     "responses": {
14107         "200": {
14108             "description": "",
14109             "x-example":
14110                 {
14111                     "modes": ["enabled"]
14112                 },
14113             "schema": { "$ref": "#/definitions/ecomode-update" }
14114         }
14115     }
14116 },
14117 },
14118 },
14119 "parameters": {
14120     "interface": {
14121         "in": "query",
14122         "name": "if",
14123         "type": "string",
14124         "enum": ["oic.if.a", "oic.if.baseline"]
14125     }
14126 },
14127 "definitions": {
14128     "ecomode": {
14129         "properties": {
14130             "rt": {
14131                 "description": "The Resource Type.",
14132                 "items": {
14133                     "enum": ["oic.r.ecomode"],
14134                     "maxLength": 64,
14135                     "type": "string"
14136                 },
14137                 "minItems": 1,
14138                 "uniqueItems": true,
14139                 "readOnly": true,
14140                 "type": "array"
14141             },
14142             "modes": {
14143                 "description": "The array of the currently active mode(s).",
14144                 "items": {
14145                     "enum": ["disabled", "enabled", "notsupported"],
14146                     "type": "string"
14147                 }
14148             }
14149         }
14150     }
14151 }

```



```

14148         "uniqueItems": true,
14149         "type": "array"
14150     },
14151     "supportedModes": {
14152         "description": "The array of possible modes the device supports.",
14153         "items": {
14154             "enum": ["disabled", "enabled", "notsupported"],
14155             "type": "string"
14156         },
14157         "readOnly": true,
14158         "type": "array"
14159     },
14160     "adminforced": {
14161         "description": "The indicator that the current mode of operation has been forced by admin
14162 action.",
14163         "readOnly": true,
14164         "type": "boolean"
14165     },
14166     "n": {
14167         "$ref":
14168 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14169 schema.json#/definitions/n"
14170     },
14171     "id": {
14172         "$ref":
14173 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14174 schema.json#/definitions/id"
14175     },
14176     "if": {
14177         "description": "The OCF Interface set supported by this Resource.",
14178         "items": {
14179             "enum": [
14180                 "oic.if.a",
14181                 "oic.if.baseline"
14182             ],
14183             "type": "string"
14184         },
14185         "minItems": 2,
14186         "uniqueItems": true,
14187         "readOnly": true,
14188         "type": "array"
14189     }
14190 },
14191 "type" : "object",
14192 "required": ["supportedModes", "modes"]
14193 },
14194 "ecomode-update" : {
14195     "properties": {
14196         "modes": {
14197             "description": "The desired mode.",
14198             "items": {
14199                 "enum": ["disabled", "enabled", "notsupported"],
14200                 "type": "string"
14201             },
14202             "type": "array"
14203         }
14204     },
14205     "type": "object",
14206     "required": ["modes"]
14207 }
14208 }
14209 }
14210

```

6.71.5 Property definition

Table 145 defines the Properties that are part of the "oic.r.ecomode" Resource Type.

14213 **Table 145 – The Property definitions of the Resource with type "rt" = "oic.r.ecomode".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
modes	array: see schema	Yes	Read Write	The array of the currently active mode(s).
supportedModes	array: see schema	Yes	Read Only	The array of possible modes the device supports.
adminforced	boolean	No	Read Only	The indicator that the current mode of operation has been forced by admin action.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
modes	array: see schema	Yes	Read Write	The desired mode.

14214 6.71.6 CRUDN behaviour

14215 Table 146 defines the CRUDN operations that are supported on the "oic.r.ecomode" Resource
14216 Type.

14217 **Table 146 – The CRUDN operations of the Resource with type "rt" = "oic.r.ecomode".**

Create	Read	Update	Delete	Notify
	get	post		observe

14218 6.72 Heating Zone

14219 6.72.1 Introduction

14220 This Resource provides information about the status of a (single) heating zone of a Cook-Top.
14221 It describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the device
14222 implements pot recognition).

14223 The Property "maxheatinglevel" defines the max level for the heating zone

14224 The Property "heatinglevel" is the current heating level of the zone

14225 For each element, the value range is from 0 (indication that the zone is not heating) to
14226 "maxheatinglevel".

14227 6.72.2 Example URI

14228 /HeatingZoneResURI

14229 6.72.3 Resource type

14230 The Resource Type is defined as: "oic.r.heatingzone".

14231 6.72.4 OpenAPI 2.0 definition

```
14232 {
14233   "swagger": "2.0",
14234   "info": {
14235     "title": "Heating Zone",
14236     "version": "20190215",
14237     "license": {
```

```

14238         "name": "OCF Data Model License",
14239         "url":
14240 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
14241 CENSE.md",
14242         "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
14243 reserved.",
14244     },
14245     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
14246 },
14247 "schemas": ["http"],
14248 "consumes": ["application/json"],
14249 "produces": ["application/json"],
14250 "paths": {
14251     "/HeatingZoneResURI" : {
14252         "get": {
14253             "description": "This Resource provides information about the status of a (single) heating
14254 zone of a Cook-Top.\nIt describes the case of a Cook-Top whose zones can be activated dynamically
14255 (i.e. the device implements pot recognition).\nThe Property \"maxheatinglevel\" defines the max
14256 level for the heating zone\nThe Property \"heatinglevel\" is the current heating level of the zone\n
14257 For each element, the value range is from 0 (indication that the zone is not heating) to
14258 \"maxheatinglevel\".",
14259             "parameters": [
14260                 { "$ref": "#/parameters/interface" }
14261             ],
14262             "responses": {
14263                 "200": {
14264                     "description": "RETRIEVES the current heating zone information.",
14265                     "x-example":
14266 {
14267     "rt": ["oic.r.heatingzone"],
14268     "if": ["oic.if.s", "oic.if.baseline"],
14269     "maxheatinglevel": 6,
14270     "heatinglevel": 0
14271 },
14272                     "schema": { "$ref": "#/definitions/HeatingZone" }
14273                 }
14274             }
14275         }
14276     },
14277     "parameters": {
14278         "interface": {
14279             "in": "query",
14280             "name": "if",
14281             "type": "string",
14282             "enum": ["oic.if.s", "oic.if.baseline"]
14283         }
14284     },
14285     "definitions": {
14286         "HeatingZone" : {
14287             "properties": {
14288                 "rt": {
14289                     "description": "The Resource Type.",
14290                     "items": {
14291                         "enum": ["oic.r.heatingzone"],
14292                         "maxLength": 64,
14293                         "type": "string"
14294                     },
14295                     "minItems": 1,
14296                     "uniqueItems": true,
14297                     "readOnly": true,
14298                     "type": "array"
14299                 },
14300                 "heatinglevel": {
14301                     "description": "The current heating level for the zone.",
14302                     "readOnly": true,
14303                     "type": "integer"
14304                 },
14305                 "maxheatinglevel": {
14306                     "description": "The maximum heating level for the zone.",
14307                     "readOnly": true,
14308                     "type": "integer"
14309                 }
14310             }
14311         }
14312     }
14313 }

```

```

14310     },
14311     "n": {
14312         "$ref":
14313         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14314         schema.json#/definitions/n"
14315     },
14316     "id": {
14317         "$ref":
14318         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14319         schema.json#/definitions/id"
14320     },
14321     "if": {
14322         "description": "The OCF Interface set supported by this Resource.",
14323         "items": {
14324             "enum": [
14325                 "oic.if.s",
14326                 "oic.if.baseline"
14327             ],
14328             "type": "string"
14329         },
14330         "minItems": 2,
14331         "uniqueItems": true,
14332         "readOnly": true,
14333         "type": "array"
14334     }
14335 },
14336 "type": "object",
14337 "required": ["maxheatinglevel", "heatinglevel"]
14338 }
14339 }
14340 }
14341

```

6.72.5 Property definition

Table 147 defines the Properties that are part of the "oic.r.heatingzone" Resource Type.

Table 147 – The Property definitions of the Resource with type "rt" = "oic.r.heatingzone".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
heatinglevel	integer	Yes	Read Only	The current heating level for the zone.
maxheatinglevel	integer	Yes	Read Only	The maximum heating level for the zone.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

6.72.6 CRUDN behaviour

Table 148 defines the CRUDN operations that are supported on the "oic.r.heatingzone" Resource Type.

Table 148 – The CRUDN operations of the Resource with type "rt" = "oic.r.heatingzone".

Create	Read	Update	Delete	Notify
	get			observe

14349 6.73 Heating Zone Collection

14350 6.73.1 Introduction

14351 This Resource provides information about the status of the heating zones of a Cook-Top.
14352 It describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the device
14353 implements pot recognition).

14354 The resource is a Collection of instances of oic.r.heatingzone detailing the individual cooktop
14355 zones

14356 Retrieves the current heating zone information.

14357

14358 6.73.2 Example URI

14359 /HeatingZoneResURI

14360 6.73.3 Resource type

14361 The Resource Type is defined as: "oic.r.heatingzonecollection, oic.wk.col".

14362 6.73.4 OpenAPI 2.0 definition

```
14363 {
14364   "swagger": "2.0",
14365   "info": {
14366     "title": "Heating Zone Collection",
14367     "version": "20190613",
14368     "license": {
14369       "name": "OCF Data Model License",
14370       "url":
14371 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
14372 CENSE.md",
14373       "x-copyright": "copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
14374     },
14375     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
14376   },
14377   "schemes": ["http"],
14378   "consumes": ["application/json"],
14379   "produces": ["application/json"],
14380   "paths": {
14381     "/HeatingZoneResURI?if=oic.if.ll" : {
14382       "get": {
14383         "description": "This Resource provides information about the status of the heating zones of
14384 a Cook-Top.\nIt describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the
14385 device implements pot recognition).\nThe resource is a Collection of instances of oic.r.heatingzone
14386 detailing the individual cooktop zones\n",
14387         "parameters": [
14388           {"$ref": "#/parameters/interface-all"}
14389         ],
14390         "responses": {
14391           "200": {
14392             "description": "",
14393             "x-example":
14394 [
14395   {"href": "/myZone1ResURI", "rt": ["oic.r.heatingzone"], "if":
14396 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
14397   {"href": "/myZone2ResURI", "rt": ["oic.r.heatingzone"], "if":
14398 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
14399   {"href": "/myZone3ResURI", "rt": ["oic.r.heatingzone"], "if":
14400 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
14401   {"href": "/myZone4ResURI", "rt": ["oic.r.heatingzone"], "if":
14402 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
14403         ],
14404         "schema": { "$ref": "#/definitions/HeatingZone-ll" }
14405       }
14406     }
14407   },
14408   "/HeatingZoneResURI?if=oic.if.b": {
14409     "get": {
```

```

14411         "description": "This Resource provides information about the status of the heating zones of
14412 a Cook-Top.\nIt describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the
14413 device implements pot recognition).\nThe resource is a Collection of instances of oic.r.heatingzone
14414 detailing the individual cooktop zones\n",
14415         "parameters": [
14416             { "$ref": "#/parameters/interface-all" }
14417         ],
14418         "responses": {
14419             "200": {
14420                 "description" : "",
14421                 "x-example": [
14422                     {
14423                         "href": "/heatingZoneLeftResURI",
14424                         "rep": {
14425                             "maxheatinglevel": 6,
14426                             "heatinglevel": 0
14427                         }
14428                     },
14429                     {
14430                         "href": "/heatingZoneRightResURI",
14431                         "rep": {
14432                             "maxheatinglevel": 6,
14433                             "heatinglevel": 3
14434                         }
14435                     }
14436                 ],
14437                 "schema": { "$ref": "#/definitions/HeatingZoneCollectionBatch-Retrieve" }
14438             }
14439         }
14440     },
14441     {
14442         "/HeatingZoneResURI?if=oic.if.baseline" : {
14443             "get": {
14444                 "description": "This Resource provides information about the status of the heating zones of
14445 a Cook-Top.\nIt describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the
14446 device implements pot recognition).\nThe resource is a Collection of instances of oic.r.heatingzone
14447 detailing the individual cooktop zones\nRetrieves the current heating zone information.\n",
14448                 "parameters": [
14449                     { "$ref": "#/parameters/interface-all" }
14450                 ],
14451                 "responses": {
14452                     "200": {
14453                         "description" : "",
14454                         "x-example":
14455                         {
14456                             "rt": [ "oic.r.heatingzonecollection", "oic.wk.col" ],
14457                             "if": [ "oic.if.ll", "oic.if.b", "oic.if.baseline" ],
14458                             "rts": [ "oic.r.heatingzone" ],
14459                             "links": [
14460                                 { "href": "/myZone1ResURI", "rt": [ "oic.r.heatingzone" ], "if":
14461 [ "oic.if.s", "oic.if.baseline" ], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] },
14462                                 { "href": "/myZone2ResURI", "rt": [ "oic.r.heatingzone" ], "if":
14463 [ "oic.if.s", "oic.if.baseline" ], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] },
14464                                 { "href": "/myZone3ResURI", "rt": [ "oic.r.heatingzone" ], "if":
14465 [ "oic.if.s", "oic.if.baseline" ], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] },
14466                                 { "href": "/myZone4ResURI", "rt": [ "oic.r.heatingzone" ], "if":
14467 [ "oic.if.s", "oic.if.baseline" ], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] }
14468                             ]
14469                         },
14470                         "schema": { "$ref": "#/definitions/HeatingZone" }
14471                     }
14472                 }
14473             }
14474         },
14475         "parameters": {
14476             "interface-all" : {
14477                 "in" : "query",
14478                 "name" : "if",
14479                 "type" : "string",
14480                 "enum" : [ "oic.if.ll", "oic.if.b", "oic.if.baseline" ]
14481             }
14482         }

```

```

14483     },
14484     "definitions": {
14485         "HeatingZone-ll" : {
14486             "items": {
14487                 "$ref": "#/definitions/oic.oic-link"
14488             },
14489             "type": "array",
14490             "minItems": 1,
14491             "uniqueItems": true,
14492             "readOnly": true
14493         },
14494         "oic.oic-link": {
14495             "type": "object",
14496             "properties": {
14497                 "anchor": {
14498                     "$ref":
14499 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
14500 schema.json#/definitions/anchor"
14501                 },
14502                 "di": {
14503                     "$ref":
14504 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
14505 schema.json#/definitions/di"
14506                 },
14507                 "eps": {
14508                     "$ref":
14509 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
14510 schema.json#/definitions/eps"
14511                 },
14512                 "href": {
14513                     "$ref":
14514 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
14515 schema.json#/definitions/href"
14516                 },
14517                 "ins": {
14518                     "$ref":
14519 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
14520 schema.json#/definitions/ins"
14521                 },
14522                 "p": {
14523                     "$ref":
14524 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
14525 schema.json#/definitions/p"
14526                 },
14527                 "rel": {
14528                     "$ref":
14529 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
14530 schema.json#/definitions/rel_array"
14531                 },
14532                 "title": {
14533                     "$ref":
14534 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
14535 schema.json#/definitions/title"
14536                 },
14537                 "type": {
14538                     "$ref":
14539 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
14540 schema.json#/definitions/type"
14541                 },
14542                 "if": {
14543                     "description": "The OCF Interfaces supported by the target Resource",
14544                     "items": {
14545                         "enum": [
14546                             "oic.if.s",
14547                             "oic.if.baseline"
14548                         ],
14549                         "type": "string",
14550                         "maxLength": 64
14551                     },
14552                     "minItems": 2,
14553                     "uniqueItems": true,
14554                     "type": "array",

```

```

14555         "readOnly": true
14556     },
14557     "rt": {
14558         "description": "Resource Type of the target Resource",
14559         "items": {
14560             "maxLength": 64,
14561             "type": "string",
14562             "enum": ["oic.r.heatingzone"]
14563         },
14564         "minItems": 1,
14565         "type": "array",
14566         "uniqueItems": true,
14567         "readOnly": true
14568     }
14569 },
14570 "required": [
14571     "href",
14572     "rt",
14573     "if"
14574 ],
14575 },
14576 "HeatingZone" : {
14577     "properties": {
14578         "rt": {
14579             "items": {
14580                 "enum": [
14581                     "oic.r.heatingzonecollection",
14582                     "oic.wk.col"
14583                 ],
14584                 "type": "string",
14585                 "maxLength": 64
14586             },
14587             "minItems": 2,
14588             "type": "array",
14589             "uniqueItems": true
14590         },
14591         "links": {
14592             "items": {
14593                 "$ref": "#/definitions/oic.oic-link"
14594             },
14595             "type": "array",
14596             "minItems": 1,
14597             "uniqueItems": true,
14598             "readOnly": true
14599         },
14600         "n": {
14601             "$ref" :
14602 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14603 schema.json#/definitions/n"
14604         },
14605         "id": {
14606             "$ref" :
14607 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14608 schema.json#/definitions/id"
14609         },
14610         "rts": {
14611             "items": {
14612                 "enum": ["oic.r.heatingzone"],
14613                 "type": "string",
14614                 "maxLength": 64
14615             },
14616             "minItems": 1,
14617             "type": "array",
14618             "readOnly": true,
14619             "uniqueItems": true
14620         },
14621         "if": {
14622             "description": "The OCF Interfaces supported by this Resource",
14623             "items": {
14624                 "enum": [
14625                     "oic.if.ll",
14626                     "oic.if.b",

```



```

14627         "oic.if.baseline"
14628     ],
14629     "type": "string",
14630     "maxLength": 64
14631 },
14632 "minItems": 1,
14633 "readOnly": true,
14634 "uniqueItems": true,
14635 "type": "array"
14636 }
14637 },
14638 "type" : "object"
14639 },
14640 "HeatingZoneCollectionBatch-Retrieve" : {
14641     "type": "array",
14642     "minItems": 1,
14643     "uniqueItems": true,
14644     "items": {
14645         "type": "object",
14646         "additionalProperties": true,
14647         "properties": {
14648             "href": {
14649                 "$ref":
14650 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
14651 schema.json#/definitions/href"
14652             },
14653             "rep": {
14654                 "$ref":
14655 "https://openconnectivityfoundation.github.io/IoTDataModels/HeatingZoneResURI.swagger.json#/definiti
14656 ons/HeatingZone"
14657             }
14658         },
14659         "required": [
14660             "href",
14661             "rep"
14662         ]
14663     }
14664 }
14665 }
14666 }
14667

```

6.73.5 Property definition

Table 149 defines the Properties that are part of the "oic.r.heatingzonecollection, oic.wk.col" Resource Type.

Table 149 – The Property definitions of the Resource with type "rt" = "oic.r.heatingzonecollection, oic.wk.col".

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

title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	
if	array: see schema	Yes	Read Only	The OCF Interfaces supported by the target Resource
rt	array: see schema	Yes	Read Only	Resource Type of the target Resource
rt	array: see schema		Read Write	
links	array: see schema		Read Only	
n	multiple types: see schema		Read Write	
id	multiple types: see schema		Read Write	
rts	array: see schema		Read Only	
if	array: see schema		Read Only	The OCF Interfaces supported by this Resource
href	multiple types: see schema	Yes	Read Write	
rep	multiple types: see schema	Yes	Read Write	

14673 6.73.6 CRUDN behaviour

14674 Table 150 defines the CRUDN operations that are supported on the "oic.r.heatingzonecollection,
14675 oic.wk.col" Resource Type.

Table 150 – The CRUDN operations of the Resource with type "rt" = "oic.r.heatingzonecollection, oic.wk.col".

Create	Read	Update	Delete	Notify
	get			observe

14678 6.74 Selectable Levels

14679 6.74.1 Introduction

14680 This Resource provides a set of device defined levels that can be selected for an operation.
14681 For example where a humidifier has a discrete set that model different humidity levels that can be
14682 set.

14683 The Property "availablelevels" is an array of the levels that can be selected, these can be a
14684 number or an integer (as subset of integer).

14685 The Property "targetlevel" is the level that has currently been selected and is written to in order to
14686 select a new level.

14687 When retrieved the targetlevel provides the actual value that has been selected.

14688 6.74.2 Example URI

14689 /SelectableLevelsResURI

14690 6.74.3 Resource type

14691 The Resource Type is defined as: "oic.r.selectablelevels".

6.74.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Selectable Levels",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/SelectableLevelsResURI" : {
      "get": {
        "description": "This Resource provides a set of device defined levels that can be selected
for an operation.\nFor example where a humidifier has a discrete set that model different humidity
levels that can be set.\nThe Property \"availablelevels\" is an array of the levels that can be
selected, these can be a number or an integer (as subset of integer).\nThe Property \"targetlevel\"
is the level that has currently been selected and is written to in order to select a new
level.\nWhen retrieved the targetlevel provides the actual value that has been selected.",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
            "description": "Example is using integers for selection levels.",
            "x-example": {
              "rt": ["oic.r.selectablelevels"],
              "if": ["oic.if.a", "oic.if.baseline"],
              "availablelevels": [0, 2, 4, 6, 8],
              "targetlevel": 2
            },
            "schema": { "$ref": "#/definitions/SelectableLevels" }
          }
        }
      },
      "post": {
        "description": "Sets the current level from the set \"availablelevels\".",
        "parameters": [
          {"$ref": "#/parameters/interface"},
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/UpdateSchema" },
            "x-example": {
              "targetlevel": 4
            }
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "targetlevel": 4
            },
            "schema": { "$ref": "#/definitions/UpdateSchema" }
          },
          "403": {
            "description": "Generated by a OCF Server when an attempt is made to update to a
```

```

14763 targetlevel that is not in the set of availablelevels",
14764     "x-example":
14765     {
14766         "availablelevels": [0, 2, 4, 6, 8],
14767         "targetlevel": 2
14768     },
14769     "schema": { "$ref": "#/definitions/SelectableLevels" }
14770 }
14771 }
14772 }
14773 }
14774 },
14775 "parameters": {
14776     "interface": {
14777         "in": "query",
14778         "name": "if",
14779         "type": "string",
14780         "enum": ["oic.if.a", "oic.if.baseline"]
14781     }
14782 },
14783 "definitions": {
14784     "SelectableLevels" : {
14785         "properties": {
14786             "rt": {
14787                 "description": "The Resource Type.",
14788                 "items": {
14789                     "enum": ["oic.r.selectablelevels"],
14790                     "maxLength": 64,
14791                     "type": "string"
14792                 },
14793                 "minItems": 1,
14794                 "uniqueItems": true,
14795                 "readOnly": true,
14796                 "type": "array"
14797             },
14798             "targetlevel": {
14799                 "description": "The target level from the available selectable set.",
14800                 "type": "number"
14801             },
14802             "availablelevels": {
14803                 "description": "The set of levels to select from.",
14804                 "items": {
14805                     "type": "number"
14806                 },
14807                 "readOnly": true,
14808                 "type": "array"
14809             },
14810             "if": {
14811                 "description": "The OCF Interface set supported by this Resource.",
14812                 "items": {
14813                     "enum": [
14814                         "oic.if.a",
14815                         "oic.if.baseline"
14816                     ],
14817                     "type": "string"
14818                 },
14819                 "minItems": 2,
14820                 "uniqueItems": true,
14821                 "readOnly": true,
14822                 "type": "array"
14823             }
14824         },
14825         "type": "object",
14826         "required": ["availablelevels", "targetlevel"]
14827     },
14828     "UpdateSchema" : {
14829         "properties": {
14830             "targetlevel": {
14831                 "description": "The target level from the available selectable set",
14832                 "type": "number"
14833             }
14834         },

```

```

14835         "type": "object",
14836         "required": ["targetlevel"]
14837     }
14838 }
14839 }
14840

```

6.74.5 Property definition

Table 151 defines the Properties that are part of the "oic.r.selectablelevels" Resource Type.

Table 151 – The Property definitions of the Resource with type "rt" = "oic.r.selectablelevels".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
targetlevel	number	Yes	Read Write	The target level from the available selectable set.
availablelevels	array: see schema	Yes	Read Only	The set of levels to select from.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
targetlevel	number	Yes	Read Write	The target level from the available selectable set

6.74.6 CRUDN behaviour

Table 152 defines the CRUDN operations that are supported on the "oic.r.selectablelevels" Resource Type.

Table 152 – The CRUDN operations of the Resource with type "rt" = "oic.r.selectablelevels".

Create	Read	Update	Delete	Notify
	get	post		observe

6.75 Value Conditional

6.75.1 Introduction

This Resource specifies conditions that can be applied to an observed value in any Resource.

These conditions are applied by the OCF 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.

An OCF 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"].

The Property "threshold" is the amount by which the thing being observed must change before a notification is sent.

The Property "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 Property "maxnotifyperiod" is a timer that 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.

6.75.2 Example URI

/ValueConditionalResURI

6.75.3 Resource type

The Resource Type is defined as: "oic.r.value.conditional".

6.75.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Value Conditional",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
        "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
        CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
        reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/ValueConditionalResURI" : {
      "get": {
        "description": "This Resource specifies conditions that can be applied to an observed value
        in any Resource.\nThese conditions are applied by the OCF Server exposing the Resource to any
        generated notifications because of subscriptions to the Resource.\nA unicast RETRIEVE to the
        Resource will receive the most recent value; which may not be the most recent notified value.\nAn
        OCF Server exposes this Resource in association with the Resource conveying the observed
        value.\nThis 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\"].\nThe Property \"threshold\" is the amount by which the thing being
        observed must change before a notification is sent.\nThe Property \"minnotifyperiod\" is the minimum
        time in ms (milliseconds) that must elapse before a notification is sent.\nIf the maxnotifyperiod
        (time in ms (milliseconds)) elapses then a notification must be sent.\nThe Property
        \"maxnotifyperiod\" is a timer that resets each time a notification is sent.\nA value of '0' for any
        of \"threshold\", \"minnotifyperiod\" or \"maxnotifyperiod\" means that the capability is supported
        but not active.",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.value.conditional"],
              "if": ["oic.if.rw", "oic.if.baseline"],
              "threshold": 2,
              "minnotifyperiod": 2000,
              "maxnotifyperiod": 5000
            },
            "schema": { "$ref": "#/definitions/valueconditional" }
          }
        }
      },
      "post": {
        "description": "",
        "parameters": [
          {"$ref": "#/parameters/interface"},
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/valueconditional" }
          }
        ]
      }
    }
  }
}
```

```

14936         "x-example":
14937         {
14938             "threshold": 2,
14939             "minnotifyperiod": 1500
14940         }
14941     },
14942 ],
14943 "responses": {
14944     "200": {
14945         "description": "",
14946         "x-example":
14947         {
14948             "threshold": 2,
14949             "minnotifyperiod": 1500
14950         },
14951         "schema": { "$ref": "#/definitions/valueconditional" }
14952     }
14953 }
14954 }
14955 },
14956 },
14957 "parameters": {
14958     "interface": {
14959         "in": "query",
14960         "name": "if",
14961         "type": "string",
14962         "enum": ["oic.if.rw", "oic.if.baseline"]
14963     }
14964 },
14965 "definitions": {
14966     "valueconditional" : {
14967         "properties": {
14968             "rt": {
14969                 "description": "The Resource Type.",
14970                 "items": {
14971                     "maxLength": 64,
14972                     "type": "string",
14973                     "enum": ["oic.r.value.conditional"]
14974                 },
14975                 "minItems": 1,
14976                 "uniqueItems": true,
14977                 "readOnly": true,
14978                 "type": "array"
14979             },
14980             "maxnotifyperiod": {
14981                 "description": "The maximum elapsed time in ms before a notification must be sent.",
14982                 "minimum": 0,
14983                 "type": "integer"
14984             },
14985             "minnotifyperiod": {
14986                 "description": "The minimum elapsed time in ms before a notification is sent.",
14987                 "minimum": 0,
14988                 "type": "integer"
14989             },
14990             "threshold": {
14991                 "description": "The amount by which the measured value must change before a notification
14992 is sent.",
14993                 "minimum": 0,
14994                 "type": "number"
14995             },
14996             "n": {
14997                 "$ref":
14998 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
14999 schema.json#/definitions/n"
15000             },
15001             "id": {
15002                 "$ref":
15003 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15004 schema.json#/definitions/id"
15005             },
15006             "if": {
15007                 "description": "The OCF Interface set supported by this Resource.",

```

```

15008         "items": {
15009             "enum": [
15010                 "oic.if.rw",
15011                 "oic.if.baseline"
15012             ],
15013             "type": "string",
15014             "maxLength": 64
15015         },
15016         "minItems": 2,
15017         "uniqueItems": true,
15018         "readOnly": true,
15019         "type": "array"
15020     },
15021 },
15022     "anyOf": [
15023         {
15024             "required": ["threshold"]
15025         },
15026         {
15027             "required": ["minnotifyperiod"]
15028         },
15029         {
15030             "required": ["maxnotifyperiod"]
15031         }
15032     ],
15033     "type": "object"
15034 }
15035 }
15036 }
15037

```

6.75.5 Property definition

Table 153 defines the Properties that are part of the "oic.r.value.conditional" Resource Type.

Table 153 – The Property definitions of the Resource with type "rt" = "oic.r.value.conditional".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
maxnotifyperiod	integer	Yes	Read Write	The maximum elapsed time in ms before a notification must be sent.
minnotifyperiod	integer	No	Read Write	The minimum elapsed time in ms before a notification is sent.
threshold	number	No	Read Write	The amount by which the measured value must change before a notification is sent.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

6.75.6 CRUDN behaviour

Table 154 defines the CRUDN operations that are supported on the "oic.r.value.conditional" Resource Type.

15045
15046

Table 154 – The CRUDN operations of the Resource with type "rt" = "oic.r.value.conditional".

Create	Read	Update	Delete	Notify
	get	post		observe

15047

6.76 Colour Space Coordinates

15048

6.76.1 Introduction

15049

This Resource describes the colour using colour space co-ordinates.

15050

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

15051

The first item in the array is the X coordinate.

15052

The second item in the array is the Y coordinate.

15053

If the Property "precision" is provided it applies to both the X and Y coordinates.

15054

The Resource provides the colour using colour space coordinates.

15055

15056

6.76.2 Example URI

15057

/example/ColourSpaceCoordinatesResURI

15058

6.76.3 Resource type

15059

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

15060

6.76.4 OpenAPI 2.0 definition

15061

```
{
  "swagger": "2.0",
  "info": {
    "title": "Colour Space Coordinates",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/example/ColourSpaceCoordinatesResURI" : {
      "get": {
        "description": "This Resource describes the colour using colour space co-ordinates.\nThe
Property \"csc\" is the colour space coordinates in CIE colour space.\n The first item in the array
is the X coordinate.\n The second item in the array is the Y coordinate.\n If the Property
\"precision\" is provided it applies to both the X and Y coordinates.\nThe Resource provides the
colour using colour space coordinates.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example":
            {
              "rt": ["oic.r.colour.csc"],
              "if": ["oic.if.a", "oic.if.baseline"],
              "csc": [0.41, 0.51]
            },
            "schema": { "$ref": "#/definitions/ColourCSC" }
          }
        }
      }
    }
  }
}
```

15101

```

15102     },
15103     "post": {
15104         "description": "Sets current colour space coordinates\n",
15105         "parameters": [
15106             { "$ref": "#/parameters/interface" },
15107             {
15108                 "name": "body",
15109                 "in": "body",
15110                 "required": true,
15111                 "schema": { "$ref": "#/definitions/ColourCSC" },
15112                 "x-example":
15113                     {
15114                         "csc": [0.40, 0.70]
15115                     }
15116             }
15117         ],
15118         "responses": {
15119             "200": {
15120                 "description": "",
15121                 "x-example":
15122                     {
15123                         "csc": [0.40, 0.70]
15124                     },
15125                 "schema": { "$ref": "#/definitions/ColourCSC" }
15126             }
15127         }
15128     }
15129 },
15130 },
15131 "parameters": {
15132     "interface": {
15133         "in": "query",
15134         "name": "if",
15135         "type": "string",
15136         "enum": ["oic.if.a", "oic.if.baseline"]
15137     }
15138 },
15139 "definitions": {
15140     "ColourCSC": {
15141         "properties": {
15142             "rt": {
15143                 "description": "The Resource Type.",
15144                 "items": {
15145                     "enum": ["oic.r.colour.csc"],
15146                     "maxLength": 64,
15147                     "type": "string"
15148                 },
15149                 "minItems": 1,
15150                 "uniqueItems": true,
15151                 "readOnly": true,
15152                 "type": "array"
15153             },
15154             "csc": {
15155                 "description": "The X and Y coordinates of the colour in CIE colour space.",
15156                 "items": {
15157                     "maximum": 1,
15158                     "minimum": 0,
15159                     "type": "number"
15160                 },
15161                 "maxItems": 2,
15162                 "minItems": 2,
15163                 "type": "array"
15164             },
15165             "n": {
15166                 "$ref":
15167                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15168                 schema.json#/definitions/n"
15169             },
15170             "id": {
15171                 "$ref":
15172                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15173                 schema.json#/definitions/id"

```

```

15174     },
15175     "precision": {
15176         "$ref":
15177         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
15178         schema.json#/definitions/precision"
15179     },
15180     "if": {
15181         "description": "The OCF Interface set supported by this Resource.",
15182         "items": {
15183             "enum": [
15184                 "oic.if.a",
15185                 "oic.if.baseline"
15186             ],
15187             "type": "string"
15188         },
15189         "minItems": 2,
15190         "uniqueItems": true,
15191         "readOnly": true,
15192         "type": "array"
15193     }
15194 },
15195 "type": "object",
15196 "required": ["csc"]
15197 }
15198 }
15199 }
15200

```

15201 6.76.5 Property definition

15202 Table 155 defines the Properties that are part of the "oic.r.colour.csc" Resource Type.

15203 **Table 155 – The Property definitions of the Resource with type "rt" = "oic.r.colour.csc".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
csc	array: see schema	Yes	Read Write	The X and Y coordinates of the colour in CIE colour space.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

15204 6.76.6 CRUDN behaviour

15205 Table 156 defines the CRUDN operations that are supported on the "oic.r.colour.csc" Resource
15206 Type.

15207 **Table 156 – The CRUDN operations of the Resource with type "rt" = "oic.r.colour.csc".**

Create	Read	Update	Delete	Notify
	get	post		observe

15208 6.77 Colour Temperature

15209 6.77.1 Introduction

15210 This Resource describes the colour using colour temperature conventions.
15211 The Property "ct" is the Mired colour temperature.
15212 The equivalent value in Kelvin is obtained by $\text{Colour Temp(K)} = 1,000,000/\text{Colour Temp(Mired)}$
15213 The Resource provides the colour using colour temperature conventions.

15214 6.77.2 Example URI

15215 /example/ColourTemperatureResURI

15216 6.77.3 Resource type

15217 The Resource Type is defined as: "oic.r.colour.colourtemperature".

15218 6.77.4 OpenAPI 2.0 definition

```
15219 {
15220   "swagger": "2.0",
15221   "info": {
15222     "title": "Colour Temperature",
15223     "version": "20190215",
15224     "license": {
15225       "name": "OCF Data Model License",
15226       "url":
15227         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
15228         CENSE.md",
15229       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
15230         reserved."
15231     },
15232     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
15233   },
15234   "schemes": ["http"],
15235   "consumes": ["application/json"],
15236   "produces": ["application/json"],
15237   "paths": {
15238     "/example/ColourTemperatureResURI" : {
15239       "get": {
15240         "description": "This Resource describes the colour using colour temperature
15241         conventions.\nThe Property \"ct\" is the Mired colour temperature.\nThe equivalent value in Kelvin
15242         is obtained by Colour Temp(K) = 1,000,000/Colour Temp(Mired)\nThe Resource provides the colour using
15243         colour temperature conventions.",
15244         "parameters": [
15245           { "$ref": "#/parameters/interface" }
15246         ],
15247         "responses": {
15248           "200": {
15249             "description": "",
15250             "x-example":
15251               {
15252                 "rt": ["oic.r.colour.colourtemperature"],
15253                 "if": ["oic.if.a", "oic.if.baseline"],
15254                 "ct": 457
15255               },
15256             "schema": { "$ref": "#/definitions/ColourTemp" }
15257           }
15258         }
15259       },
15260       "post": {
15261         "description": "Sets current colour temperature value\n",
15262         "parameters": [
15263           { "$ref": "#/parameters/interface" },
15264           {
15265             "name": "body",
15266             "in": "body",
15267             "required": true,
15268             "schema": { "$ref": "#/definitions/ColourTemp" },
15269             "x-example":
15270               {
```

```

15271         "ct": 457
15272     }
15273 }
15274 ],
15275 "responses": {
15276     "200": {
15277         "description": "",
15278         "x-example":
15279             {
15280                 "ct": 467
15281             },
15282         "schema": { "$ref": "#/definitions/ColourTemp" }
15283     }
15284 }
15285 }
15286 },
15287 },
15288 "parameters": {
15289     "interface": {
15290         "in": "query",
15291         "name": "if",
15292         "type": "string",
15293         "enum": ["oic.if.a", "oic.if.baseline"]
15294     }
15295 },
15296 "definitions": {
15297     "ColourTemp": {
15298         "properties": {
15299             "rt":
15300                 {
15301                     "description": "The Resource Type.",
15302                     "items": {
15303                         "maxLength": 64,
15304                         "type": "string",
15305                         "enum": ["oic.r.colour.colourtemperature"]
15306                     },
15307                     "minItems": 1,
15308                     "uniqueItems": true,
15309                     "readOnly": true,
15310                     "type": "array"
15311                 },
15312             "ct": {
15313                 "description": "The Mired colour temperature.",
15314                 "minimum": 0,
15315                 "type": "integer"
15316             },
15317             "n": {
15318                 "$ref":
15319                     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15320                     schema.json#/definitions/n"
15321             },
15322             "id": {
15323                 "$ref":
15324                     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15325                     schema.json#/definitions/id"
15326             },
15327             "range": {
15328                 "$ref":
15329                     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
15330                     schema.json#/definitions/range_integer"
15331             },
15332             "step": {
15333                 "$ref":
15334                     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
15335                     schema.json#/definitions/step_integer"
15336             },
15337             "if": {
15338                 "description": "The OCF Interface set supported by this Resource.",
15339                 "items": {
15340                     "enum": [
15341                         "oic.if.a",
15342                         "oic.if.baseline"

```

```

15343         ],
15344         "type": "string"
15345     },
15346     "minItems": 2,
15347     "uniqueItems": true,
15348     "readOnly": true,
15349     "type": "array"
15350 }
15351 },
15352 "type": "object",
15353 "required": ["ct"]
15354 }
15355 }
15356 }
15357

```

6.77.5 Property definition

Table 157 defines the Properties that are part of the "oic.r.colour.colourtemperature" Resource Type.

Table 157 – The Property definitions of the Resource with type "rt" = "oic.r.colour.colourtemperature".

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

6.77.6 CRUDN behaviour

Table 158 defines the CRUDN operations that are supported on the "oic.r.colour.colourtemperature" Resource Type.

Table 158 – The CRUDN operations of the Resource with type "rt" = "oic.r.colour.colourtemperature".

Create	Read	Update	Delete	Notify
	get	post		observe

6.78 Colour Hue and Saturation

6.78.1 Introduction

This Resource describes the colour using hue-saturation conventions.

The Property "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 Property "precision" is provided it applies to the hue angle.

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

15377 The Property "saturation" can be converted to a percentage by saturation/maximalsaturation X
 15378 100; where maximalsaturation is 32767 if the Property itself is not present.
 15379 The Property "maximalsaturation" is the upper bound on the saturation supported by the Device.
 15380 If not present the maximum value for saturation is 32767.
 15381 The Resource provides the colour using hue and saturation conventions.
 15382

15383 6.78.2 Example URI

15384 /example/ColourHueSaturationResURI

15385 6.78.3 Resource type

15386 The Resource Type is defined as: "oic.r.colour.hs".

15387 6.78.4 OpenAPI 2.0 definition

```
15388 {
15389   "swagger": "2.0",
15390   "info": {
15391     "title": "Colour Hue and Saturation",
15392     "version": "20190215",
15393     "license": {
15394       "name": "OCF Data Model License",
15395       "url":
15396         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
15397         CENSE.md",
15398       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
15399         reserved."
15400     },
15401     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
15402   },
15403   "schemes": ["http"],
15404   "consumes": ["application/json"],
15405   "produces": ["application/json"],
15406   "paths": {
15407     "/example/ColourHueSaturationResURI" : {
15408       "get": {
15409         "description": "This Resource describes the colour using hue-saturation conventions.\n
15410         Property \"hue\" is the hue angle, it is a number value as defined by the CIECAM02 model definition
15411         (see reference [CIE CIE159:2004]).\n
15412         A Device that does not support fractional hue angles can provide
15413         integer values.\n
15414         If Property \"precision\" is provided it applies to the hue angle.\n
15415         The Property \"saturation\" is an integer value as defined by the CIECAM02 model definition (see reference [CIE
15416         CIE159:2004]).\n
15417         The Property \"saturation\" can be converted to a percentage by
15418         saturation/maximalsaturation X 100; where maximalsaturation is 32767 if the Property itself is not
15419         present.\n
15420         The Property \"maximalsaturation\" is the upper bound on the saturation supported by the
15421         Device.\n
15422         If not present the maximum value for saturation is 32767.\n
15423         The Resource provides the colour
15424         using hue and saturation conventions.\n",
15425         "parameters": [
15426           { "$ref": "#/parameters/interface" }
15427         ],
15428         "responses": {
15429           "200": {
15430             "description": "",
15431             "x-example": {
15432               "rt": ["oic.r.colour.hs"],
15433               "if": ["oic.if.a", "oic.if.baseline"],
15434               "hue": 300.0,
15435               "saturation": 212,
15436               "maximalsaturation": 1000
15437             },
15438             "schema": { "$ref": "#/definitions/ColourHS" }
15439           }
15440         }
15441       },
15442       "post": {
15443         "description": "Sets current colour hue and saturation values.\n
15444         At least one of hue or
15445         saturation shall be provided in the payload.\n",
15446         "parameters": [
```

```

15441         {"$ref": "#/parameters/interface"},
15442     {
15443         "name": "body",
15444         "in": "body",
15445         "required": true,
15446         "schema": { "$ref": "#/definitions/ColourHS" },
15447         "x-example":
15448             {
15449                 "hue": 300.0,
15450                 "saturation": 212
15451             }
15452     },
15453 ],
15454 "responses": {
15455     "200": {
15456         "description": "",
15457         "x-example":
15458             {
15459                 "hue": 300.0,
15460                 "saturation": 212
15461             },
15462         "schema": { "$ref": "#/definitions/ColourHS" }
15463     }
15464 },
15465 },
15466 },
15467 },
15468 "parameters": {
15469     "interface": {
15470         "in": "query",
15471         "name": "if",
15472         "type": "string",
15473         "enum": ["oic.if.a", "oic.if.baseline"]
15474     }
15475 },
15476 "definitions": {
15477     "ColourHS": {
15478         "properties": {
15479             "rt": {
15480                 "description": "The Resource Type.",
15481                 "items": {
15482                     "enum": ["oic.r.colour.hs"],
15483                     "maxLength": 64,
15484                     "type": "string"
15485                 },
15486                 "minItems": 1,
15487                 "uniqueItems": true,
15488                 "readOnly": true,
15489                 "type": "array"
15490             },
15491             "hue": {
15492                 "description": "The hue angle as defined by the CIECAM02 model definition.",
15493                 "maximum": 360.0,
15494                 "minimum": 0.0,
15495                 "type": "number"
15496             },
15497             "saturation": {
15498                 "description": "The saturation as defined by the CIECAM02 model definition.",
15499                 "maximum": 32767,
15500                 "minimum": 0,
15501                 "type": "integer"
15502             },
15503             "maximumsaturation": {
15504                 "description": "The maximum supported value of \"saturation\" for this Device.",
15505                 "maximum": 32767,
15506                 "minimum": 0,
15507                 "readOnly": true,
15508                 "type": "integer"
15509             },
15510             "n": {
15511                 "$ref":

```



```

15513 schema.json#/definitions/n"
15514     },
15515     "id": {
15516       "$ref":
15517       "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15518       schema.json#/definitions/id"
15519     },
15520     "precision": {
15521       "$ref":
15522       "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
15523       schema.json#/definitions/precision"
15524     },
15525     "if": {
15526       "description": "The OCF Interface set supported by this Resource.",
15527       "items": {
15528         "enum": [
15529           "oic.if.a",
15530           "oic.if.baseline"
15531         ],
15532         "type": "string"
15533       },
15534       "minItems": 2,
15535       "uniqueItems": true,
15536       "readOnly": true,
15537       "type": "array"
15538     }
15539   },
15540   "type": "object",
15541   "required": ["hue", "saturation"]
15542 }
15543 }
15544 }
15545

```

15546 6.78.5 Property definition

15547 Table 159 defines the Properties that are part of the "oic.r.colour.hs" Resource Type.

15548 **Table 159 – The Property definitions of the Resource with type "rt" = "oic.r.colour.hs".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
hue	number	Yes	Read Write	The hue angle as defined by the CIECAM02 model definition.
saturation	integer	Yes	Read Write	The saturation as defined by the CIECAM02 model definition.
maximumsaturation	integer	No	Read Only	The maximum supported value of "saturation" for this Device.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

6.78.6 CRUDN behaviour

Table 160 defines the CRUDN operations that are supported on the "oic.r.colour.hs" Resource Type.

Table 160 – The CRUDN operations of the Resource with type "rt" = "oic.r.colour.hs".

Create	Read	Update	Delete	Notify
	get	post		observe

6.79 Battery Material

6.79.1 Introduction

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

6.79.2 Example URI

/BatteryMaterialResURI

6.79.3 Resource type

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

6.79.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Battery Material",
    "version": "20190222",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/BatteryMaterialResURI" : {
      "get": {
        "description": "This Resource describes the battery material represented as an enumerated
set of strings.",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example":
              {
                "rt": ["oic.r.batterymaterial"],
                "if": ["oic.if.s", "oic.if.baseline"],
                "material": "Alkaline"
              },
            "schema": { "$ref": "#/definitions/BatteryMaterial" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface" : {
      "in": "query",
      "name": "if",

```

```

15605         "type": "string",
15606         "enum": ["oic.if.s", "oic.if.baseline"]
15607     },
15608 },
15609 "definitions": {
15610     "BatteryMaterial" : {
15611         "properties": {
15612             "rt": {
15613                 "description": "The Resource Type.",
15614                 "items": {
15615                     "enum": ["oic.r.batterymaterial"],
15616                     "maxLength": 64,
15617                     "type": "string"
15618                 },
15619                 "minItems": 1,
15620                 "uniqueItems": true,
15621                 "readOnly": true,
15622                 "type": "array"
15623             },
15624             "material": {
15625                 "description": "The battery construction material (type).",
15626                 "enum": [
15627                     "Alkaline",
15628                     "Aluminium Air",
15629                     "Aluminium Ion",
15630                     "Atomic Betavoltaics",
15631                     "Atomic Optoelectric Nuclear",
15632                     "Atomic Nuclear",
15633                     "Bunsen Cell",
15634                     "Chromic Acid Cell",
15635                     "Poggendorff Cell",
15636                     "Clark Cell",
15637                     "Daniell Cell",
15638                     "Dry Cell",
15639                     "Earth",
15640                     "Flow",
15641                     "Flow Vanadium Redox",
15642                     "Flow Zinc Bromine",
15643                     "Flow Zinc Cerium",
15644                     "Frog",
15645                     "Fuel",
15646                     "Galvanic Cell",
15647                     "Glass",
15648                     "Grove Cell",
15649                     "Lead Acid",
15650                     "Lead Acid Deep Cycle",
15651                     "Lead Acid VRLA",
15652                     "Lead Acid AGM",
15653                     "Lead Acid Gel",
15654                     "Leclanche Cell",
15655                     "Lemon Potato",
15656                     "Lithium",
15657                     "Lithium Air",
15658                     "Lithium Ion",
15659                     "Lithium Ion Cobalt Oxide (ICR)",
15660                     "Lithium Ion Manganese Oxide (IMR)",
15661                     "Lithium Ion Polymer",
15662                     "Lithium Iron Phosphate",
15663                     "Lithium Sulfur",
15664                     "Lithium Titanate",
15665                     "Lithium Ion Thin Film",
15666                     "Magnesium",
15667                     "Magnesium Ion",
15668                     "Mercury",
15669                     "Molten Salt",
15670                     "Nickel Cadmium",
15671                     "Nickel Cadmium Vented Cell",
15672                     "Nickel Hydrogen",
15673                     "Nickel Iron ",
15674                     "Nickel Metal Hydride",
15675                     "Nickel Metal Hydride Low Self-Discharge",
15676                     "Nickel Oxyhydroxide",

```

```

15677         "Nickel Oxyride",
15678         "Nickel Zinc",
15679         "Organic Radical",
15680         "Paper",
15681         "Polymer Based",
15682         "Polysulfide Bromide",
15683         "Potassium Ion",
15684         "Pulvermachers Chain",
15685         "Silicon Air",
15686         "Silver Calcium",
15687         "Silver Oxide",
15688         "Silver Zinc",
15689         "Sodium Ion",
15690         "Sodium Sulfur",
15691         "Solid State",
15692         "Sugar",
15693         "Super Iron",
15694         "UltraBattery",
15695         "Voltaic Pile",
15696         "Voltaic Pile Penny",
15697         "Voltaic Pile Trough",
15698         "Water Activated",
15699         "Weston Cell",
15700         "Zinc Air",
15701         "Zinc Carbon",
15702         "Zinc Chloride",
15703         "Zinc Ion",
15704         "Unknown"
15705     ],
15706     "readOnly": true,
15707     "type": "string"
15708 },
15709 "n": {
15710     "$ref":
15711     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15712     schema.json#/definitions/n"
15713 },
15714 "id": {
15715     "$ref":
15716     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15717     schema.json#/definitions/id"
15718 },
15719 "if": {
15720     "description": "The OCF Interface set supported by this Resource.",
15721     "items": {
15722         "enum": [
15723             "oic.if.s",
15724             "oic.if.baseline"
15725         ],
15726         "type": "string"
15727     },
15728     "minItems": 2,
15729     "uniqueItems": true,
15730     "readOnly": true,
15731     "type": "array"
15732 },
15733 },
15734 "type": "object",
15735 "required": ["material"]
15736 }
15737 }
15738 }
15739

```

15740 6.79.5 Property definition

15741 Table 161 defines the Properties that are part of the "oic.r.batterymaterial" Resource Type.

15742
15743

Table 161 – The Property definitions of the Resource with type "rt" = "oic.r.batterymaterial".

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

15744

6.79.6 CRUDN behaviour

15745 Table 162 defines the CRUDN operations that are supported on the "oic.r.batterymaterial"
15746 Resource Type.

15747 **Table 162 – The CRUDN operations of the Resource with type "rt" = "oic.r.batterymaterial".**

Create	Read	Update	Delete	Notify
	get			observe

15748

6.80 Brewing

15749

6.80.1 Introduction

15750 This Resource describes the attributes associated with brewing. This resource is used for
15751 configuration only. The Operation of the Device is handled independently of this Resource. The
15752 amount requested is in ml. The strength of a brewed drink is an integer, the range of which may
15753 be enforced by the presence of a strengthrange Property.

6.80.2 Example URI

15755 /BrewingResURI

6.80.3 Resource type

15757 The Resource Type is defined as: "oic.r.brewing".

6.80.4 OpenAPI 2.0 definition

```
15759 {  
15760   "swagger": "2.0",  
15761   "info": {  
15762     "title": "Brewing",  
15763     "version": "20190222",  
15764     "license": {  
15765       "name": "OCF Data Model License",  
15766       "url":  
15767         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
15768         CENSE.md",  
15769       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."  
15770     },  
15771     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
15772   },  
15773   "schemes": ["http"],  
15774   "consumes": ["application/json"],  
15775   "produces": ["application/json"],  
15776   "paths": {  
15777     "/BrewingResURI" : {  
15778       "get": {
```

```

15779         "description": "This Resource describes the attributes associated with brewing. This
15780 resource is used for configuration only. The Operation of the Device is handled independently of
15781 this Resource. The amount requested is in ml. The strength of a brewed drink is an integer, the
15782 range of which may be enforced by the presence of a strengthrange Property.",
15783         "parameters": [
15784             { "$ref": "#/parameters/interface" }
15785         ],
15786         "responses": {
15787             "200": {
15788                 "description": "",
15789                 "x-example":
15790                     {
15791                         "rt": ["oic.r.brewing"],
15792                         "if": ["oic.if.rw", "oic.if.baseline"],
15793                         "amountrequested": 120,
15794                         "strength": 8,
15795                         "strengthrange": [1, 10]
15796                     },
15797                 "schema": { "$ref": "#/definitions/Brewing" }
15798             }
15799         },
15800     },
15801     "post": {
15802         "description": "Sets the brewing values\n",
15803         "parameters": [
15804             { "$ref": "#/parameters/interface" },
15805             {
15806                 "name": "body",
15807                 "in": "body",
15808                 "required": true,
15809                 "schema": { "$ref": "#/definitions/Brewing" },
15810                 "x-example":
15811                     {
15812                         "amountrequested": 120,
15813                         "strength": 8
15814                     }
15815             }
15816         ],
15817         "responses": {
15818             "200": {
15819                 "description": "",
15820                 "x-example":
15821                     {
15822                         "amountrequested": 120,
15823                         "strength": 8
15824                     }
15825             }
15826         }
15827     },
15828 },
15829 {
15830     "parameters": {
15831         "interface": {
15832             "in": "query",
15833             "name": "if",
15834             "type": "string",
15835             "enum": ["oic.if.rw", "oic.if.baseline"]
15836         }
15837     },
15838     "definitions": {
15839         "Brewing": {
15840             "properties": {
15841                 "rt": {
15842                     "description": "The Resource Type.",
15843                     "items": {
15844                         "enum": ["oic.r.brewing"],
15845                         "maxLength": 64,
15846                         "type": "string"
15847                     },
15848                     "minItems": 1,
15849                     "uniqueItems": true,
15850                     "readOnly": true,

```

```

15851         "type": "array"
15852     },
15853     "strength": {
15854         "description": "The strength of a brewed drink.",
15855         "type": "integer"
15856     },
15857     "amountrequested": {
15858         "description": "The amount requested in ml.",
15859         "type": "integer"
15860     },
15861     "strengthrange": {
15862         "items": {
15863             "type": "integer"
15864         },
15865         "maxItems": 2,
15866         "minItems": 2,
15867         "readOnly": true,
15868         "type": "array"
15869     },
15870     "n": {
15871         "$ref":
15872         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15873         schema.json#/definitions/n"
15874     },
15875     "id": {
15876         "$ref":
15877         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
15878         schema.json#/definitions/id"
15879     },
15880     "if": {
15881         "description": "The OCF Interface set supported by this Resource.",
15882         "items": {
15883             "enum": [
15884                 "oic.if.rw",
15885                 "oic.if.baseline"
15886             ],
15887             "type": "string"
15888         },
15889         "minItems": 2,
15890         "uniqueItems": true,
15891         "readOnly": true,
15892         "type": "array"
15893     }
15894 },
15895 "type": "object",
15896 "required": ["amountrequested"]
15897 }
15898 }
15899 }
15900

```

6.80.5 Property definition

Table 163 defines the Properties that are part of the "oic.r.brewing" Resource Type.

Table 163 – The Property definitions of the Resource with type "rt" = "oic.r.brewing".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
strength	integer	No	Read Write	The strength of a brewed drink.
amountrequested	integer	Yes	Read Write	The amount requested in ml.
strengthrange	array: see schema	No	Read Only	
n	multiple types: see schema	No	Read Write	

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

6.80.6 CRUDN behaviour

Table 164 defines the CRUDN operations that are supported on the "oic.r.brewing" Resource Type.

Table 164 – The CRUDN operations of the Resource with type "rt" = "oic.r.brewing".

Create	Read	Update	Delete	Notify
	get	post		observe

6.81 Energy

6.81.1 Introduction

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

6.81.2 Example URI

/EnergyResURI

6.81.3 Resource type

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

6.81.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Energy",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url": "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/EnergyResURI" : {
      "get": {
        "description": "This Resource describes the attributes associated with electrical energy.
This Resource can be used for either rated (read-only), desired (read-write) or measured (read-only)
energy. The Property \"voltage\" is in Volts (V), The Property \"current\" in Amps (A), and The
Property \"frequency\" is in Hertz (Hz).",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ],
        "responses": {
          "200": {
            "description": "Retrieves the current energy.",
            "x-example": {
              "rt": ["oic.r.energy.electrical"],

```



```

15952         "if": ["oic.if.rw", "oic.if.baseline"],
15953         "voltage": 120.0,
15954         "current": 5.0,
15955         "frequency": 60.0
15956     },
15957     "schema": { "$ref": "#/definitions/Energy" }
15958 }
15959 },
15960 },
15961 "post": {
15962     "description": "Sets the desired energy values\n",
15963     "parameters": [
15964         { "$ref": "#/parameters/interface",
15965           {
15966             "name": "body",
15967             "in": "body",
15968             "required": true,
15969             "schema": { "$ref": "#/definitions/EnergyUpdate" },
15970             "x-example":
15971               {
15972                 "desiredvoltage": 130.0,
15973                 "desiredcurrent": 6.0
15974               }
15975           }
15976     ],
15977     "responses": {
15978         "200": {
15979             "description": "",
15980             "x-example":
15981               {
15982                 "desiredvoltage": 130.0,
15983                 "desiredcurrent": 6.0
15984               }
15985         }
15986     }
15987 },
15988 },
15989 },
15990 "parameters": {
15991     "interface" : {
15992         "in" : "query",
15993         "name" : "if",
15994         "type" : "string",
15995         "enum" : ["oic.if.rw", "oic.if.baseline"]
15996     }
15997 },
15998 "definitions": {
15999     "Energy" : {
16000         "properties": {
16001             "rt": {
16002                 "description": "The Resource Type.",
16003                 "items": {
16004                     "enum": ["oic.r.energy.electrical"],
16005                     "maxLength": 64,
16006                     "type": "string"
16007                 },
16008                 "minItems": 1,
16009                 "uniqueItems": true,
16010                 "readOnly": true,
16011                 "type": "array"
16012             },
16013             "desiredcurrent": {
16014                 "description": "The desired electric current in Amps (A).",
16015                 "type": "number"
16016             },
16017             "current": {
16018                 "description": "The electric current in Amps (A).",
16019                 "readOnly": true,
16020                 "type": "number"
16021             },
16022             "frequency": {
16023                 "description": "The electric frequency in Hertz (Hz).",

```

```

16024         "readOnly": true,
16025         "type": "number"
16026     },
16027     "voltage": {
16028         "description": "The electric voltage in Volts (V).",
16029         "readOnly": true,
16030         "type": "number"
16031     },
16032     "desiredfrequency": {
16033         "description": "The desired electric frequency in Hertz (Hz).",
16034         "type": "number"
16035     },
16036     "desiredvoltage": {
16037         "description": "The desired electric voltage in Volts (V).",
16038         "type": "number"
16039     },
16040     "n": {
16041         "$ref":
16042         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16043         schema.json#/definitions/n"
16044     },
16045     "id": {
16046         "$ref":
16047         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16048         schema.json#/definitions/id"
16049     },
16050     "if": {
16051         "description": "The OCF Interface set supported by this Resource.",
16052         "items": {
16053             "enum": [
16054                 "oic.if.rw",
16055                 "oic.if.baseline"
16056             ],
16057             "type": "string"
16058         },
16059         "minItems": 2,
16060         "uniqueItems": true,
16061         "readOnly": true,
16062         "type": "array"
16063     }
16064 },
16065 "type" : "object",
16066 "required": ["voltage", "current", "frequency"]
16067 }
16068 ,
16069 "EnergyUpdate" : {
16070     "properties": {
16071         "desiredcurrent": {
16072             "description": "The desired electric current in Amps (A).",
16073             "type": "number"
16074         },
16075         "desiredfrequency": {
16076             "description": "The desired electric frequency in Hertz (Hz).",
16077             "type": "number"
16078         },
16079         "desiredvoltage": {
16080             "description": "The desired electric voltage in Volts (V).",
16081             "type": "number"
16082         }
16083     },
16084     "anyOf": [
16085         {
16086             "required": ["desiredvoltage"]
16087         },
16088         {
16089             "required": ["desiredcurrent"]
16090         },
16091         {
16092             "required": ["desiredfrequency"]
16093         }
16094     ],
16095     "type": "object"

```

16096 }
 16097 }
 16098 }
 16099 }

16100 6.81.5 Property definition

16101 Table 165 defines the Properties that are part of the "oic.r.energy.electrical" Resource Type.

16102 **Table 165 – The Property definitions of the Resource with type "rt" =**
 16103 **"oic.r.energy.electrical".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
desiredcurrent	number	No	Read Write	The desired electric current in Amps (A).
current	number	Yes	Read Only	The electric current in Amps (A).
frequency	number	Yes	Read Only	The electric frequency in Hertz (Hz).
voltage	number	Yes	Read Only	The electric voltage in Volts (V).
desiredfrequency	number	No	Read Write	The desired electric frequency in Hertz (Hz).
desiredvoltage	number	No	Read Write	The desired electric voltage in Volts (V).
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
desiredcurrent	number	No	Read Write	The desired electric current in Amps (A).
desiredfrequency	number	Yes	Read Write	The desired electric frequency in Hertz (Hz).
desiredvoltage	number	No	Read Write	The desired electric voltage in Volts (V).

16104 6.81.6 CRUDN behaviour

16105 Table 166 defines the CRUDN operations that are supported on the "oic.r.energy.electrical"
 16106 Resource Type.

16107 **Table 166 – The CRUDN operations of the Resource with type "rt" =**
 16108 **"oic.r.energy.electrical".**

Create	Read	Update	Delete	Notify
	get	post		observe

6.82 Energy Generation

6.82.1 Introduction

This Resource describes the attributes associated with energy generation
The Property "energygenerated" is a number that provides the energy generated in Watt-hour(Wh).

6.82.2 Example URI

/EnergyGenerationResURI

6.82.3 Resource type

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

6.82.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Energy Generation",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/EnergyGenerationResURI" : {
      "get": {
        "description": "This Resource describes the attributes associated with energy
generation\nThe Property \"energygenerated\" is a number that provides the energy generated in Watt-
hour(Wh).",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example":
              {
                "rt": ["oic.r.energy.generation"],
                "if": ["oic.if.s", "oic.if.baseline"],
                "energygenerated": 3000.00
              },
            "schema": { "$ref": "#/definitions/EnergyGeneration" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface" : {
      "in" : "query",
      "name" : "if",
      "type" : "string",
      "enum" : ["oic.if.s", "oic.if.baseline"]
    }
  },
  "definitions": {
    "EnergyGeneration" : {
      "properties": {
        "rt": {
```

```

16173         "description": "The Resource Type.",
16174         "items": {
16175             "enum": ["oic.r.energy.generation"],
16176             "maxLength": 64,
16177             "type": "string"
16178         },
16179         "minItems": 1,
16180         "uniqueItems": true,
16181         "readOnly": true,
16182         "type": "array"
16183     },
16184     "energygenerated": {
16185         "description": "The energy generated in Watt-hour(Wh).",
16186         "readOnly": true,
16187         "type": "number"
16188     },
16189     "n": {
16190         "$ref":
16191         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16192         schema.json#/definitions/n"
16193     },
16194     "id": {
16195         "$ref":
16196         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16197         schema.json#/definitions/id"
16198     },
16199     "if": {
16200         "description": "The OCF Interface set supported by this Resource.",
16201         "items": {
16202             "enum": [
16203                 "oic.if.s",
16204                 "oic.if.baseline"
16205             ],
16206             "type": "string"
16207         },
16208         "minItems": 2,
16209         "uniqueItems": true,
16210         "readOnly": true,
16211         "type": "array"
16212     }
16213 },
16214 "type": "object",
16215 "required": ["energygenerated"]
16216 }
16217 }
16218 }
16219

```

6.82.5 Property definition

Table 167 defines the Properties that are part of the "oic.r.energy.generation" Resource Type.

Table 167 – The Property definitions of the Resource with type "rt" = "oic.r.energy.generation".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
energygenerated	number	Yes	Read Only	The energy generated in Watt-hour(Wh).
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

6.82.6 CRUDN behaviour

Table 168 defines the CRUDN operations that are supported on the "oic.r.energy.generation" Resource Type.

Table 168 – The CRUDN operations of the Resource with type "rt" = "oic.r.energy.generation".

Create	Read	Update	Delete	Notify
	get			observe

6.83 Foaming

6.83.1 Introduction

This Resource describes the attributes associated with foaming. The Property "foamstrength" 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 the Property "range".

6.83.2 Example URI

/FoamingResURI

6.83.3 Resource type

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

6.83.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Foaming",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/FoamingResURI" : {
      "get": {
        "description": "This Resource describes the attributes associated with foaming. The Property
\"foamstrength\" of the liquid is represented as an integer.\nThe foam strength is an integer, the
range of which may be enforced by the presence of the Property \"range\".",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
            "description": "RETRIEVES the state of foaming.",
            "x-example":
              {
                "rt": ["oic.r.foaming"],
                "if": ["oic.if.rw", "oic.if.baseline"],
                "foamstrength": 50,
                "range": [0, 100]
              },
            "schema": { "$ref": "#/definitions/Foaming" }
          }
        }
      }
    }
  }
}
```

```

16279     }
16280   },
16281   "post": {
16282     "description": "Sets foaming value\n",
16283     "parameters": [
16284       { "$ref": "#/parameters/interface" },
16285       {
16286         "name": "body",
16287         "in": "body",
16288         "required": true,
16289         "schema": { "$ref": "#/definitions/Foaming" },
16290         "x-example":
16291           {
16292             "foamstrength": 50
16293           }
16294       }
16295     ],
16296     "responses": {
16297       "200": {
16298         "description": "",
16299         "x-example":
16300           {
16301             "foamstrength": 50
16302           },
16303         "schema": { "$ref": "#/definitions/Foaming" }
16304       }
16305     }
16306   }
16307 },
16308 {
16309   "parameters": {
16310     "interface": {
16311       "in": "query",
16312       "name": "if",
16313       "type": "string",
16314       "enum": ["oic.if.rw", "oic.if.baseline"]
16315     }
16316   },
16317   "definitions": {
16318     "Foaming": {
16319       "properties": {
16320         "rt": {
16321           "description": "Resource Type",
16322           "items": {
16323             "enum": ["oic.r.foaming"],
16324             "maxLength": 64,
16325             "type": "string"
16326           },
16327           "minItems": 1,
16328           "uniqueItems": true,
16329           "readOnly": true,
16330           "type": "array"
16331         },
16332         "foamstrength": {
16333           "description": "The desired foaminess of the liquid.",
16334           "type": "integer"
16335         },
16336         "n": {
16337           "$ref":
16338             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16339             schema.json#/definitions/n"
16340         },
16341         "id": {
16342           "$ref":
16343             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16344             schema.json#/definitions/id"
16345         },
16346         "range": {
16347           "$ref":
16348             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
16349             schema.json#/definitions/range_integer"
16350         }
16351       }
16352     }
16353   }
16354 }

```

```

16351         "step": {
16352             "$ref":
16353             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
16354             schema.json#/definitions/step_integer"
16355         },
16356         "if": {
16357             "description": "The interface set supported by this resource",
16358             "items": {
16359                 "enum": [
16360                     "oic.if.rw",
16361                     "oic.if.baseline"
16362                 ],
16363                 "type": "string"
16364             },
16365             "minItems": 2,
16366             "uniqueItems": true,
16367             "readOnly": true,
16368             "type": "array"
16369         }
16370     },
16371     "type": "object",
16372     "required": ["foamstrength"]
16373 }
16374 }
16375 }
16376

```

16377 6.83.5 Property definition

16378 Table 169 defines the Properties that are part of the "oic.r.foaming" Resource Type.

16379 **Table 169 – The Property definitions of the Resource with type "rt" = "oic.r.foaming".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
foamstrength	integer	Yes	Read Write	The desired foaminess of the liquid.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The interface set supported by this resource

16380 6.83.6 CRUDN behaviour

16381 Table 170 defines the CRUDN operations that are supported on the "oic.r.foaming" Resource Type.

16382 **Table 170 – The CRUDN operations of the Resource with type "rt" = "oic.r.foaming".**

Create	Read	Update	Delete	Notify
	get	post		observe

6.84 Grinder

6.84.1 Introduction

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

6.84.2 Example URI

/GrinderResURI

6.84.3 Resource type

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

6.84.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Grinder",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
        "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
        CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
        reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/GrinderResURI" : {
      "get": {
        "description": "This Resource describes the attributes associated with a grinder. The
        Property \"coarseness\" of the grounds is an integer. The higher the value, the less coarse. The
        Property \"remaining\" is a percentage that represents the unground material left.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "RETRIEVES the state of a grinder.",
            "x-example":
              {
                "rt": ["oic.r.grinder"],
                "if": ["oic.if.rw", "oic.if.baseline"],
                "coarseness": 10,
                "remaining": 50
              },
            "schema": { "$ref": "#/definitions/Grinder" }
          }
        }
      },
      "post": {
        "description": "Sets grinding values.",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/GrinderUpdate" },
            "x-example":
              {
                "coarseness": 10
              }
          }
        ]
      }
    }
  }
}
```

```

16447     }
16448   ],
16449   "responses": {
16450     "200": {
16451       "description": "",
16452       "x-example":
16453         {
16454           "coarseness": 10
16455         },
16456       "schema": { "$ref": "#/definitions/GrinderUpdate" }
16457     }
16458   }
16459 },
16460 },
16461 },
16462 "parameters": {
16463   "interface": {
16464     "in": "query",
16465     "name": "if",
16466     "type": "string",
16467     "enum": ["oic.if.rw", "oic.if.baseline"]
16468   }
16469 },
16470 "definitions": {
16471   "Grinder": {
16472     "properties": {
16473       "rt": {
16474         "description": "Resource Type",
16475         "items": {
16476           "enum": ["oic.r.grinder"],
16477           "maxLength": 64,
16478           "type": "string"
16479         },
16480         "minItems": 1,
16481         "uniqueItems": true,
16482         "readOnly": true,
16483         "type": "array"
16484       },
16485       "coarseness": {
16486         "description": "The desired coarseness when grinding.",
16487         "type": "integer"
16488       },
16489       "remaining": {
16490         "description": "The percentage of unground material left.",
16491         "maximum": 100,
16492         "minimum": 0,
16493         "readOnly": true,
16494         "type": "integer"
16495       },
16496       "n": {
16497         "$ref":
16498           "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16499           schema.json#/definitions/n"
16500       },
16501       "id": {
16502         "$ref":
16503           "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16504           schema.json#/definitions/id"
16505       },
16506       "range": {
16507         "$ref":
16508           "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
16509           schema.json#/definitions/range_integer"
16510       },
16511       "step": {
16512         "$ref":
16513           "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
16514           schema.json#/definitions/step_integer"
16515       },
16516       "if": {
16517         "description": "The OCF Interface set supported by this Resource.",
16518         "items": {

```

```

16519         "enum": [
16520             "oic.if.rw",
16521             "oic.if.baseline"
16522         ],
16523         "type": "string"
16524     },
16525     "minItems": 2,
16526     "uniqueItems": true,
16527     "readOnly": true,
16528     "type": "array"
16529 }
16530 },
16531 "type": "object",
16532 "required": ["coarseness"]
16533 },
16534 "GrinderUpdate" : {
16535     "properties": {
16536         "coarseness": {
16537             "description": "The desired coarseness when grinding.",
16538             "type": "integer"
16539         }
16540     },
16541     "type": "object",
16542     "required": ["coarseness"]
16543 }
16544 }
16545 }
16546

```

6.84.5 Property definition

Table 171 defines the Properties that are part of the "oic.r.grinder" Resource Type.

Table 171 – The Property definitions of the Resource with type "rt" = "oic.r.grinder".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
coarseness	integer	Yes	Read Write	The desired coarseness when grinding.
remaining	integer	No	Read Only	The percentage of unground material left.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
coarseness	integer	Yes	Read Write	The desired coarseness when grinding.

6.84.6 CRUDN behaviour

Table 172 defines the CRUDN operations that are supported on the "oic.r.grinder" Resource Type.

Table 172 – The CRUDN operations of the Resource with type "rt" = "oic.r.grinder".

Create	Read	Update	Delete	Notify
	get	post		observe

6.85 Liquid Level

6.85.1 Introduction

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

6.85.2 Example URI

/LiquidLevelResURI

6.85.3 Resource type

The Resource Type is defined as: "oic.r.liquid.level".

6.85.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Liquid Level",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/LiquidLevelResURI" : {
      "get": {
        "description": "This Resource describes the attributes associated with liquid level. The
Property \"currentlevel\" and \"desiredlevel\" are defined in terms of a percentage. The behaviour
of when the currentlevel and desiredlevel are not equal is determined by the device manufacturer.",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
            "description": "RETRIEVES the state of liquid level.",
            "x-example":
{
  "rt": ["oic.r.liquid.level"],
  "if": ["oic.if.rw", "oic.if.r", "oic.if.baseline"],
  "currentlevel": 60,
  "desiredlevel": 80
},
            "schema": { "$ref": "#/definitions/LiquidLevel" }
          }
        }
      },
      "post": {
        "description": "Sets liquid level value.",
        "parameters": [
          {"$ref": "#/parameters/interface-rw"},
          {
            "name": "body",

```

```

16610         "in": "body",
16611         "required": true,
16612         "schema": { "$ref": "#/definitions/LiquidLevelUpdate" },
16613         "x-example":
16614             {
16615                 "desiredlevel": 80
16616             }
16617     },
16618     ],
16619     "responses": {
16620         "200": {
16621             "description": "",
16622             "x-example":
16623                 {
16624                     "desiredlevel": 80
16625                 },
16626             "schema": { "$ref": "#/definitions/LiquidLevelUpdate" }
16627         }
16628     }
16629 },
16630 },
16631 },
16632 "parameters": {
16633     "interface" : {
16634         "in" : "query",
16635         "name" : "if",
16636         "type" : "string",
16637         "enum" : ["oic.if.rw", "oic.if.r", "oic.if.baseline"]
16638     },
16639     "interface-rw" : {
16640         "in" : "query",
16641         "name" : "if",
16642         "type" : "string",
16643         "enum" : ["oic.if.rw", "oic.if.baseline"]
16644     }
16645 },
16646 "definitions": {
16647     "LiquidLevel" : {
16648         "properties": {
16649             "rt": {
16650                 "description": "The Resource Type.",
16651                 "items": {
16652                     "enum": ["oic.r.liquid.level"],
16653                     "maxLength": 64,
16654                     "type": "string"
16655                 },
16656                 "minItems": 1,
16657                 "uniqueItems": true,
16658                 "readOnly": true,
16659                 "type": "array"
16660             },
16661             "currentlevel": {
16662                 "description": "The current level of the liquid in percentage.",
16663                 "maximum": 100,
16664                 "minimum": 0,
16665                 "readOnly": true,
16666                 "type": "integer"
16667             },
16668             "desiredlevel": {
16669                 "description": "The desired level of the liquid in percentage.",
16670                 "maximum": 100,
16671                 "minimum": 0,
16672                 "type": "integer"
16673             },
16674             "n": {
16675                 "$ref":
16676                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16677                 schema.json#/definitions/n"
16678             },
16679             "id": {
16680                 "$ref":
16681                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-

```

```

16682 schema.json#/definitions/id"
16683     },
16684     "step": {
16685         "$ref":
16686         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
16687         schema.json#/definitions/step_integer"
16688     },
16689     "if": {
16690         "description": "The OCF Interface set supported by this Resource.",
16691         "items": {
16692             "enum": [
16693                 "oic.if.rw",
16694                 "oic.if.r",
16695                 "oic.if.baseline"
16696             ],
16697             "type": "string"
16698         },
16699         "minItems": 2,
16700         "uniqueItems": true,
16701         "readOnly": true,
16702         "type": "array"
16703     }
16704 },
16705 "type" : "object",
16706 "required": ["currentlevel"]
16707 },
16708 "LiquidLevelUpdate" : {
16709     "properties": {
16710         "desiredlevel": {
16711             "description": "The desired level of the liquid in percentage.",
16712             "maximum": 100,
16713             "minimum": 0,
16714             "type": "integer"
16715         }
16716     },
16717     "type": "object",
16718     "required": ["desiredlevel"]
16719 }
16720 }
16721 }
16722

```

6.85.5 Property definition

Table 173 defines the Properties that are part of the "oic.r.liquid.level" Resource Type.

Table 173 – The Property definitions of the Resource with type "rt" = "oic.r.liquid.level".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
currentlevel	integer	Yes	Read Only	The current level of the liquid in percentage.
desiredlevel	integer	No	Read Write	The desired level of the liquid in percentage.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

desiredlevel	integer	Yes	Read Write	The desired level of the liquid in percentage.
--------------	---------	-----	------------	--

6.85.6 CRUDN behaviour

Table 174 defines the CRUDN operations that are supported on the "oic.r.liquid.level" Resource Type.

Table 174 – The CRUDN operations of the Resource with type "rt" = "oic.r.liquid.level".

Create	Read	Update	Delete	Notify
	get	post		observe

6.86 Vehicle Connector

6.86.1 Introduction

This Resource describes the attributes associated with an electric vehicle charging connector. The Property "connected" is a boolean indicating the status of the connector (False = disconnected, True = connected). The Property "ratedchargingcapacity" and "rateddischargingcapacity" are in Amps (A).

6.86.2 Example URI

/VehicleConnectorResURI

6.86.3 Resource type

The Resource Type is defined as: "oic.r.vehicle.connector".

6.86.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Vehicle Connector",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/VehicleConnectorResURI" : {
      "get": {
        "description": "This Resource describes the attributes associated with an electric vehicle
charging connector. The Property \"connected\" is a boolean indicating the status of the connector
(False = disconnected, True = connected). The Property \"ratedchargingcapacity\" and
\"rateddischargingcapacity\" are in Amps (A).",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.vehicle.connector"],
              "if": ["oic.if.s", "oic.if.baseline"],
              "connected": true,

```

```

16777         "ratedchargingcapacity": 20.0,
16778         "rateddischargingcapacity": 5.0
16779     },
16780     "schema": { "$ref": "#/definitions/VehicleConnector" }
16781 }
16782 }
16783 }
16784 }
16785 },
16786 "parameters": {
16787     "interface": {
16788         "in": "query",
16789         "name": "if",
16790         "type": "string",
16791         "enum": ["oic.if.s", "oic.if.baseline"]
16792     }
16793 },
16794 "definitions": {
16795     "VehicleConnector" : {
16796         "properties": {
16797             "rt": {
16798                 "description": "The Resource Type.",
16799                 "items": {
16800                     "enum": ["oic.r.vehicle.connector"],
16801                     "maxLength": 64,
16802                     "type": "string"
16803                 },
16804                 "minItems": 1,
16805                 "uniqueItems": true,
16806                 "readOnly": true,
16807                 "type": "array"
16808             },
16809             "connected": {
16810                 "description": "The connection state.",
16811                 "readOnly": true,
16812                 "type": "boolean"
16813             },
16814             "ratedchargingcapacity": {
16815                 "description": "The rated charging capacity in Amps (A).",
16816                 "readOnly": true,
16817                 "type": "number"
16818             },
16819             "rateddischargingcapacity": {
16820                 "description": "The rated discharging capacity in Amps (A).",
16821                 "readOnly": true,
16822                 "type": "number"
16823             },
16824             "n": {
16825                 "$ref":
16826 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16827 schema.json#/definitions/n"
16828             },
16829             "id": {
16830                 "$ref":
16831 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16832 schema.json#/definitions/id"
16833             },
16834             "if": {
16835                 "description": "The OCF Interface set supported by this Resource.",
16836                 "items": {
16837                     "enum": [
16838                         "oic.if.s",
16839                         "oic.if.baseline"
16840                     ],
16841                     "type": "string"
16842                 },
16843                 "minItems": 2,
16844                 "uniqueItems": true,
16845                 "readOnly": true,
16846                 "type": "array"
16847             }
16848         },

```



```

16849     "type": "object",
16850     "required": ["connected"]
16851   }
16852 }
16853 }
16854

```

16855 6.86.5 Property definition

16856 Table 175 defines the Properties that are part of the "oic.r.vehicle.connector" Resource Type.

16857 **Table 175 – The Property definitions of the Resource with type "rt" =**
16858 **"oic.r.vehicle.connector".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
connected	boolean	Yes	Read Only	The connection state.
ratedchargingcapacity	number	No	Read Only	The rated charging capacity in Amps (A).
rateddischargingcapacity	number	No	Read Only	The rated discharging capacity in Amps (A).
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

16859 6.86.6 CRUDN behaviour

16860 Table 176 defines the CRUDN operations that are supported on the "oic.r.vehicle.connector"
16861 Resource Type.

16862 **Table 176 – The CRUDN operations of the Resource with type "rt" =**
16863 **"oic.r.vehicle.connector".**

Create	Read	Update	Delete	Notify
	get			observe

16864 6.87 Time Stamp

16865 6.87.1 Introduction

16866 This Resource describes Properties associated with a timestamp.
16867 The "timestamp" Property is a string that captures a timestamp using the RFC3339 datetime
16868 format (e.g: 2007-04-05T14:30Z) (Time+Date+Timezone).

16869 6.87.2 Example URI

16870 /TimeStampResURI

16871 6.87.3 Resource type

16872 The Resource Type is defined as: "oic.r.time.stamp".

6.87.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Time Stamp",
    "version": "20190327",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/TimeStampResURI" : {
      "get": {
        "description": "This Resource describes Properties associated with a timestamp.\n\nThe
\"timestamp\" Property is a string that captures a timestamp using the RFC3339 datetime format (e.g:
2007-04-05T14:30Z) (Time+Date+Timezone).",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example":
            {
              "rt": ["oic.r.time.stamp"],
              "if": ["oic.if.s", "oic.if.r", "oic.if.baseline"],
              "timestamp": "2015-11-05T14:30:00Z"
            },
            "schema": { "$ref": "#/definitions/TimeStamp" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface": {
      "in": "query",
      "name": "if",
      "type": "string",
      "enum": ["oic.if.s", "oic.if.r", "oic.if.baseline"]
    }
  },
  "definitions": {
    "TimeStamp" : {
      "properties": {
        "rt": {
          "description": "The Resource Type.",
          "items": {
            "enum": ["oic.r.time.stamp"],
            "maxLength": 64,
            "type": "string"
          },
          "minItems": 1,
          "uniqueItems": true,
          "readOnly": true,
          "type": "array"
        },
        "timestamp": {
          "description": "An RFC3339 formatted time indicating when the data was observed (e.g.:
2016-02-15T09:19Z, 1996-12-19T16:39:57-08:00).",
          "format": "date-time",
          "readOnly": true,

```

```

16944         "type": "string"
16945     },
16946     "n": {
16947         "$ref":
16948         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16949         schema.json#/definitions/n"
16950     },
16951     "id": {
16952         "$ref":
16953         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
16954         schema.json#/definitions/id"
16955     },
16956     "if": {
16957         "description": "The OCF Interface set supported by this Resource.",
16958         "items": {
16959             "enum": [
16960                 "oic.if.s",
16961                 "oic.if.r",
16962                 "oic.if.baseline"
16963             ],
16964             "type": "string"
16965         },
16966         "minItems": 2,
16967         "uniqueItems": true,
16968         "readOnly": true,
16969         "type": "array"
16970     }
16971 },
16972 "type": "object",
16973 "required": ["timestamp"]
16974 }
16975 }
16976 }
16977

```

16978 6.87.5 Property definition

16979 Table 177 defines the Properties that are part of the "oic.r.time.stamp" Resource Type.

16980 **Table 177 – The Property definitions of the Resource with type "rt" = "oic.r.time.stamp".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
timestamp	string	Yes	Read Only	An RFC3339 formatted time indicating when the data was observed (e.g.: 2016-02-15T09:19Z, 1996-12-19T16:39:57-08:00).
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

16981 6.87.6 CRUDN behaviour

16982 Table 178 defines the CRUDN operations that are supported on the "oic.r.time.stamp" Resource
16983 Type.

Table 178 – The CRUDN operations of the Resource with type "rt" = "oic.r.time.stamp".

Create	Read	Update	Delete	Notify
	get			observe

6.88 3D Printer

6.88.1 Introduction

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

6.88.2 Example URI

/3DPrinterResURI

6.88.3 Resource type

The Resource Type is defined as: "oic.r.printer.3d".

6.88.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "3D Printer",
    "version": "20190222",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/3DPrinterResURI" : {
      "get": {
        "description": "This Resource describes the attributes associated with 3D Printer. The type
of 3D printing technology is specified by an enumerated string value. The maximum sizes in mm are
included for the x, y, and z dimensions. A designation of whether the device is capable of WAN
connectivity is represented in a boolean. The memory capacity is captured in MB.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example":
              {
                "rt" : ["oic.r.printer.3d"],
                "if" : ["oic.if.r", "oic.if.baseline"],
                "3dprinttype" : "Digital Light Processing",
                "printsizex" : 300.00,
                "printsizex" : 200.50,
                "printsizex" : 250.75,
                "wanconnected" : false,
                "memorysize" : 120.5
              },
            "schema": { "$ref": "#/definitions/3DPrinter" }
          }
        }
      }
    }
  }
}
```

```

17042 },
17043 "parameters": {
17044   "interface" : {
17045     "in": "query",
17046     "name": "if",
17047     "type": "string",
17048     "enum": ["oic.if.r", "oic.if.baseline"]
17049   }
17050 },
17051 "definitions": {
17052   "3DPrinter": {
17053     "properties": {
17054       "rt": {
17055         "description": "The Resource Type",
17056         "items": {
17057           "maxLength": 64,
17058           "type": "string",
17059           "enum": ["oic.r.printer.3d"]
17060         },
17061         "minItems": 1,
17062         "uniqueItems": true,
17063         "readOnly": true,
17064         "type": "array"
17065       },
17066       "printsizex": {
17067         "description": "This Property represents the maximum size of printing object in the
17068 direction of Y-axis. The unit is mm.",
17069         "readOnly": true,
17070         "type": "number"
17071       },
17072       "memorysize": {
17073         "description": "This Property represents the total memory size of the printer. The unit is
17074 MB(Mega Bytes)",
17075         "readOnly": true,
17076         "type": "number"
17077       },
17078       "3dprinttype": {
17079         "description": "The type of 3D printing technology.",
17080         "enum": [
17081           "Fused Filament Fabrication",
17082           "Fused Deposition Modeling",
17083           "Digital Light Processing",
17084           "Powder Bed & inkjet head 3D Printing",
17085           "Photopolymer Jetting Technology",
17086           "Laminated Object Manufacturing",
17087           "Stereolithography Apparatus",
17088           "Selective Laser Sintering",
17089           "Unknown"
17090         ],
17091         "readOnly": true,
17092         "type": "string"
17093       },
17094       "wanconnected": {
17095         "description": "This Property indicates the connectivity capability of the 3D printer. If
17096 the value is false, the printer does not have network facility to Wide Area Network such as internet
17097 and GSM. If the value is true, the printer has network connectivity",
17098         "readOnly": true,
17099         "type": "boolean"
17100       },
17101       "printsizex": {
17102         "description": "This Property represents the maximum size of printing object in the
17103 direction of X-axis. The unit is mm.",
17104         "readOnly": true,
17105         "type": "number"
17106       },
17107       "printsizex": {
17108         "description": "This Property represents the maximum size of printing object in the
17109 direction of Z-axis. The unit is mm.",
17110         "readOnly": true,
17111         "type": "number"
17112       },
17113       "n": {

```

```

17114         "$ref":
17115         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17116         schema.json#/definitions/n"
17117     },
17118     "id": {
17119         "$ref":
17120         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17121         schema.json#/definitions/id"
17122     },
17123     "if": {
17124         "description": "The OCF Interface set supported by this Resource.",
17125         "items": {
17126             "enum": [
17127                 "oic.if.r",
17128                 "oic.if.baseline"
17129             ],
17130             "type": "string"
17131         },
17132         "minItems": 2,
17133         "readOnly": true,
17134         "uniqueItems": true,
17135         "type": "array"
17136     }
17137 },
17138 "type": "object",
17139 "required": ["3dprinttype", "printsizex", "printsizex", "printsizex", "wanconnected",
17140 "memorysize"]
17141 }
17142 }
17143 }
17144

```

17145 6.88.5 Property definition

17146 Table 179 defines the Properties that are part of the "oic.r.printer.3d" Resource Type.

17147 **Table 179 – The Property definitions of the Resource with type "rt" = "oic.r.printer.3d".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type
printsizex	number	Yes	Read Only	This Property represents the maximum size of printing object in the direction of Y-axis. The unit is mm.
memorysize	number	Yes	Read Only	This Property represents the total memory size of the printer. The unit is MB(Mega Bytes)
3dprinttype	string	Yes	Read Only	The type of 3D printing technology.
wanconnected	boolean	Yes	Read Only	This Property indicates the connectivity capability of the 3D printer. If the value is false, the printer does not have network facility to Wide Area Network such as internet and GSM. If the value is true, the printer has network connectivity

printsizeX	number	Yes	Read Only	This Property represents the maximum size of printing object in the direction of X-axis. The unit is mm.
printsizeZ	number	Yes	Read Only	This Property represents the maximum size of printing object in the direction of Z-axis. The unit is mm.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

6.88.6 CRUDN behaviour

Table 180 defines the CRUDN operations that are supported on the "oic.r.printer.3d" Resource Type.

Table 180 – The CRUDN operations of the Resource with type "rt" = "oic.r.printer.3d".

Create	Read	Update	Delete	Notify
	get			observe

6.89 Blood Pressure

6.89.1 Introduction

This Resource describes the Properties associated with a person's blood pressure. The unit is a single value that is one of mmHg or kPa. If the unit Property is missing the default is a millimeter of mercury [mmHg]. The bloodpressure and unit Properties are read-only values that are provided by the Server. When range is omitted the default is 0 to +MAXFLOAT.

6.89.2 Example URI

/BloodPressureResURI

6.89.3 Resource type

The Resource Type is defined as: "oic.r.blood.pressure".

6.89.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Blood Pressure",
    "version": "2019-03-22",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ]
}
```

```

17180 ],
17181 "consumes": [
17182   "application/json"
17183 ],
17184 "produces": [
17185   "application/json"
17186 ],
17187 "paths": {
17188   "/BloodPressureResURI": {
17189     "get": {
17190       "description": "This Resource describes the Properties associated with a person's blood
17191 pressure.\n\nThe unit is a single value that is one of mmHg or kPa.\n\nIf the unit Property is missing
17192 the default is a millimeter of mercury [mmHg].\n\nThe bloodpressure and unit Properties are read-only
17193 values that are provided by the Server.\n\nWhen range is omitted the default is 0 to +MAXFLOAT.",
17194       "parameters": [
17195         {
17196           "$ref": "#/parameters/interface"
17197         }
17198       ],
17199       "responses": {
17200         "200": {
17201           "description": "",
17202           "x-example": {
17203             "rt": [
17204               "oic.r.blood.pressure"
17205             ],
17206             "systolic": 110.0,
17207             "diastolic": 85.0,
17208             "map": 93.0,
17209             "range": [20.0, 300.0],
17210             "step": 1.0,
17211             "units": "mmHg"
17212           },
17213           "schema": {
17214             "$ref": "#/definitions/BloodPressure"
17215           }
17216         }
17217       }
17218     }
17219   }
17220 },
17221 "parameters": {
17222   "interface": {
17223     "in": "query",
17224     "name": "if",
17225     "type": "string",
17226     "enum": [
17227       "oic.if.s",
17228       "oic.if.baseline"
17229     ]
17230   }
17231 },
17232 "definitions": {
17233   "BloodPressure": {
17234     "properties": {
17235       "rt": {
17236         "description": "Resource Type",
17237         "items": {
17238           "enum": [
17239             "oic.r.blood.pressure"
17240           ],
17241           "type": "string",
17242           "maxLength": 64
17243         },
17244         "minItems": 1,
17245         "uniqueItems": true,
17246         "readOnly": true,
17247         "type": "array"
17248       },
17249       "map": {
17250         "description": "Mean arterial pressure (MAP)",
17251         "minimum": 0.0,

```



```

17252         "readOnly": true,
17253         "type": "number"
17254     },
17255     "units": {
17256         "description": "Blood pressure unit",
17257         "enum": [
17258             "mmHg",
17259             "kPa"
17260         ],
17261         "readOnly": true,
17262         "type": "string",
17263         "default": "mmHg"
17264     },
17265     "systolic": {
17266         "description": "Systolic blood pressure",
17267         "minimum": 0.0,
17268         "readOnly": true,
17269         "type": "number"
17270     },
17271     "diastolic": {
17272         "description": "Diastolic blood pressure",
17273         "minimum": 0.0,
17274         "readOnly": true,
17275         "type": "number"
17276     },
17277     "if": {
17278         "description": "The OCF Interface set supported by this Resource",
17279         "items": {
17280             "enum": [
17281                 "oic.if.s",
17282                 "oic.if.baseline"
17283             ],
17284             "type": "string",
17285             "maxLength": 64
17286         },
17287         "minItems": 1,
17288         "readOnly": true,
17289         "uniqueItems": true,
17290         "type": "array"
17291     },
17292     "range": {
17293         "$ref":
17294         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
17295         schema.json#/definitions/range_number"
17296     },
17297     "step": {
17298         "$ref":
17299         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
17300         schema.json#/definitions/step_number"
17301     },
17302     "precision": {
17303         "$ref":
17304         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
17305         schema.json#/definitions/precision"
17306     },
17307     "n": {
17308         "$ref":
17309         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17310         schema.json#/definitions/n"
17311     }
17312 },
17313 "type": "object",
17314 "required": [
17315     "systolic",
17316     "diastolic"
17317 ]
17318 }
17319 }
17320 }
17321

```

6.89.5 Property definition

Table 181 defines the Properties that are part of the "oic.r.blood.pressure" Resource Type.

Table 181 – The Property definitions of the Resource with type "rt" = "oic.r.blood.pressure".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
map	number	No	Read Only	Mean arterial pressure (MAP)
units	string	No	Read Only	Blood pressure unit
systolic	number	Yes	Read Only	Systolic blood pressure
diastolic	number	Yes	Read Only	Diastolic blood pressure
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	

6.89.6 CRUDN behaviour

Table 182 defines the CRUDN operations that are supported on the "oic.r.blood.pressure" Resource Type.

Table 182 – The CRUDN operations of the Resource with type "rt" = "oic.r.blood.pressure".

Create	Read	Update	Delete	Notify
	get			observe

6.90 Blood Pressure Monitor Atomic Measurement

6.90.1 Introduction

This Resource describes the Properties associated with a blood pressure monitor. The Resource is an Atomic Measurement of blood pressure (oic.r.blood.pressure), pulse rate (oic.r.pulserate), observed time (oic.r.time.stamp), and user id (oic.r.userid).

6.90.2 Example URI

/BloodPressureMonitorAMResURI

6.90.3 Resource type

The Resource Type is defined as: "oic.r.bloodpressuremonitor-am, oic.wk.atomicmeasurement".

6.90.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Blood Pressure Monitor Atomic Measurement",
    "version": "2019-03-22",
```

```

17345     "license": {
17346         "name": "OCF Data Model License",
17347         "url":
17348 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
17349 CENSE.md",
17350         "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
17351     },
17352     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
17353 },
17354     "schemas": [
17355         "http"
17356     ],
17357     "consumes": [
17358         "application/json"
17359     ],
17360     "produces": [
17361         "application/json"
17362     ],
17363     "paths": {
17364         "/BloodPressureMonitorAMResURI?if=oic.if.b": {
17365             "get": {
17366                 "description": "This Resource describes the Properties associated with a blood pressure
17367 monitor.\nThe Resource is an Atomic Measurement of blood pressure (oic.r.blood.pressure), pulse
17368 rate (oic.r.pulserate), observed time (oic.r.time.stamp), and user id (oic.r.userid).",
17369                 "parameters": [
17370                     {
17371                         "$ref": "#/parameters/interface-all"
17372                     }
17373                 ],
17374                 "responses": {
17375                     "200": {
17376                         "description": "",
17377                         "x-example": [
17378                             {
17379                                 "href": "/myBloodPressureResURI",
17380                                 "rep": {
17381                                     "systolic": 120.0,
17382                                     "diastolic": 80.0,
17383                                     "map": 93.0,
17384                                     "range": [20.0, 300.0],
17385                                     "step": 1,
17386                                     "units": "mmHg"
17387                                 }
17388                             },
17389                             {
17390                                 "href": "/myPulseRateResURI",
17391                                 "rep": {
17392                                     "pulserate": 70,
17393                                     "range": [20, 220],
17394                                     "step": 1
17395                                 }
17396                             },
17397                             {
17398                                 "href": "/myUserId",
17399                                 "rep": {
17400                                     "userid": "USER1"
17401                                 }
17402                             },
17403                             {
17404                                 "href": "/myTimeStamp",
17405                                 "rep": {
17406                                     "timestamp": "2018-11-08T21:00+08:00"
17407                                 }
17408                             }
17409                         ],
17410                         "schema": {
17411                             "$ref": "#/definitions/batch-retrieve"
17412                         }
17413                     }
17414                 }
17415             }
17416         },

```

```

17417     "/BloodPressureMonitorAMResURI?if=oic.if.ll": {
17418         "get": {
17419             "description": "This Resource describes the Properties associated with a blood pressure
17420 monitor.\nThe Resource is an Atomic Measurement of blood pressure (oic.r.blood.pressure), pulse
17421 rate (oic.r.pulserate), observed time (oic.r.time.stamp), and user id (oic.r.userid).",
17422             "parameters": [
17423                 {
17424                     "$ref": "#/parameters/interface-all"
17425                 }
17426             ],
17427             "responses": {
17428                 "200": {
17429                     "description": "",
17430                     "x-example": [
17431                         {
17432                             "href": "/myBloodPressureResURI",
17433                             "rt": [
17434                                 "oic.r.blood.pressure"
17435                             ],
17436                             "if": [
17437                                 "oic.if.s",
17438                                 "oic.if.baseline"
17439                             ]
17440                         },
17441                         {
17442                             "href": "/myPulseRateResURI",
17443                             "rt": [
17444                                 "oic.r.pulserate"
17445                             ],
17446                             "if": [
17447                                 "oic.if.s",
17448                                 "oic.if.baseline"
17449                             ]
17450                         },
17451                         {
17452                             "href": "/myUserId",
17453                             "rt": [
17454                                 "oic.r.userid"
17455                             ],
17456                             "if": [
17457                                 "oic.if.r",
17458                                 "oic.if.baseline"
17459                             ]
17460                         },
17461                         {
17462                             "href": "/myTimeStamp",
17463                             "rt": [
17464                                 "oic.r.time.stamp"
17465                             ],
17466                             "if": [
17467                                 "oic.if.r",
17468                                 "oic.if.baseline"
17469                             ]
17470                         }
17471                     ],
17472                     "schema": {
17473                         "$ref": "#/definitions/links"
17474                     }
17475                 }
17476             }
17477         }
17478     },
17479     "/BloodPressureMonitorAMResURI?if=oic.if.baseline": {
17480         "get": {
17481             "description": "This Resource describes the Properties associated with a blood pressure
17482 monitor.\nThe Resource is an Atomic Measurement of blood pressure (oic.r.blood.pressure), pulse
17483 rate (oic.r.pulserate), observed time (oic.r.time.stamp), and user id (oic.r.userid).",
17484             "parameters": [
17485                 {
17486                     "$ref": "#/parameters/interface-all"
17487                 }
17488             ],

```

```

17489 "responses": {
17490   "200": {
17491     "description": "",
17492     "x-example": {
17493       "rt": [
17494         "oic.r.bloodpressuremonitor-am",
17495         "oic.wk.atomicmeasurement"
17496       ],
17497       "if": [
17498         "oic.if.b",
17499         "oic.if.ll",
17500         "oic.if.baseline"
17501       ],
17502       "rts-m": [
17503         "oic.r.blood.pressure"
17504       ],
17505       "rts": [
17506         "oic.r.blood.pressure",
17507         "oic.r.pulserate",
17508         "oic.r.userid",
17509         "oic.r.time.stamp"
17510       ],
17511       "links": [
17512         {
17513           "href": "/myBloodPressureResURI",
17514           "rt": [
17515             "oic.r.blood.pressure"
17516           ],
17517           "if": [
17518             "oic.if.s",
17519             "oic.if.baseline"
17520           ]
17521         },
17522         {
17523           "href": "/myPulseRateResURI",
17524           "rt": [
17525             "oic.r.pulserate"
17526           ],
17527           "if": [
17528             "oic.if.s",
17529             "oic.if.baseline"
17530           ]
17531         },
17532         {
17533           "href": "/myUserId",
17534           "rt": [
17535             "oic.r.userid"
17536           ],
17537           "if": [
17538             "oic.if.r",
17539             "oic.if.baseline"
17540           ]
17541         },
17542         {
17543           "href": "/myTimeStamp",
17544           "rt": [
17545             "oic.r.time.stamp"
17546           ],
17547           "if": [
17548             "oic.if.r",
17549             "oic.if.baseline"
17550           ]
17551         }
17552       ],
17553     },
17554     "schema": {
17555       "$ref": "#/definitions/baseline"
17556     }
17557   }
17558 }
17559 }
17560 }

```

```

17561 },
17562 "parameters": {
17563   "interface-all": {
17564     "in": "query",
17565     "name": "if",
17566     "type": "string",
17567     "enum": [
17568       "oic.if.b",
17569       "oic.if.ll",
17570       "oic.if.baseline"
17571     ]
17572   }
17573 },
17574 "definitions": {
17575   "batch-retrieve": {
17576     "minItems": 1,
17577     "items": {
17578       "properties": {
17579         "href": {
17580           "$ref":
17581 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17582 schema.json#/definitions/href"
17583         },
17584         "rep": {
17585           "type": "object",
17586           "anyOf": [
17587             {
17588               "$ref":
17589 "https://openconnectivityfoundation.github.io/IoTDataModels/BloodPressureResURI.swagger.json#/defini-
17590 tions/BloodPressure"
17591             },
17592             {
17593               "$ref":
17594 "https://openconnectivityfoundation.github.io/IoTDataModels/PulseRateResURI.swagger.json#/definition-
17595 s/PulseRate"
17596             },
17597             {
17598               "$ref":
17599 "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/U-
17600 serID"
17601             },
17602             {
17603               "$ref":
17604 "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definition-
17605 s/TimeStamp"
17606             }
17607           ]
17608         }
17609       },
17610       "required": [
17611         "href",
17612         "rep"
17613       ],
17614       "type": "object"
17615     },
17616     "type": "array"
17617   },
17618   "links": {
17619     "type": "array",
17620     "items": {
17621       "$ref": "#/definitions/oic.oic-link"
17622     }
17623   },
17624   "baseline": {
17625     "properties": {
17626       "rt": {
17627         "items": {
17628           "enum": [
17629             "oic.r.bloodpressuremonitor-am",
17630             "oic.wk.atomicmeasurement"
17631           ],
17632           "type": "string",

```

```

17633         "maxLength": 64
17634     },
17635     "minItems": 2,
17636     "uniqueItems": true,
17637     "readOnly": true,
17638     "type": "array"
17639 },
17640 "rts": {
17641     "description": "This contains all possible Resource Types for this Atomic Measurement.",
17642     "items": {
17643         "enum": [
17644             "oic.r.blood.pressure",
17645             "oic.r.pulserate",
17646             "oic.r.userid",
17647             "oic.r.time.stamp"
17648         ],
17649         "type": "string",
17650         "maxLength": 64
17651     },
17652     "minItems": 1,
17653     "uniqueItems": true,
17654     "readOnly": true,
17655     "type": "array"
17656 },
17657 "rts-m": {
17658     "description": "This contains all mandatory Resource Types for this Atomic Measurement.",
17659     "items": {
17660         "enum": [
17661             "oic.r.blood.pressure"
17662         ],
17663         "type": "string",
17664         "maxLength": 64
17665     },
17666     "maxItems": 1,
17667     "minItems": 1,
17668     "uniqueItems": true,
17669     "readOnly": true,
17670     "type": "array"
17671 },
17672 "if": {
17673     "description": "The OCF Interface set supported by this Resource",
17674     "items": {
17675         "enum": [
17676             "oic.if.b",
17677             "oic.if.ll",
17678             "oic.if.baseline"
17679         ],
17680         "type": "string"
17681     },
17682     "minItems": 3,
17683     "uniqueItems": true,
17684     "readOnly": true,
17685     "type": "array"
17686 },
17687 "n": {
17688     "$ref":
17689 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17690 schema.json#/definitions/n"
17691 },
17692 "id": {
17693     "$ref":
17694 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17695 schema.json#/definitions/id"
17696 },
17697 "links": {
17698     "$ref": "#/definitions/links"
17699 }
17700 },
17701 "type": "object",
17702 "required": [
17703     "rt", "if", "rts", "rts-m", "links"
17704 ]

```

```

17705     },
17706     "oic.oic-link": {
17707         "properties": {
17708             "if": {
17709                 "type": "array",
17710                 "readOnly": true,
17711                 "uniqueItems": true,
17712                 "minItems": 1,
17713                 "items": {
17714                     "type": "string",
17715                     "maxLength": 64,
17716                     "enum": [
17717                         "oic.if.s",
17718                         "oic.if.r",
17719                         "oic.if.baseline"
17720                     ]
17721                 }
17722             },
17723             "rt": {
17724                 "type": "array",
17725                 "readOnly": true,
17726                 "uniqueItems": true,
17727                 "minItems": 1,
17728                 "items": {
17729                     "type": "string",
17730                     "maxLength": 64,
17731                     "enum": [
17732                         "oic.r.blood.pressure",
17733                         "oic.r.pulserate",
17734                         "oic.r.userid",
17735                         "oic.r.time.stamp"
17736                     ]
17737                 }
17738             },
17739             "anchor": {
17740                 "$ref":
17741                 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17742                 schema.json#/definitions/anchor"
17743             },
17744             "di": {
17745                 "$ref":
17746                 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17747                 schema.json#/definitions/di"
17748             },
17749             "eps": {
17750                 "$ref":
17751                 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17752                 schema.json#/definitions/eps"
17753             },
17754             "href": {
17755                 "$ref":
17756                 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17757                 schema.json#/definitions/href"
17758             },
17759             "ins": {
17760                 "$ref":
17761                 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17762                 schema.json#/definitions/ins"
17763             },
17764             "p": {
17765                 "$ref":
17766                 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17767                 schema.json#/definitions/p"
17768             },
17769             "rel": {
17770                 "$ref":
17771                 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17772                 schema.json#/definitions/rel_array"
17773             },
17774             "title": {
17775                 "$ref":
17776                 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-

```



```

17777 schema.json#/definitions/title"
17778     },
17779     "type": {
17780         "$ref":
17781         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
17782         schema.json#/definitions/type"
17783     }
17784 },
17785 "required": [
17786     "href",
17787     "rt",
17788     "if"
17789 ],
17790 "type": "object"
17791 }
17792 }
17793 }
17794

```

17795 6.90.5 Property definition

17796 Table 183 defines the Properties that are part of the "oic.r.bloodpressuremonitor-am,
17797 oic.wk.atomicmeasurement" Resource Type.

17798 **Table 183 – The Property definitions of the Resource with type "rt" =**
17799 **"oic.r.bloodpressuremonitor-am, oic.wk.atomicmeasurement".**

Property name	Value type	Mandatory	Access mode	Description
href	multiple types: see schema	Yes	Read Write	
rep	object: see schema	Yes	Read Write	
rt	array: see schema	Yes	Read Only	
rts	array: see schema	Yes	Read Only	This contains all possible Resource Types for this Atomic Measurement.
rts-m	array: see schema	Yes	Read Only	This contains all mandatory Resource Types for this Atomic Measurement.
if	array: see schema	Yes	Read Only	The OCF Interface set supported by this Resource
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
links	multiple types: see schema	Yes	Read Write	
if	array: see schema	Yes	Read Only	
rt	array: see schema	Yes	Read Only	
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	

href	multiple types: see schema	Yes	Read Write	
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	

6.90.6 CRUDN behaviour

Table 184 defines the CRUDN operations that are supported on the "oic.r.bloodpressuremonitor-am, oic.wk.atomicmeasurement" Resource Type.

Table 184 – The CRUDN operations of the Resource with type "rt" = "oic.r.bloodpressuremonitor-am, oic.wk.atomicmeasurement".

Create	Read	Update	Delete	Notify
	get			observe

6.91 Body Mass Index(BMI)

6.91.1 Introduction

This Resource describes the Properties associated with a person's Body Mass Index (BMI). The unit, which is the default unit, is kg/m². The bmi and unit Properties are read-only values that are provided by the server. When range is omitted the default is 0 to +MAXFLOAT.

6.91.2 Example URI

/BMIResURI

6.91.3 Resource type

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

6.91.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Body Mass Index(BMI)",
    "version": "2019-03-22",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ]
}
```

```

17838 ],
17839 "paths": {
17840   "/BMIResURI": {
17841     "get": {
17842       "description": "This Resource describes the Properties associated with a person's Body Mass
17843 Index (BMI).\n\nThe unit, which is the default unit, is kg/m^2.\n\nThe bmi and unit Properties are read-
17844 only values that are provided by the server.\n\nWhen range is omitted the default is 0 to +MAXFLOAT.",
17845       "parameters": [
17846         {
17847           "$ref": "#/parameters/interface"
17848         }
17849       ],
17850       "responses": {
17851         "200": {
17852           "description": "",
17853           "x-example": {
17854             "rt": [
17855               "oic.r.bmi"
17856             ],
17857             "bmi": 20.0
17858           },
17859           "schema": {
17860             "$ref": "#/definitions/BMI"
17861           }
17862         }
17863       }
17864     }
17865   },
17866   "parameters": {
17867     "interface": {
17868       "in": "query",
17869       "name": "if",
17870       "type": "string",
17871       "enum": [
17872         "oic.if.s",
17873         "oic.if.baseline"
17874       ]
17875     }
17876   },
17877   "definitions": {
17878     "BMI": {
17879       "properties": {
17880         "rt": {
17881           "description": "Resource Type",
17882           "items": {
17883             "enum": [
17884               "oic.r.bmi"
17885             ],
17886             "type": "string",
17887             "maxLength": 64
17888           },
17889           "minItems": 1,
17890           "uniqueItems": true,
17891           "readOnly": true,
17892           "type": "array"
17893         },
17894         "bmi": {
17895           "description": "Body Mass Index (BMI) in kg/m^2",
17896           "minimum": 0.0,
17897           "readOnly": true,
17898           "type": "number"
17899         },
17900         "range": {
17901           "$ref":
17902 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
17903 schema.json#/definitions/range_number"
17904         },
17905         "step": {
17906           "$ref":
17907 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
17908 schema.json#/definitions/step_number"
17909         }

```

```

17910     },
17911     "precision": {
17912       "$ref":
17913       "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
17914       schema.json#/definitions/precision"
17915     },
17916     "n": {
17917       "$ref":
17918       "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17919       schema.json#/definitions/n"
17920     },
17921     "id": {
17922       "$ref":
17923       "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
17924       schema.json#/definitions/id"
17925     },
17926     "if": {
17927       "description": "The OCF Interface set supported by this Resource",
17928       "items": {
17929         "enum": [
17930           "oic.if.s",
17931           "oic.if.baseline"
17932         ],
17933         "type": "string",
17934         "maxLength": 64
17935       },
17936       "minItems": 1,
17937       "readOnly": true,
17938       "uniqueItems": true,
17939       "type": "array"
17940     }
17941   },
17942   "type": "object",
17943   "required": [
17944     "bmi"
17945   ]
17946 }
17947 }
17948 }
17949

```

17950 6.91.5 Property definition

17951 Table 185 defines the Properties that are part of the "oic.r.bmi" Resource Type.

17952 **Table 185 – The Property definitions of the Resource with type "rt" = "oic.r.bmi".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
bmi	number	Yes	Read Only	Body Mass Index (BMI) in kg/m^2
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

6.91.6 CRUDN behaviour

Table 186 defines the CRUDN operations that are supported on the "oic.r.bmi" Resource Type.

Table 186 – The CRUDN operations of the Resource with type "rt" = "oic.r.bmi".

Create	Read	Update	Delete	Notify
	get			observe

6.92 Body Fat

6.92.1 Introduction

This Resource describes the Properties associated with a person's body fat.

The unit is a single value that is one of kg, lb or percent.

If the unit Property is missing the default is kilograms [kg].

The bodyfat and unit Properties are read-only values that are provided by the Server.

When range is omitted the default is 0 to +MAXFLOAT.

6.92.2 Example URI

/BodyFatResURI

6.92.3 Resource type

The Resource Type is defined as: "oic.r.body.fat".

6.92.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Body Fat",
    "version": "2019-03-22",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/BodyFatResURI": {
      "get": {
        "description": "This Resource describes the Properties associated with a person's body
fat.\nThe unit is a single value that is one of kg, lb or percent.\nIf the unit Property is missing
the default is kilograms [kg].\nThe bodyfat and unit Properties are read-only values that are
provided by the Server.\nWhen range is omitted the default is 0 to +MAXFLOAT.",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": [
```

```

18008         "oic.r.body.fat"
18009     ],
18010     "bodyfat": 20.0,
18011     "units": "kg"
18012 },
18013     "schema": {
18014         "$ref": "#/definitions/BodyFat"
18015     }
18016 }
18017 }
18018 }
18019 },
18020 },
18021 "parameters": {
18022     "interface": {
18023         "in": "query",
18024         "name": "if",
18025         "type": "string",
18026         "enum": [
18027             "oic.if.s",
18028             "oic.if.baseline"
18029         ]
18030     }
18031 },
18032 "definitions": {
18033     "BodyFat": {
18034         "properties": {
18035             "rt": {
18036                 "description": "Resource Type",
18037                 "items": {
18038                     "enum": [
18039                         "oic.r.body.fat"
18040                     ],
18041                     "type": "string",
18042                     "maxLength": 64
18043                 },
18044                 "minItems": 1,
18045                 "uniqueItems": true,
18046                 "readOnly": true,
18047                 "type": "array"
18048             },
18049             "bodyfat": {
18050                 "description": "Body fat.",
18051                 "minimum": 0.0,
18052                 "readOnly": true,
18053                 "type": "number"
18054             },
18055             "units": {
18056                 "description": "Body fat units",
18057                 "enum": [
18058                     "kg",
18059                     "lb",
18060                     "percent"
18061                 ],
18062                 "readOnly": true,
18063                 "type": "string",
18064                 "default": "kg"
18065             },
18066             "range": {
18067                 "$ref":
18068 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
18069 schema.json#/definitions/range_number"
18070             },
18071             "step": {
18072                 "$ref":
18073 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
18074 schema.json#/definitions/step_number"
18075             },
18076             "precision": {
18077                 "$ref":
18078 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
18079 schema.json#/definitions/precision"

```

```

18080     },
18081     "n": {
18082       "$ref":
18083       "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
18084       schema.json#/definitions/n"
18085     },
18086     "id": {
18087       "$ref":
18088       "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
18089       schema.json#/definitions/id"
18090     },
18091     "if": {
18092       "description": "The OCF Interface set supported by this Resource",
18093       "items": {
18094         "enum": [
18095           "oic.if.s",
18096           "oic.if.baseline"
18097         ],
18098         "type": "string",
18099         "maxLength": 64
18100       },
18101       "minItems": 1,
18102       "readOnly": true,
18103       "type": "array"
18104     }
18105   },
18106   "type": "object",
18107   "required": [
18108     "bodyfat"
18109   ]
18110 }
18111 }
18112 }
18113

```

18114 6.92.5 Property definition

18115 Table 187 defines the Properties that are part of the "oic.r.body.fat" Resource Type.

18116 **Table 187 – The Property definitions of the Resource with type "rt" = "oic.r.body.fat".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
bodyfat	number	Yes	Read Only	Body fat.
units	string	No	Read Only	Body fat units
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

18117 6.92.6 CRUDN behaviour

18118 Table 188 defines the CRUDN operations that are supported on the "oic.r.body.fat" Resource Type.

18119 **Table 188 – The CRUDN operations of the Resource with type "rt" = "oic.r.body.fat".**

Create	Read	Update	Delete	Notify
	get			observe

18120 **6.93 Body Fat Free Mass**

18121 **6.93.1 Introduction**

18122 This Resource describes the Properties associated with a person's body fat free mass.
 18123 The unit is a single value that is one of kg, lb or percent.
 18124 If the unit Property is missing the default is kilograms [kg].
 18125 The ffm and unit Properties are read-only values that are provided by the Server.
 18126 When range is omitted the default is 0 to +MAXFLOAT.

18127 **6.93.2 Example URI**

18128 /BodyFatFreeMassResURI

18129 **6.93.3 Resource type**

18130 The Resource Type is defined as: "oic.r.body.ffm".

18131 **6.93.4 OpenAPI 2.0 definition**

```

18132 {
18133   "swagger": "2.0",
18134   "info": {
18135     "title": "Body Fat Free Mass",
18136     "version": "2019-03-22",
18137     "license": {
18138       "name": "OCF Data Model License",
18139       "url":
18140         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
18141         CENSE.md",
18142       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
18143     },
18144     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
18145   },
18146   "schemes": [
18147     "http"
18148   ],
18149   "consumes": [
18150     "application/json"
18151   ],
18152   "produces": [
18153     "application/json"
18154   ],
18155   "paths": {
18156     "/BodyFatFreeMassResURI": {
18157       "get": {
18158         "description": "This Resource describes the Properties associated with a person's body fat
18159         free mass.\nThe unit is a single value that is one of kg, lb or percent.\nIf the unit Property is
18160         missing the default is kilograms [kg].\nThe ffm and unit Properties are read-only values that are
18161         provided by the Server.\nWhen range is omitted the default is 0 to +MAXFLOAT.",
18162         "parameters": [
18163           {
18164             "$ref": "#/parameters/interface"
18165           }
18166         ],
18167         "responses": {
18168           "200": {
18169             "description": "",
18170             "x-example": {
18171               "rt": [
18172                 "oic.r.body.ffm"
18173               ],
18174               "ffm": 40.0,
18175               "units": "kg"
18176             }
18177           }
18178         }
18179       }
18180     }
18181   }

```



```

18177         "schema": {
18178             "$ref": "#/definitions/BodyFatFreeMass"
18179         }
18180     }
18181 }
18182 }
18183 }
18184 },
18185 "parameters": {
18186     "interface": {
18187         "in": "query",
18188         "name": "if",
18189         "type": "string",
18190         "enum": [
18191             "oic.if.s",
18192             "oic.if.baseline"
18193         ]
18194     }
18195 },
18196 "definitions": {
18197     "BodyFatFreeMass": {
18198         "properties": {
18199             "rt": {
18200                 "description": "Resource Type",
18201                 "items": {
18202                     "enum": [
18203                         "oic.r.body.ffm"
18204                     ],
18205                     "type": "string",
18206                     "maxLength": 64
18207                 },
18208                 "minItems": 1,
18209                 "uniqueItems": true,
18210                 "readOnly": true,
18211                 "type": "array"
18212             },
18213             "ffm": {
18214                 "description": "Body fat free mass.",
18215                 "minimum": 0.0,
18216                 "readOnly": true,
18217                 "type": "number"
18218             },
18219             "units": {
18220                 "description": "Body fat free mass units",
18221                 "enum": [
18222                     "kg",
18223                     "lb",
18224                     "percent"
18225                 ],
18226                 "readOnly": true,
18227                 "type": "string",
18228                 "default": "kg"
18229             },
18230             "range": {
18231                 "$ref":
18232                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
18233                 schema.json#/definitions/range_number"
18234             },
18235             "step": {
18236                 "$ref":
18237                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
18238                 schema.json#/definitions/step_number"
18239             },
18240             "precision": {
18241                 "$ref":
18242                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
18243                 schema.json#/definitions/precision"
18244             },
18245             "n": {
18246                 "$ref":
18247                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
18248                 schema.json#/definitions/n"

```

```

18249     },
18250     "id": {
18251       "$ref":
18252       "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
18253       schema.json#/definitions/id"
18254     },
18255     "if": {
18256       "description": "The OCF Interface set supported by this Resource",
18257       "items": {
18258         "enum": [
18259           "oic.if.s",
18260           "oic.if.baseline"
18261         ],
18262         "type": "string",
18263         "maxLength": 64
18264       },
18265       "minItems": 1,
18266       "readOnly": true,
18267       "uniqueItems": true,
18268       "type": "array"
18269     }
18270   },
18271   "type": "object",
18272   "required": [
18273     "ffm"
18274   ]
18275 }
18276 }
18277 }
18278

```

18279 6.93.5 Property definition

18280 Table 189 defines the Properties that are part of the "oic.r.body.ffm" Resource Type.

18281 **Table 189 – The Property definitions of the Resource with type "rt" = "oic.r.body.ffm".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
ffm	number	Yes	Read Only	Body fat free mass.
units	string	No	Read Only	Body fat free mass units
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

18282 6.93.6 CRUDN behaviour

18283 Table 190 defines the CRUDN operations that are supported on the "oic.r.body.ffm" Resource Type.

18284 **Table 190 – The CRUDN operations of the Resource with type "rt" = "oic.r.body.ffm".**

Create	Read	Update	Delete	Notify
	get			observe

18285 **6.94 Body Location Temperature**

18286 **6.94.1 Introduction**

18287 This Resource describes the Properties associated with body location for temperature
18288 measurement of a person.

18289 The bloc Property is a read-only value that is provided by the Server.

18290 **6.94.2 Example URI**

18291 /BodyLocationTemperatureResURI

18292 **6.94.3 Resource type**

18293 The Resource Type is defined as: "oic.r.body.location.temperature".

18294 **6.94.4 OpenAPI 2.0 definition**

```

18295 {
18296   "swagger": "2.0",
18297   "info": {
18298     "title": "Body Location Temperature",
18299     "version": "2019-03-22",
18300     "license": {
18301       "name": "OCF Data Model License",
18302       "url":
18303         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
18304         CENSE.md",
18305       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
18306     },
18307     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
18308   },
18309   "schemes": [
18310     "http"
18311   ],
18312   "consumes": [
18313     "application/json"
18314   ],
18315   "produces": [
18316     "application/json"
18317   ],
18318   "paths": {
18319     "/BodyLocationTemperatureResURI": {
18320       "get": {
18321         "description": "This Resource describes the Properties associated with body location for
18322         temperature measurement of a person.\n\nThe bloc Property is a read-only value that is provided by the
18323         Server.",
18324         "parameters": [
18325           {
18326             "$ref": "#/parameters/interface"
18327           }
18328         ],
18329         "responses": {
18330           "200": {
18331             "description": "",
18332             "x-example": {
18333               "rt": [
18334                 "oic.r.body.location.temperature"
18335               ],
18336               "bloc": "ear"
18337             },
18338             "schema": {
18339               "$ref": "#/definitions/BodyLocationTemperature"
18340             }
18341           }
18342         }
18343       }
18344     }
18345   }

```

```

18342     }
18343   }
18344 }
18345 },
18346 "parameters": {
18347   "interface": {
18348     "in": "query",
18349     "name": "if",
18350     "type": "string",
18351     "enum": [
18352       "oic.if.s",
18353       "oic.if.baseline"
18354     ]
18355   }
18356 },
18357 "definitions": {
18358   "BodyLocationTemperature": {
18359     "properties": {
18360       "rt": {
18361         "description": "Resource Type",
18362         "items": {
18363           "enum": [
18364             "oic.r.body.location.temperature"
18365           ],
18366           "type": "string",
18367           "maxLength": 64
18368         },
18369         "minItems": 1,
18370         "uniqueItems": true,
18371         "readOnly": true,
18372         "type": "array"
18373       },
18374       "bloc": {
18375         "description": "A list specific to temperature site",
18376         "enum": [
18377           "axillary",
18378           "body",
18379           "ear",
18380           "finger",
18381           "gitract",
18382           "mouth",
18383           "rectum",
18384           "toe",
18385           "tympanum"
18386         ],
18387         "readOnly": true,
18388         "type": "string"
18389       },
18390       "n": {
18391         "$ref":
18392         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
18393         schema.json#/definitions/n"
18394       },
18395       "id": {
18396         "$ref":
18397         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
18398         schema.json#/definitions/id"
18399       },
18400       "if": {
18401         "description": "The OCF Interface set supported by this Resource",
18402         "items": {
18403           "enum": [
18404             "oic.if.s",
18405             "oic.if.baseline"
18406           ],
18407           "type": "string",
18408           "maxLength": 64
18409         },
18410         "minItems": 1,
18411         "readOnly": true,
18412         "uniqueItems": true,
18413         "type": "array"

```

```

18414     },
18415     },
18416     "type": "object",
18417     "required": [
18418         "bloc"
18419     ]
18420 }
18421 }
18422 }
18423

```

18424 6.94.5 Property definition

18425 Table 191 defines the Properties that are part of the "oic.r.body.location.temperature" Resource
 18426 Type.

18427 **Table 191 – The Property definitions of the Resource with type "rt" =**
 18428 **"oic.r.body.location.temperature".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
bloc	string	Yes	Read Only	A list specific to temperature site
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

18429 6.94.6 CRUDN behaviour

18430 Table 192 defines the CRUDN operations that are supported on the
 18431 "oic.r.body.location.temperature" Resource Type.

18432 **Table 192 – The CRUDN operations of the Resource with type "rt" =**
 18433 **"oic.r.body.location.temperature".**

Create	Read	Update	Delete	Notify
	get			observe

18434 6.95 Body Scale Atomic Measurement

18435 6.95.1 Introduction

18436 This Resource describes the Properties associated with body scale.
 18437 The Resource is an Atomic Measurement of weight (oic.r.weight), body mass index (BMI)
 18438 (oic.r.bmi), height (oic.r.height), body fat (oic.r.body.fat), body water (oic.r.body.water), body soft
 18439 lean mass (oic.r.body.slm), body fat free mass (oic.r.body.ffmpeg), observed time (oic.r.time.stamp),
 18440 and user id (oic.r.userid).

18441 6.95.2 Example URI

18442 /BodyScaleAMResURI

18443 6.95.3 Resource type

18444 The Resource Type is defined as: "oic.r.bodyscale-am, oic.wk.atomicmeasurement".

18445 6.95.4 OpenAPI 2.0 definition

```

18446 {
18447     "swagger": "2.0",

```

```

18448     "info": {
18449         "title": "Body Scale Atomic Measurement",
18450         "version": "2019-03-22",
18451         "license": {
18452             "name": "OCF Data Model License",
18453             "url":
18454 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
18455 CENSE.md",
18456             "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
18457         },
18458         "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
18459     },
18460     "schemes": [
18461         "http"
18462     ],
18463     "consumes": [
18464         "application/json"
18465     ],
18466     "produces": [
18467         "application/json"
18468     ],
18469     "paths": {
18470         "/BodyScaleAMResURI?if=oic.if.b": {
18471             "get": {
18472                 "description": "This Resource describes the Properties associated with body scale.\nThe
18473 Resource is an Atomic Measurement of weight (oic.r.weight), body mass index (BMI) (oic.r.bmi),
18474 height (oic.r.height), body fat (oic.r.body.fat), body water (oic.r.body.water), body soft lean mass
18475 (oic.r.body.slm), body fat free mass (oic.r.body.ffm), observed time (oic.r.time.stamp), and user id
18476 (oic.r.userid).",
18477                 "parameters": [
18478                     {
18479                         "$ref": "#/parameters/interface-all"
18480                     }
18481                 ],
18482                 "responses": {
18483                     "200": {
18484                         "description": "",
18485                         "x-example": [
18486                             {
18487                                 "href": "/myWeight",
18488                                 "rep": {
18489                                     "weight": 80.0,
18490                                     "units": "kg"
18491                                 }
18492                             },
18493                             {
18494                                 "href": "/myBMI",
18495                                 "rep": {
18496                                     "bmi": 20.0
18497                                 }
18498                             },
18499                             {
18500                                 "href": "/myHeight",
18501                                 "rep": {
18502                                     "height": 1.8,
18503                                     "units": "m"
18504                                 }
18505                             },
18506                             {
18507                                 "href": "/myBodyFat",
18508                                 "rep": {
18509                                     "bodyfat": 20.0,
18510                                     "units": "kg"
18511                                 }
18512                             },
18513                             {
18514                                 "href": "/myBodyWater",
18515                                 "rep": {
18516                                     "bwater": 20.0,
18517                                     "units": "kg"
18518                                 }
18519                             }
18520                         ]
18521                     }
18522                 }
18523             }
18524         }
18525     }

```

```

18520         {
18521             "href": "/myBodySoftLeanMass",
18522             "rep": {
18523                 "slm": 20.0,
18524                 "units": "kg"
18525             }
18526         },
18527         {
18528             "href": "/myBodyFatFreeMass",
18529             "rep": {
18530                 "ffm": 40.0,
18531                 "units": "kg"
18532             }
18533         },
18534         {
18535             "href": "/myUserId",
18536             "rep": {
18537                 "userid": "USER1"
18538             }
18539         },
18540         {
18541             "href": "/myTimeStamp",
18542             "rep": {
18543                 "timestamp": "2018-11-09T12:15+08:00"
18544             }
18545         }
18546     ],
18547     "schema": {
18548         "$ref": "#/definitions/batch-retrieve"
18549     }
18550 }
18551 }
18552 },
18553 },
18554 "/BodyScaleAMResURI?if=oic.if.ll": {
18555     "get": {
18556         "description": "This Resource describes the Properties associated with body scale.\n\nThe
18557 Resource is an Atomic Measurement of weight (oic.r.weight), body mass index (BMI) (oic.r.bmi),
18558 height (oic.r.height), body fat (oic.r.body.fat), body water (oic.r.body.water), body soft lean mass
18559 (oic.r.body.slm), body fat free mass (oic.r.body.ffm), observed time (oic.r.time.stamp), and user id
18560 (oic.r.userid).",
18561         "parameters": [
18562             {
18563                 "$ref": "#/parameters/interface-all"
18564             }
18565         ],
18566         "responses": {
18567             "200": {
18568                 "description": "",
18569                 "x-example": [
18570                     {
18571                         "href": "/myWeight",
18572                         "rt": [
18573                             "oic.r.weight"
18574                         ],
18575                         "if": [
18576                             "oic.if.s",
18577                             "oic.if.baseline"
18578                         ]
18579                     },
18580                     {
18581                         "href": "/myBMI",
18582                         "rt": [
18583                             "oic.r.bmi"
18584                         ],
18585                         "if": [
18586                             "oic.if.s",
18587                             "oic.if.baseline"
18588                         ]
18589                     }
18590                 ],
18591                 {
18592                     "href": "/myHeight",

```

```

18592         "rt": [
18593             "oic.r.height"
18594         ],
18595         "if": [
18596             "oic.if.s",
18597             "oic.if.baseline"
18598         ]
18599     },
18600     {
18601         "href": "/myBodyFat",
18602         "rt": [
18603             "oic.r.body.fat"
18604         ],
18605         "if": [
18606             "oic.if.s",
18607             "oic.if.baseline"
18608         ]
18609     },
18610     {
18611         "href": "/myBodyWater",
18612         "rt": [
18613             "oic.r.body.water"
18614         ],
18615         "if": [
18616             "oic.if.s",
18617             "oic.if.baseline"
18618         ]
18619     },
18620     {
18621         "href": "/myBodySoftLeanMass",
18622         "rt": [
18623             "oic.r.body.slm"
18624         ],
18625         "if": [
18626             "oic.if.s",
18627             "oic.if.baseline"
18628         ]
18629     },
18630     {
18631         "href": "/myBodyFatFreeMass",
18632         "rt": [
18633             "oic.r.body.ffm"
18634         ],
18635         "if": [
18636             "oic.if.s",
18637             "oic.if.baseline"
18638         ]
18639     },
18640     {
18641         "href": "/myUserId",
18642         "rt": [
18643             "oic.r.userid"
18644         ],
18645         "if": [
18646             "oic.if.r",
18647             "oic.if.baseline"
18648         ]
18649     },
18650     {
18651         "href": "/myTimeStamp",
18652         "rt": [
18653             "oic.r.time.stamp"
18654         ],
18655         "if": [
18656             "oic.if.r",
18657             "oic.if.baseline"
18658         ]
18659     }
18660 ],
18661 "schema": {
18662     "$ref": "#/definitions/links"
18663 }

```



```

18664     }
18665   }
18666 }
18667 },
18668 "/BodyScaleAMResURI?if=oic.if.baseline": {
18669   "get": {
18670     "description": "This Resource describes the Properties associated with body scale.\nThe
18671 Resource is an Atomic Measurement of weight (oic.r.weight), body mass index (BMI) (oic.r.bmi),
18672 height (oic.r.height), body fat (oic.r.body.fat), body water (oic.r.body.water), body soft lean mass
18673 (oic.r.body.slm), body fat free mass (oic.r.body.ffmpeg), observed time (oic.r.time.stamp), and user id
18674 (oic.r.userid).",
18675     "parameters": [
18676       {
18677         "$ref": "#/parameters/interface-all"
18678       }
18679     ],
18680     "responses": {
18681       "200": {
18682         "description": "",
18683         "x-example": {
18684           "rt": [
18685             "oic.r.bodyscale-am",
18686             "oic.wk.atomicmeasurement"
18687           ],
18688           "if": [
18689             "oic.if.b",
18690             "oic.if.ll",
18691             "oic.if.baseline"
18692           ],
18693           "rts": [
18694             "oic.r.weight",
18695             "oic.r.bmi",
18696             "oic.r.height",
18697             "oic.r.body.fat",
18698             "oic.r.body.water",
18699             "oic.r.body.slm",
18700             "oic.r.body.ffmpeg",
18701             "oic.r.userid",
18702             "oic.r.time.stamp"
18703           ],
18704           "rts-m": [
18705             "oic.r.weight"
18706           ],
18707           "links": [
18708             {
18709               "href": "/myWeight",
18710               "rt": [
18711                 "oic.r.weight"
18712               ],
18713               "if": [
18714                 "oic.if.s",
18715                 "oic.if.baseline"
18716               ]
18717             },
18718             {
18719               "href": "/myBMI",
18720               "rt": [
18721                 "oic.r.bmi"
18722               ],
18723               "if": [
18724                 "oic.if.s",
18725                 "oic.if.baseline"
18726               ]
18727             },
18728             {
18729               "href": "/myHeight",
18730               "rt": [
18731                 "oic.r.height"
18732               ],
18733               "if": [
18734                 "oic.if.s",
18735                 "oic.if.baseline"

```

```

18736     ]
18737   },
18738   {
18739     "href": "/myBodyFat",
18740     "rt": [
18741       "oic.r.body.fat"
18742     ],
18743     "if": [
18744       "oic.if.s",
18745       "oic.if.baseline"
18746     ]
18747   },
18748   {
18749     "href": "/myBodyWater",
18750     "rt": [
18751       "oic.r.body.water"
18752     ],
18753     "if": [
18754       "oic.if.s",
18755       "oic.if.baseline"
18756     ]
18757   },
18758   {
18759     "href": "/myBodySoftLeanMass",
18760     "rt": [
18761       "oic.r.body.slm"
18762     ],
18763     "if": [
18764       "oic.if.s",
18765       "oic.if.baseline"
18766     ]
18767   },
18768   {
18769     "href": "/myBodyFatFreeMass",
18770     "rt": [
18771       "oic.r.body ffm"
18772     ],
18773     "if": [
18774       "oic.if.s",
18775       "oic.if.baseline"
18776     ]
18777   },
18778   {
18779     "href": "/myUserId",
18780     "rt": [
18781       "oic.r.userid"
18782     ],
18783     "if": [
18784       "oic.if.r",
18785       "oic.if.baseline"
18786     ]
18787   },
18788   {
18789     "href": "/myTimeStamp",
18790     "rt": [
18791       "oic.r.time.stamp"
18792     ],
18793     "if": [
18794       "oic.if.r",
18795       "oic.if.baseline"
18796     ]
18797   }
18798 ]
18799 },
18800 "schema": {
18801   "$ref": "#/definitions/baseline"
18802 }
18803 }
18804 }
18805 }
18806 }
18807 },

```

```

18808 "parameters": {
18809   "interface-all": {
18810     "in": "query",
18811     "name": "if",
18812     "type": "string",
18813     "enum": [
18814       "oic.if.b",
18815       "oic.if.ll",
18816       "oic.if.baseline"
18817     ]
18818   },
18819 },
18820 "definitions": {
18821   "links": {
18822     "type": "array",
18823     "items": {
18824       "$ref": "#/definitions/oic.oic-link"
18825     }
18826   },
18827   "baseline": {
18828     "properties": {
18829       "rt": {
18830         "items": {
18831           "enum": [
18832             "oic.r.bodyscale-am",
18833             "oic.wk.atomicmeasurement"
18834           ],
18835           "type": "string",
18836           "maxLength": 64
18837         },
18838         "minItems": 2,
18839         "uniqueItems": true,
18840         "readOnly": true,
18841         "type": "array"
18842       },
18843       "rts": {
18844         "description": "This contains all possible Resource Types for this Atomic Measurement.",
18845         "items": {
18846           "enum": [
18847             "oic.r.weight",
18848             "oic.r.bmi",
18849             "oic.r.height",
18850             "oic.r.body.fat",
18851             "oic.r.body.water",
18852             "oic.r.body.slm",
18853             "oic.r.body.ffmpeg",
18854             "oic.r.time.stamp",
18855             "oic.r.userid"
18856           ],
18857           "type": "string",
18858           "maxLength": 64
18859         },
18860         "minItems": 1,
18861         "uniqueItems": true,
18862         "readOnly": true,
18863         "type": "array"
18864       },
18865       "rts-m": {
18866         "description": "This contains all mandatory Resource Types for this Atomic Measurement.",
18867         "items": {
18868           "enum": [
18869             "oic.r.weight"
18870           ],
18871           "type": "string",
18872           "maxLength": 64
18873         },
18874         "maxItems": 1,
18875         "minItems": 1,
18876         "uniqueItems": true,
18877         "readOnly": true,
18878         "type": "array"
18879       },

```

```

18880         "if": {
18881             "description": "The OCF Interface set supported by this Resource",
18882             "items": {
18883                 "enum": [
18884                     "oic.if.b",
18885                     "oic.if.ll",
18886                     "oic.if.baseline"
18887                 ],
18888                 "type": "string",
18889                 "maxLength": 64
18890             },
18891             "minItems": 3,
18892             "uniqueItems": true,
18893             "readOnly": true,
18894             "type": "array"
18895         },
18896         "n": {
18897             "$ref":
18898 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
18899 schema.json#/definitions/n"
18900         },
18901         "id": {
18902             "$ref":
18903 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
18904 schema.json#/definitions/id"
18905         },
18906         "links": {
18907             "$ref": "#/definitions/links"
18908         }
18909     },
18910     "type": "object",
18911     "required": [
18912         "rt", "if", "links", "rts", "rts-m"
18913     ]
18914 },
18915 "batch-retrieve": {
18916     "minItems": 1,
18917     "items": {
18918         "properties": {
18919             "href": {
18920                 "$ref":
18921 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
18922 schema.json#/definitions/href"
18923             },
18924             "rep": {
18925                 "type": "object",
18926                 "anyOf": [
18927                     {
18928                         "$ref":
18929 "https://openconnectivityfoundation.github.io/IoTDataModels/WeightResURI.swagger.json#/definitions/W
18930 eight"
18931                     },
18932                     {
18933                         "$ref":
18934 "https://openconnectivityfoundation.github.io/IoTDataModels/BMIResURI.swagger.json#/definitions/BMI"
18935                     },
18936                     {
18937                         "$ref":
18938 "https://openconnectivityfoundation.github.io/IoTDataModels/HeightResURI.swagger.json#/definitions/H
18939 eight"
18940                     },
18941                     {
18942                         "$ref":
18943 "https://openconnectivityfoundation.github.io/IoTDataModels/BodyFatResURI.swagger.json#/definitions/
18944 BodyFat"
18945                     },
18946                     {
18947                         "$ref":
18948 "https://openconnectivityfoundation.github.io/IoTDataModels/BodyWaterResURI.swagger.json#/definition
18949 s/BodyWater"
18950                     }
18951                 ]

```

```

18952         "$ref":
18953         "https://openconnectivityfoundation.github.io/IoTDataModels/BodySoftLeanMassResURI.swagger.json#/def
18954         initions/BodySoftLeanMass"
18955     },
18956     {
18957         "$ref":
18958         "https://openconnectivityfoundation.github.io/IoTDataModels/BodyFatFreeMassResURI.swagger.json#/defi
18959         nitions/BodyFatFreeMass"
18960     },
18961     {
18962         "$ref":
18963         "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/U
18964         serID"
18965     },
18966     {
18967         "$ref":
18968         "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definition
18969         s/TimeStamp"
18970     }
18971 ]
18972 }
18973 },
18974 "required": [
18975     "href",
18976     "rep"
18977 ],
18978 "type": "object"
18979 },
18980 "type": "array"
18981 },
18982 "oic.oic-link": {
18983     "properties": {
18984         "rt": {
18985             "description": "Resource Type of the target Resource",
18986             "items": {
18987                 "enum": [
18988                     "oic.r.weight",
18989                     "oic.r.bmi",
18990                     "oic.r.height",
18991                     "oic.r.body.fat",
18992                     "oic.r.body.water",
18993                     "oic.r.body.slm",
18994                     "oic.r.body.ffmpeg",
18995                     "oic.r.time.stamp",
18996                     "oic.r.userid"
18997                 ],
18998                 "type": "string",
18999                 "maxLength": 64
19000             },
19001             "minItems": 1,
19002             "uniqueItems": true,
19003             "readOnly": true,
19004             "type": "array"
19005         },
19006         "if": {
19007             "description": "The OCF Interface set supported by the target Resource",
19008             "items": {
19009                 "enum": [
19010                     "oic.if.s",
19011                     "oic.if.r",
19012                     "oic.if.baseline"
19013                 ],
19014                 "type": "string",
19015                 "maxLength": 64
19016             },
19017             "minItems": 1,
19018             "uniqueItems": true,
19019             "readOnly": true,
19020             "type": "array"
19021         },
19022         "anchor": {
19023             "$ref":

```

```

19024 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19025 schema.json#/definitions/anchor"
19026 },
19027 "di": {
19028   "$ref":
19029     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19030     schema.json#/definitions/di"
19031 },
19032 "eps": {
19033   "$ref":
19034     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19035     schema.json#/definitions/eps"
19036 },
19037 "href": {
19038   "$ref":
19039     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19040     schema.json#/definitions/href"
19041 },
19042 "ins": {
19043   "$ref":
19044     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19045     schema.json#/definitions/ins"
19046 },
19047 "p": {
19048   "$ref":
19049     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19050     schema.json#/definitions/p"
19051 },
19052 "rel": {
19053   "$ref":
19054     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19055     schema.json#/definitions/rel_array"
19056 },
19057 "title": {
19058   "$ref":
19059     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19060     schema.json#/definitions/title"
19061 },
19062 "type": {
19063   "$ref":
19064     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19065     schema.json#/definitions/type"
19066 }
19067 },
19068 "required": [
19069   "href",
19070   "rt",
19071   "if"
19072 ],
19073 "type": "object"
19074 }
19075 }
19076 }
19077

```

19078 6.95.5 Property definition

19079 Table 193 defines the Properties that are part of the "oic.r.bodyscale-am,
19080 oic.wk.atomicmeasurement" Resource Type.

19081 **Table 193 – The Property definitions of the Resource with type "rt" = "oic.r.bodyscale-am,**
19082 **oic.wk.atomicmeasurement".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	Yes	Read Only	
rts	array: see schema	Yes	Read Only	This contains all possible Resource Types for this

				Atomic Measurement.
rts-m	array: see schema	Yes	Read Only	This contains all mandatory Resource Types for this Atomic Measurement.
if	array: see schema	Yes	Read Only	The OCF Interface set supported by this Resource
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
links	multiple types: see schema	Yes	Read Write	
href	multiple types: see schema	Yes	Read Write	
rep	object: see schema	Yes	Read Write	
rt	array: see schema	Yes	Read Only	Resource Type of the target Resource
if	array: see schema	Yes	Read Only	The OCF Interface set supported by the target Resource
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	

19083 **6.95.6 CRUDN behaviour**

19084 Table 194 defines the CRUDN operations that are supported on the "oic.r.bodyscale-am,
19085 oic.wk.atomicmeasurement" Resource Type.

19086 **Table 194 – The CRUDN operations of the Resource with type "rt" = "oic.r.bodyscale-am,**
19087 **oic.wk.atomicmeasurement".**

Create	Read	Update	Delete	Notify
	get			observe

19088 **6.96 Body Soft Lean Mass**

19089 **6.96.1 Introduction**

19090 This Resource describes the Properties associated with a person's body soft lean mass.

19091 The unit is a single value that is one of kg, lb or percent.

19092 If the unit Property is missing the default is kilograms [kg].

19093 The slm and unit Properties are read-only values that are provided by the Server.

19094 When range is omitted the default is 0 to +MAXFLOAT.

19095 **6.96.2 Example URI**

19096 /BodySoftLeanMassResURI

19097 **6.96.3 Resource type**

19098 The Resource Type is defined as: "oic.r.body.slm".

19099 **6.96.4 OpenAPI 2.0 definition**

```
19100 {
19101   "swagger": "2.0",
19102   "info": {
19103     "title": "Body Soft Lean Mass",
19104     "version": "2019-03-22",
19105     "license": {
19106       "name": "OCF Data Model License",
19107       "url":
19108         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
19109         CENSE.md",
19110       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
19111     },
19112     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
19113   },
19114   "schemes": [
19115     "http"
19116   ],
19117   "consumes": [
19118     "application/json"
19119   ],
19120   "produces": [
19121     "application/json"
19122   ],
19123   "paths": {
19124     "/BodySoftLeanMassResURI": {
19125       "get": {
19126         "description": "This Resource describes the Properties associated with a person's body soft
19127         lean mass.\nThe unit is a single value that is one of kg, lb or percent.\nIf the unit Property is
19128         missing the default is kilograms [kg].\nThe slm and unit Properties are read-only values that are
19129         provided by the Server.\nWhen range is omitted the default is 0 to +MAXFLOAT.",
19130         "parameters": [
19131           {
19132             "$ref": "#/parameters/interface"
19133           }
19134         ],
19135         "responses": {
19136           "200": {
19137             "description": "",
19138             "x-example": {
19139               "rt": [
19140                 "oic.r.body.slm"
19141               ],
19142               "slm": 20.0,
19143               "units": "kg"
19144             },
19145             "schema": {
19146               "$ref": "#/definitions/BodySoftLeanMass"
19147             }
19148           }
19149         }
19150       }
19151     }
19152   }
```



```

19151     }
19152   },
19153   "parameters": {
19154     "interface": {
19155       "in": "query",
19156       "name": "if",
19157       "type": "string",
19158       "enum": [
19159         "oic.if.s",
19160         "oic.if.baseline"
19161       ]
19162     }
19163   },
19164   "definitions": {
19165     "BodySoftLeanMass": {
19166       "properties": {
19167         "rt": {
19168           "description": "Resource Type",
19169           "items": {
19170             "enum": [
19171               "oic.r.body.slm"
19172             ],
19173             "type": "string",
19174             "maxLength": 64
19175           },
19176           "minItems": 1,
19177           "uniqueItems": true,
19178           "readOnly": true,
19179           "type": "array"
19180         },
19181         "slm": {
19182           "description": "Body soft lean mass.",
19183           "minimum": 0.0,
19184           "readOnly": true,
19185           "type": "number"
19186         },
19187         "units": {
19188           "description": "Body soft lean mass units",
19189           "enum": [
19190             "kg",
19191             "lb",
19192             "percent"
19193           ],
19194           "readOnly": true,
19195           "type": "string",
19196           "default": "kg"
19197         },
19198         "range": {
19199           "$ref":
19200             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19201             schema.json#/definitions/range_number"
19202         },
19203         "step": {
19204           "$ref":
19205             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19206             schema.json#/definitions/step_number"
19207         },
19208         "precision": {
19209           "$ref":
19210             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19211             schema.json#/definitions/precision"
19212         },
19213         "n": {
19214           "$ref":
19215             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19216             schema.json#/definitions/n"
19217         },
19218         "id": {
19219           "$ref":
19220             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19221             schema.json#/definitions/id"
19222         },

```

```

19223     "if": {
19224         "description": "The OCF Interface set supported by this Resource",
19225         "items": {
19226             "enum": [
19227                 "oic.if.s",
19228                 "oic.if.baseline"
19229             ],
19230             "type": "string",
19231             "maxLength": 64
19232         },
19233         "minItems": 1,
19234         "readOnly": true,
19235         "uniqueItems": true,
19236         "type": "array"
19237     },
19238     "type": "object",
19239     "required": [
19240         "slm"
19241     ]
19242 }
19243 }
19244 }
19245 }
19246

```

19247 6.96.5 Property definition

19248 Table 195 defines the Properties that are part of the "oic.r.body.slm" Resource Type.

19249 **Table 195 – The Property definitions of the Resource with type "rt" = "oic.r.body.slm".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
slm	number	Yes	Read Only	Body soft lean mass.
units	string	No	Read Only	Body soft lean mass units
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

19250 6.96.6 CRUDN behaviour

19251 Table 196 defines the CRUDN operations that are supported on the "oic.r.body.slm" Resource Type.

19252 **Table 196 – The CRUDN operations of the Resource with type "rt" = "oic.r.body.slm".**

Create	Read	Update	Delete	Notify
	get			observe

19253 6.97 Body Thermometer Atomic Measurement

19254 6.97.1 Introduction

19255 This Resource describes the Properties associated with body thermometer.
19256 The Resource is an Atomic Measurement of temperature (oic.r.temperature), body location for
19257 temperature (oic.r.body.location.temperature), observed time (oic.r.time.stamp), and user id
19258 (oic.r.userid).

19259 6.97.2 Example URI

19260 /BodyThermometerAMResURI

19261 6.97.3 Resource type

19262 The Resource Type is defined as: "oic.r.bodythermometer-am, oic.wk.atomicmeasurement".

19263 6.97.4 OpenAPI 2.0 definition

```
19264 {  
19265   "swagger": "2.0",  
19266   "info": {  
19267     "title": "Body Thermometer Atomic Measurement",  
19268     "version": "2019-03-22",  
19269     "license": {  
19270       "name": "OCF Data Model License",  
19271       "url":  
19272         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
19273         CENSE.md",  
19274         "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."  
19275       },  
19276       "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
19277     },  
19278     "schemes": [  
19279       "http"  
19280     ],  
19281     "consumes": [  
19282       "application/json"  
19283     ],  
19284     "produces": [  
19285       "application/json"  
19286     ],  
19287     "paths": {  
19288       "/BodyThermometerAMResURI?if=oic.if.b": {  
19289         "get": {  
19290           "description": "This Resource describes the Properties associated with body  
19291           thermometer.\n\nThe Resource is an Atomic Measurement of temperature (oic.r.temperature), body  
19292           location for temperature (oic.r.body.location.temperature), observed time (oic.r.time.stamp), and  
19293           user id (oic.r.userid).",  
19294           "parameters": [  
19295             {  
19296               "$ref": "#/parameters/interface-all"  
19297             }  
19298           ],  
19299           "responses": {  
19300             "200": {  
19301               "description": "",  
19302               "x-example": [  
19303                 {  
19304                   "href": "/myTemperature",  
19305                   "rep": {  
19306                     "temperature": 38.0,  
19307                     "units": "C"  
19308                   }  
19309                 },  
19310                 {  
19311                   "href": "/myBodyLocationForTemperature",  
19312                   "rep": {  
19313                     "bloc": "mouth"  
19314                   }  
19315                 }  
19316               ]  
19317             }  
19318           }  
19319         }  
19320       }  
19321     }  
19322   }
```

```

19316         {
19317             "href": "/myUserId",
19318             "rep": {
19319                 "userid": "USER1"
19320             }
19321         },
19322         {
19323             "href": "/myTimeStamp",
19324             "rep": {
19325                 "timestamp": "2018-11-09T12:15+08:00"
19326             }
19327         }
19328     ],
19329     "schema": {
19330         "$ref": "#/definitions/batch-retrieve"
19331     }
19332 }
19333 }
19334 }
19335 },
19336 "/BodyThermometerAMResURI?if=oic.if.ll": {
19337     "get": {
19338         "description": "This Resource describes the Properties associated with body
19339 thermometer.\n\nThe Resource is an Atomic Measurement of temperature (oic.r.temperature), body
19340 location for temperature (oic.r.body.location.temperature), observed time (oic.r.time.stamp), and
19341 user id (oic.r.userid).",
19342         "parameters": [
19343             {
19344                 "$ref": "#/parameters/interface-all"
19345             }
19346         ],
19347         "responses": {
19348             "200": {
19349                 "description": "",
19350                 "x-example": [
19351                     {
19352                         "href": "/myTemperature",
19353                         "rt": [
19354                             "oic.r.temperature"
19355                         ],
19356                         "if": [
19357                             "oic.if.s",
19358                             "oic.if.baseline"
19359                         ]
19360                     },
19361                     {
19362                         "href": "/myBodyLocationForTemperature",
19363                         "rt": [
19364                             "oic.r.body.location.temperature"
19365                         ],
19366                         "if": [
19367                             "oic.if.s",
19368                             "oic.if.baseline"
19369                         ]
19370                     }
19371                 ],
19372                 {
19373                     "href": "/myUserId",
19374                     "rt": [
19375                         "oic.r.userid"
19376                     ],
19377                     "if": [
19378                         "oic.if.r",
19379                         "oic.if.baseline"
19380                     ]
19381                 },
19382                 {
19383                     "href": "/myTimeStamp",
19384                     "rt": [
19385                         "oic.r.time.stamp"
19386                     ],
19387                     "if": [
19388                         "oic.if.r",

```

```

19388         "oic.if.baseline"
19389     ]
19390 }
19391 ],
19392 "schema": {
19393     "$ref": "#/definitions/links"
19394 }
19395 }
19396 }
19397 },
19398 },
19399 "/BodyThermometerAMResURI?if=oic.if.baseline": {
19400     "get": {
19401         "description": "This Resource describes the Properties associated with body
19402 thermometer.\n\nThe Resource is an Atomic Measurement of temperature (oic.r.temperature), body
19403 location for temperature (oic.r.body.location.temperature), observed time (oic.r.time.stamp), and
19404 user id (oic.r.userid).",
19405         "parameters": [
19406             {
19407                 "$ref": "#/parameters/interface-all"
19408             }
19409         ],
19410         "responses": {
19411             "200": {
19412                 "description": "",
19413                 "x-example": {
19414                     "rt": [
19415                         "oic.r.bodythermometer-am",
19416                         "oic.wk.atomicmeasurement"
19417                     ],
19418                     "if": [
19419                         "oic.if.b",
19420                         "oic.if.ll",
19421                         "oic.if.baseline"
19422                     ],
19423                     "rts": [
19424                         "oic.r.temperature",
19425                         "oic.r.body.location.temperature",
19426                         "oic.r.userid",
19427                         "oic.r.time.stamp"
19428                     ],
19429                     "rts-m": [
19430                         "oic.r.temperature"
19431                     ],
19432                     "links": [
19433                         {
19434                             "href": "/myTemperature",
19435                             "rt": [
19436                                 "oic.r.temperature"
19437                             ],
19438                             "if": [
19439                                 "oic.if.s",
19440                                 "oic.if.baseline"
19441                             ]
19442                         },
19443                         {
19444                             "href": "/myBodyLocationForTemperature",
19445                             "rt": [
19446                                 "oic.r.body.location.temperature"
19447                             ],
19448                             "if": [
19449                                 "oic.if.s",
19450                                 "oic.if.baseline"
19451                             ]
19452                         },
19453                         {
19454                             "href": "/myUserId",
19455                             "rt": [
19456                                 "oic.r.userid"
19457                             ],
19458                             "if": [
19459                                 "oic.if.r",

```

```

19460         "oic.if.baseline"
19461     ]
19462 },
19463 {
19464     "href": "/myTimeStamp",
19465     "rt": [
19466         "oic.r.time.stamp"
19467     ],
19468     "if": [
19469         "oic.if.x",
19470         "oic.if.baseline"
19471     ]
19472 }
19473 ]
19474 },
19475 "schema": {
19476     "$ref": "#/definitions/baseline"
19477 }
19478 }
19479 }
19480 }
19481 },
19482 {
19483     "parameters": {
19484         "interface-all": {
19485             "in": "query",
19486             "name": "if",
19487             "type": "string",
19488             "enum": [
19489                 "oic.if.b",
19490                 "oic.if.ll",
19491                 "oic.if.baseline"
19492             ]
19493         }
19494     },
19495     "definitions": {
19496         "batch-retrieve": {
19497             "minItems": 1,
19498             "items": {
19499                 "properties": {
19500                     "href": {
19501                         "$ref":
19502 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19503 schema.json#/definitions/href"
19504                     },
19505                     "rep": {
19506                         "type": "object",
19507                         "anyOf": [
19508                             {
19509                                 "$ref":
19510 "https://openconnectivityfoundation.github.io/IoTDataModels/TemperatureResURI.swagger.json#/definiti
19511 ons/Temperature"
19512                             },
19513                             {
19514                                 "$ref":
19515 "https://openconnectivityfoundation.github.io/IoTDataModels/BodyLocationTemperatureResURI.swagger.js
19516 on#/definitions/BodyLocationTemperature"
19517                             },
19518                             {
19519                                 "$ref":
19520 "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/U
19521 serID"
19522                             },
19523                             {
19524                                 "$ref":
19525 "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definition
19526 s/TimeStamp"
19527                             }
19528                         ]
19529                     }
19530                 },
19531                 "required": [

```

```

19532         "href",
19533         "rep"
19534     ],
19535     "type": "object"
19536 },
19537 "type": "array"
19538 },
19539 "links": {
19540     "type": "array",
19541     "items": {
19542         "$ref": "#/definitions/oic.oic-link"
19543     }
19544 },
19545 "baseline": {
19546     "properties": {
19547         "rt": {
19548             "items": {
19549                 "enum": [
19550                     "oic.r.bodythermometer-am",
19551                     "oic.wk.atomicmeasurement"
19552                 ],
19553                 "type": "string",
19554                 "maxLength": 64
19555             },
19556             "minItems": 2,
19557             "uniqueItems": true,
19558             "readOnly": true,
19559             "type": "array"
19560         },
19561         "rts": {
19562             "description": "This contains all possible Resource Types for this Atomic Measurement.",
19563             "items": {
19564                 "enum": [
19565                     "oic.r.temperature",
19566                     "oic.r.body.location.temperature",
19567                     "oic.r.time.stamp",
19568                     "oic.r.userid"
19569                 ],
19570                 "type": "string",
19571                 "maxLength": 64
19572             },
19573             "minItems": 1,
19574             "uniqueItems": true,
19575             "readOnly": true,
19576             "type": "array"
19577         },
19578         "rts-m": {
19579             "description": "This contains all mandatory Resource Types for this Atomic Measurement.",
19580             "items": {
19581                 "enum": [
19582                     "oic.r.temperature"
19583                 ],
19584                 "type": "string",
19585                 "maxLength": 64
19586             },
19587             "maxItems": 1,
19588             "minItems": 1,
19589             "uniqueItems": true,
19590             "readOnly": true,
19591             "type": "array"
19592         },
19593         "if": {
19594             "description": "The OC Interface set supported by this Resource",
19595             "items": {
19596                 "enum": [
19597                     "oic.if.b",
19598                     "oic.if.ll",
19599                     "oic.if.baseline"
19600                 ],
19601                 "type": "string",
19602                 "maxLength": 64
19603             },

```

```

19604         "minItems": 3,
19605         "uniqueItems": true,
19606         "readOnly": true,
19607         "type": "array"
19608     },
19609     "n": {
19610         "$ref":
19611         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19612         schema.json#/definitions/n"
19613     },
19614     "id": {
19615         "$ref":
19616         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19617         schema.json#/definitions/id"
19618     },
19619     "links": {
19620         "$ref": "#/definitions/links"
19621     }
19622 },
19623 "type": "object",
19624 "required": [
19625     "rt", "if", "links", "rts", "rts-m"
19626 ],
19627 },
19628 "oic.oic-link": {
19629     "properties": {
19630         "if": {
19631             "description": "The OCF Interface set supported by target Resource",
19632             "items": {
19633                 "enum": [
19634                     "oic.if.baseline",
19635                     "oic.if.s",
19636                     "oic.if.r"
19637                 ],
19638                 "type": "string",
19639                 "maxLength": 64
19640             },
19641             "minItems": 1,
19642             "uniqueItems": true,
19643             "readOnly": true,
19644             "type": "array"
19645         },
19646         "rt": {
19647             "description": "Resource Type of the target Resource",
19648             "items": {
19649                 "enum": [
19650                     "oic.r.temperature",
19651                     "oic.r.body.location.temperature",
19652                     "oic.r.time.stamp",
19653                     "oic.r.userid"
19654                 ],
19655                 "type": "string",
19656                 "maxLength": 64
19657             },
19658             "minItems": 1,
19659             "uniqueItems": true,
19660             "readOnly": true,
19661             "type": "array"
19662         },
19663         "anchor": {
19664             "$ref":
19665             "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19666             schema.json#/definitions/anchor"
19667         },
19668         "di": {
19669             "$ref":
19670             "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19671             schema.json#/definitions/di"
19672         },
19673         "eps": {
19674             "$ref":
19675             "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-

```



```

19676 schema.json#/definitions/eps"
19677     },
19678     "href": {
19679         "$ref":
19680         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19681         schema.json#/definitions/href"
19682     },
19683     "ins": {
19684         "$ref":
19685         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19686         schema.json#/definitions/ins"
19687     },
19688     "p": {
19689         "$ref":
19690         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19691         schema.json#/definitions/p"
19692     },
19693     "rel": {
19694         "$ref":
19695         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19696         schema.json#/definitions/rel_array"
19697     },
19698     "title": {
19699         "$ref":
19700         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19701         schema.json#/definitions/title"
19702     },
19703     "type": {
19704         "$ref":
19705         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
19706         schema.json#/definitions/type"
19707     }
19708 },
19709 "required": [
19710     "href",
19711     "rt",
19712     "if"
19713 ],
19714 "type": "object"
19715 }
19716 }
19717 }
19718

```

19719 6.97.5 Property definition

19720 Table 197 defines the Properties that are part of the "oic.r.bodythermometer-am,
19721 oic.wk.atomicmeasurement" Resource Type.

19722 **Table 197 – The Property definitions of the Resource with type "rt" =**
19723 **"oic.r.bodythermometer-am, oic.wk.atomicmeasurement".**

Property name	Value type	Mandatory	Access mode	Description
href	multiple types: see schema	Yes	Read Write	
rep	object: see schema	Yes	Read Write	
rt	array: see schema	Yes	Read Only	
rts	array: see schema	Yes	Read Only	This contains all possible Resource Types for this Atomic Measurement.
rts-m	array: see schema	Yes	Read Only	This contains all mandatory Resource Types for this Atomic Measurement.

if	array: see schema	Yes	Read Only	The OC Interface set supported by this Resource
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
links	multiple types: see schema	Yes	Read Write	
if	array: see schema	Yes	Read Only	The OCF Interface set supported by target Resource
rt	array: see schema	Yes	Read Only	Resource Type of the target Resource
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	

6.97.6 CRUDN behaviour

Table 198 defines the CRUDN operations that are supported on the "oic.r.bodythermometer-am, oic.wk.atomicmeasurement" Resource Type.

Table 198 – The CRUDN operations of the Resource with type "rt" = "oic.r.bodythermometer-am, oic.wk.atomicmeasurement".

Create	Read	Update	Delete	Notify
	get			observe

6.98 Body Water

6.98.1 Introduction

This Resource describes the Properties associated with a person's body water.

The unit is a single value that is one of kg or lb.

If the unit Property is missing the default is kilograms [kg].

The bwater and unit Properties are read-only values that are provided by the Server.

When range is omitted the default is 0 to +MAXFLOAT.

6.98.2 Example URI

/BodyWaterResURI

6.98.3 Resource type

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

6.98.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Body Water",
    "version": "2019-03-22",
    "license": {
      "name": "OCF Data Model License",
      "url": "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/BodyWaterResURI": {
      "get": {
        "description": "This Resource describes the Properties associated with a person's body
water.\n\nThe unit is a single value that is one of kg or lb.\n\nIf the unit Property is missing the
default is kilograms [kg].\n\nThe bwater and unit Properties are read-only values that are provided by
the Server.\n\nWhen range is omitted the default is 0 to +MAXFLOAT.",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": [
                "oic.r.body.water"
              ],
              "bwater": 20.0,
              "units": "kg"
            },
            "schema": {
              "$ref": "#/definitions/BodyWater"
            }
          }
        }
      }
    }
  },
  "parameters": {
    "interface": {
      "in": "query",
      "name": "if",
      "type": "string",
      "enum": [
        "oic.if.s",
        "oic.if.baseline"
      ]
    }
  },
  "definitions": {
    "BodyWater": {
```

```

19807     "properties": {
19808         "rt": {
19809             "description": "Resource Type",
19810             "items": {
19811                 "enum": [
19812                     "oic.r.body.water"
19813                 ],
19814                 "type": "string",
19815                 "maxLength": 64
19816             },
19817             "minItems": 1,
19818             "uniqueItems": true,
19819             "readOnly": true,
19820             "type": "array"
19821         },
19822         "bwater": {
19823             "description": "Body water.",
19824             "minimum": 0.0,
19825             "readOnly": true,
19826             "type": "number"
19827         },
19828         "units": {
19829             "description": "Body water unit",
19830             "enum": [
19831                 "kg",
19832                 "lb"
19833             ],
19834             "readOnly": true,
19835             "type": "string",
19836             "default": "kg"
19837         },
19838         "range": {
19839             "$ref":
19840             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19841             schema.json#/definitions/range_number"
19842         },
19843         "step": {
19844             "$ref":
19845             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19846             schema.json#/definitions/step_number"
19847         },
19848         "precision": {
19849             "$ref":
19850             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
19851             schema.json#/definitions/precision"
19852         },
19853         "n": {
19854             "$ref":
19855             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19856             schema.json#/definitions/n"
19857         },
19858         "id": {
19859             "$ref":
19860             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
19861             schema.json#/definitions/id"
19862         },
19863         "if": {
19864             "description": "The OCF Interface set supported by this Resource",
19865             "items": {
19866                 "enum": [
19867                     "oic.if.s",
19868                     "oic.if.baseline"
19869                 ],
19870                 "type": "string",
19871                 "maxLength": 64
19872             },
19873             "minItems": 1,
19874             "readOnly": true,
19875             "uniqueItems": true,
19876             "type": "array"
19877         }
19878     },

```

```

19879     "type": "object",
19880     "required": [
19881         "bwater"
19882     ]
19883 }
19884 }
19885 }
19886

```

19887 6.98.5 Property definition

19888 Table 199 defines the Properties that are part of the "oic.r.body.water" Resource Type.

19889 **Table 199 – The Property definitions of the Resource with type "rt" = "oic.r.body.water".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
bwater	number	Yes	Read Only	Body water.
units	string	No	Read Only	Body water unit
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

19890 6.98.6 CRUDN behaviour

19891 Table 200 defines the CRUDN operations that are supported on the "oic.r.body.water" Resource
19892 Type.

19893 **Table 200 – The CRUDN operations of the Resource with type "rt" = "oic.r.body.water".**

Create	Read	Update	Delete	Notify
	get			observe

19894 6.99 Glucose

19895 6.99.1 Introduction

19896 This Resource describes the Properties associated with a person's glucose level.

19897 The unit is a single value that is one of mg/dL, mmol/L.

19898 If the unit Property is missing the default is milligrams per decilitre [mg/dL].

19899 The glucose and unit Properties are read-only values that are provided by the Server.

19900 When range is omitted the default is 0 to +MAXFLOAT.

19901 6.99.2 Example URI

19902 /GlucoseResURI

19903 6.99.3 Resource type

19904 The Resource Type is defined as: "oic.r.glucose".

6.99.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Glucose",
    "version": "2019-03-22",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/GlucoseResURI": {
      "get": {
        "description": "This Resource describes the Properties associated with a person's glucose
level.\n\nThe unit is a single value that is one of mg/dL, mmol/L.\n\nIf the unit Property is missing
the default is milligrams per decilitre [mg/dL].\n\nThe glucose and unit Properties are read-only
values that are provided by the Server.\n\nWhen range is omitted the default is 0 to +MAXFLOAT.",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": [
                "oic.r.glucose"
              ],
              "glucose": 90.0,
              "units": "mg/dL",
              "range": [
                20.0,
                600.0
              ],
              "step": 1
            },
            "schema": {
              "$ref": "#/definitions/Glucose"
            }
          }
        }
      }
    }
  },
  "parameters": {
    "interface": {
      "in": "query",
      "name": "if",
      "type": "string",
      "enum": [
        "oic.if.s",
        "oic.if.baseline"
      ]
    }
  },
  "definitions": {
```

```

19976     "Glucose": {
19977         "properties": {
19978             "rt": {
19979                 "description": "Resource Type",
19980                 "items": {
19981                     "enum": [
19982                         "oic.r.glucose"
19983                     ],
19984                     "type": "string",
19985                     "maxLength": 64
19986                 },
19987                 "minItems": 1,
19988                 "uniqueItems": true,
19989                 "readOnly": true,
19990                 "type": "array"
19991             },
19992             "glucose": {
19993                 "description": "A measurement of glucose concentration in the blood",
19994                 "minimum": 0.0,
19995                 "readOnly": true,
19996                 "type": "number"
19997             },
19998             "units": {
19999                 "description": "Glucose unit",
20000                 "enum": [
20001                     "mg/dL",
20002                     "mmol/L"
20003                 ],
20004                 "readOnly": true,
20005                 "type": "string",
20006                 "default": "mg/dL"
20007             },
20008             "range": {
20009                 "$ref":
20010                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20011                 schema.json#/definitions/range_number"
20012             },
20013             "step": {
20014                 "$ref":
20015                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20016                 schema.json#/definitions/step_number"
20017             },
20018             "precision": {
20019                 "$ref":
20020                 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20021                 schema.json#/definitions/precision"
20022             },
20023             "n": {
20024                 "$ref":
20025                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20026                 schema.json#/definitions/n"
20027             },
20028             "id": {
20029                 "$ref":
20030                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20031                 schema.json#/definitions/id"
20032             },
20033             "if": {
20034                 "description": "The OCF Interface set supported by this Resource",
20035                 "items": {
20036                     "enum": [
20037                         "oic.if.s",
20038                         "oic.if.baseline"
20039                     ],
20040                     "type": "string",
20041                     "maxLength": 64
20042                 },
20043                 "minItems": 1,
20044                 "readOnly": true,
20045                 "uniqueItems": true,
20046                 "type": "array"
20047             }

```

```

20048     },
20049     "type": "object",
20050     "required": [
20051         "glucose"
20052     ]
20053 }
20054 }
20055 }
20056

```

20057 6.99.5 Property definition

20058 Table 201 defines the Properties that are part of the "oic.r.glucose" Resource Type.

20059 **Table 201 – The Property definitions of the Resource with type "rt" = "oic.r.glucose".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
glucose	number	Yes	Read Only	A measurement of glucose concentration in the blood
units	string	No	Read Only	Glucose unit
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

20060 6.99.6 CRUDN behaviour

20061 Table 202 defines the CRUDN operations that are supported on the "oic.r.glucose" Resource Type.

20062 **Table 202 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose".**

Create	Read	Update	Delete	Notify
	get			observe

20063 6.100 Context Carbohydrates for Glucose Meter

20064 6.100.1 Introduction

20065 This Resource describes the Properties associated with a context carbohydrates.

20066 The carb Property has a default unit of grams[g].

20067 The carb and meal Properties are read-only values that are provided by the Server.

20068 When range is omitted the default is 0 to +MAXFLOAT.

20069 6.100.2 Example URI

20070 /GlucoseCarbResURI

20071 6.100.3 Resource type

20072 The Resource Type is defined as: "oic.r.glucose.carb".

6.100.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Context Carbohydrates for Glucose Meter",
    "version": "2019-03-22",
    "license": {
      "name": "OCF Data Model License",
      "url": "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/GlucoseCarbResURI": {
      "get": {
        "description": "This Resource describes the Properties associated with a context
carbohydrates.\nThe carb Property has a default unit of grams[g].\nThe carb and meal Properties are
read-only values that are provided by the Server.\nWhen range is omitted the default is 0 to
+MAXFLOAT.",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": [
                "oic.r.glucose.carb"
              ],
              "carb": 100.0,
              "meal": "breakfast"
            },
            "schema": {
              "$ref": "#/definitions/GlucoseCarb"
            }
          }
        }
      }
    }
  },
  "parameters": {
    "interface": {
      "in": "query",
      "name": "if",
      "type": "string",
      "enum": [
        "oic.if.s",
        "oic.if.baseline"
      ]
    }
  },
  "definitions": {
    "GlucoseCarb": {
      "properties": {
        "rt": {
          "description": "Resource Type",
          "items": {
```

```

20144         "enum": [
20145             "oic.r.glucose.carb"
20146         ],
20147         "type": "string",
20148         "maxLength": 64
20149     },
20150     "minItems": 1,
20151     "uniqueItems": true,
20152     "readOnly": true,
20153     "type": "array"
20154 },
20155 "carb": {
20156     "description": "The amount of carbohydrates undertaken in grams",
20157     "readOnly": true,
20158     "type": "number",
20159     "minimum": 0.0
20160 },
20161 "meal": {
20162     "description": "Recorded time of carbohydrates intake",
20163     "enum": [
20164         "breakfast",
20165         "lunch",
20166         "dinner",
20167         "snack",
20168         "drink",
20169         "supper",
20170         "brunch",
20171         "undetermined",
20172         "other",
20173         "no_entry",
20174         "no_ingestion"
20175     ],
20176     "readOnly": true,
20177     "type": "string"
20178 },
20179 "range": {
20180     "description": "The range applies to the carb property only",
20181     "$ref":
20182     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20183     schema.json#/definitions/range_number"
20184 },
20185 "step": {
20186     "description": "The step applies to the carb property only",
20187     "$ref":
20188     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20189     schema.json#/definitions/step_number"
20190 },
20191 "precision": {
20192     "description": "The precision applies to the carb property only",
20193     "$ref":
20194     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20195     schema.json#/definitions/precision"
20196 },
20197 "n": {
20198     "$ref":
20199     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20200     schema.json#/definitions/n"
20201 },
20202 "id": {
20203     "$ref":
20204     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20205     schema.json#/definitions/id"
20206 },
20207 "if": {
20208     "description": "The OCF Interface set supported by this Resource",
20209     "items": {
20210         "enum": [
20211             "oic.if.s",
20212             "oic.if.baseline"
20213         ],
20214         "type": "string",
20215         "maxLength": 64

```

```
20216         },
20217         "minItems": 1,
20218         "readOnly": true,
20219         "uniqueItems": true,
20220         "type": "array"
20221     },
20222 },
20223 "type": "object",
20224 "required": [
20225     "carb",
20226     "meal"
20227 ]
20228 }
20229 }
20230 }
20231 }
```

20232 **6.100.5 Property definition**

20233 Table 203 defines the Properties that are part of the "oic.r.glucose.carb" Resource Type.

20234 **Table 203 – The Property definitions of the Resource with type "rt" = "oic.r.glucose.carb".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
carb	number	Yes	Read Only	The amount of carbohydrates undertaken in grams
meal	string	Yes	Read Only	Recorded time of carbohydrates intake
range	multiple types: see schema	No	Read Write	The range applies to the carb property only
step	multiple types: see schema	No	Read Write	The step applies to the carb property only
precision	multiple types: see schema	No	Read Write	The precision applies to the carb property only
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

20235 **6.100.6 CRUDN behaviour**

20236 Table 204 defines the CRUDN operations that are supported on the "oic.r.glucose.carb" Resource Type.

20238 **Table 204 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose.carb".**

Create	Read	Update	Delete	Notify
	get			observe

20239 6.101 Exercise for Glucose Meter

20240 6.101.1 Introduction

20241 This Resource describes the Properties associated with glucose exercise.

20242 The exercise Property has a default unit of percentage.

20243 The exercise Property is a read-only value that is provided by the Server.

20244 6.101.2 Example URI

20245 /ExerciseResURI

20246 6.101.3 Resource type

20247 The Resource Type is defined as: "oic.r.glucose.exercise".

20248 6.101.4 OpenAPI 2.0 definition

```
20249 {
20250   "swagger": "2.0",
20251   "info": {
20252     "title": "Exercise for Glucose Meter",
20253     "version": "2019-03-22",
20254     "license": {
20255       "name": "OCF Data Model License",
20256       "url":
20257         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
20258         CENSE.md",
20259       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
20260     },
20261     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
20262   },
20263   "schemes": [
20264     "http"
20265   ],
20266   "consumes": [
20267     "application/json"
20268   ],
20269   "produces": [
20270     "application/json"
20271   ],
20272   "paths": {
20273     "/ExerciseResURI": {
20274       "get": {
20275         "description": "This Resource describes the Properties associated with glucose
20276         exercise.\nThe exercise Property has a default unit of percentage.\nThe exercise Property is a read-
20277         only value that is provided by the Server.",
20278         "parameters": [
20279           {
20280             "$ref": "#/parameters/interface"
20281           }
20282         ],
20283         "responses": {
20284           "200": {
20285             "description": "",
20286             "x-example": {
20287               "rt": [
20288                 "oic.r.glucose.exercise"
20289               ],
20290               "exercise": 30.0
20291             },
20292             "schema": {
20293               "$ref": "#/definitions/Exercise"
20294             }
20295           }
20296         }
20297       }
20298     }
20299   },
20300   "parameters": {
20301     "interface": {
20302       "in": "query",
```

```

20303         "name": "if",
20304         "type": "string",
20305         "enum": [
20306             "oic.if.s",
20307             "oic.if.baseline"
20308         ]
20309     },
20310 },
20311 "definitions": {
20312     "Exercise": {
20313         "properties": {
20314             "rt": {
20315                 "description": "Resource Type",
20316                 "items": {
20317                     "enum": [
20318                         "oic.r.glucose.exercise"
20319                     ],
20320                     "type": "string",
20321                     "maxLength": 64
20322                 },
20323                 "minItems": 1,
20324                 "uniqueItems": true,
20325                 "readOnly": true,
20326                 "type": "array"
20327             },
20328             "exercise": {
20329                 "description": "The level of exercise undertaken in percentage",
20330                 "maximum": 100.0,
20331                 "minimum": 0.0,
20332                 "readOnly": true,
20333                 "type": "number"
20334             },
20335             "range": {
20336                 "$ref":
20337 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20338 schema.json#/definitions/range_number"
20339             },
20340             "step": {
20341                 "$ref":
20342 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20343 schema.json#/definitions/step_number"
20344             },
20345             "precision": {
20346                 "$ref":
20347 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20348 schema.json#/definitions/precision"
20349             },
20350             "n": {
20351                 "$ref":
20352 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20353 schema.json#/definitions/n"
20354             },
20355             "id": {
20356                 "$ref":
20357 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20358 schema.json#/definitions/id"
20359             },
20360             "if": {
20361                 "description": "The OCF Interface set supported by this Resource",
20362                 "items": {
20363                     "enum": [
20364                         "oic.if.s",
20365                         "oic.if.baseline"
20366                     ],
20367                     "type": "string",
20368                     "maxLength": 64
20369                 },
20370                 "minItems": 1,
20371                 "readOnly": true,
20372                 "uniqueItems": true,
20373                 "type": "array"
20374             }

```

```

20375     },
20376     "type": "object",
20377     "required": [
20378         "exercise"
20379     ]
20380 }
20381 }
20382 }
20383

```

20384 6.101.5 Property definition

20385 Table 205 defines the Properties that are part of the "oic.r.glucose.exercise" Resource Type.

20386 **Table 205 – The Property definitions of the Resource with type "rt" =**
20387 **"oic.r.glucose.exercise".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
exercise	number	Yes	Read Only	The level of exercise undertaken in percentage
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

20388 6.101.6 CRUDN behaviour

20389 Table 206 defines the CRUDN operations that are supported on the "oic.r.glucose.exercise"
20390 Resource Type.

20391 **Table 206 – The CRUDN operations of the Resource with type "rt" =**
20392 **"oic.r.glucose.exercise".**

Create	Read	Update	Delete	Notify
	get			observe

20393 6.102 Hemoglobin Bound to Glucose A1c Form (HbA1c) for Glucose Meter

20394 6.102.1 Introduction

20395 This Resource describes the Properties associated with a person's hba1c level.
20396 The unit is a single value that is percentage.
20397 The hba1c Property is a read-only value that is provided by the Server.

20398 6.102.2 Example URI

20399 /GlucoseHbA1cResURI

20400 6.102.3 Resource type

20401 The Resource Type is defined as: "oic.r.glucose.hba1c".

6.102.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Hemoglobin Bound to Glucose Alc Form (HbA1c) for Glucose Meter",
    "version": "2019-03-22",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/GlucoseHbA1cResURI": {
      "get": {
        "description": "This Resource describes the Properties associated with a person's hbalc
level.\nThe unit is a single value that is percentage.\nThe hbalc Property is a read-only value that
is provided by the Server.",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": [
                "oic.r.glucose.hbalc"
              ],
              "hbalc": 5.0
            },
            "schema": {
              "$ref": "#/definitions/HbA1c"
            }
          }
        }
      }
    }
  },
  "parameters": {
    "interface": {
      "in": "query",
      "name": "if",
      "type": "string",
      "enum": [
        "oic.if.s",
        "oic.if.baseline"
      ]
    }
  },
  "definitions": {
    "HbA1c": {
      "properties": {
        "rt": {
          "description": "Resource Type",
          "items": {
            "enum": [
              "oic.r.glucose.hbalc"
            ]
          }
        }
      }
    }
  }
}
```

```

20473         ],
20474         "type": "string",
20475         "maxLength": 64
20476     },
20477     "minItems": 1,
20478     "uniqueItems": true,
20479     "readOnly": true,
20480     "type": "array"
20481 },
20482 "hba1c": {
20483     "description": "Current HbA1c measurement in percentage",
20484     "maximum": 100.0,
20485     "minimum": 0.0,
20486     "readOnly": true,
20487     "type": "number"
20488 },
20489 "range": {
20490     "$ref":
20491 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20492 schema.json#/definitions/range_number"
20493 },
20494 "step": {
20495     "$ref":
20496 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20497 schema.json#/definitions/step_number"
20498 },
20499 "precision": {
20500     "$ref":
20501 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20502 schema.json#/definitions/precision"
20503 },
20504 "n": {
20505     "$ref":
20506 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20507 schema.json#/definitions/n"
20508 },
20509 "id": {
20510     "$ref":
20511 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20512 schema.json#/definitions/id"
20513 },
20514 "if": {
20515     "description": "The OCF Interface set supported by this Resource",
20516     "items": {
20517         "enum": [
20518             "oic.if.s",
20519             "oic.if.baseline"
20520         ],
20521         "type": "string",
20522         "maxLength": 64
20523     },
20524     "minItems": 1,
20525     "readOnly": true,
20526     "uniqueItems": true,
20527     "type": "array"
20528     }
20529 },
20530 "type": "object",
20531 "required": [
20532     "hba1c"
20533 ]
20534 }
20535 }
20536 }
20537

```

6.102.5 Property definition

Table 207 defines the Properties that are part of the "oic.r.glucose.hba1c" Resource Type.

20540 **Table 207 – The Property definitions of the Resource with type "rt" = "oic.r.glucose.hba1c".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
hba1c	number	Yes	Read Only	Current HbA1c measurement in percentage
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

20541 **6.102.6 CRUDN behaviour**

20542 Table 208 defines the CRUDN operations that are supported on the "oic.r.glucose.hba1c" Resource
20543 Type.

20544 **Table 208 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose.hba1c".**

Create	Read	Update	Delete	Notify
	get			observe

20545 **6.103 Context Health for Glucose Meter**

20546 **6.103.1 Introduction**

20547 This Resource describes the Properties associated with context health.
20548 The health Property is a read-only value that is provided by the Server where
20549 minor and major are related to the general health or the level of illness of the person;
20550 menses refers to the female menstrual cycle;
20551 stress refers to physiological or psychological stress.

20552 **6.103.2 Example URI**

20553 /GlucoseHealthResURI

20554 **6.103.3 Resource type**

20555 The Resource Type is defined as: "oic.r.glucose.health".

20556 **6.103.4 OpenAPI 2.0 definition**

```
20557 {  
20558   "swagger": "2.0",  
20559   "info": {  
20560     "title": "Context Health for Glucose Meter",  
20561     "version": "2019-03-22",  
20562     "license": {  
20563       "name": "OCF Data Model License",  
20564       "url":  
20565         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
20566         CENSE.md",  
20567       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
```

```

20568     },
20569     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
20570 },
20571 "schemes": [
20572     "http"
20573 ],
20574 "consumes": [
20575     "application/json"
20576 ],
20577 "produces": [
20578     "application/json"
20579 ],
20580 "paths": {
20581     "/GlucoseHealthResURI": {
20582         "get": {
20583             "description": "This Resource describes the Properties associated with context health.\n\nThe
20584 health Property is a read-only value that is provided by the Server where\n\nminor and major are
20585 related to the general health or the level of illness of the person;\n\nmenses refers to the female
20586 menstrual cycle;\n\nstress refers to physiological or psychological stress.",
20587             "parameters": [
20588                 {
20589                     "$ref": "#/parameters/interface"
20590                 }
20591             ],
20592             "responses": {
20593                 "200": {
20594                     "description": "",
20595                     "x-example": {
20596                         "rt": [
20597                             "oic.r.glucose.health"
20598                         ],
20599                         "health": "major"
20600                     },
20601                     "schema": {
20602                         "$ref": "#/definitions/GlucoseHealth"
20603                     }
20604                 }
20605             }
20606         }
20607     }
20608 },
20609 "parameters": {
20610     "interface": {
20611         "in": "query",
20612         "name": "if",
20613         "type": "string",
20614         "enum": [
20615             "oic.if.s",
20616             "oic.if.baseline"
20617         ]
20618     }
20619 },
20620 "definitions": {
20621     "GlucoseHealth": {
20622         "properties": {
20623             "rt": {
20624                 "description": "Resource Type",
20625                 "items": {
20626                     "enum": [
20627                         "oic.r.glucose.health"
20628                     ],
20629                     "type": "string",
20630                     "maxLength": 64
20631                 },
20632                 "minItems": 1,
20633                 "readOnly": true,
20634                 "type": "array"
20635             },
20636             "health": {
20637                 "description": "The various levels of health a person feels when taking a glucose.",
20638                 "enum": [
20639                     "minor",

```

```

20640         "major",
20641         "menses",
20642         "stress",
20643         "none"
20644     ],
20645     "readOnly": true,
20646     "type": "string"
20647 },
20648 "n": {
20649     "$ref":
20650     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20651     schema.json#/definitions/n"
20652 },
20653 "id": {
20654     "$ref":
20655     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20656     schema.json#/definitions/id"
20657 },
20658 "if": {
20659     "description": "The OCF Interface set supported by this Resource",
20660     "items": {
20661         "enum": [
20662             "oic.if.s",
20663             "oic.if.baseline"
20664         ],
20665         "type": "string",
20666         "maxLength": 64
20667     },
20668     "minItems": 1,
20669     "readOnly": true,
20670     "uniqueItems": true,
20671     "type": "array"
20672 }
20673 },
20674 "type": "object",
20675 "required": [
20676     "health"
20677 ]
20678 }
20679 }
20680 }
20681

```

20682 6.103.5 Property definition

20683 Table 209 defines the Properties that are part of the "oic.r.glucose.health" Resource Type.

20684 **Table 209 – The Property definitions of the Resource with type "rt" =**
20685 **"oic.r.glucose.health".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
health	string	Yes	Read Only	The various levels of health a person feels when taking a glucose.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

6.103.6 CRUDN behaviour

Table 210 defines the CRUDN operations that are supported on the "oic.r.glucose.health" Resource Type.

Table 210 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose.health".

Create	Read	Update	Delete	Notify
	get			observe

6.104 Context Meal for Glucose Meter

6.104.1 Introduction

This Resource describes the Properties associated with context meal.

Preprandial means pre-meal.

Postprandial means post-meal.

Fasting means the effect of long-term absence of food intake (overnight).

The meal Property is a read-only value that is provided by the Server.

6.104.2 Example URI

/GlucoseMealResURI

6.104.3 Resource type

The Resource Type is defined as: "oic.r.glucose.meal".

6.104.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Context Meal for Glucose Meter",
    "version": "2019-03-22",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/GlucoseMealResURI": {
      "get": {
        "description": "This Resource describes the Properties associated with context
meal.\nPreprandial means pre-meal.\nPostprandial means post-meal.\nFasting means the effect of long-
term absence of food intake (overnight).\nThe meal Property is a read-only value that is provided by
the Server.",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
```

```

20741         "rt": [
20742             "oic.r.glucose.meal"
20743         ],
20744         "meal": "preprandial"
20745     },
20746     "schema": {
20747         "$ref": "#/definitions/GlucoseMeal"
20748     }
20749 }
20750 }
20751 }
20752 },
20753 },
20754 "parameters": {
20755     "interface": {
20756         "in": "query",
20757         "name": "if",
20758         "type": "string",
20759         "enum": [
20760             "oic.if.s",
20761             "oic.if.baseline"
20762         ]
20763     }
20764 },
20765 "definitions": {
20766     "GlucoseMeal": {
20767         "properties": {
20768             "rt": {
20769                 "description": "Resource Type",
20770                 "items": {
20771                     "enum": [
20772                         "oic.r.glucose.meal"
20773                     ],
20774                     "type": "string",
20775                     "maxLength": 64
20776                 },
20777                 "minItems": 1,
20778                 "uniqueItems": true,
20779                 "readOnly": true,
20780                 "type": "array"
20781             },
20782             "meal": {
20783                 "description": "Time of day when the measurement is taken.",
20784                 "enum": [
20785                     "preprandial",
20786                     "postprandial",
20787                     "fasting",
20788                     "bedtime",
20789                     "casual"
20790                 ],
20791                 "readOnly": true,
20792                 "type": "string"
20793             },
20794             "n": {
20795                 "$ref":
20796 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20797 schema.json#/definitions/n"
20798             },
20799             "id": {
20800                 "$ref":
20801 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20802 schema.json#/definitions/id"
20803             },
20804             "if": {
20805                 "description": "The OCF Interface set supported by this Resource",
20806                 "items": {
20807                     "enum": [
20808                         "oic.if.s",
20809                         "oic.if.baseline"
20810                     ],
20811                     "type": "string",
20812                     "maxLength": 64

```

```
20813         },
20814         "minItems": 1,
20815         "readOnly": true,
20816         "uniqueItems": true,
20817         "type": "array"
20818     },
20819 },
20820 "type": "object",
20821 "required": [
20822     "meal"
20823 ]
20824 }
20825 }
20826 }
20827 }
```

20828 **6.104.5 Property definition**

20829 Table 211 defines the Properties that are part of the "oic.r.glucose.meal" Resource Type.

20830 **Table 211 – The Property definitions of the Resource with type "rt" = "oic.r.glucose.meal".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
meal	string	Yes	Read Only	Time of day when the measurement is taken.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

20831 **6.104.6 CRUDN behaviour**

20832 Table 212 defines the CRUDN operations that are supported on the "oic.r.glucose.meal" Resource
20833 Type.

20834 **Table 212 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose.meal".**

Create	Read	Update	Delete	Notify
	get			observe

20835 **6.105 Context Medication for Glucose Meter**

20836 **6.105.1 Introduction**

20837 This Resource describes the Properties associated with context medication.
20838 The unit is a single value that is one of mg and mL.
20839 The medication Property has a default unit of milligrams[mg].
20840 The medication, unit and regimen Properties are read-only values that are provided by the
20841 Server.
20842 When range is omitted the default is 0 to +MAXFLOAT.

20843 **6.105.2 Example URI**

20844 /GlucoseMedicationResURI

20845 **6.105.3 Resource type**

20846 The Resource Type is defined as: "oic.r.glucose.medication".

6.105.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Context Medication for Glucose Meter",
    "version": "2019-03-22",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/GlucoseMedicationResURI": {
      "get": {
        "description": "This Resource describes the Properties associated with context
medication.\n\nThe unit is a single value that is one of mg and mL.\n\nThe medication Property has a
default unit of milligrams[mg].\n\nThe medication, unit and regimen Properties are read-only values
that are provided by the Server.\n\nWhen range is omitted the default is 0 to +MAXFLOAT.",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": [
                "oic.r.glucose.medication"
              ],
              "medication": 100.0,
              "units": "mg",
              "regimen": "rapidacting"
            },
            "schema": {
              "$ref": "#/definitions/GlucoseMedication"
            }
          }
        }
      }
    }
  },
  "parameters": {
    "interface": {
      "in": "query",
      "name": "if",
      "type": "string",
      "enum": [
        "oic.if.s",
        "oic.if.baseline"
      ]
    }
  },
  "definitions": {
    "GlucoseMedication": {
      "properties": {
        "rt": {
          "description": "Resource Type",
```

```

20918         "items": {
20919             "enum": [
20920                 "oic.r.glucose.medication"
20921             ],
20922             "type": "string",
20923             "maxLength": 64
20924         },
20925         "minItems": 1,
20926         "uniqueItems": true,
20927         "readOnly": true,
20928         "type": "array"
20929     },
20930     "regimen": {
20931         "description": "Medication regimen",
20932         "enum": [
20933             "rapidacting",
20934             "shortacting",
20935             "intermediateacting",
20936             "longacting",
20937             "premix"
20938         ],
20939         "readOnly": true,
20940         "type": "string"
20941     },
20942     "medication": {
20943         "description": "The amount of medication taken",
20944         "readOnly": true,
20945         "type": "number",
20946         "minimum": 0.0
20947     },
20948     "units": {
20949         "description": "Unit for the amount of medication taken",
20950         "enum": [
20951             "mg",
20952             "mL"
20953         ],
20954         "readOnly": true,
20955         "type": "string",
20956         "default": "mg"
20957     },
20958     "range": {
20959         "$ref":
20960         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20961         schema.json#/definitions/range_number"
20962     },
20963     "step": {
20964         "$ref":
20965         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20966         schema.json#/definitions/step_number"
20967     },
20968     "precision": {
20969         "$ref":
20970         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
20971         schema.json#/definitions/precision"
20972     },
20973     "n": {
20974         "$ref":
20975         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20976         schema.json#/definitions/n"
20977     },
20978     "id": {
20979         "$ref":
20980         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
20981         schema.json#/definitions/id"
20982     },
20983     "if": {
20984         "description": "The OCF Interface set supported by this Resource",
20985         "items": {
20986             "enum": [
20987                 "oic.if.s",
20988                 "oic.if.baseline"
20989             ],

```



```

20990         "type": "string",
20991         "maxLength": 64
20992     },
20993     "minItems": 1,
20994     "readOnly": true,
20995     "uniqueItems": true,
20996     "type": "array"
20997 }
20998 },
20999 "type": "object",
21000 "required": [
21001     "medication"
21002 ]
21003 }
21004 }
21005 }
21006

```

21007 6.105.5 Property definition

21008 Table 213 defines the Properties that are part of the "oic.r.glucose.medication" Resource Type.

21009 **Table 213 – The Property definitions of the Resource with type "rt" =**
21010 **"oic.r.glucose.medication".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
regimen	string	No	Read Only	Medication regimen
medication	number	Yes	Read Only	The amount of medication taken
units	string	No	Read Only	Unit for the amount of medication taken
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

21011 6.105.6 CRUDN behaviour

21012 Table 214 defines the CRUDN operations that are supported on the "oic.r.glucose.medication"
21013 Resource Type.

21014 **Table 214 – The CRUDN operations of the Resource with type "rt" =**
21015 **"oic.r.glucose.medication".**

Create	Read	Update	Delete	Notify
	get			observe

21016 **6.106 Glucose Meter Atomic Measurement**

21017 **6.106.1 Introduction**

21018 This Resource describes the Properties associated with glucose meter.

21019 The Resource is an Atomic Measurement of glucose (oic.r.glucose), context carbohydrates
21020 (oic.r.glucose.carb), context exercise (oic.r.glucose.exercise), Hemoglobin Bound to glucose a1c
21021 Form (HbA1c) (oic.r.glucose.hba1c), context health (oic.r.glucose.health), context meal
21022 (oic.r.glucose.meal), context medication (oic.r.glucose.medication), context sample location
21023 (oic.r.glucose.samplelocation), context tester (oic.r.glucose.testers), observed time
21024 (oic.r.time.stamp), and user id (oic.r.userid).

21025 **6.106.2 Example URI**

21026 /GlucoseMeterAMResURI

21027 **6.106.3 Resource type**

21028 The Resource Type is defined as: "oic.r.glucosemeter-am, oic.wk.atomicmeasurement".

21029 **6.106.4 OpenAPI 2.0 definition**

```
21030 {
21031   "swagger": "2.0",
21032   "info": {
21033     "title": "Glucose Meter Atomic Measurement",
21034     "version": "2019-03-22",
21035     "license": {
21036       "name": "OCF Data Model License",
21037       "url":
21038 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
21039 CENSE.md",
21040       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
21041     },
21042     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
21043   },
21044   "schemes": [
21045     "http"
21046   ],
21047   "consumes": [
21048     "application/json"
21049   ],
21050   "produces": [
21051     "application/json"
21052   ],
21053   "paths": {
21054     "/GlucoseMeterAMResURI?if=oic.if.b": {
21055       "get": {
21056         "description": "This Resource describes the Properties associated with glucose meter.\n\nThe
21057 Resource is an Atomic Measurement of glucose (oic.r.glucose), context carbohydrates
21058 (oic.r.glucose.carb), context exercise (oic.r.glucose.exercise), hemoglobin bound to glucose alc
21059 Form (HbA1c) (oic.r.glucose.hba1c), context health (oic.r.glucose.health), context meal
21060 (oic.r.glucose.meal), context medication (oic.r.glucose.medication), context sample location
21061 (oic.r.glucose.samplelocation), context tester (oic.r.glucose.testers), observed time
21062 (oic.r.time.stamp), and user id (oic.r.userid).",
21063         "parameters": [
21064           {
21065             "$ref": "#/parameters/interface-all"
21066           }
21067         ],
21068         "responses": {
21069           "200": {
21070             "description": "",
21071             "x-example": [
21072               {
21073                 "href": "/myGlucose",
21074                 "rep": {
21075                   "glucose": 100.0,
21076                   "units": "mg/dL",
21077                   "range": [
```

```

21078         20.0,
21079         600.0
21080     ],
21081     "step": 1
21082 }
21083 },
21084 {
21085     "href": "/myGlucoseCarb",
21086     "rep": {
21087         "carb": 100.0,
21088         "meal": "breakfast"
21089     }
21090 },
21091 {
21092     "href": "/myGlucoseExercise",
21093     "rep": {
21094         "exercise": 30.0
21095     }
21096 },
21097 {
21098     "href": "/myGlucoseHbA1c",
21099     "rep": {
21100         "hba1c": 5.0
21101     }
21102 },
21103 {
21104     "href": "/myGlucoseHealth",
21105     "rep": {
21106         "health": "major"
21107     }
21108 },
21109 {
21110     "href": "/myGlucoseMeal",
21111     "rep": {
21112         "meal": "preprandial"
21113     }
21114 },
21115 {
21116     "href": "/myGlucoseMeditation",
21117     "rep": {
21118         "medication": 100.0,
21119         "units": "mg",
21120         "regimen": "rapidacting"
21121     }
21122 },
21123 {
21124     "href": "/myGlucoseSampleLocation",
21125     "rep": {
21126         "samplelocation": "finger"
21127     }
21128 },
21129 {
21130     "href": "/myGlucoseTester",
21131     "rep": {
21132         "tester": "self"
21133     }
21134 },
21135 {
21136     "href": "/myUserId",
21137     "rep": {
21138         "userid": "USER1"
21139     }
21140 },
21141 {
21142     "href": "/myTimeStamp",
21143     "rep": {
21144         "timestamp": "2018-11-09T12:15+08:00"
21145     }
21146 }
21147 ],
21148 "schema": {
21149     "$ref": "#/definitions/batch-retrieve"

```

```

21150     }
21151   }
21152 }
21153 },
21154 },
21155 "/GlucoseMeterAMResURI?if=oic.if.ll": {
21156   "get": {
21157     "description": "This Resource describes the Properties associated with glucose meter.\nThe
21158 Resource is an Atomic Measurement of glucose (oic.r.glucose), context carbohydrates
21159 (oic.r.glucose.carb), context exercise (oic.r.glucose.exercise), hemoglobin bound to glucose alc
21160 Form (HbA1c) (oic.r.glucose.hb1c), context health (oic.r.glucose.health), context meal
21161 (oic.r.glucose.meal), context medication (oic.r.glucose.medication), context sample location
21162 (oic.r.glucose.samplelocation), context tester (oic.r.glucose.tester), observed time
21163 (oic.r.time.stamp), and user id (oic.r.userid).",
21164     "parameters": [
21165       {
21166         "$ref": "#/parameters/interface-all"
21167       }
21168     ],
21169     "responses": {
21170       "200": {
21171         "description": "",
21172         "x-example": [
21173           {
21174             "href": "/myGlucose",
21175             "rt": [
21176               "oic.r.glucose"
21177             ],
21178             "if": [
21179               "oic.if.s",
21180               "oic.if.baseline"
21181             ]
21182           },
21183           {
21184             "href": "/myGlucoseCarb",
21185             "rt": [
21186               "oic.r.glucose.carb"
21187             ],
21188             "if": [
21189               "oic.if.s",
21190               "oic.if.baseline"
21191             ]
21192           },
21193           {
21194             "href": "/myGlucoseExercise",
21195             "rt": [
21196               "oic.r.glucose.exercise"
21197             ],
21198             "if": [
21199               "oic.if.s",
21200               "oic.if.baseline"
21201             ]
21202           },
21203           {
21204             "href": "/myGlucoseHbA1c",
21205             "rt": [
21206               "oic.r.glucose.hb1c"
21207             ],
21208             "if": [
21209               "oic.if.s",
21210               "oic.if.baseline"
21211             ]
21212           },
21213           {
21214             "href": "/myGlucoseHealth",
21215             "rt": [
21216               "oic.r.glucose.health"
21217             ],
21218             "if": [
21219               "oic.if.s",
21220               "oic.if.baseline"
21221             ]

```

```

21222     },
21223     {
21224         "href": "/myGlucoseMeal",
21225         "rt": [
21226             "oic.r.glucose.meal"
21227         ],
21228         "if": [
21229             "oic.if.s",
21230             "oic.if.baseline"
21231         ]
21232     },
21233     {
21234         "href": "/myGlucoseMedication",
21235         "rt": [
21236             "oic.r.glucose.medication"
21237         ],
21238         "if": [
21239             "oic.if.s",
21240             "oic.if.baseline"
21241         ]
21242     },
21243     {
21244         "href": "/myGlucoseSampleLocation",
21245         "rt": [
21246             "oic.r.glucose.samplelocation"
21247         ],
21248         "if": [
21249             "oic.if.r",
21250             "oic.if.baseline"
21251         ]
21252     },
21253     {
21254         "href": "/myGlucoseTester",
21255         "rt": [
21256             "oic.r.glucose.testers"
21257         ],
21258         "if": [
21259             "oic.if.r",
21260             "oic.if.baseline"
21261         ]
21262     },
21263     {
21264         "href": "/myUserId",
21265         "rt": [
21266             "oic.r.userid"
21267         ],
21268         "if": [
21269             "oic.if.r",
21270             "oic.if.baseline"
21271         ]
21272     },
21273     {
21274         "href": "/myTimeStamp",
21275         "rt": [
21276             "oic.r.time.stamp"
21277         ],
21278         "if": [
21279             "oic.if.r",
21280             "oic.if.baseline"
21281         ]
21282     }
21283 ],
21284 "schema": {
21285     "$ref": "#/definitions/links"
21286 }
21287 }
21288 }
21289 },
21290 "/GlucoseMeterAMResURI?if=oic.if.baseline": {
21291     "get": {
21292         "description": "This Resource describes the Properties associated with glucose meter.\n\nThe

```

```

21294 Resource is an Atomic Measurement of glucose (oic.r.glucose), context carbohydrates
21295 (oic.r.glucose.carb), context exercise (oic.r.glucose.exercise), Hemoglobin Bound to glucose alc
21296 Form (HbA1c) (oic.r.glucose.hbA1c), context health (oic.r.glucose.health), context meal
21297 (oic.r.glucose.meal), context medication (oic.r.glucose.medication), context sample location
21298 (oic.r.glucose.samplelocation), context tester (oic.r.glucose.tester), observed time
21299 (oic.r.time.stamp), and user id (oic.r.userid).",
21300     "parameters": [
21301     {
21302         "$ref": "#/parameters/interface-all"
21303     }
21304 ],
21305     "responses": {
21306         "200": {
21307             "description": "",
21308             "x-example": {
21309                 "rt": [
21310                     "oic.r.glucosemeter-am",
21311                     "oic.wk.atomicmeasurement"
21312                 ],
21313                 "if": [
21314                     "oic.if.b",
21315                     "oic.if.ll",
21316                     "oic.if.baseline"
21317                 ],
21318                 "rts": [
21319                     "oic.r.glucose",
21320                     "oic.r.glucose.carb",
21321                     "oic.r.glucose.exercise",
21322                     "oic.r.glucose.hbA1c",
21323                     "oic.r.glucose.health",
21324                     "oic.r.glucose.meal",
21325                     "oic.r.glucose.medication",
21326                     "oic.r.glucose.samplelocation",
21327                     "oic.r.glucose.tester",
21328                     "oic.r.userid",
21329                     "oic.r.time.stamp"
21330                 ],
21331                 "rts-m": [
21332                     "oic.r.glucose"
21333                 ],
21334                 "links": [
21335                     {
21336                         "href": "/myGlucose",
21337                         "rt": [
21338                             "oic.r.glucose"
21339                         ],
21340                         "if": [
21341                             "oic.if.s",
21342                             "oic.if.baseline"
21343                         ]
21344                     },
21345                     {
21346                         "href": "/myGlucoseCarb",
21347                         "rt": [
21348                             "oic.r.glucose.carb"
21349                         ],
21350                         "if": [
21351                             "oic.if.s",
21352                             "oic.if.baseline"
21353                         ]
21354                     },
21355                     {
21356                         "href": "/myGlucoseExercise",
21357                         "rt": [
21358                             "oic.r.glucose.exercise"
21359                         ],
21360                         "if": [
21361                             "oic.if.s",
21362                             "oic.if.baseline"
21363                         ]
21364                     },
21365                 ]

```

```

21366         "href": "/myGlucoseHbA1c",
21367         "rt": [
21368             "oic.r.glucose.hbA1c"
21369         ],
21370         "if": [
21371             "oic.if.s",
21372             "oic.if.baseline"
21373         ]
21374     },
21375     {
21376         "href": "/myGlucoseHealth",
21377         "rt": [
21378             "oic.r.glucose.health"
21379         ],
21380         "if": [
21381             "oic.if.s",
21382             "oic.if.baseline"
21383         ]
21384     },
21385     {
21386         "href": "/myGlucoseMeal",
21387         "rt": [
21388             "oic.r.glucose.meal"
21389         ],
21390         "if": [
21391             "oic.if.s",
21392             "oic.if.baseline"
21393         ]
21394     },
21395     {
21396         "href": "/myGlucoseMedication",
21397         "rt": [
21398             "oic.r.glucose.medication"
21399         ],
21400         "if": [
21401             "oic.if.s",
21402             "oic.if.baseline"
21403         ]
21404     },
21405     {
21406         "href": "/myGlucoseSampleLocation",
21407         "rt": [
21408             "oic.r.glucose.samplelocation"
21409         ],
21410         "if": [
21411             "oic.if.r",
21412             "oic.if.baseline"
21413         ]
21414     },
21415     {
21416         "href": "/myGlucoseTester",
21417         "rt": [
21418             "oic.r.glucose.testers"
21419         ],
21420         "if": [
21421             "oic.if.r",
21422             "oic.if.baseline"
21423         ]
21424     },
21425     {
21426         "href": "/myUserId",
21427         "rt": [
21428             "oic.r.userid"
21429         ],
21430         "if": [
21431             "oic.if.r",
21432             "oic.if.baseline"
21433         ]
21434     },
21435     {
21436         "href": "/myTimeStamp",
21437         "rt": [

```

```

21438         "oic.r.time.stamp"
21439     ],
21440     "if": [
21441         "oic.if.x",
21442         "oic.if.baseline"
21443     ]
21444 }
21445 ]
21446 },
21447 "schema": {
21448     "$ref": "#/definitions/baseline"
21449 }
21450 }
21451 }
21452 }
21453 }
21454 },
21455 "parameters": {
21456     "interface-all": {
21457         "in": "query",
21458         "name": "if",
21459         "type": "string",
21460         "enum": [
21461             "oic.if.b",
21462             "oic.if.ll",
21463             "oic.if.baseline"
21464         ]
21465     }
21466 },
21467 "definitions": {
21468     "links": {
21469         "type": "array",
21470         "items": {
21471             "$ref": "#/definitions/oic.oic-link"
21472         }
21473     },
21474     "batch-retrieve": {
21475         "minItems": 1,
21476         "items": {
21477             "properties": {
21478                 "href": {
21479                     "$ref":
21480 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21481 schema.json#/definitions/href"
21482                 },
21483                 "rep": {
21484                     "type": "object",
21485                     "anyOf": [
21486                         {
21487                             "$ref":
21488 "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseResURI.swagger.json#/definitions/
21489 Glucose"
21490                         },
21491                         {
21492                             "$ref":
21493 "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseCarbResURI.swagger.json#/definiti
21494 ons/GlucoseCarb"
21495                         },
21496                         {
21497                             "$ref":
21498 "https://openconnectivityfoundation.github.io/IoTDataModels/ExerciseResURI.swagger.json#/definitions
21499 /Exercise"
21500                         },
21501                         {
21502                             "$ref":
21503 "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseHbA1cResURI.swagger.json#/definit
21504 ions/HbA1c"
21505                         },
21506                         {
21507                             "$ref":
21508 "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseHealthResURI.swagger.json#/defini
21509 tions/GlucoseHealth"

```



```

21510         },
21511         {
21512             "$ref":
21513 "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseMealResURI.swagger.json#/definitions/GlucoseMeal"
21514         },
21515         {
21516             "$ref":
21517 "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseMedicationResURI.swagger.json#/definitions/GlucoseMedication"
21518         },
21519         {
21520             "$ref":
21521 "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseSampleLocationResURI.swagger.json#/definitions/GlucoseSampleLocation"
21522         },
21523         {
21524             "$ref":
21525 "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseTesterResURI.swagger.json#/definitions/GlucoseTester"
21526         },
21527         {
21528             "$ref":
21529 "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/UserID"
21530         },
21531         {
21532             "$ref":
21533 "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definitions/TimeStamp"
21534         }
21535     ],
21536     "required": [
21537         "href",
21538         "rep"
21539     ],
21540     "type": "object"
21541 },
21542 "type": "array"
21543 },
21544 "baseline": {
21545     "properties": {
21546         "rt": {
21547             "items": {
21548                 "enum": [
21549                     "oic.r.glucosemeter-am",
21550                     "oic.wk.atomicmeasurement"
21551                 ],
21552                 "type": "string",
21553                 "maxLength": 64
21554             },
21555             "minItems": 2,
21556             "uniqueItems": true,
21557             "readOnly": true,
21558             "type": "array"
21559         },
21560         "rts": {
21561             "description": "This contains all possible Resource Types for this Atomic Measurement.",
21562             "items": {
21563                 "enum": [
21564                     "oic.r.glucose",
21565                     "oic.r.glucose.carb",
21566                     "oic.r.glucose.exercise",
21567                     "oic.r.glucose.hbabc",
21568                     "oic.r.glucose.health",
21569                     "oic.r.glucose.meal",
21570                     "oic.r.glucose.medication",
21571                     "oic.r.glucose.samplelocation",
21572                     "oic.r.glucose.testers",
21573                     "oic.r.time.stamp",

```

```

21582         "oic.r.userid"
21583     ],
21584     "type": "string",
21585     "maxLength": 64
21586 },
21587     "minItems": 1,
21588     "uniqueItems": true,
21589     "readOnly": true,
21590     "type": "array"
21591 },
21592     "rts-m": {
21593         "description": "This contains all mandatory Resource Types for this Atomic Measurement.",
21594         "items": {
21595             "enum": [
21596                 "oic.r.glucose"
21597             ],
21598             "type": "string",
21599             "maxLength": 64
21600         },
21601         "maxItems": 1,
21602         "minItems": 1,
21603         "uniqueItems": true,
21604         "readOnly": true,
21605         "type": "array"
21606     },
21607     "if": {
21608         "description": "The OCF Interface set supported by this Resource",
21609         "items": {
21610             "enum": [
21611                 "oic.if.b",
21612                 "oic.if.ll",
21613                 "oic.if.baseline"
21614             ],
21615             "type": "string",
21616             "maxLength": 64
21617         },
21618         "minItems": 3,
21619         "uniqueItems": true,
21620         "readOnly": true,
21621         "type": "array"
21622     },
21623     "n": {
21624         "$ref":
21625         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21626         schema.json#/definitions/n"
21627     },
21628     "id": {
21629         "$ref":
21630         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21631         schema.json#/definitions/id"
21632     },
21633     "links": {
21634         "$ref": "#/definitions/links"
21635     }
21636 },
21637     "type": "object",
21638     "required": [
21639         "rt", "if", "links", "rts", "rts-m"
21640     ]
21641 },
21642     "oic.oic-link": {
21643         "properties": {
21644             "if": {
21645                 "description": "The OCF Interface set supported by the target Resource",
21646                 "items": {
21647                     "enum": [
21648                         "oic.if.s",
21649                         "oic.if.r",
21650                         "oic.if.baseline"
21651                     ],
21652                     "type": "string",
21653                     "maxLength": 64

```

```

21654     },
21655     "minItems": 1,
21656     "uniqueItems": true,
21657     "readOnly": true,
21658     "type": "array"
21659   },
21660   "rt": {
21661     "description": "Resource Type of the target Resource",
21662     "items": {
21663       "enum": [
21664         "oic.r.glucose",
21665         "oic.r.glucose.carb",
21666         "oic.r.glucose.exercise",
21667         "oic.r.glucose.hbabc",
21668         "oic.r.glucose.health",
21669         "oic.r.glucose.meal",
21670         "oic.r.glucose.medication",
21671         "oic.r.glucose.samplelocation",
21672         "oic.r.glucose.test",
21673         "oic.r.time.stamp",
21674         "oic.r.userid"
21675       ],
21676       "type": "string",
21677       "maxLength": 64
21678     },
21679     "minItems": 1,
21680     "uniqueItems": true,
21681     "readOnly": true,
21682     "type": "array"
21683   },
21684   "anchor": {
21685     "$ref":
21686     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21687     schema.json#/definitions/anchor"
21688   },
21689   "di": {
21690     "$ref":
21691     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21692     schema.json#/definitions/di"
21693   },
21694   "eps": {
21695     "$ref":
21696     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21697     schema.json#/definitions/eps"
21698   },
21699   "href": {
21700     "$ref":
21701     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21702     schema.json#/definitions/href"
21703   },
21704   "ins": {
21705     "$ref":
21706     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21707     schema.json#/definitions/ins"
21708   },
21709   "p": {
21710     "$ref":
21711     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21712     schema.json#/definitions/p"
21713   },
21714   "rel": {
21715     "$ref":
21716     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21717     schema.json#/definitions/rel_array"
21718   },
21719   "title": {
21720     "$ref":
21721     "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21722     schema.json#/definitions/title"
21723   },
21724   "type": {
21725     "$ref":

```

```

21726 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
21727 schema.json#/definitions/type"
21728     },
21729     "required": [
21730         "href",
21731         "rt",
21732         "if"
21733     ],
21734     "type": "object"
21735 }
21736 }
21737 }
21738 }
21739

```

21740 6.106.5 Property definition

21741 Table 215 defines the Properties that are part of the "oic.r.glucosemeter-am,
21742 oic.wk.atomicmeasurement" Resource Type.

21743 **Table 215 – The Property definitions of the Resource with type "rt" = "oic.r.glucosemeter-**
21744 **am, oic.wk.atomicmeasurement".**

Property name	Value type	Mandatory	Access mode	Description
href	multiple types: see schema	Yes	Read Write	
rep	object: see schema	Yes	Read Write	
rt	array: see schema	Yes	Read Only	
rts	array: see schema	Yes	Read Only	This contains all possible Resource Types for this Atomic Measurement.
rts-m	array: see schema	Yes	Read Only	This contains all mandatory Resource Types for this Atomic Measurement.
if	array: see schema	Yes	Read Only	The OCF Interface set supported by this Resource
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
links	multiple types: see schema	Yes	Read Write	
if	array: see schema	Yes	Read Only	The OCF Interface set supported by the target Resource
rt	array: see schema	Yes	Read Only	Resource Type of the target Resource
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	

ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	

6.106.6 CRUDN behaviour

Table 216 defines the CRUDN operations that are supported on the "oic.r.glucosemeter-am, oic.wk.atomicmeasurement" Resource Type.

Table 216 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucosemeter-am, oic.wk.atomicmeasurement".

Create	Read	Update	Delete	Notify
	get			observe

6.107 Context Sample Location for Glucose Meter

6.107.1 Introduction

This Resource describes the Properties associated with context sample Location. AST means Alternative Site Test specifying that the location of test performed was from an alternative site on the body. The samplelocation Property is a read-only value that is provided by the Server.

6.107.2 Example URI

/GlucoseSampleLocationResURI

6.107.3 Resource type

The Resource Type is defined as: "oic.r.glucose.samplelocation".

6.107.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Context Sample Location for Glucose Meter",
    "version": "2019-03-22",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/GlucoseSampleLocationResURI": {
```

```

21786     "get": {
21787         "description": "This Resource describes the Properties associated with context sample
21788 Location.\nAST means Alternative Site Test specifying that the location of test performed was from
21789 an alternative site on the body.\nThe samplelocation Property is a read-only value that is provided
21790 by the Server.",
21791         "parameters": [
21792             {
21793                 "$ref": "#/parameters/interface"
21794             }
21795         ],
21796         "responses": {
21797             "200": {
21798                 "description": "",
21799                 "x-example": {
21800                     "rt": [
21801                         "oic.r.glucose.samplelocation"
21802                     ],
21803                     "samplelocation": "finger"
21804                 },
21805                 "schema": {
21806                     "$ref": "#/definitions/GlucoseSampleLocation"
21807                 }
21808             }
21809         }
21810     }
21811 },
21812 "parameters": {
21813     "interface": {
21814         "in": "query",
21815         "name": "if",
21816         "type": "string",
21817         "enum": [
21818             "oic.if.r",
21819             "oic.if.baseline"
21820         ]
21821     }
21822 },
21823 },
21824 "definitions": {
21825     "GlucoseSampleLocation": {
21826         "properties": {
21827             "rt": {
21828                 "description": "Resource Type",
21829                 "items": {
21830                     "enum": [
21831                         "oic.r.glucose.samplelocation"
21832                     ],
21833                     "type": "string",
21834                     "maxLength": 64
21835                 },
21836                 "minItems": 1,
21837                 "uniqueItems": true,
21838                 "readOnly": true,
21839                 "type": "array"
21840             },
21841             "samplelocation": {
21842                 "description": "The possible blood locations where the blood sample may be taken.",
21843                 "enum": [
21844                     "finger",
21845                     "ast",
21846                     "earlobe",
21847                     "ctrlsolution"
21848                 ],
21849                 "readOnly": true,
21850                 "type": "string"
21851             },
21852             "n": {
21853                 "$ref":
21854 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21855 schema.json#/definitions/n"
21856             },
21857             "id": {

```

```
21858         "$ref":
21859         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21860         schema.json#/definitions/id"
21861     },
21862     "if": {
21863         "description": "The OCF Interface set supported by this Resource",
21864         "items": {
21865             "enum": [
21866                 "oic.if.r",
21867                 "oic.if.baseline"
21868             ],
21869             "type": "string",
21870             "maxLength": 64
21871         },
21872         "minItems": 1,
21873         "readOnly": true,
21874         "uniqueItems": true,
21875         "type": "array"
21876     }
21877 },
21878 "type": "object",
21879 "required": [
21880     "samplelocation"
21881 ]
21882 }
21883 }
21884 }
21885 }
```

21886 **6.107.5 Property definition**

21887 Table 217 defines the Properties that are part of the "oic.r.glucose.samplelocation" Resource Type.

21888 **Table 217 – The Property definitions of the Resource with type "rt" =**
21889 **"oic.r.glucose.samplelocation".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
samplelocation	string	Yes	Read Only	The possible blood locations where the blood sample may be taken.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

21890 **6.107.6 CRUDN behaviour**

21891 Table 218 defines the CRUDN operations that are supported on the "oic.r.glucose.samplelocation"
21892 Resource Type.

21893 **Table 218 – The CRUDN operations of the Resource with type "rt" =**
21894 **"oic.r.glucose.samplelocation".**

Create	Read	Update	Delete	Notify
	get			observe

21895 **6.108 Context Tester for Glucose Meter**

21896 **6.108.1 Introduction**

21897 This Resource describes the Properties associated with context tester.

21898 The tester Property is a read-only value that is provided by the Server where especially
21899 hcp stands for HealthCare Professional.

21900 **6.108.2 Example URI**

21901 /GlucoseTesterResURI

21902 **6.108.3 Resource type**

21903 The Resource Type is defined as: "oic.r.glucose.tester".

21904 **6.108.4 OpenAPI 2.0 definition**

```
21905 {
21906   "swagger": "2.0",
21907   "info": {
21908     "title": "Context Tester for Glucose Meter",
21909     "version": "2019-03-22",
21910     "license": {
21911       "name": "OCF Data Model License",
21912       "url":
21913         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
21914         CENSE.md",
21915       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
21916     },
21917     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
21918   },
21919   "schemes": [
21920     "http"
21921   ],
21922   "consumes": [
21923     "application/json"
21924   ],
21925   "produces": [
21926     "application/json"
21927   ],
21928   "paths": {
21929     "/GlucoseTesterResURI": {
21930       "get": {
21931         "description": "This Resource describes the Properties associated with context tester.\n\nThe
21932         tester Property is a read-only value that is provided by the Server where especially\n\nhcp stands for
21933         HealthCare Professional.",
21934         "parameters": [
21935           {
21936             "$ref": "#/parameters/interface"
21937           }
21938         ],
21939         "responses": {
21940           "200": {
21941             "description": "",
21942             "x-example": {
21943               "rt": [
21944                 "oic.r.glucose.tester"
21945               ],
21946               "tester": "self"
21947             },
21948             "schema": {
21949               "$ref": "#/definitions/GlucoseTester"
21950             }
21951           }
21952         }
21953       }
21954     }
21955   },
21956   "parameters": {
21957     "interface": {
21958       "in": "query",
```



```

21959         "name": "if",
21960         "type": "string",
21961         "enum": [
21962             "oic.if.r",
21963             "oic.if.baseline"
21964         ]
21965     },
21966 },
21967 "definitions": {
21968     "GlucoseTester": {
21969         "properties": {
21970             "rt": {
21971                 "description": "Resource Type",
21972                 "items": {
21973                     "enum": [
21974                         "oic.r.glucose.testers"
21975                     ],
21976                     "type": "string",
21977                     "maxLength": 64
21978                 },
21979                 "minItems": 1,
21980                 "uniqueItems": true,
21981                 "readOnly": true,
21982                 "type": "array"
21983             },
21984             "tester": {
21985                 "description": "The possible cases of testers who may perform the blood sugar
21986 measurement.",
21987                 "enum": [
21988                     "self",
21989                     "hcp",
21990                     "lab"
21991                 ],
21992                 "readOnly": true,
21993                 "type": "string"
21994             },
21995             "n": {
21996                 "$ref":
21997 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
21998 schema.json#/definitions/n"
21999             },
22000             "id": {
22001                 "$ref":
22002 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22003 schema.json#/definitions/id"
22004             },
22005             "if": {
22006                 "description": "The OCF Interface set supported by this Resource",
22007                 "items": {
22008                     "enum": [
22009                         "oic.if.r",
22010                         "oic.if.baseline"
22011                     ],
22012                     "type": "string",
22013                     "maxLength": 64
22014                 },
22015                 "minItems": 1,
22016                 "readOnly": true,
22017                 "uniqueItems": true,
22018                 "type": "array"
22019             }
22020         },
22021         "type": "object",
22022         "required": [
22023             "tester"
22024         ]
22025     }
22026 }
22027 }
22028

```

22029 6.108.5 Property definition

22030 Table 219 defines the Properties that are part of the "oic.r.glucose.tester" Resource Type.

22031 **Table 219 – The Property definitions of the Resource with type "rt" = "oic.r.glucose.tester".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
tester	string	Yes	Read Only	The possible cases of testers who may perform the blood sugar measurement.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

22032 6.108.6 CRUDN behaviour

22033 Table 220 defines the CRUDN operations that are supported on the "oic.r.glucose.tester" Resource Type.

22035 **Table 220 – The CRUDN operations of the Resource with type "rt" = "oic.r.glucose.tester".**

Create	Read	Update	Delete	Notify
	get			observe

22036 6.109 Optical RFID Station

22037 6.109.1 Introduction

22038 The Property "process" represents the stage of the product in the product line which has an optical RFID tag on its body.

22039 The Property "event" is represented by a Boolean value set to "true" and "false" alarming the issue when additional action is requested for the tagged product.

22040 The Property "actionrequest" represent necessary actions like the isolation of the product, to send the product back to other specific line to modify or fix the issue.

22044 6.109.2 Example URI

22045 /ORFIDStationResURI

22046 6.109.3 Resource type

22047 The Resource Type is defined as: "oic.r.orfid.station".

22048 6.109.4 OpenAPI 2.0 definition

```

22049 {
22050   "swagger": "2.0",
22051   "info": {
22052     "title": "Optical RFID Station",
22053     "version": "20190215",
22054     "license": {
22055       "name": "OCF Data Model License",
22056       "url":
22057         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
22058         CENSE.md",
22059       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
22060       reserved."
22061     },

```

```

22062     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
22063 },
22064 "schemes": ["http"],
22065 "consumes": ["application/json"],
22066 "produces": ["application/json"],
22067 "paths": {
22068     "/ORFIDStationResURI" : {
22069         "get": {
22070             "description": "The Property \"process\" represents the stage of the product in the product
22071 line which has an optical RFID tag on its body.\nThe Property \"event\" is represented by a Boolean
22072 value set to \"true\" and \"false\" alarming the issue when additional action is requested for the
22073 tagged product.\nThe Property \"actionrequest\" represent necessary actions like the isolation of
22074 the product, to send the product back to other specific line to modify or fix the issue.",
22075             "parameters": [
22076                 {"$ref": "#/parameters/interface"}
22077             ],
22078             "responses": {
22079                 "200": {
22080                     "description": "RETRIEVES the station information from optical augmented RFID reader
22081 in smart factory environment.",
22082                     "x-example":
22083                         {
22084                             "rt": ["oic.r.orfid.station"],
22085                             "if": ["oic.if.rw", "oic.if.baseline"],
22086                             "process": 17,
22087                             "event": true,
22088                             "actionrequest": 2
22089                         },
22090                     "schema": { "$ref": "#/definitions/ORFID" }
22091                 }
22092             }
22093         },
22094         "post": {
22095             "description": "Sets necessary action in accordance with Tag Information.",
22096             "parameters": [
22097                 {"$ref": "#/parameters/interface"},
22098                 {
22099                     "name": "body",
22100                     "in": "body",
22101                     "required": true,
22102                     "schema": { "$ref": "#/definitions/ORFID" },
22103                     "x-example":
22104                         {
22105                             "event": false,
22106                             "actionrequest": 0
22107                         }
22108                 }
22109             ],
22110             "responses": {
22111                 "200": {
22112                     "description": "",
22113                     "x-example":
22114                         {
22115                             "event": false,
22116                             "actionrequest": 0
22117                         },
22118                     "schema": { "$ref": "#/definitions/ORFID" }
22119                 }
22120             }
22121         }
22122     }
22123 },
22124 "parameters": {
22125     "interface": {
22126         "in": "query",
22127         "name": "if",
22128         "type": "string",
22129         "enum": ["oic.if.rw", "oic.if.baseline"]
22130     }
22131 },
22132 "definitions": {
22133     "ORFID" : {

```

```

22134     "properties": {
22135       "rt": {
22136         "description": "The Resource Type.",
22137         "items": {
22138           "enum": ["oic.r.orfid.station"],
22139           "maxLength": 64,
22140           "type": "string"
22141         },
22142         "minItems": 1,
22143         "uniqueItems": true,
22144         "readOnly": true,
22145         "type": "array"
22146       },
22147       "process": {
22148         "description": "The process step that is being performed at this station.",
22149         "readOnly": true,
22150         "type": "integer"
22151       },
22152       "actionrequest": {
22153         "description": "The action request identifier.",
22154         "type": "integer"
22155       },
22156       "event": {
22157         "description": "The Event indicator, when True, the action request should be applied to
22158 the product identified by the tagid.",
22159         "type": "boolean"
22160       },
22161       "n": {
22162         "$ref":
22163 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22164 schema.json#/definitions/n"
22165       },
22166       "id": {
22167         "$ref":
22168 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22169 schema.json#/definitions/id"
22170       },
22171       "if": {
22172         "description": "The OCF Interface set supported by this Resource.",
22173         "items": {
22174           "enum": [
22175             "oic.if.rw",
22176             "oic.if.baseline"
22177           ],
22178           "type": "string"
22179         },
22180         "minItems": 2,
22181         "uniqueItems": true,
22182         "readOnly": true,
22183         "type": "array"
22184       }
22185     },
22186     "type": "object",
22187     "required": ["event", "actionrequest"]
22188   }
22189 }
22190 }
22191

```

6.109.5 Property definition

Table 221 defines the Properties that are part of the "oic.r.orfid.station" Resource Type.

Table 221 – The Property definitions of the Resource with type "rt" = "oic.r.orfid.station".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
process	integer	No	Read Only	The process step that is being

				performed at this station.
actionrequest	integer	Yes	Read Write	The action request identifier.
event	boolean	Yes	Read Write	The Event indicator, when True, the action request should be applied to the product identified by the tagid.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

22195 6.109.6 CRUDN behaviour

22196 Table 222 defines the CRUDN operations that are supported on the "oic.r.orfid.station" Resource
22197 Type.

22198 **Table 222 – The CRUDN operations of the Resource with type "rt" = "oic.r.orfid.station".**

Create	Read	Update	Delete	Notify
	get	post		observe

22199 6.110 Optical RFID Tag

22200 6.110.1 Introduction

22201 The Property "tagid" is an integer showing the currently read optical augmented RFID tag's
22202 identity information.

22203 6.110.2 Example URI

22204 /ORFIDTagResURI

22205 6.110.3 Resource type

22206 The Resource Type is defined as: "oic.r.orfid.tag".

22207 6.110.4 OpenAPI 2.0 definition

```

22208 {
22209   "swagger": "2.0",
22210   "info": {
22211     "title": "Optical RFID Tag",
22212     "version": "20190215",
22213     "license": {
22214       "name": "OCF Data Model License",
22215       "url":
22216         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
22217 CENSE.md",
22218       "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
22219 reserved."
22220     },
22221     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
22222   },
22223   "schemes": ["http"],
22224   "consumes": ["application/json"],
22225   "produces": ["application/json"],
22226   "paths": {
22227     "/ORFIDTagResURI" : {

```

```

22228     "get": {
22229         "description": "The Property \"tagid\" is an integer showing the currently read optical
22230 augmented RFID tag's identity information.",
22231         "parameters": [
22232             { "$ref": "#/parameters/interface" }
22233         ],
22234         "responses": {
22235             "200": {
22236                 "description": "RETRIEVES the tag information from optical augmented RFID reader in
22237 smart factory environment.",
22238                 "x-example":
22239                     {
22240                         "rt": ["oic.r.orfid.tag"],
22241                         "if": ["oic.if.r", "oic.if.baseline"],
22242                         "tagid": 10965742,
22243                         "reading": true
22244                     },
22245                 "schema": { "$ref": "#/definitions/ORFID" }
22246             }
22247         }
22248     }
22249 },
22250 {
22251     "parameters": {
22252         "interface": {
22253             "in": "query",
22254             "name": "if",
22255             "type": "string",
22256             "enum": ["oic.if.r", "oic.if.baseline"]
22257         }
22258     },
22259     "definitions": {
22260         "ORFID": {
22261             "properties": {
22262                 "rt": {
22263                     "description": "The Resource Type.",
22264                     "items": {
22265                         "enum": ["oic.r.orfid.tag"],
22266                         "maxLength": 64,
22267                         "type": "string"
22268                     },
22269                     "minItems": 1,
22270                     "uniqueItems": true,
22271                     "readOnly": true,
22272                     "type": "array"
22273                 },
22274                 "tagid": {
22275                     "description": "The tag read by the RFID reader.",
22276                     "readOnly": true,
22277                     "type": "integer"
22278                 },
22279                 "reading": {
22280                     "description": "The reading indication. true: the tagid is read e.g. being valid. false:
22281 the tagid is invalid.",
22282                     "readOnly": true,
22283                     "type": "boolean"
22284                 },
22285                 "n": {
22286                     "$ref":
22287 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22288 schema.json#/definitions/n"
22289                 },
22290                 "id": {
22291                     "$ref":
22292 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22293 schema.json#/definitions/id"
22294                 },
22295                 "if": {
22296                     "description": "The OCF Interface set supported by this Resource.",
22297                     "items": {
22298                         "enum": [
22299                             "oic.if.r",

```

```
22300         "oic.if.baseline"
22301     ],
22302     "type": "string"
22303 },
22304     "minItems": 2,
22305     "uniqueItems": true,
22306     "readOnly": true,
22307     "type": "array"
22308 },
22309 },
22310     "type": "object",
22311     "required": ["tagid", "reading"]
22312 }
22313 }
22314 }
22315 }
```

22316 **6.110.5 Property definition**

22317 Table 223 defines the Properties that are part of the "oic.r.orfid.tag" Resource Type.

22318 **Table 223 – The Property definitions of the Resource with type "rt" = "oic.r.orfid.tag".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
tagid	integer	Yes	Read Only	The tag read by the RFID reader.
reading	boolean	Yes	Read Only	The reading indication. true: the tagid is read e.g. being valid. false: the tagid is invalid.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

22319 **6.110.6 CRUDN behaviour**

22320 Table 224 defines the CRUDN operations that are supported on the "oic.r.orfid.tag" Resource Type.

22321 **Table 224 – The CRUDN operations of the Resource with type "rt" = "oic.r.orfid.tag".**

Create	Read	Update	Delete	Notify
	get			observe

22322 **6.111 PowerSource**

22323 **6.111.1 Introduction**

22324 This Resource list the available power sources for the Device. The Property "powersources" is a
22325 list that is read only and is informative only.
22326 If there is more than 1 power source active, use multiple Resources to indicate the active power
22327 sources. If the power source is unknown use the value "unknown".

22328 **6.111.2 Example URI**

22329 /PowerSourceResURI

22330 **6.111.3 Resource type**

22331 The Resource Type is defined as: "oic.r.powersource".

6.111.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "PowerSource",
    "version": "20190513",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/PowerSourceResURI" : {
      "get": {
        "description": "This Resource list the available power sources for the Device. The Property
\"powersources\" is a list that is read only and is informative only.\nIf there is more than 1 power
source active, use multiple Resources to indicate the active power sources. If the power source is
unknown use the value \"unknown\".",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description" : "Retrieves the list of available power sources.",
            "x-example":
{
  "rt": ["oic.r.powersource"],
  "if": ["oic.if.r", "oic.if.baseline"],
  "powersources": [
    "DC power",
    "Internal Battery",
    "External Battery",
    "Power over Ethernet",
    "USB",
    "AC (Mains) Power",
    "Solar"
  ],
  "sourcefault": false
            },
            "schema": { "$ref": "#/definitions/powerSourceSchema" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface": {
      "in": "query",
      "name": "if",
      "type": "string",
      "enum": ["oic.if.r", "oic.if.baseline"]
    }
  },
  "definitions": {
    "powerSourceSchema" : {
      "properties": {
        "rt": {
          "description": "The Resource Type.",
          "items": {
            "enum": ["oic.r.powersource"],
            "maxLength": 64,
            "type": "string"
          },

```



```

22403         "minItems": 1,
22404         "uniqueItems": true,
22405         "readOnly": true,
22406         "type": "array"
22407     },
22408     "powersources": {
22409         "items": {
22410             "enum": [
22411                 "unknown",
22412                 "DC power",
22413                 "Internal Battery",
22414                 "External Battery",
22415                 "Power over Ethernet",
22416                 "USB",
22417                 "AC (Mains) Power",
22418                 "Solar"
22419             ],
22420             "minItems": 1,
22421             "type": "string",
22422             "uniqueItems": true
22423         },
22424         "type": "array"
22425     },
22426     "sourcefault": {
22427         "description": "Fault detected in currently active power source. True = fault detected",
22428         "readOnly": true,
22429         "type": "boolean"
22430     },
22431     "n": {
22432         "$ref":
22433         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22434         schema.json#/definitions/n"
22435     },
22436     "id": {
22437         "$ref":
22438         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22439         schema.json#/definitions/id"
22440     },
22441     "if": {
22442         "description": "The OCF Interface set supported by this Resource.",
22443         "items": {
22444             "enum": [
22445                 "oic.if.r",
22446                 "oic.if.baseline"
22447             ],
22448             "type": "string"
22449         },
22450         "minItems": 2,
22451         "uniqueItems": true,
22452         "readOnly": true,
22453         "type": "array"
22454     }
22455 },
22456 "type": "object",
22457 "required": ["powersources"]
22458 }
22459 }
22460 }
22461

```

6.111.5 Property definition

Table 225 defines the Properties that are part of the "oic.r.powersource" Resource Type.

Table 225 – The Property definitions of the Resource with type "rt" = "oic.r.powersource".

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

sourcefault	boolean	No	Read Only	Fault detected in currently active power source. True = fault detected
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

6.111.6 CRUDN behaviour

Table 226 defines the CRUDN operations that are supported on the "oic.r.powersource" Resource Type.

Table 226 – The CRUDN operations of the Resource with type "rt" = "oic.r.powersource".

Create	Read	Update	Delete	Notify
	get			observe

6.112 Print Queue

6.112.1 Introduction

This Resource describes the items in a Printer Queue. The Properties "uri" and "status" are read only items that cannot be changed through this resource.

6.112.2 Example URI

/PrintQueueResURI

6.112.3 Resource type

The Resource Type is defined as: "oic.r.printer.queue".

6.112.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Print Queue",
    "version": "20190215",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/PrintQueueResURI" : {
      "get": {
        "description": "This Resource describes the items in a Printer Queue. The Properties \"uri\"
and \"status\" are read only items that cannot be changed through this resource.",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
```

```

22506         "description" : "Retrieves the current Print Queue.",
22507         "x-example": {
22508             "rt": ["oic.r.printer.queue"],
22509             "if": ["oic.if.r", "oic.if.baseline"],
22510             "queue": [
22511                 {
22512                     "uri": "file://10.10.10.10/3dprinter/queueitem/1",
22513                     "status": "Printing"
22514                 },
22515                 {
22516                     "uri": "file://10.10.10.10/3dprinter/queueitem/2",
22517                     "status": "Pending"
22518                 }
22519             ]
22520         },
22521         "schema": { "$ref": "#/definitions/PrintQueue" }
22522     }
22523 }
22524 }
22525 }
22526 },
22527 "parameters": {
22528     "interface": {
22529         "in": "query",
22530         "name": "if",
22531         "type": "string",
22532         "enum": ["oic.if.r", "oic.if.baseline"]
22533     }
22534 },
22535 "definitions": {
22536     "PrintQueue" : {
22537         "properties": {
22538             "rt": {
22539                 "description": "The Resource Type.",
22540                 "items": {
22541                     "enum": ["oic.r.printer.queue"],
22542                     "maxLength": 64,
22543                     "type": "string"
22544                 },
22545                 "minItems": 1,
22546                 "uniqueItems": true,
22547                 "readOnly": true,
22548                 "type": "array"
22549             },
22550             "queue": {
22551                 "description": "The array of queue items for the printer.",
22552                 "items": {
22553                     "properties": {
22554                         "status": {
22555                             "description": "The status of the queue item.",
22556                             "enum": [
22557                                 "Printing",
22558                                 "Pending",
22559                                 "Paused",
22560                                 "Error",
22561                                 "Unknown"
22562                             ],
22563                             "readOnly": true,
22564                             "type": "string"
22565                         },
22566                         "uri": {
22567                             "description": "The uri of the queue item (i.e. the actual file).",
22568                             "format": "uri",
22569                             "maxLength": 256,
22570                             "readOnly": true,
22571                             "type": "string"
22572                         }
22573                     },
22574                     "required": [
22575                         "uri",
22576                         "status"
22577                     ],

```

```
22578         "type": "object"
22579     },
22580     "readOnly": true,
22581     "type": "array"
22582 },
22583 "n": {
22584     "$ref":
22585 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22586 schema.json#/definitions/n"
22587 },
22588 "id": {
22589     "$ref":
22590 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22591 schema.json#/definitions/id"
22592 },
22593 "if": {
22594     "description": "The OCF Interface set supported by this Resource.",
22595     "items": {
22596         "enum": [
22597             "oic.if.r",
22598             "oic.if.baseline"
22599         ],
22600         "type": "string"
22601     },
22602     "minItems": 2,
22603     "uniqueItems": true,
22604     "readOnly": true,
22605     "type": "array"
22606 },
22607 },
22608 "type": "object",
22609 "required": ["queue"]
22610 }
22611 }
22612 }
22613 }
```

22614 **6.112.5 Property definition**

22615 Table 227 defines the Properties that are part of the "oic.r.printer.queue" Resource Type.

22616 **Table 227 – The Property definitions of the Resource with type "rt" = "oic.r.printer.queue".**

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

22617 **6.112.6 CRUDN behaviour**

22618 Table 228 defines the CRUDN operations that are supported on the "oic.r.printer.queue" Resource
22619 Type.

22620 **Table 228 – The CRUDN operations of the Resource with type "rt" = "oic.r.printer.queue".**

Create	Read	Update	Delete	Notify
	get			observe

22621 6.113 Pulse Rate

22622 6.113.1 Introduction

22623 This Resource describes the Properties associated with a person's pulse rate.

22624 The unit, which is the default unit, is bpm.

22625 The pulserate and unit Properties are read-only values that are provided by the Server.

22626 When range is omitted the default is 0 to +MAXFLOAT.

22627 6.113.2 Example URI

22628 /PulseRateResURI

22629 6.113.3 Resource type

22630 The Resource Type is defined as: "oic.r.pulserate".

22631 6.113.4 OpenAPI 2.0 definition

```
22632 {
22633   "swagger": "2.0",
22634   "info": {
22635     "title": "Pulse Rate",
22636     "version": "2019-03-22",
22637     "license": {
22638       "name": "OCF Data Model License",
22639       "url":
22640         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
22641         CENSE.md",
22642       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
22643     },
22644     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
22645   },
22646   "schemes": [
22647     "http"
22648   ],
22649   "consumes": [
22650     "application/json"
22651   ],
22652   "produces": [
22653     "application/json"
22654   ],
22655   "paths": {
22656     "/PulseRateResURI": {
22657       "get": {
22658         "description": "This Resource describes the Properties associated with a person's pulse
22659         rate.\nThe unit, which is the default unit, is bpm.\nThe pulserate and unit Properties are read-only
22660         values that are provided by the Server.\nWhen range is omitted the default is 0 to +MAXFLOAT.",
22661         "parameters": [
22662           {
22663             "$ref": "#/parameters/interface"
22664           }
22665         ],
22666         "responses": {
22667           "200": {
22668             "description": "",
22669             "x-example": {
22670               "rt": [
22671                 "oic.r.pulserate"
22672               ],
22673               "pulserate": 80,
22674               "range": [20, 220],
22675               "step": 1
22676             },
22677             "schema": {
22678               "$ref": "#/definitions/PulseRate"
22679             }
22680           }
22681         }
22682       }
22683     }
  }
```

```

22684 },
22685 "parameters": {
22686   "interface": {
22687     "in": "query",
22688     "name": "if",
22689     "type": "string",
22690     "enum": [
22691       "oic.if.s",
22692       "oic.if.baseline"
22693     ]
22694   }
22695 },
22696 "definitions": {
22697   "PulseRate": {
22698     "properties": {
22699       "rt": {
22700         "description": "Resource Type",
22701         "items": {
22702           "enum": [
22703             "oic.r.pulserate"
22704           ],
22705           "type": "string",
22706           "maxLength": 64
22707         },
22708         "minItems": 1,
22709         "uniqueItems": true,
22710         "readOnly": true,
22711         "type": "array"
22712       },
22713       "pulserate": {
22714         "description": "Pulse rate in bpm.",
22715         "minimum": 0,
22716         "readOnly": true,
22717         "type": "integer"
22718       },
22719       "if": {
22720         "description": "The OCF Interface set supported by this Resource",
22721         "items": {
22722           "enum": [
22723             "oic.if.s",
22724             "oic.if.baseline"
22725           ],
22726           "type": "string",
22727           "maxLength": 64
22728         },
22729         "minItems": 1,
22730         "readOnly": true,
22731         "uniqueItems": true,
22732         "type": "array"
22733       },
22734       "range": {
22735         "$ref":
22736         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
22737         schema.json#/definitions/range_integer"
22738       },
22739       "step": {
22740         "$ref":
22741         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
22742         schema.json#/definitions/step_integer"
22743       },
22744       "n": {
22745         "$ref":
22746         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22747         schema.json#/definitions/n"
22748       }
22749     },
22750     "type": "object",
22751     "required": [
22752       "pulserate"
22753     ]
22754   }
22755 }

```

22756 }
22757

22758 6.113.5 Property definition

22759 Table 229 defines the Properties that are part of the "oic.r.pulserate" Resource Type.

22760 **Table 229 – The Property definitions of the Resource with type "rt" = "oic.r.pulserate".**

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

22761 6.113.6 CRUDN behaviour

22762 Table 230 defines the CRUDN operations that are supported on the "oic.r.pulserate" Resource
22763 Type.

22764 **Table 230 – The CRUDN operations of the Resource with type "rt" = "oic.r.pulserate".**

Create	Read	Update	Delete	Notify
	get			observe

22765 6.114 Sensor Properties

22766 6.114.1 Introduction

22767 This Resource describes the properties which guide the reporting of a state change of a Sensor.
22768 The Property "silenttime" represents the period after which a state change report was sent where
22769 the Sensor state change is not reported.
22770 The Property "sensitivity" represents the level at which the sensor detects a state change.
22771 These values are completely dependent on the type of Sensor and the manufacturer capability, so
22772 no range restrictions are used.
22773 The Properties "range", "step" and "precision" are only applied to the "sensitivity" Property.

22774 6.114.2 Example URI

22775 /SensorPropsResURI

22776 6.114.3 Resource type

22777 The Resource Type is defined as: "oic.r.sensor.props".

22778 6.114.4 OpenAPI 2.0 definition

```
22779 {  
22780   "swagger": "2.0",  
22781   "info": {  
22782     "title": "Sensor Properties",  
22783     "version": "20190215",  
22784     "license": {  
22785       "name": "OCF Data Model License",  
22786       "url":  
22787         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
22788         CENSE.md",
```

```

22789         "x-copyright": "copyright 2016-2017, 2019 Open Connectivity Foundation, Inc. All rights
22790 reserved."
22791     },
22792     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
22793 },
22794 "schemes": ["http"],
22795 "consumes": ["application/json"],
22796 "produces": ["application/json"],
22797 "paths": {
22798     "/SensorPropsResURI" : {
22799         "get": {
22800             "description": "This Resource describes the properties which guide the reporting of a state
22801 change of a Sensor.\nThe Property \"silenttime\" represents the period after which a state change
22802 report was sent where the Sensor state change is not reported.\nThe Property \"sensitivity\"
22803 represents the level at which the sensor detects a state change.\nThese values are completely
22804 dependent on the type of Sensor and the manufacturer capability, so no range restrictions are
22805 used.\nThe Properties \"range\", \"step\" and \"precision\" are only applied to the \"sensitivity\"
22806 Property.",
22807             "parameters": [
22808                 { "$ref": "#/parameters/interface" }
22809             ],
22810             "responses": {
22811                 "200": {
22812                     "description": "Gets current Sensor Property values.",
22813                     "x-example":
22814                         {
22815                             "rt": ["oic.r.sensor.props"],
22816                             "if": ["oic.if.rw", "oic.if.baseline"],
22817                             "silenttime": 10,
22818                             "sensitivity": 20.5
22819                         },
22820                     "schema": { "$ref": "#/definitions/SensorProps" }
22821                 }
22822             },
22823         },
22824         "post": {
22825             "description": "Sets Sensor Property values\n",
22826             "parameters": [
22827                 { "$ref": "#/parameters/interface" },
22828                 {
22829                     "name": "body",
22830                     "in": "body",
22831                     "required": true,
22832                     "schema": { "$ref": "#/definitions/SensorProps" },
22833                     "x-example":
22834                         {
22835                             "silenttime": 20,
22836                             "sensitivity": 10.75
22837                         }
22838                 }
22839             ],
22840             "responses": {
22841                 "200": {
22842                     "description": "",
22843                     "x-example":
22844                         {
22845                             "silenttime": 20,
22846                             "sensitivity": 10.75
22847                         },
22848                     "schema": { "$ref": "#/definitions/SensorProps" }
22849                 }
22850             }
22851         }
22852     }
22853 },
22854 "parameters": {
22855     "interface": {
22856         "in": "query",
22857         "name": "if",
22858         "type": "string",
22859         "enum": ["oic.if.rw", "oic.if.baseline"]
22860     }
22861 }

```



```

22861 },
22862 "definitions": {
22863   "SensorProps": {
22864     "properties": {
22865       "rt": {
22866         "description": "The Resource Type.",
22867         "items": {
22868           "enum": ["oic.r.sensor.props"],
22869           "maxLength": 64,
22870           "type": "string"
22871         },
22872         "minItems": 1,
22873         "uniqueItems": true,
22874         "readOnly": true,
22875         "type": "array"
22876       },
22877       "silenttime": {
22878         "description": "The time in seconds from the previous report that the Sensor restrains
22879 from sending a state change. This is used to avoid repeated state change reports.",
22880         "type": "integer"
22881       },
22882       "sensitivity": {
22883         "description": "The level of the detection accuracy of the Sensor. This is used to control
22884 the level at which the Sensor detects a state change. The \"range\" Property should be specified per
22885 manufacturer device capabilities.",
22886         "type": "number"
22887       },
22888       "n": {
22889         "$ref":
22890 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22891 schema.json#/definitions/n"
22892       },
22893       "id": {
22894         "$ref":
22895 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
22896 schema.json#/definitions/id"
22897       },
22898       "range": {
22899         "$ref":
22900 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
22901 schema.json#/definitions/range_number"
22902       },
22903       "step": {
22904         "$ref":
22905 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
22906 schema.json#/definitions/step_number"
22907       },
22908       "precision": {
22909         "$ref":
22910 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
22911 schema.json#/definitions/precision"
22912       },
22913       "if": {
22914         "description": "The OCF Interface set supported by this Resource.",
22915         "items": {
22916           "enum": [
22917             "oic.if.rw",
22918             "oic.if.baseline"
22919           ],
22920           "type": "string"
22921         },
22922         "minItems": 2,
22923         "uniqueItems": true,
22924         "readOnly": true,
22925         "type": "array"
22926       }
22927     },
22928     "type": "object",
22929     "required": ["silenttime", "sensitivity"]
22930   }
22931 }

```

22932 }
22933

22934 6.114.5 Property definition

22935 Table 231 defines the Properties that are part of the "oic.r.sensor.props" Resource Type.

22936 **Table 231 – The Property definitions of the Resource with type "rt" = "oic.r.sensor.props".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
silenttime	integer	Yes	Read Write	The time in seconds from the previous report that the Sensor restrains from sending a state change. This is used to avoid repeated state change reports.
sensitivity	number	Yes	Read Write	The level of the detection accuracy of the Sensor. This is used to control the level at which the Sensor detects a state change. The "range" Property should be specified per manufacturer device capabilities.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

22937 6.114.6 CRUDN behaviour

22938 Table 232 defines the CRUDN operations that are supported on the "oic.r.sensor.props" Resource
22939 Type.

22940 **Table 232 – The CRUDN operations of the Resource with type "rt" = "oic.r.sensor.props".**

Create	Read	Update	Delete	Notify
	get	post		observe

22941 6.115 User ID

22942 6.115.1 Introduction

22943 This Resource describes the Properties associated with user id of an OCF Client.
22944 The userid Property is a single value of type string.
22945 The userid Property is a read-only value that is provided by the Server.

22946 6.115.2 Example URI

22947 /UserIDResURI

22948 6.115.3 Resource type

22949 The Resource Type is defined as: "oic.r.userid".

22950 6.115.4 OpenAPI 2.0 definition

```
22951 {
22952   "swagger": "2.0",
22953   "info": {
22954     "title": "User ID",
22955     "version": "2019-03-22",
22956     "license": {
22957       "name": "OCF Data Model License",
22958       "url":
22959 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
22960 CENSE.md",
22961       "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
22962     },
22963     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
22964   },
22965   "schemes": [
22966     "http"
22967   ],
22968   "consumes": [
22969     "application/json"
22970   ],
22971   "produces": [
22972     "application/json"
22973   ],
22974   "paths": {
22975     "/UserIDResURI": {
22976       "get": {
22977         "description": "This Resource describes the Properties associated with user id of an OCF
22978 Client.\n\nThe userid Property is a single value of type string.\n\nThe userid Property is a read-only
22979 value that is provided by the Server.",
22980         "parameters": [
22981           {
22982             "$ref": "#/parameters/interface"
22983           }
22984         ],
22985         "responses": {
22986           "200": {
22987             "description": "",
22988             "x-example": {
22989               "rt": [
22990                 "oic.r.userid"
22991               ],
22992               "userid": "USER1"
22993             },
22994             "schema": {
22995               "$ref": "#/definitions/UserID"
22996             }
22997           }
22998         }
22999       }
23000     }
23001   },
23002   "parameters": {
23003     "interface": {
23004       "in": "query",
23005       "name": "if",
23006       "type": "string",
23007       "enum": [
23008         "oic.if.r",
23009         "oic.if.baseline"
23010       ]
23011     }
23012   },
```

```

23013     "definitions": {
23014         "UserID": {
23015             "properties": {
23016                 "rt": {
23017                     "description": "Resource Type",
23018                     "items": {
23019                         "enum": [
23020                             "oic.r.userid"
23021                         ],
23022                     "type": "string",
23023                     "maxLength": 64
23024                 },
23025                 "minItems": 1,
23026                 "uniqueItems": true,
23027                 "readOnly": true,
23028                 "type": "array"
23029             },
23030             "userid": {
23031                 "description": "Id of a patient/user of healthcare devices",
23032                 "readOnly": true,
23033                 "type": "string"
23034             },
23035             "n": {
23036                 "$ref":
23037                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23038                 schema.json#/definitions/n"
23039             },
23040             "if": {
23041                 "description": "The OCF Interface set supported by this Resource",
23042                 "items": {
23043                     "enum": [
23044                         "oic.if.r",
23045                         "oic.if.baseline"
23046                     ],
23047                     "type": "string",
23048                     "maxLength": 64
23049                 },
23050                 "minItems": 1,
23051                 "readOnly": true,
23052                 "uniqueItems": true,
23053                 "type": "array"
23054             }
23055         },
23056         "type": "object",
23057         "required": [
23058             "userid"
23059         ]
23060     }
23061 }
23062 }
23063

```

6.115.5 Property definition

Table 233 defines the Properties that are part of the "oic.r.userid" Resource Type.

Table 233 – The Property definitions of the Resource with type "rt" = "oic.r.userid".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
userid	string	Yes	Read Only	Id of a patient/user of healthcare devices
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource

6.115.6 CRUDN behaviour

Table 234 defines the CRUDN operations that are supported on the "oic.r.userid" Resource Type.

Table 234 – The CRUDN operations of the Resource with type "rt" = "oic.r.userid".

Create	Read	Update	Delete	Notify
	get			observe

6.116 Calorific Value

6.116.1 Introduction

This Resource describes Properties associated with the energy associated with the consumption of different fuels (including natural gas)

The calorific value is a number

the calorific value is a measure of the available heat energy, used as part of the calculation to convert a volume of a fuel (e.g. m3) to an energy value (e.g. KWh).

6.116.2 Example URI

/CalorificValueResURI

6.116.3 Resource type

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

6.116.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Calorific Value",
    "version": "2019-03-18",
    "license": {
      "name": "OCF Data Model License",
      "url": "https://openconnectivityfoundation.github.io/core/LICENSE.md",
      "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/CalorificValueResURI" : {
      "get": {
        "description": "This Resource describes Properties associated with the energy associated with the consumption of different fuels (including natural gas)\nThe calorific value is a number\nthe calorific value is a measure of the available heat energy, used as part of the calculation to convert a volume of a fuel (e.g. m3) to an energy value (e.g. KWh).\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "Success path response for the Resource",
            "x-example": {
              "rt": ["oic.r.calorificvalue"],
              "calorific": 39.2
            },
            "schema": { "$ref": "#/definitions/Calorific" }
          }
        }
      }
    }
  },
  "parameters": {
```

```

23122     "interface" : {
23123         "in" : "query",
23124         "name" : "if",
23125         "type" : "string",
23126         "enum" : ["oic.if.r", "oic.if.baseline"]
23127     }
23128 },
23129 "definitions": {
23130     "Calorific" : {
23131         "properties": {
23132             "rt" : {
23133                 "description": "Resource Type",
23134                 "items": {
23135                     "maxLength": 64,
23136                     "type": "string",
23137                     "enum": ["oic.r.calorificvalue"]
23138                 },
23139                 "minItems": 1,
23140                 "readOnly": true,
23141                 "uniqueItems": true,
23142                 "type": "array"
23143             },
23144             "if" : {
23145                 "description": "The OCF Interfaces supported by this Resource",
23146                 "items": {
23147                     "enum": ["oic.if.baseline", "oic.if.r"],
23148                     "type": "string",
23149                     "maxLength": 64
23150                 },
23151                 "minItems": 2,
23152                 "readOnly": true,
23153                 "uniqueItems": true,
23154                 "type": "array"
23155             },
23156             "n": {
23157                 "$ref" :
23158                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23159                 schema.json#/definitions/n"
23160             },
23161             "id": {
23162                 "$ref" :
23163                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23164                 schema.json#/definitions/id"
23165             },
23166             "precision" : {
23167                 "description": "Accuracy granularity of the exposed value",
23168                 "readOnly": true,
23169                 "type": "number"
23170             },
23171             "calorific" : {
23172                 "description": "Calorific value of fuel",
23173                 "readOnly": true,
23174                 "type": "number",
23175                 "minimum": 0,
23176                 "exclusiveMinimum": true
23177             }
23178         },
23179         "type" : "object",
23180         "required": ["calorific"]
23181     }
23182 }
23183 }
23184

```

6.116.5 Property definition

Table 235 defines the Properties that are part of the "oic.r.calorificvalue" Resource Type.

23187 **Table 235 – The Property definitions of the Resource with type "rt" = "oic.r.calorificvalue".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
if	array: see schema	No	Read Only	The OCF Interfaces supported by this Resource
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
precision	number	No	Read Only	Accuracy granularity of the exposed value
calorific	number	Yes	Read Only	Calorific value of fuel

23188 6.116.6 CRUDN behaviour

23189 Table 236 defines the CRUDN operations that are supported on the "oic.r.calorificvalue" Resource
23190 Type.

23191 **Table 236 – The CRUDN operations of the Resource with type "rt" = "oic.r.calorificvalue".**

Create	Read	Update	Delete	Notify
	get			observe

23192 6.117 Conversion Factor

23193 6.117.1 Introduction

23194 This Resource describes Properties associated with the energy associated with the consumption
23195 of different fuels (including natural gas)

23196 The conversion factor is a number used as part of the calculation to convert gas volume to gas
23197 energy. The value used for this calculation is generally defined by local regulations and the
23198 conversion factor resource is therefore configurable.

23199 Provides the conversion factor used/required as part of the calculation to convert from fuel
23200 volume (m3) to fuel energy (kWh).
23201

23202 6.117.2 Example URI

23203 /ConversionFactorResURI

23204 6.117.3 Resource type

23205 The Resource Type is defined as: "oic.r.conversionfactor".

23206 6.117.4 OpenAPI 2.0 definition

```

23207 {
23208   "swagger": "2.0",
23209   "info": {
23210     "title": "Conversion Factor",
23211     "version": "2019-03-18",
23212     "license": {
23213       "name": "OCF Data Model License",
23214       "url": "https://openconnectivityfoundation.github.io/core/LICENSE.md",
23215       "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
23216     },
23217     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
23218   },
23219   "schemes": ["http"],
23220   "consumes": ["application/json"],

```

```

23221     "produces": ["application/json"],
23222     "paths": {
23223         "/ConversionFactorResURI" : {
23224             "get": {
23225                 "description": "This Resource describes Properties associated with the energy associated
23226 with the consumption of different fuels (including natural gas)\nThe conversion factor is a number
23227 used as part of the calculation to convert gas volume to gas energy. The value used for this
23228 calculation is generally defined by local regulations and the conversion factor resource is
23229 therefore configurable.\nProvides the conversion factor used/required as part of the calculation to
23230 convert from fuel volume (m3) to fuel energy (kWh).\n",
23231                 "parameters": [
23232                     { "$ref": "#/parameters/interface" }
23233                 ],
23234                 "responses": {
23235                     "200": {
23236                         "description" : "Success path response for the Resource",
23237                         "x-example": {
23238                             "rt": ["oic.r.conversionfactor"],
23239                             "conversion": 1.02264
23240                         },
23241                         "schema": { "$ref": "#/definitions/Conversion" }
23242                     }
23243                 }
23244             }
23245         }
23246     },
23247     "parameters": {
23248         "interface" : {
23249             "in" : "query",
23250             "name" : "if",
23251             "type" : "string",
23252             "enum" : ["oic.if.r", "oic.if.baseline"]
23253         }
23254     },
23255     "definitions": {
23256         "Conversion" : {
23257             "properties": {
23258                 "rt" : {
23259                     "description": "Resource Type",
23260                     "items": {
23261                         "maxLength": 64,
23262                         "type": "string",
23263                         "enum": ["oic.r.conversionfactor"]
23264                     },
23265                     "minItems": 1,
23266                     "readOnly": true,
23267                     "uniqueItems": true,
23268                     "type": "array"
23269                 },
23270                 "if" : {
23271                     "description": "The OCF Interfaces supported by this Resource",
23272                     "items": {
23273                         "enum": [
23274                             "oic.if.r",
23275                             "oic.if.baseline"
23276                         ],
23277                         "type": "string",
23278                         "maxLength": 64
23279                     },
23280                     "minItems": 2,
23281                     "readOnly": true,
23282                     "uniqueItems": true,
23283                     "type": "array"
23284                 },
23285                 "n": {
23286                     "$ref" :
23287 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23288 schema.json#/definitions/n"
23289                 },
23290                 "id": {
23291                     "$ref" :
23292 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-

```



```
23293 schema.json#/definitions/id"
23294 },
23295 "conversion" : {
23296   "description": "Conversion factor to convert a volume of a fuel to energy consumption",
23297   "readOnly": true,
23298   "type": "number",
23299   "minimum": 0,
23300   "exclusiveMinimum": true
23301 },
23302 "precision" : {
23303   "description": "Accuracy granularity of the exposed value",
23304   "readOnly": true,
23305   "type": "number"
23306 },
23307 },
23308 "type" : "object",
23309 "required": ["conversion"]
23310 }
23311 }
23312 }
23313 }
```

23314 **6.117.5 Property definition**

23315 Table 237 defines the Properties that are part of the "oic.r.conversionfactor" Resource Type.

23316 **Table 237 – The Property definitions of the Resource with type "rt" =**
23317 **"oic.r.conversionfactor".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
if	array: see schema	No	Read Only	The OCF Interfaces supported by this Resource
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
conversion	number	Yes	Read Only	Conversion factor to convert a volume of a fuel to energy consumption
precision	number	No	Read Only	Accuracy granularity of the exposed value

23318 **6.117.6 CRUDN behaviour**

23319 Table 238 defines the CRUDN operations that are supported on the "oic.r.conversionfactor"
23320 Resource Type.

23321 **Table 238 – The CRUDN operations of the Resource with type "rt" =**
23322 **"oic.r.conversionfactor".**

Create	Read	Update	Delete	Notify
	get			observe

23323 **6.118 Gas Consumption**

23324 **6.118.1 Introduction**

23325 This Resource describes Properties associated with the energy associated with the consumption
23326 of natural gas

23327 The gas value is in kilowatt hours [kWh].

23328 The volume value is in metres cubed [m3].

23329 Provides the cumulative gas energy, the cumulative gas volume and the calorific value and
23330 conversion factor used/required to convert from gas volume (m3[TB1]) to gas energy (KWh).
23331

23332 6.118.2 Example URI

23333 /GasConsumptionResURI

23334 6.118.3 Resource type

23335 The Resource Type is defined as: "oic.r.gas.consumption".

23336 6.118.4 OpenAPI 2.0 definition

```
23337 {  
23338   "swagger": "2.0",  
23339   "info": {  
23340     "title": "Gas Consumption",  
23341     "version": "2019-03-18",  
23342     "license": {  
23343       "name": "OCF Data Model License",  
23344       "url": "https://openconnectivityfoundation.github.io/core/LICENSE.md",  
23345       "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."  
23346     },  
23347     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
23348   },  
23349   "schemes": ["http"],  
23350   "consumes": ["application/json"],  
23351   "produces": ["application/json"],  
23352   "paths": {  
23353     "/GasConsumptionResURI" : {  
23354       "get": {  
23355         "description": "This Resource describes Properties associated with the energy associated  
23356         with the consumption of natural gas\nThe gas value is in kilowatt hours [kWh].\nThe volume value is  
23357         in metres cubed [m3].\nProvides the cumulative gas energy, the cumulative gas volume and the  
23358         calorific value and conversion factor used/required to convert from gas volume (m3[TB1]) to gas  
23359         energy (KWh).\n",  
23360         "parameters": [  
23361           { "$ref": "#/parameters/interface" }  
23362         ],  
23363         "responses": {  
23364           "200": {  
23365             "description": "Success path response for the Resource",  
23366             "x-example": {  
23367               "rt": ["oic.r.gas.consumption"],  
23368               "gas": 11135.41,  
23369               "volume": 1000.0  
23370             },  
23371             "schema": { "$ref": "#/definitions/Consumption" }  
23372           }  
23373         }  
23374       }  
23375     }  
23376   },  
23377   "parameters": {  
23378     "interface" : {  
23379       "in" : "query",  
23380       "name" : "if",  
23381       "type" : "string",  
23382       "enum" : ["oic.if.s", "oic.if.baseline"]  
23383     }  
23384   },  
23385   "definitions": {  
23386     "Consumption" : {  
23387       "properties": {  
23388         "rt": {  
23389           "description": "Resource Type",  
23390           "items": {  
23391             "maxLength": 64,  
23392             "type": "string",  
23393             "enum": ["oic.r.gas.consumption"]
```

```

23394     },
23395     "minItems": 1,
23396     "uniqueItems": true,
23397     "readOnly": true,
23398     "type": "array"
23399   },
23400   "if": {
23401     "description": "The OCF Interfaces supported by this Resource",
23402     "items": {
23403       "enum": ["oic.if.r", "oic.if.baseline"],
23404       "type": "string"
23405     },
23406     "minItems": 1,
23407     "readOnly": true,
23408     "uniqueItems": true,
23409     "type": "array"
23410   },
23411   "n": {
23412     "$ref" :
23413     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23414     schema.json#/definitions/n"
23415   },
23416   "id": {
23417     "$ref" :
23418     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23419     schema.json#/definitions/id"
23420   },
23421   "gas" : {
23422     "description": "gas energy consumed in kWh",
23423     "readOnly": true,
23424     "type": "number",
23425     "minimum": 0
23426   },
23427   "precision" : {
23428     "description": "Accuracy granularity of the exposed value",
23429     "readOnly": true,
23430     "type": "number"
23431   },
23432   "volume" : {
23433     "description": "gas volume consumed in m3 (metres cubed)",
23434     "readOnly": true,
23435     "type": "number",
23436     "minimum": 0
23437   }
23438 },
23439 "type" : "object",
23440 "required": ["gas"]
23441 }
23442 }
23443 }
23444

```

6.118.5 Property definition

Table 239 defines the Properties that are part of the "oic.r.gas.consumption" Resource Type.

Table 239 – The Property definitions of the Resource with type "rt" = "oic.r.gas.consumption".

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

gas	number	Yes	Read Only	gas energy consumed in kWh
precision	number	No	Read Only	Accuracy granularity of the exposed value
volume	number	No	Read Only	gas volume consumed in m3 (metres cubed)

6.118.6 CRUDN behaviour

Table 240 defines the CRUDN operations that are supported on the "oic.r.gas.consumption" Resource Type.

Table 240 – The CRUDN operations of the Resource with type "rt" = "oic.r.gas.consumption".

Create	Read	Update	Delete	Notify
	get			observe

6.119 Gas Usage

6.119.1 Introduction

This Resource describes a cumulative time-based gas usage query.

The Resource is a Collection of:

- TimePeriod Resource

- Gas Consumption Resource

6.119.2 Example URI

/GasUsageResURI

6.119.3 Resource type

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

6.119.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Gas Usage",
    "version": "2019-03-18",
    "license": {
      "name": "OCF Data Model License",
      "url": "https://openconnectivityfoundation.github.io/core/LICENSE.md",
      "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/GasUsageResURI?if=oic.if.ll" : {
      "get": {
        "description": "This Resource describes a cumulative time-based gas usage query.\nThe Resource is a Collection of:\n TimePeriod Resource\n Gas Consumption Resource\nThe Collection has a single instance of a Link per Resource Type.\n",
        "parameters": [
          {
            "$ref": "#/parameters/interface-all"
          }
        ],
        "responses": {
          "200": {
            "description": "Success path response for the Resource",
            "x-example":
```

```

23494     [
23495     {
23496         "href": "/TimeIntervalResURI",
23497         "rt": ["oic.r.time.period"],
23498         "if": ["oic.if.a", "oic.if.baseline"],
23499         "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
23500     },
23501     {
23502         "href": "/GasConsumptionResURI",
23503         "rt": ["oic.r.gas.consumption"],
23504         "if": ["oic.if.s", "oic.if.baseline"],
23505         "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
23506     }
23507 ],
23508 "schema": { "$ref": "#/definitions/links" }
23509 }
23510 }
23511 }
23512 },
23513 "/GasUsageResURI?if=oic.if.baseline" : {
23514     "get": {
23515         "description": "This Resource describes a cumulative time-based gas usage query.\nThe
23516 Resource is a Collection of:\n  TimePeriod Resource\n  Gas Consumption Resource\n",
23517         "parameters": [
23518             {"$ref": "#/parameters/interface-all"}
23519         ],
23520         "responses": {
23521             "200": {
23522                 "description" : "Success path response for the Resource",
23523                 "x-example":
23524                 {
23525                     "rt": ["oic.r.gas.usage"],
23526                     "if": ["oic.if.ll", "oic.if.b", "oic.if.baseline"],
23527                     "resources": [
23528                         {
23529                             "href": "/TimeIntervalResURI",
23530                             "rt": ["oic.r.time.period"],
23531                             "if": ["oic.if.a", "oic.if.baseline"],
23532                             "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
23533                         },
23534                         {
23535                             "href": "/GasConsumptionResURI",
23536                             "rt": ["oic.r.gas.consumption"],
23537                             "if": ["oic.if.s", "oic.if.baseline"],
23538                             "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
23539                         }
23540                     ]
23541                 },
23542                 "schema": { "$ref": "#/definitions/Usage" }
23543             }
23544         }
23545     },
23546 },
23547 "/GasUsageResURI?if=oic.if.b" : {
23548     "get": {
23549         "description": "This Resource describes a cumulative time-based gas usage query.\nThe
23550 Resource is a Collection of:\n  TimePeriod Resource\n  Gas Consumption Resource\n",
23551         "parameters": [
23552             {"$ref": "#/parameters/interface-all"}
23553         ],
23554         "responses": {
23555             "200": {
23556                 "description" : "Success path response for the Resource",
23557                 "x-example":
23558                 [
23559                     {
23560                         "href": "/TimeIntervalResURI",
23561                         "rep": {
23562                             "startTime": "2018-01-09T14:30Z",
23563                             "stopTime": "2018-01-09T14:45Z"
23564                         }
23565                     }
23566                 ],

```

```

23566         {
23567             "href": "/GasConsumptionResURI",
23568             "rep": {
23569                 "gas": 11135.41,
23570                 "volume": 1000.0
23571             }
23572         }
23573     ],
23574     "schema": { "$ref": "#/definitions/batch" }
23575 }
23576 },
23577 "post": {
23578     "description": "Sets the current time period. A Client may also post directly to the exposed
23579 URL for the Time Period Resource.\n",
23580     "x-method": ["optional"],
23581     "parameters": [
23582         { "$ref": "#/parameters/interface-b" },
23583         {
23584             "name": "body",
23585             "in": "body",
23586             "required": true,
23587             "schema": { "$ref": "#/definitions/batchupdate" },
23588             "x-example":
23589             [
23590                 {
23591                     "href": "/TimePeriodResURI",
23592                     "rep": {
23593                         "startTime": "2018-01-15T16:30Z",
23594                         "stopTime": "2018-01-16T16:30Z"
23595                     }
23596                 }
23597             ]
23598         }
23599     ],
23600     "responses": {
23601         "200": {
23602             "description": "Success path response code\n"
23603         }
23604     }
23605 },
23606 },
23607 },
23608 },
23609 "parameters": {
23610     "interface-all" : {
23611         "in" : "query",
23612         "name" : "if",
23613         "type" : "string",
23614         "enum" : ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
23615     },
23616     "interface-b" : {
23617         "in" : "query",
23618         "name" : "if",
23619         "type" : "string",
23620         "enum" : ["oic.if.b"]
23621     }
23622 },
23623 "definitions": {
23624     "links": {
23625         "type": "array",
23626         "items": {
23627             "$ref": "#/definitions/oic.oic-link"
23628         },
23629         "minItems": 2,
23630         "maxItems": 4
23631     },
23632     "oic.oic-link": {
23633         "properties": {
23634             "if": {
23635                 "description": "The interface set supported by the Linked Resource",
23636                 "items": {
23637                     "enum": [

```

```

23638         "oic.if.baseline",
23639         "oic.if.a",
23640         "oic.if.s"
23641     ],
23642     "type": "string"
23643 },
23644 "minItems": 1,
23645 "uniqueItems": true,
23646 "readOnly": true,
23647 "type": "array"
23648 },
23649 "rt": {
23650     "description": "Resource Type of the linked Resource",
23651     "items": {
23652         "enum": [
23653             "oic.r.time.period",
23654             "oic.r.gas.consumption",
23655             "oic.r.conversionfactor",
23656             "oic.r.calorificvalue"
23657         ],
23658         "type": "string",
23659         "maxLength": 64
23660     },
23661     "minItems": 1,
23662     "uniqueItems": true,
23663     "readOnly": true,
23664     "type": "array"
23665 },
23666 "anchor": {
23667     "$ref":
23668         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23669         schema.json#/definitions/anchor"
23670 },
23671 "di": {
23672     "$ref":
23673         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23674         schema.json#/definitions/di"
23675 },
23676 "eps": {
23677     "$ref":
23678         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23679         schema.json#/definitions/eps"
23680 },
23681 "href": {
23682     "$ref":
23683         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23684         schema.json#/definitions/href"
23685 },
23686 "ins": {
23687     "$ref":
23688         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23689         schema.json#/definitions/ins"
23690 },
23691 "p": {
23692     "$ref":
23693         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23694         schema.json#/definitions/p"
23695 },
23696 "rel": {
23697     "$ref":
23698         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23699         schema.json#/definitions/rel_array"
23700 },
23701 "title": {
23702     "$ref":
23703         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23704         schema.json#/definitions/title"
23705 },
23706 "type": {
23707     "$ref":
23708         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23709         schema.json#/definitions/type"

```

```

23710     }
23711   },
23712   "required": [
23713     "href",
23714     "rt",
23715     "if"
23716   ],
23717   "type": "object"
23718 },
23719 "batch": {
23720   "title": "Collection Batch Retrieve Format",
23721   "minItems": 2,
23722   "maxItems": 4,
23723   "type": "array",
23724   "items": {
23725     "additionalProperties": true,
23726     "type": "object",
23727     "properties": {
23728       "href": {
23729         "$ref":
23730 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23731 schema.json#/definitions/href"
23732       },
23733       "rep": {
23734         "anyOf": [
23735           {
23736             "$ref":
23737 "https://openconnectivityfoundation.github.io/IoTDataModels/TimePeriodResURI.swagger.json#/definitio
23738 ns/TimePeriod"
23739           },
23740           {
23741             "$ref":
23742 "https://openconnectivityfoundation.github.io/IoTDataModels/GasConsumptionResURI.swagger.json#/defin
23743 itions/Consumption"
23744           },
23745           {
23746             "$ref":
23747 "https://openconnectivityfoundation.github.io/IoTDataModels/CalorificValueResURI.swagger.json#/defin
23748 itions/Calorific"
23749           },
23750           {
23751             "$ref":
23752 "https://openconnectivityfoundation.github.io/IoTDataModels/ConversionFactorResURI.swagger.json#/def
23753 initions/Conversion"
23754           }
23755         ]
23756       }
23757     },
23758     "required": ["href", "rep"]
23759   }
23760 },
23761 "batchupdate" : {
23762   "title": "Collection Batch Update Format",
23763   "minItems": 1,
23764   "type": "array",
23765   "items": {
23766     "additionalProperties": true,
23767     "type": "object",
23768     "properties": {
23769       "href": {
23770         "$ref":
23771 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
23772 schema.json#/definitions/href"
23773       },
23774       "rep": {
23775         "$ref":
23776 "https://openconnectivityfoundation.github.io/IoTDataModels/TimePeriodResURI.swagger.json#/definitio
23777 ns/TimePeriod"
23778       }
23779     }
23780   }
23781 },

```



```

23782     "Usage" : {
23783         "properties": {
23784             "rt" : {
23785                 "description": "Resource Type",
23786                 "items": {
23787                     "type": "string",
23788                     "enum": ["oic.r.gas.usage"],
23789                     "maxLength": 64
23790                 },
23791                 "minItems": 1,
23792                 "readOnly": true,
23793                 "uniqueItems": true,
23794                 "type": "array"
23795             },
23796             "rts" : {
23797                 "description": "Allowed Resource Type",
23798                 "items": {
23799                     "type": "string",
23800                     "enum":
23801 ["oic.r.gas.consumption","oic.r.time.period","oic.r.calorificvalue","oic.r.conversionfactor"],
23802                     "maxLength": 64
23803                 },
23804                 "minItems": 2,
23805                 "readOnly": true,
23806                 "uniqueItems": true,
23807                 "type": "array"
23808             },
23809             "rts-m" : {
23810                 "description": "Mandatory Resource Type",
23811                 "items": {
23812                     "type": "string",
23813                     "enum": ["oic.r.gas.consumption","oic.r.time.period"],
23814                     "maxLength": 64
23815                 },
23816                 "minItems": 2,
23817                 "readOnly": true,
23818                 "uniqueItems": true,
23819                 "type": "array"
23820             },
23821             "n": {
23822                 "$ref" :
23823 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23824 schema.json#/definitions/n"
23825             },
23826             "id": {
23827                 "$ref" :
23828 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23829 schema.json#/definitions/id"
23830             },
23831             "resources" : {
23832                 "$ref": "#/definitions/links"
23833             },
23834             "if" : {
23835                 "description": "The interface set supported by this resource",
23836                 "items": {
23837                     "enum": [
23838                         "oic.if.ll",
23839                         "oic.if.b",
23840                         "oic.if.baseline"
23841                     ],
23842                     "type": "string",
23843                     "maxLength": 64
23844                 },
23845                 "minItems": 1,
23846                 "readOnly": true,
23847                 "uniqueItems": true,
23848                 "type": "array"
23849             }
23850         },
23851         "type" : "object",
23852         "required": ["resources"]
23853     }

```

23854 }
 23855 }
 23856 }

23857 6.119.5 Property definition

23858 Table 241 defines the Properties that are part of the "oic.r.gas.usage" Resource Type.

23859 **Table 241 – The Property definitions of the Resource with type "rt" = "oic.r.gas.usage".**

Property name	Value type	Mandatory	Access mode	Description
if	array: see schema	Yes	Read Only	The interface set supported by the Linked Resource
rt	array: see schema	Yes	Read Only	Resource Type of the linked Resource
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
rep	multiple types: see schema	Yes	Read Write	
href	multiple types: see schema		Read Write	
rep	multiple types: see schema		Read Write	
rt	array: see schema	No	Read Only	Resource Type
rts	array: see schema	No	Read Only	Allowed Resource Type
rts-m	array: see schema	No	Read Only	Mandatory Resource Type
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
resources	multiple types: see schema	Yes	Read Write	

if	array: see schema	No	Read Only	The interface set supported by this resource
----	-------------------	----	-----------	--

6.119.6 CRUDN behaviour

Table 242 defines the CRUDN operations that are supported on the "oic.r.gas.usage" Resource Type.

Table 242 – The CRUDN operations of the Resource with type "rt" = "oic.r.gas.usage".

Create	Read	Update	Delete	Notify
	get			observe

6.120 Impact Sensor

6.120.1 Introduction

This Resource provides a status and properties of an impact sensor. Included is the current status (boolean), horizontal and vertical direction (in degrees) and impact level (g force).

6.120.2 Example URI

/ImpactSensorResURI

6.120.3 Resource type

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

6.120.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Impact Sensor",
    "version": "2019-03-21",
    "license": {
      "name": "OCF Data Model License",
      "url": "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/ImpactSensorResURI" : {
      "get": {
        "description": "This Resource provides a status and properties of an impact sensor. Included
is the current status (boolean), horizontal and vertical direction (in degrees) and impact level (g
force).",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
            "description": "The success path response for the Resource.",
            "x-example": {
              "rt": ["oic.r.impactsensor"],
              "if": ["oic.if.s", "oic.if.baseline"],
              "impactstatus": true,
              "impactlevel": 2.25,
              "impactdirectionhorizontal": 120.0,
              "impactdirectionvertical": 240.0
            },
            "schema": { "$ref": "#/definitions/ImpactSensor" }
          }
        }
      }
    }
  }
}
```

```

23912     }
23913   }
23914 }
23915 },
23916 "parameters": {
23917   "interface": {
23918     "in": "query",
23919     "name": "if",
23920     "type": "string",
23921     "enum": ["oic.if.s", "oic.if.baseline"]
23922   }
23923 },
23924 "definitions": {
23925   "ImpactSensor": {
23926     "properties": {
23927       "rt": {
23928         "description": "The Resource Type.",
23929         "items": {
23930           "maxLength": 64,
23931           "type": "string",
23932           "enum": ["oic.r.impactsensor"]
23933         },
23934         "minItems": 1,
23935         "uniqueItems": true,
23936         "readOnly": true,
23937         "type": "array"
23938       },
23939       "impactstatus": {
23940         "type": "boolean",
23941         "readOnly": true,
23942         "description": "The \"impactstatus\" Property indicates the impact as: \"true\" A physical
23943 impact is detected, \"false\" Normal status, an impact is not detected."
23944       },
23945       "impactlevel": {
23946         "type": "number",
23947         "readOnly": true,
23948         "description": "The \"impactlevel\" Property provides the level of impact. The unit is in
23949 \"G\" (G-force)."
23950       },
23951       "impactdirectionhorizontal": {
23952         "type": "number",
23953         "readOnly": true,
23954         "description": "The \"impactdirectionhorizontal\" Property shows a horizontal direction
23955 where the impact comes from. The value is 0 to 360 degrees. 0 is the front of the sensor and
23956 clockwise increment."
23957       },
23958       "minimum": 0,
23959       "maximum": 360
23960     },
23961     "impactdirectionvertical": {
23962       "type": "number",
23963       "readOnly": true,
23964       "description": "The \"impactdirectionvertical\" Property shows a vertical direction where
23965 the impact comes from. The value is 0 to 360 degrees. 0 is the front of the sensor and upward
23966 increment."
23967     },
23968     "minimum": 0,
23969     "maximum": 360
23970   },
23971   "n": {
23972     "$ref":
23973 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23974 schema.json#/definitions/n"
23975   },
23976   "id": {
23977     "$ref":
23978 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
23979 schema.json#/definitions/id"
23980   },
23981   "if": {
23982     "description": "The OCF Interface set supported by this Resource.",
23983     "items": {
23984       "enum": [

```

```

23984         "oic.if.s",
23985         "oic.if.baseline"
23986     ],
23987     "type": "string"
23988 },
23989     "minItems": 2,
23990     "uniqueItems": true,
23991     "readOnly": true,
23992     "type": "array"
23993 }
23994 },
23995     "type": "object",
23996     "required": [ "impactstatus" ]
23997 }
23998 }
23999 }
24000

```

24001 6.120.5 Property definition

24002 Table 243 defines the Properties that are part of the "oic.r.impactsensor" Resource Type.

24003 **Table 243 – The Property definitions of the Resource with type "rt" = "oic.r.impactsensor".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
impactstatus	boolean	Yes	Read Only	The "impactstatus" Property indicates the impact as: "true" A physical impact is detected, "false" Normal status, an impact is not detected.
impactlevel	number	No	Read Only	The "impactlevel" Property provides the level of impact. The unit is in "G" (G-force).
impactdirectionhorizontal	number	No	Read Only	The "impactdirectionhorizontal" Property shows a horizontal direction where the impact comes from. The value is 0 to 360 degrees. 0 is the front of the sensor and clockwise increment.
impactdirectionvertical	number	No	Read Only	The "impactdirectionvertical" Property shows a vertical direction where the impact comes from. The value is 0 to 360 degrees. 0 is the front of the sensor and upward increment.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

24004 6.120.6 CRUDN behaviour

24005 Table 244 defines the CRUDN operations that are supported on the "oic.r.impactsensor" Resource
24006 Type.

24007 **Table 244 – The CRUDN operations of the Resource with type "rt" = "oic.r.impactsensor".**

Create	Read	Update	Delete	Notify
	get			observe

24008 6.121 KeyPadChar

24009 6.121.1 Introduction

24010 This Resource describes a char (0-9,*,#) which is selected on a number keypad.

24011 6.121.2 Example URI

24012 /KeyPadCharResURI

24013 6.121.3 Resource type

24014 The Resource Type is defined as: "oic.r.keypadchar".

24015 6.121.4 OpenAPI 2.0 definition

```

24016 {
24017   "swagger": "2.0",
24018   "info": {
24019     "title": "KeyPadChar",
24020     "version": "12122018",
24021     "license": {
24022       "name": "OCF Data Model License",
24023       "url":
24024         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
24025         CENSE.md",
24026       "x-copyright": "copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
24027     },
24028     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
24029   },
24030   "schemes": ["http"],
24031   "consumes": ["application/json"],
24032   "produces": ["application/json"],
24033   "paths": {
24034     "/KeyPadCharResURI" : {
24035       "get": {
24036         "description": "This Resource describes a char (0-9,*,#) which is selected on a number
24037 keypad.",
24038         "parameters": [
24039           {"$ref": "#/parameters/interface"}
24040         ],
24041         "responses": {
24042           "200": {
24043             "description": "Success path response for the Resource",
24044             "x-example":
24045               {
24046                 "rt": ["oic.r.keypadchar"],
24047                 "if": ["oic.if.rw", "oic.if.baseline"],
24048                 "keyvalue": "7"
24049               },
24050             "schema": { "$ref": "#/definitions/KeyPadChar" }
24051           }
24052         }
24053       },
24054       "post": {
24055         "description": "This Resource describes a char (0-9, *, #) which is selected on a number
24056 keypad.\n",
24057         "parameters": [
24058           {"$ref": "#/parameters/interface"},
24059           {

```

```

24060         "name": "body",
24061         "in": "body",
24062         "required": true,
24063         "schema": { "$ref": "#/definitions/KeyPadChar" },
24064         "x-example":
24065             {
24066                 "keyvalue": "4"
24067             }
24068     },
24069     ],
24070     "responses": {
24071         "200": {
24072             "description": "",
24073             "x-example":
24074                 {
24075                     "keyvalue": "4"
24076                 },
24077             "schema": { "$ref": "#/definitions/KeyPadChar" }
24078         }
24079     },
24080 },
24081 },
24082 },
24083 "parameters": {
24084     "interface": {
24085         "in": "query",
24086         "name": "if",
24087         "type": "string",
24088         "enum": ["oic.if.rw", "oic.if.baseline"]
24089     }
24090 },
24091 "definitions": {
24092     "KeyPadChar": {
24093         "properties": {
24094             "rt": {
24095                 "description": "The Resource Type.",
24096                 "items": {
24097                     "maxLength": 64,
24098                     "type": "string",
24099                     "enum": ["oic.r.keypadchar"]
24100                 },
24101                 "minItems": 1,
24102                 "uniqueItems": true,
24103                 "readOnly": true,
24104                 "type": "array"
24105             },
24106             "keyvalue": {
24107                 "type": "string",
24108                 "enum": [
24109                     "0",
24110                     "1",
24111                     "2",
24112                     "3",
24113                     "4",
24114                     "5",
24115                     "6",
24116                     "7",
24117                     "8",
24118                     "9",
24119                     "*",
24120                     "#"
24121                 ],
24122                 "description": "The value of the key pad char."
24123             },
24124             "n": {
24125                 "$ref":
24126                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
24127                 schema.json#/definitions/n"
24128             },
24129             "id": {
24130                 "$ref":
24131                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-

```

```

24132 schema.json#/definitions/id"
24133 },
24134 "if": {
24135   "description": "The OCF Interface set supported by this Resource.",
24136   "items": {
24137     "enum": [
24138       "oic.if.baseline",
24139       "oic.if.rw"
24140     ],
24141     "type": "string"
24142   },
24143   "minItems": 2,
24144   "uniqueItems": true,
24145   "readOnly": true,
24146   "type": "array"
24147 },
24148 },
24149 "type": "object",
24150 "required": ["keyvalue"]
24151 }
24152 }
24153 }

```

24154 6.121.5 Property definition

24155 Table 245 defines the Properties that are part of the "oic.r.keypadchar" Resource Type.

24156 **Table 245 – The Property definitions of the Resource with type "rt" = "oic.r.keypadchar".**

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

24157 6.121.6 CRUDN behaviour

24158 Table 246 defines the CRUDN operations that are supported on the "oic.r.keypadchar" Resource
 24159 Type.

24160 **Table 246 – The CRUDN operations of the Resource with type "rt" = "oic.r.keypadchar".**

Create	Read	Update	Delete	Notify
	get	post		observe

24161 6.122 Opaque Data

24162 6.122.1 Introduction

24163 This Resource defines opaque data that can be transfered between endpoints where the data
 24164 itself is not interpretable by the OCF endpoints.
 24165 The stringdata is a string of ASCII characters.

24166 6.122.2 Example URI

24167 /OpaqueDataResURI

6.122.3 Resource type

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

6.122.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Opaque Data",
    "version": "12122018",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/OpaqueDataResURI" : {
      "get": {
        "description": "This Resource defines opaque data that can be transfered between endpoints
where the data itself is not interpretable by the OCF endpoints.\nThe stringdata is a string of
ASCII characters.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example":
{
  "rt": ["oic.r.opaquedata"],
  "if": ["oic.if.rw", "oic.if.baseline"],
  "payload": "asdf0123",
  "payloadtype": "switch-get",
  "encoding": "base64",
  "size": 8,
  "hash": "AlA1",
  "system": "foreign system"
},
            "schema": { "$ref": "#/definitions/OpaqueData" }
          }
        }
      },
      "post": {
        "description": "",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/OpaqueData" },
            "x-example":
{
  "payload": "asdf0123",
  "payloadtype": "switch-get",
  "encoding": "base64",
  "size": 8,
  "hash": "AlA1",
  "system": "foreign system"
}
          }
        ],
        "responses": {
          "200": {
```

```

24237         "description" : "",
24238         "x-example":
24239             {
24240                 "payload": "asdf0123",
24241                 "payloadtype": "switch-get",
24242                 "encoding": "base64",
24243                 "size": 8,
24244                 "hash": "A1A1",
24245                 "system": "foreign system"
24246             },
24247         "schema": { "$ref": "#/definitions/OpaqueData" }
24248     }
24249 }
24250 }
24251 }
24252 },
24253 "parameters": {
24254     "interface": {
24255         "in": "query",
24256         "name": "if",
24257         "type": "string",
24258         "enum": ["oic.if.rw", "oic.if.baseline"]
24259     }
24260 },
24261 "definitions": {
24262     "OpaqueData" : {
24263         "properties": {
24264             "rt": {
24265                 "description": "The Resource Type.",
24266                 "items": {
24267                     "maxLength": 64,
24268                     "type": "string",
24269                     "enum": ["oic.r.opaquedata"]
24270                 },
24271                 "minItems": 1,
24272                 "uniqueItems": true,
24273                 "readOnly": true,
24274                 "type": "array"
24275             },
24276             "payload": {
24277                 "type": "string",
24278                 "description": "This Property contains the opaque data."
24279             },
24280             "encoding": {
24281                 "type": "string",
24282                 "description": "This Property describes the encoding of the payload, e.g. binary as
24283 base64, json, xml, utf-8."
24284             },
24285             "payloadtype": {
24286                 "type": "string",
24287                 "description": "This Property describes the identification of the payload, e.g. what the
24288 payload is representing ."
24289             },
24290             "size": {
24291                 "type": "integer",
24292                 "description": "The size in bytes of the decoded binary object."
24293             },
24294             "hash": {
24295                 "type": "string",
24296                 "description": "The hash code of the blob. If present, it is used to check the decoded
24297 content of the object data point for integrity. The algorithm used for generating the hash value is
24298 SHA-2 [15]. The data point contains the hash as a hex encoded value."
24299             },
24300             "system": {
24301                 "type": "string",
24302                 "description": "The eco system that is using the payload."
24303             },
24304             "if": {
24305                 "description": "The OCF Interface set supported by this Resource.",
24306                 "items": {
24307                     "enum": [
24308                         "oic.if.baseline",

```

```

24309         "oic.if.rw"
24310     ],
24311     "type": "string"
24312 },
24313     "minItems": 2,
24314     "uniqueItems": true,
24315     "readOnly": true,
24316     "type": "array"
24317 },
24318 },
24319     "type": "object",
24320     "required": [ "payload", "encoding", "system" ]
24321 }
24322 }
24323 }
24324

```

6.122.5 Property definition

Table 247 defines the Properties that are part of the "oic.r.opaquedata" Resource Type.

Table 247 – The Property definitions of the Resource with type "rt" = "oic.r.opaquedata".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
payload	string	Yes	Read Write	This Property contains the opaque data.
encoding	string	Yes	Read Write	This Property describes the encoding of the payload, e.g. binary as base64, json, xml, utf-8.
payloadtype	string	No	Read Write	This Property describes the identification of the payload, e.g. what the payload is representing .
size	integer	No	Read Write	The size in bytes of the decoded binary object.
hash	string	No	Read Write	The hash code of the blob. If present, it is used to check the decoded content of the object data point for integrity. The algorithm used for generating the hash value is SHA-2 [15]. The data point contains the hash as a hex encoded value.
system	string	Yes	Read Write	The eco system that is using the payload.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

6.122.6 CRUDN behaviour

Table 248 defines the CRUDN operations that are supported on the "oic.r.opaquedata" Resource Type.

Table 248 – The CRUDN operations of the Resource with type "rt" = "oic.r.opaquedata".

Create	Read	Update	Delete	Notify
	get	post		observe

6.123 User Info for Application Layer

6.123.1 Introduction

This Resource defines credentials for user to application layer login. This does not relate to OCF Device to Device or Device to Cloud authentication. The username, password and token are strings.

6.123.2 Example URI

/UserInfoResURI

6.123.3 Resource type

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

6.123.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "User Info for Application Layer",
    "version": "12122018",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/UserInfoResURI" : {
      "get": {
        "description": "This Resource defines credentials for user to application layer login. This
does not relate to OCF Device to Device or Device to Cloud authentication. The username, password
and token are strings.",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
            "description": "Success path response for the Resource, note that the info supplied
is NOT returned on RETRIEVE",
            "x-example":
              {
                "rt": ["oic.r.userinfo"],
                "if": ["oic.if.rw", "oic.if.baseline"]
              },
            "schema": { "$ref": "#/definitions/UserInfo-retrieve" }
          }
        }
      },
      "post": {
        "description": "This Resource defines credentials for user to application layer login. This
does not relate to OCF Device to Device or Device to Cloud authentication. The username, password
```

```

24384 and token are strings.",
24385     "parameters": [
24386         { "$ref": "#/parameters/interface" },
24387         {
24388             "name": "body",
24389             "in": "body",
24390             "required": true,
24391             "schema": { "$ref": "#/definitions/UserInfo-update" },
24392             "x-example":
24393                 {
24394                     "username": "username",
24395                     "password": "password",
24396                     "token": "AlAl"
24397                 }
24398         }
24399     ],
24400     "responses": {
24401         "200": {
24402             "description": "The success path response for the Resource.",
24403             "x-example":
24404                 {
24405                     "username": "username",
24406                     "password": "password",
24407                     "token": "AlAl"
24408                 },
24409             "schema": { "$ref": "#/definitions/UserInfo-update" }
24410         }
24411     }
24412 },
24413 },
24414 },
24415 "parameters": {
24416     "interface": {
24417         "in": "query",
24418         "name": "if",
24419         "type": "string",
24420         "enum": ["oic.if.rw", "oic.if.baseline"]
24421     }
24422 },
24423 "definitions": {
24424     "UserInfo-retrieve": {
24425         "properties": {
24426             "rt": {
24427                 "description": "The Resource Type.",
24428                 "items": {
24429                     "maxLength": 64,
24430                     "type": "string",
24431                     "enum": ["oic.r.userinfo"]
24432                 },
24433                 "minItems": 1,
24434                 "uniqueItems": true,
24435                 "readOnly": true,
24436                 "type": "array"
24437             },
24438             "n": {
24439                 "$ref":
24440                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
24441                 schema.json#/definitions/n"
24442             },
24443             "id": {
24444                 "$ref":
24445                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
24446                 schema.json#/definitions/id"
24447             },
24448             "if": {
24449                 "description": "The OCF Interface set supported by this Resource.",
24450                 "items": {
24451                     "enum": [
24452                         "oic.if.rw",
24453                         "oic.if.baseline"
24454                     ],
24455                     "type": "string"

```

```

24456         },
24457         "minItems": 2,
24458         "uniqueItems": true,
24459         "readOnly": true,
24460         "type": "array"
24461     },
24462 },
24463     "type": "object",
24464     "required": [ ]
24465 },
24466     "UserInfo-update": {
24467         "properties": {
24468             "username": {
24469                 "type": "string",
24470                 "description": "Login name."
24471             },
24472             "password": {
24473                 "type": "string",
24474                 "description": "Login password."
24475             },
24476             "token": {
24477                 "type": "string",
24478                 "description": "Authentication token."
24479             }
24480         },
24481         "type": "object",
24482         "required": [ ]
24483     }
24484 }
24485 }
24486

```

24487 6.123.5 Property definition

24488 Table 249 defines the Properties that are part of the "oic.r.userinfo" Resource Type.

24489 **Table 249 – The Property definitions of the Resource with type "rt" = "oic.r.userinfo".**

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

24490 6.123.6 CRUDN behaviour

24491 Table 250 defines the CRUDN operations that are supported on the "oic.r.userinfo" Resource Type.

24492 **Table 250 – The CRUDN operations of the Resource with type "rt" = "oic.r.userinfo".**

Create	Read	Update	Delete	Notify
	get	post		observe

24493 6.124 IAS Zone Info

24494 6.124.1 Introduction

24495 This Resource describes information associated with an Intruder Alert System (IAS) Zone.

24496 Zone Type provides the information about the type of device/alarm.

24497 Zone Status provides an array which has 10 items representing various status information(e.g.,
24498 battery status, mode, alarm (Up to two), supervision of IAS network, etc.

24499 A Device implementing this Resource can be enrolled to IAS Control and Indicator Equipment
24500 (CIE). IAS CIE can allocate an ID for the Device and update this Resource on the Device.

24501 This Resource may provide multiple sensitivity levels (>2).

24502 NumberofZoneSensitivityLevelSupported provides the number of the levels. A specific level can
24503 be selected as currentzonesensitivityLevel.

24504 6.124.2 Example URI

24505 /IASZoneInfoResURI

24506 6.124.3 Resource type

24507 The Resource Type is defined as: "oic.r.iaszoneinfo".

24508 6.124.4 OpenAPI 2.0 definition

```
24509 {  
24510   "swagger": "2.0",  
24511   "info": {  
24512     "title": "IAS Zone Info",  
24513     "version": "20190513",  
24514     "license": {  
24515       "name": "OCF Data Model License",  
24516       "url":  
24517         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
24518         CENSE.md",  
24519       "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."  
24520     },  
24521     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
24522   },  
24523   "schemes": ["http"],  
24524   "consumes": ["application/json"],  
24525   "produces": ["application/json"],  
24526   "paths": {  
24527     "/IASZoneInfoResURI" : {  
24528       "get": {  
24529         "description": "This Resource describes information associated with an Intruder Alert System  
24530         (IAS) Zone.\nZone Type provides the information about the type of device/alarm.\nZone Status  
24531         provides an array which has 10 items representing various status information(e.g., battery status,  
24532         mode, alarm (Up to two), supervision of IAS network, etc.\nA Device implementing this Resource can  
24533         be enrolled to IAS Control and Indicator Equipment (CIE). IAS CIE can allocate an ID for the Device  
24534         and update this Resource on the Device.\nThis Resource may provide multiple sensitivity levels (>2).  
24535         NumberofZoneSensitivityLevelSupported provides the number of the levels. A specific level can be  
24536         selected as currentzonesensitivityLevel.",  
24537         "parameters": [  
24538           {"$ref": "#/parameters/interface-all"}  
24539         ],  
24540         "responses": {  
24541           "200": {  
24542             "description" : "",  
24543             "x-example":  
24544               {  
24545                 "rt": ["oic.r.iaszoneinfo"],  
24546                 "zonetype": "motionsensor",  
24547                 "zonestatus": {  
24548                   "alarms": ["presence"],  
24549                   "tamper": false,  
24550                   "zonestatusreports": "statuschangeonly",  
24551                   "fault": false,  
24552                   "test": false  
24553                 },  
24554                 "iascieaddress": "ACDE9F56A3FE6B98",
```

```

24555         "zonestate": true,
24556         "zoneid": 64,
24557         "numzonesensitivitylevel": 3,
24558         "currentzonesensitivitylevel": 2
24559     },
24560     "schema": { "$ref": "#/definitions/IASZoneInfo" }
24561 },
24562 },
24563 },
24564 "post": {
24565     "description": "Sets the current sensitivity level of the IASZone.\n",
24566     "parameters": [
24567         { "$ref": "#/parameters/interface-rw",
24568         {
24569             "name": "body",
24570             "in": "body",
24571             "required": true,
24572             "schema": { "$ref": "#/definitions/IASZoneInfo-Update" },
24573             "x-example":
24574                 {
24575                     "currentzonesensitivitylevel": 3
24576                 }
24577         }
24578     ],
24579     "responses": {
24580         "200": {
24581             "description": "Success path response code\n"
24582         }
24583     }
24584 },
24585 },
24586 },
24587 "parameters": {
24588     "interface-all" : {
24589         "in" : "query",
24590         "name" : "if",
24591         "type" : "string",
24592         "enum" : ["oic.if.rw", "oic.if.baseline"]
24593     },
24594     "interface-rw" : {
24595         "in" : "query",
24596         "name" : "if",
24597         "type" : "string",
24598         "enum" : ["oic.if.rw"]
24599     }
24600 },
24601 "definitions": {
24602     "IASZoneInfo" : {
24603         "properties": {
24604             "rt" : {
24605                 "description": "Resource Type",
24606                 "items": {
24607                     "type": "string",
24608                     "enum": ["oic.r.iaszoneinfo"]
24609                 },
24610                 "minItems": 1,
24611                 "readOnly": true,
24612                 "type": "array"
24613             },
24614             "zonestate" : {
24615                 "description": "The IAS zone state. True = enrolled, False = not enrolled.",
24616                 "readOnly": true,
24617                 "type": "boolean"
24618             },
24619             "zonestatus" : {
24620                 "description": "Set of alarm indicators.",
24621                 "properties": {
24622                     "alarms": {
24623                         "type": "array",
24624                         "description": "Array of alarms. The alarms exposed are dependent on the zonetype.",
24625                         "readOnly": true,
24626                         "minItems": 1,

```



```

24627         "maxItems": 2,
24628         "items": {
24629             "type": "string",
24630             "enum":
24631 ["system","intrusion","presence","1stportalopenclose","2ndportalopenclose","fire","wateroverflow","C
24632 O","cooking","fall","emergencybutton","movement","vibration","panic","emergency","glassbreak"]
24633         },
24634     },
24635     "zonestatusreports": {
24636         "description": "Controls the generation of status indications",
24637         "type": "string",
24638         "enum": ["none","statuschangeonly","alarmclearonly","statuschangeandalarmclear"]
24639     },
24640     "tamper": {
24641         "description": "Tamper status. True = tampered, False = not tampered.",
24642         "readOnly": true,
24643         "type": "boolean"
24644     },
24645     "test": {
24646         "description": "Test mode indicator. True = sensor is in test mode, False = sensor is
24647 in operational mode",
24648         "readOnly": true,
24649         "type": "boolean"
24650     },
24651     "fault": {
24652         "description": "Fault indicator. True = fault detected, False = no fault detected",
24653         "readOnly": true,
24654         "type": "boolean"
24655     },
24656 },
24657 "readOnly": true,
24658 "type": "object"
24659 },
24660 "numzonesensitivitylevel" : {
24661     "description": "Number of supported zone sensitivity levels",
24662     "minimum": 2,
24663     "readOnly": true,
24664     "type": "integer"
24665 },
24666 "zoneid" : {
24667     "description": "ID allocated by the IAS CIE",
24668     "readOnly": true,
24669     "type": "integer"
24670 },
24671 "iascieaddress" : {
24672     "description": "EUI-64 Address of the enrolled IAS Control and Indicating Equipment
24673 (CIE)",
24674     "readOnly": true,
24675     "type": "string"
24676 },
24677 "zonetype" : {
24678     "description": "IAS zone type. See OCF enumeration map for set of valid values.",
24679     "readOnly": true,
24680     "type": "string"
24681 },
24682 "currentzonesensitivitylevel" : {
24683     "description": "Current zone sensitivity level",
24684     "minimum": 0,
24685     "type": "integer"
24686 },
24687 "n": {
24688     "$ref":
24689 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
24690 schema.json#/definitions/n"
24691 },
24692 "id": {
24693     "$ref":
24694 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
24695 schema.json#/definitions/id"
24696 },
24697 "if" : {
24698     "description": "The OCF Interface set supported by this Resource",

```

```

24699         "items": {
24700             "enum": [
24701                 "oic.if.rw",
24702                 "oic.if.baseline"
24703             ],
24704             "type": "string"
24705         },
24706         "minItems": 2,
24707         "maxItems": 2,
24708         "readOnly": true,
24709         "type": "array"
24710     }
24711 },
24712     "required": ["zonetype", "zonestate", "zonestatus", "zoneid", "iascieaddress"]
24713 },
24714     "IASZoneInfo-Update" : {
24715         "properties": {
24716             "currentzonesensitivitylevel" : {
24717                 "description": "Current zone sensitivity level, Client can only set 1 or higher.",
24718                 "minimum": 1,
24719                 "type": "integer"
24720             }
24721         },
24722         "required": ["currentzonesensitivitylevel"]
24723     }
24724 }
24725 }
24726

```

6.124.5 Property definition

Table 251 defines the Properties that are part of the "oic.r.iaszoneinfo" Resource Type.

Table 251 – The Property definitions of the Resource with type "rt" = "oic.r.iaszoneinfo".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
zonestate	boolean	Yes	Read Only	The IAS zone state. True = enrolled, False = not enrolled.
zonestatus	object: see schema	Yes	Read Only	Set of alarm indicators.
numzonesensitivitylevel	integer	No	Read Only	Number of supported zone sensitivity levels
zoneid	integer	Yes	Read Only	ID allocated by the IAS CIE
iascieaddress	string	Yes	Read Only	EUI-64 Address of the enrolled IAS Control and Indicating Equipment (CIE)
zonetype	string	Yes	Read Only	IAS zone type. See OCF enumeration map for set of valid values.
currentzonesensitivitylevel	integer	No	Read Write	Current zone sensitivity level
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	

if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
currentzonesensitivitylevel	integer	Yes	Read Write	Current zone sensitivity level, Client can only set 1 or higher.

6.124.6 CRUDN behaviour

Table 252 defines the CRUDN operations that are supported on the "oic.r.iaszoneinfo" Resource Type.

Table 252 – The CRUDN operations of the Resource with type "rt" = "oic.r.iaszoneinfo".

Create	Read	Update	Delete	Notify
	get	post		observe

6.125 IAS Zone Collection

6.125.1 Introduction

6.125.2 Example URI

/IASZoneCollectionResURI

6.125.3 Resource type

6.125.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "IAS Zone Collection",
    "version": "20190513",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/IASZoneResURI?if=oic.if.baseline" : {
      "get": {
        "description": "This Resource is Collection that fully describes an Intruder Alert System
(IAS) Zone. It is made up of an instance of IAS Zone Info, Battery, and Power Source.",
        "parameters": [
          { "$ref": "#/parameters/interface-baseline" }
        ],
        "responses": {
          "200": {
            "description": "",
            "schema": { "$ref": "#/definitions/baseline" },
            "x-example":
{
  "rt": ["oic.r.iaszone"],
  "if": ["oic.if.ll", "oic.if.b", "oic.if.baseline"],
  "links": [
    {
      "href": "/myIASZoneInfoResURI",
      "rt": ["oic.r.iaszoneinfo"],

```

```

24778         "if": ["oic.if.rw", "oic.if.baseline"]
24779     },
24780     {
24781         "href": "/myBatteryResURI",
24782         "rt": ["oic.r.energy.battery"],
24783         "if": ["oic.if.rw", "oic.if.baseline"]
24784     },
24785     {
24786         "href": "/myPowersourceResURI",
24787         "rt": ["oic.r.powersource"],
24788         "if": ["oic.if.r", "oic.if.baseline"]
24789     }
24790 ]
24791 }
24792 }
24793 }
24794 }
24795 },
24796 "/IASZoneResURI?if=oic.if.ll" : {
24797     "get": {
24798         "description": "This Resource is Collection that fully describes an Intruder Alert System
24799 (IAS) Zone. It is made up of an instance of IAS Zone Info, Battery, and Power Source.",
24800         "parameters": [
24801             {"$ref": "#/parameters/interface-ll"}
24802         ],
24803         "responses": {
24804             "200": {
24805                 "description": "",
24806                 "schema": {"$ref": "#/definitions/links"},
24807                 "x-example":
24808                 [
24809                     {
24810                         "href": "/myIASZoneInfoResURI",
24811                         "rt": ["oic.r.iaszoneinfo"],
24812                         "if": ["oic.if.rw", "oic.if.baseline"]
24813                     },
24814                     {
24815                         "href": "/myBatteryResURI",
24816                         "rt": ["oic.r.energy.battery"],
24817                         "if": ["oic.if.rw", "oic.if.baseline"]
24818                     },
24819                     {
24820                         "href": "/myPowersourceResURI",
24821                         "rt": ["oic.r.powersource"],
24822                         "if": ["oic.if.r", "oic.if.baseline"]
24823                     }
24824                 ]
24825             }
24826         }
24827     },
24828 },
24829 "/IASZoneResURI?if=oic.if.b" : {
24830     "get": {
24831         "description": "This Resource is Collection that fully describes an Intruder Alert System
24832 (IAS) Zone. It is made up of an instance of IAS Zone Info, Battery, and Power Source.",
24833         "parameters": [
24834             {"$ref": "#/parameters/interface-b"}
24835         ],
24836         "responses": {
24837             "200": {
24838                 "description": "",
24839                 "schema": {"$ref": "#/definitions/IASZoneCollectionBatch-Retrieve" },
24840                 "x-example":
24841                 [
24842                     {
24843                         "href": "/myIASZoneInfoResURI",
24844                         "rep": {
24845                             "zonetype": "motionsensor",
24846                             "zonestatus": {
24847                                 "alarms": ["presence"],
24848                                 "tamper": false,
24849                                 "zonestatusreports": "statuschangeonly",

```

```

24850         "fault": false,
24851         "test": false
24852     },
24853     "iascieaddress": "ACDE9F56A3FE6B98",
24854     "zonestate": true,
24855     "zoneid": 64,
24856     "numzonesensitivitylevel": 3,
24857     "currentzonesensitivitylevel": 2
24858 }
24859 },
24860 {
24861     "href": "/myBatteryResURI",
24862     "rep": {
24863         "charge": 70,
24864         "defect": false
24865     }
24866 },
24867 {
24868     "href": "/myPowersourceResURI",
24869     "rep": {
24870         "powerSources": ["AC (Mains) Power"],
24871         "sourcefault": false
24872     }
24873 }
24874 ]
24875 }
24876 }
24877 },
24878 "post": {
24879     "description": "Sets the current sensitivity level of the IASZone.\n",
24880     "parameters": [
24881         {"$ref": "#/parameters/interface-b"},
24882         {
24883             "name": "body",
24884             "in": "body",
24885             "required": true,
24886             "schema": { "$ref": "#/definitions/IASZoneCollectionBatch-Update" },
24887             "x-example":
24888             [
24889                 {
24890                     "href": "/myIASZoneInfoResURI",
24891                     "rep": {
24892                         "currentzonesensitivitylevel": 3
24893                     }
24894                 }
24895             ]
24896         }
24897     ],
24898     "responses": {
24899         "200": {
24900             "description": "Success path response code\n"
24901         }
24902     }
24903 }
24904 },
24905 "parameters": {
24906     "interface-all" : {
24907         "in" : "query",
24908         "name" : "if",
24909         "type" : "string",
24910         "enum" : ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
24911     },
24912     "interface-ll" : {
24913         "in" : "query",
24914         "name" : "if",
24915         "type" : "string",
24916         "enum" : ["oic.if.ll"]
24917     },
24918     "interface-b" : {
24919         "in" : "query",
24920         "name" : "if",

```

```

24922         "type" : "string",
24923         "enum" : ["oic.if.b"]
24924     },
24925     "interface-baseline" : {
24926         "in" : "query",
24927         "name" : "if",
24928         "type" : "string",
24929         "enum" : ["oic.if.baseline"]
24930     }
24931 },
24932 "definitions": {
24933     "baseline": {
24934         "properties": {
24935             "rt" : {
24936                 "description": "Resource Type",
24937                 "items": {
24938                     "type": "string",
24939                     "enum": ["oic.r.iaszone"]
24940                 },
24941                 "minItems": 1,
24942                 "readOnly": true,
24943                 "type": "array"
24944             },
24945             "rts" : {
24946                 "description": "Allowed Resources",
24947                 "type": "array",
24948                 "minItems": 3,
24949                 "maxItems": 3,
24950                 "items": {
24951                     "type": "string",
24952                     "enum": ["oic.r.iaszoneinfo", "oic.r.energy.battery", "oic.r.powersource"]
24953                 }
24954             },
24955             "rts-m" : {
24956                 "description": "Mandatory Resources",
24957                 "type": "array",
24958                 "minItems": 3,
24959                 "maxItems": 3,
24960                 "items": {
24961                     "type": "string",
24962                     "enum": ["oic.r.iaszoneinfo", "oic.r.energy.battery", "oic.r.powersource"]
24963                 }
24964             },
24965             "n": {
24966                 "$ref":
24967                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
24968                 schema.json#/definitions/n"
24969             },
24970             "id": {
24971                 "$ref":
24972                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
24973                 schema.json#/definitions/id"
24974             },
24975             "links" : {
24976                 "$ref": "#/definitions/links"
24977             },
24978             "if" : {
24979                 "description": "The OCF Interface set supported by this Resource",
24980                 "items": {
24981                     "enum": [
24982                         "oic.if.ll",
24983                         "oic.if.b",
24984                         "oic.if.baseline"
24985                     ],
24986                     "type": "string"
24987                 },
24988                 "minItems": 1,
24989                 "readOnly": true,
24990                 "type": "array"
24991             }
24992         },
24993         "type" : "object",

```

```

24994     "required": ["links"]
24995 },
24996 "links": {
24997     "type": "array",
24998     "items": {
24999         "$ref": "#/definitions/oic.oic-link"
25000     }
25001 },
25002 "oic.oic-link": {
25003     "properties": {
25004         "if": {
25005             "description": "The OCF Interface set supported by this resource",
25006             "items": {
25007                 "enum": [
25008                     "oic.if.baseline",
25009                     "oic.if.rw",
25010                     "oic.if.r"
25011                 ],
25012                 "type": "string"
25013             },
25014             "minItems": 1,
25015             "uniqueItems": true,
25016             "readOnly": true,
25017             "type": "array"
25018         },
25019         "rt": {
25020             "description": "Resource Type of the Resource",
25021             "items": {
25022                 "enum": [
25023                     "oic.r.iaszoneinfo",
25024                     "oic.r.energy.battery",
25025                     "oic.r.powersource"
25026                 ],
25027                 "type": "string"
25028             },
25029             "minItems": 1,
25030             "maxItems": 1,
25031             "uniqueItems": true,
25032             "readOnly": true,
25033             "type": "array"
25034         },
25035         "anchor": {
25036             "$ref":
25037 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
25038 schema.json#/definitions/anchor"
25039         },
25040         "di": {
25041             "$ref":
25042 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
25043 schema.json#/definitions/di"
25044         },
25045         "eps": {
25046             "$ref":
25047 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
25048 schema.json#/definitions/eps"
25049         },
25050         "href": {
25051             "$ref":
25052 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
25053 schema.json#/definitions/href"
25054         },
25055         "ins": {
25056             "$ref":
25057 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
25058 schema.json#/definitions/ins"
25059         },
25060         "p": {
25061             "$ref":
25062 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
25063 schema.json#/definitions/p"
25064         },
25065         "rel": {

```

```

25066         "$ref":
25067         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
25068         schema.json#/definitions/rel_array"
25069     },
25070     "title": {
25071         "$ref":
25072         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
25073         schema.json#/definitions/title"
25074     },
25075     "type": {
25076         "$ref":
25077         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
25078         schema.json#/definitions/type"
25079     }
25080 },
25081 "required": [
25082     "href",
25083     "rt",
25084     "if"
25085 ],
25086 "type": "object"
25087 },
25088 "IASZoneCollectionBatch-Retrieve": {
25089     "title": "Collection Batch Retrieve Format",
25090     "minItems": 3,
25091     "maxItems": 3,
25092     "type": "array",
25093     "uniqueItems": true,
25094     "items": {
25095         "additionalProperties": true,
25096         "type": "object",
25097         "properties": {
25098             "href": {
25099                 "$ref":
25100                 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
25101                 schema.json#/definitions/href"
25102             },
25103             "rep": {
25104                 "anyOf": [
25105                     {
25106                         "$ref":
25107                         "https://openconnectivityfoundation.github.io/IoTDataModels/IASZoneInfoResURI.swagger.json#/definiti
25108                         ons/IASZoneInfo"
25109                     },
25110                     {
25111                         "$ref":
25112                         "https://openconnectivityfoundation.github.io/IoTDataModels/BatteryResURI.swagger.json#/definitions/
25113                         Battery"
25114                     },
25115                     {
25116                         "$ref":
25117                         "https://openconnectivityfoundation.github.io/IoTDataModels/PowerSourcesResourceURI.swagger.json#/de
25118                         finitions/powerSourceSchema"
25119                     }
25120                 ]
25121             }
25122         },
25123         "required": ["href", "rep"]
25124     }
25125 },
25126 "IASZoneCollectionBatch-Update" : {
25127     "title": "Collection Batch Update Format",
25128     "minItems": 1,
25129     "type": "array",
25130     "items": {
25131         "additionalProperties": true,
25132         "type": "object",
25133         "properties": {
25134             "href": {
25135                 "$ref":
25136                 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
25137                 schema.json#/definitions/href"

```



```

25138     },
25139     "rep": {
25140       "type": "object",
25141       "anyOf": [
25142         {
25143           "$ref":
25144             "https://openconnectivityfoundation.github.io/IoTDataModels/IASZoneInfoResURI.swagger.json#/definitions/IASZoneInfo-Update"
25145         },
25146         {
25147           "$ref":
25148             "https://openconnectivityfoundation.github.io/IoTDataModels/BatteryResURI.swagger.json#/definitions/BatteryUpdate"
25149         }
25150       ]
25151     }
25152   }
25153 }
25154 }
25155 }
25156 }
25157 }
25158 }
25159

```

25160 6.125.5 Property definition

25161 Table 253 defines the Properties that are part of the "oic.r.iaszone" Resource Type.

25162 **Table 253 – The Property definitions of the Resource with type "rt" = "None".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
rts	array: see schema	No	Read Write	Allowed Resources
rts-m	array: see schema	No	Read Write	Mandatory Resources
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
links	multiple types: see schema	Yes	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
if	array: see schema	Yes	Read Only	The OCF Interface set supported by this resource
rt	array: see schema	Yes	Read Only	Resource Type of the Resource
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	

rel	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
rep	multiple types: see schema	Yes	Read Write	
href	multiple types: see schema		Read Write	
rep	object: see schema		Read Write	

6.125.6 CRUDN behaviour

Table 254 defines the CRUDN operations that are supported on the "oic.r.iaszone" Resource Type.

Table 254 – The CRUDN operations of the Resource with type "rt" = "None".

Create	Read	Update	Delete	Notify

6.126 Window Covering

6.126.1 Introduction

This Resource describes the information of a window covering, i.e., type, configuration status, and mode.

Velocity associated with lifting the window covering can be changed by updating

Lift_Velocity(cm/sec).

Ramp up/down times to reaching the velocity setting can be changed by updating

Lift_Acceleration Time/Lift_Deceleration Time (0.1sec).

6.126.2 Example URI

/WindowCoveringResURI

6.126.3 Resource type

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

6.126.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Window Covering",
    "version": "20190513",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/WindowCoveringResURI" : {
      "get": {
        "description": "This Resource describes the information of a window covering, i.e., type,
```

```

25200 configuration status, and mode.\nVelocity associated with lifting the window covering can be changed
25201 by updating Lift_Velocity(cm/sec).\nRamp up/down times to reaching the velocity setting can be
25202 changed by updating Lift_Acceleration Time/Lift_Deceleration Time (0.1sec).",
25203     "parameters": [
25204         {"$ref": "#/parameters/interface-all"}
25205     ],
25206     "responses": {
25207         "200": {
25208             "description": "",
25209             "x-example":
25210             {
25211                 "rt": ["oic.r.windowcovering"],
25212                 "windowcoveringtype": "shutter",
25213                 "configstatus": {
25214                     "operational": true,
25215                     "online": true,
25216                     "rotationdirection": "normal",
25217                     "controllift": "closedloop",
25218                     "controltilt": "closedloop",
25219                     "closedloopliftcontrol": "encoder",
25220                     "closedlooptiltcontrol": "encoder"
25221                 },
25222                 "mode": {
25223                     "motordirection": false,
25224                     "calibration": false,
25225                     "maintenance": false,
25226                     "ledfeedback": true
25227                 },
25228                 "liftvelocity": 5,
25229                 "liftaccelerationtime": 200,
25230                 "liftdecelerationtime": 200
25231             },
25232             "schema": { "$ref": "#/definitions/WindowCovering" }
25233         }
25234     },
25235 },
25236 "post": {
25237     "description": "Update window covering settings.\n",
25238     "parameters": [
25239         {"$ref": "#/parameters/interface-all"},
25240         {
25241             "name": "body",
25242             "in": "body",
25243             "required": true,
25244             "schema": { "$ref": "#/definitions/WindowCovering-Update" },
25245             "x-example":
25246             {
25247                 "mode": {
25248                     "motordirection": true,
25249                     "calibration": false,
25250                     "maintenance": false,
25251                     "ledfeedback": true
25252                 },
25253                 "liftvelocity": 10,
25254                 "liftaccelerationtime": 500,
25255                 "liftdecelerationtime": 500
25256             }
25257         }
25258     ],
25259     "responses": {
25260         "200": {
25261             "description": "Success path response code\n"
25262         }
25263     }
25264 },
25265 },
25266 },
25267 "parameters": {
25268     "interface-all" : {
25269         "in" : "query",
25270         "name" : "if",
25271         "type" : "string",

```

```

25272         "enum" : ["oic.if.rw", "oic.if.baseline"]
25273     }
25274 },
25275 "definitions": {
25276     "WindowCovering" : {
25277         "properties": {
25278             "rt" : {
25279                 "description": "Resource Type",
25280                 "items": {
25281                     "maxLength": 64,
25282                     "type": "string",
25283                     "enum": ["oic.r.windowcovering"]
25284                 },
25285                 "minItems": 1,
25286                 "readOnly": true,
25287                 "type": "array"
25288             },
25289             "windowcoveringtype" : {
25290                 "description": "Window covering type. See OCF enumeration map for set of valid values.",
25291                 "readOnly": true,
25292                 "type": "string"
25293             },
25294             "liftvelocity" : {
25295                 "description": "Velocity in cm/sec associated with lifting the covering",
25296                 "type": "integer"
25297             },
25298             "configstatus" : {
25299                 "description": "Set of config status indicators.",
25300                 "properties": {
25301                     "controllift": {
25302                         "description": "Closed loop control allows for intermediate settings, open loop
25303 supports only up or down",
25304                         "readOnly": true,
25305                         "type": "string",
25306                         "enum": ["closedloop", "openloop"]
25307                     },
25308                     "controltilt": {
25309                         "description": "Closed loop control allows for intermediate settings, open loop
25310 supports only tilted or not tilted",
25311                         "readOnly": true,
25312                         "type": "string",
25313                         "enum": ["closedloop", "openloop"]
25314                     },
25315                     "closedloopliftcontrol": {
25316                         "description": "Encoder or timer controlled",
25317                         "readOnly": true,
25318                         "type": "string",
25319                         "enum": ["encoder", "timer"]
25320                     },
25321                     "closedlooptiltcontrol": {
25322                         "description": "Encoder or timer controlled",
25323                         "readOnly": true,
25324                         "type": "string",
25325                         "enum": ["encoder", "timer"]
25326                     },
25327                     "online": {
25328                         "description": "True = online, False = not online",
25329                         "readOnly": true,
25330                         "type": "boolean"
25331                     },
25332                     "operational": {
25333                         "description": "True = operational, False = not operational",
25334                         "readOnly": true,
25335                         "type": "boolean"
25336                     },
25337                     "rotationdirection": {
25338                         "description": "Identifies if the direction of rotation has been reversed to match
25339 physical installation.",
25340                         "readOnly": true,
25341                         "type": "string",
25342                         "enum": ["normal", "reversed"]
25343                     }
25344                 }
25345             }
25346         }
25347     }
25348 }

```

```

25344     },
25345     "readOnly": true,
25346     "type": "object"
25347 },
25348 "liftaccelerationtime" : {
25349     "description": "Ramp up time to reach lift velocity (ms)",
25350     "type": "integer"
25351 },
25352 "liftdecelerationtime" : {
25353     "description": "Ramp down time from the velocity setting (ms)",
25354     "type": "integer"
25355 },
25356 "mode" : {
25357     "description": "Set of operational modes.",
25358     "properties": {
25359         "calibration": {
25360             "description": "True = calibration mode, False = normal mode",
25361             "type": "boolean"
25362         },
25363         "ledfeedback": {
25364             "description": "True = feedback enabled, False = LEDs are off",
25365             "type": "boolean"
25366         },
25367         "maintenance": {
25368             "description": "True = maintenance mode, False = normal mode",
25369             "type": "boolean"
25370         },
25371         "motordirection": {
25372             "description": "True = direction reversed, False = direction normal",
25373             "type": "boolean"
25374         }
25375     },
25376     "type": "object"
25377 },
25378 "n": {
25379     "$ref":
25380     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
25381     schema.json#/definitions/n"
25382 },
25383 "id": {
25384     "$ref":
25385     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
25386     schema.json#/definitions/id"
25387 },
25388 "if" : {
25389     "description": "The interface set supported by this resource",
25390     "items": {
25391         "enum": [
25392             "oic.if.rw",
25393             "oic.if.baseline"
25394         ],
25395         "type": "string"
25396     },
25397     "minItems": 2,
25398     "maxItems": 2,
25399     "readOnly": true,
25400     "type": "array"
25401 }
25402 },
25403 "required": ["windowcoveringtype", "configstatus", "mode"]
25404 },
25405 "WindowCovering-Update" : {
25406     "properties": {
25407         "liftaccelerationtime" : {
25408             "description": "Ramp up time to reach lift velocity (ms)",
25409             "type": "integer"
25410         },
25411         "liftdecelerationtime" : {
25412             "description": "Ramp down time from the velocity setting (ms)",
25413             "type": "integer"
25414         },
25415         "liftvelocity" : {

```

```

25416         "description": "Velocity in cm/sec associated with lifting the covering",
25417         "type": "integer"
25418     },
25419     "mode" : {
25420         "description": "Set of operational modes.",
25421         "properties": {
25422             "calibration": {
25423                 "description": "True = calibration mode, False = normal mode",
25424                 "type": "boolean"
25425             },
25426             "ledfeedback": {
25427                 "description": "True = feedback enabled, False = LEDs are off",
25428                 "type": "boolean"
25429             },
25430             "maintenance": {
25431                 "description": "True = maintenance mode, False = normal mode",
25432                 "type": "boolean"
25433             },
25434             "motordirection": {
25435                 "description": "True = direction reversed, False = direction normal",
25436                 "type": "boolean"
25437             }
25438         },
25439         "type": "object"
25440     }
25441 },
25442 "required": ["mode"]
25443 }
25444 }
25445 }
25446

```

25447 6.126.5 Property definition

25448 Table 255 defines the Properties that are part of the "oic.r.windowcovering" Resource Type.

25449 **Table 255 – The Property definitions of the Resource with type "rt" =**
25450 **"oic.r.windowcovering".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	Resource Type
windowcoveringtype	string	Yes	Read Only	Window covering type. See OCF enumeration map for set of valid values.
liftvelocity	integer	No	Read Write	Velocity in cm/sec associated with lifting the covering
configstatus	object: see schema	Yes	Read Only	Set of config status indicators.
liftaccelerationtime	integer	No	Read Write	Ramp up time to reach lift velocity (ms)
liftdecelerationtime	integer	No	Read Write	Ramp down time from the velocity setting (ms)
mode	object: see schema	Yes	Read Write	Set of operational modes.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	

if	array: see schema	No	Read Only	The interface set supported by this resource
liftaccelerationtime	integer	No	Read Write	Ramp up time to reach lift velocity (ms)
liftdecelerationtime	integer	No	Read Write	Ramp down time from the velocity setting (ms)
liftvelocity	integer	No	Read Write	Velocity in cm/sec associated with lifting the covering
mode	object: see schema	Yes	Read Write	Set of operational modes.

6.126.6 CRUDN behaviour

Table 256 defines the CRUDN operations that are supported on the "oic.r.windowcovering" Resource Type.

Table 256 – The CRUDN operations of the Resource with type "rt" = "oic.r.windowcovering".

Create	Read	Update	Delete	Notify
	get	post		observe

6.127 Activity

6.127.1 Introduction

This Resource describes the Properties associated with a person's physical activity. All Properties are read-only values that are provided by the server. When range (from "oic.r.baseresource") is omitted the default is 0 to +MAXFLOAT.

6.127.2 Example URI

/ActivityResURI

6.127.3 Resource type

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

6.127.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Activity",
    "version": "2019-03-04",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ]
}
```

```

25488 ],
25489 "paths": {
25490   "/ActivityResURI": {
25491     "get": {
25492       "description": "This Resource describes the Properties associated with a person's physical
25493 activity.\n All Properties are read-only values that are provided by the server.\n When range (from
25494 \"oic.r.baseresource\") is omitted the default is 0 to +MAXFLOAT.",
25495       "parameters": [
25496         {
25497           "$ref": "#/parameters/interface"
25498         }
25499       ],
25500       "responses": {
25501         "200": {
25502           "description": "",
25503           "x-example": {
25504             "rt": [
25505               "oic.r.activity"
25506             ],
25507             "activity": "sleep",
25508             "steps_day": 1000,
25509             "steps_reset": 500,
25510             "ccal_day": 3000.0,
25511             "ccal_reset": 1500.0
25512           },
25513           "schema": {
25514             "$ref": "#/definitions/Activity"
25515           }
25516         }
25517       }
25518     }
25519   }
25520 },
25521 "parameters": {
25522   "interface": {
25523     "in": "query",
25524     "name": "if",
25525     "type": "string",
25526     "enum": [
25527       "oic.if.s",
25528       "oic.if.baseline"
25529     ]
25530   }
25531 },
25532 "definitions": {
25533   "Activity": {
25534     "properties": {
25535       "activity": {
25536         "description": "This Property describes the recognized current activity type of user",
25537         "type": "string",
25538         "enum": [
25539           "sleep",
25540           "sit",
25541           "stand",
25542           "walk",
25543           "run",
25544           "unknown"
25545         ],
25546         "readOnly": true
25547       },
25548       "steps_day": {
25549         "description": "This Property describes the user's step count that measures the number of
25550 steps the user has taken since the beginning of the day.",
25551         "type": "integer",
25552         "minimum": 0,
25553         "readOnly": true
25554       },
25555       "steps_reset": {
25556         "description": "This Property describes the user's step count that measures the number of
25557 steps the user has taken since the last reset.",
25558         "type": "integer",
25559         "minimum": 0,

```



```

25560         "readOnly": true
25561     },
25562     "ccal_day": {
25563         "description": "This Property describes the burned off calories of user since the
25564 beginning of the day.",
25565         "type": "number",
25566         "minimum": 0.0,
25567         "readOnly": true
25568     },
25569     "ccal_reset": {
25570         "description": "This Property describes the burned off calories of user since the last
25571 reset.",
25572         "type": "number",
25573         "minimum": 0.0,
25574         "readOnly": true
25575     },
25576     "rt": {
25577         "description": "The Resource Type.",
25578         "items": {
25579             "enum": [
25580                 "oic.r.activity"
25581             ],
25582             "type": "string"
25583         },
25584         "minItems": 1,
25585         "uniqueItems": true,
25586         "readOnly": true,
25587         "type": "array"
25588     },
25589     "n": {
25590         "$ref":
25591 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
25592 schema.json#/definitions/n"
25593     },
25594     "if": {
25595         "description": "The OCF Interface set supported by this Resource.",
25596         "items": {
25597             "enum": [
25598                 "oic.if.s", "oic.if.baseline"
25599             ],
25600             "type": "string"
25601         },
25602         "minItems": 1,
25603         "uniqueItems": true,
25604         "readOnly": true,
25605         "type": "array"
25606     },
25607     "steps_day_range": {
25608         "$ref":
25609 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
25610 schema.json#/definitions/range_integer"
25611     },
25612     "steps_day_step": {
25613         "$ref":
25614 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
25615 schema.json#/definitions/step_integer"
25616     },
25617     "steps_reset_range": {
25618         "$ref":
25619 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
25620 schema.json#/definitions/range_integer"
25621     },
25622     "steps_reset_step": {
25623         "$ref":
25624 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
25625 schema.json#/definitions/step_integer"
25626     },
25627     "ccal_day_range": {
25628         "$ref":
25629 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
25630 schema.json#/definitions/range_number"
25631     },

```

```

25632         "ccal_day_step": {
25633             "$ref":
25634             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
25635             schema.json#/definitions/step_number"
25636         },
25637         "ccal_day_precision": {
25638             "$ref":
25639             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
25640             schema.json#/definitions/precision"
25641         },
25642         "ccal_reset_range": {
25643             "$ref":
25644             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
25645             schema.json#/definitions/range_number"
25646         },
25647         "ccal_reset_step": {
25648             "$ref":
25649             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
25650             schema.json#/definitions/step_number"
25651         },
25652         "ccal_reset_precision": {
25653             "$ref":
25654             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
25655             schema.json#/definitions/precision"
25656         }
25657     },
25658     "type": "object",
25659     "required": [
25660         "activity"
25661     ]
25662 }
25663 }
25664 }

```

25665 6.127.5 Property definition

25666 Table 257 defines the Properties that are part of the "oic.r.activity" Resource Type.

25667 **Table 257 – The Property definitions of the Resource with type "rt" = "oic.r.activity".**

Property name	Value type	Mandatory	Access mode	Description
activity	string	Yes	Read Only	This Property describes the recognized current activity type of user
steps_day	integer	No	Read Only	This Property describes the user's step count that measures the number of steps the user has taken since the beginning of the day.
steps_reset	integer	No	Read Only	This Property describes the user's step count that measures the number of steps the user has taken since the last reset.
ccal_day	number	No	Read Only	This Property describes the burned off calories of user since the beginning of the day.
ccal_reset	number	No	Read Only	This Property describes the burned

				off calories of user since the last reset.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
steps_day_range	multiple types: see schema	No	Read Write	
steps_day_step	multiple types: see schema	No	Read Write	
steps_reset_range	multiple types: see schema	No	Read Write	
steps_reset_step	multiple types: see schema	No	Read Write	
ccal_day_range	multiple types: see schema	No	Read Write	
ccal_day_step	multiple types: see schema	No	Read Write	
ccal_day_precision	multiple types: see schema	No	Read Write	
ccal_reset_range	multiple types: see schema	No	Read Write	
ccal_reset_step	multiple types: see schema	No	Read Write	
ccal_reset_precision	multiple types: see schema	No	Read Write	

6.127.6 CRUDN behaviour

Table 258 defines the CRUDN operations that are supported on the "oic.r.activity" Resource Type.

Table 258 – The CRUDN operations of the Resource with type "rt" = "oic.r.activity".

Create	Read	Update	Delete	Notify
	get			observe

6.128 Activity Tracker Atomic Measurement Representation

6.128.1 Introduction

This Resource describes the Properties associated with Activity Tracker.

The Resource is an Atomic Measurement of activity ("oic.r.activity"), heart rate ("oic.r.heartrate"), observed time ("oic.r.time.stamp"), and user ID ("oic.r.userid").

6.128.2 Example URI

/ActivityTrackerAMResURI

6.128.3 Resource type

The Resource Type is defined as: "oic.r.activitytracker-am, oic.wk.atomicmeasurement".

6.128.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Activity Tracker Atomic Measurement Representation",
```

```

25685     "version": "2019-03-04",
25686     "license": {
25687         "name": "OCF Data Model License",
25688         "url":
25689 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
25690 CENSE.md",
25691         "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
25692     },
25693     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
25694 },
25695     "schemes": [
25696         "http"
25697     ],
25698     "consumes": [
25699         "application/json"
25700     ],
25701     "produces": [
25702         "application/json"
25703     ],
25704     "paths": {
25705         "/ActivityTrackerAMResURI?if=oic.if.b": {
25706             "get": {
25707                 "description": "This Resource describes the Properties associated with Activity Tracker.\n
25708 The Resource is an Atomic Measurement of activity (\\"oic.r.activity\\"), heart rate
25709 (\\"oic.r.heartrate\\"), observed time (\\"oic.r.time.stamp\\"), and user ID (\\"oic.r.userid\\").",
25710                 "parameters": [
25711                     {
25712                         "$ref": "#/parameters/interface-all"
25713                     }
25714                 ],
25715                 "responses": {
25716                     "200": {
25717                         "description": "",
25718                         "x-example": [
25719                             {
25720                                 "href": "/myActivity",
25721                                 "rep": {
25722                                     "activity": "sleep",
25723                                     "steps_day": 1000,
25724                                     "steps_reset": 500,
25725                                     "ccal_day": 3000.0,
25726                                     "ccal_reset": 1500.0
25727                                 }
25728                             },
25729                             {
25730                                 "href": "/myHeartRate",
25731                                 "rep": {
25732                                     "heartrate": 80
25733                                 }
25734                             },
25735                             {
25736                                 "href": "/myUserId",
25737                                 "rep": {
25738                                     "userid": "USER1"
25739                                 }
25740                             },
25741                             {
25742                                 "href": "/myTimeStamp",
25743                                 "rep": {
25744                                     "timestamp": "2018-11-09T12:15:00+08:00"
25745                                 }
25746                             }
25747                         ],
25748                         "schema": {
25749                             "$ref": "#/definitions/batch-retrieve"
25750                         }
25751                     }
25752                 }
25753             }
25754         },
25755         "/ActivityTrackerAMResURI?if=oic.if.ll": {
25756             "get": {

```

```

25757         "description": "This Resource describes the Properties associated with Activity Tracker.\n
25758 The Resource is an Atomic Measurement of activity (\\"oic.r.activity\\"), heart rate
25759 (\\"oic.r.heartrate\\"), observed time (\\"oic.r.time.stamp\\"), and user ID (\\"oic.r.userid\\").",
25760         "parameters": [
25761             {
25762                 "$ref": "#/parameters/interface-all"
25763             }
25764         ],
25765         "responses": {
25766             "200": {
25767                 "description": "",
25768                 "x-example": [
25769                     {
25770                         "href": "/myActivity",
25771                         "rt": [
25772                             "oic.r.activity"
25773                         ],
25774                         "if": [
25775                             "oic.if.s",
25776                             "oic.if.baseline"
25777                         ]
25778                     },
25779                     {
25780                         "href": "/myHeartRate",
25781                         "rt": [
25782                             "oic.r.heartrate"
25783                         ],
25784                         "if": [
25785                             "oic.if.s",
25786                             "oic.if.baseline"
25787                         ]
25788                     },
25789                     {
25790                         "href": "/myUserId",
25791                         "rt": [
25792                             "oic.r.userid"
25793                         ],
25794                         "if": [
25795                             "oic.if.r",
25796                             "oic.if.baseline"
25797                         ]
25798                     },
25799                     {
25800                         "href": "/myTimeStamp",
25801                         "rt": [
25802                             "oic.r.time.stamp"
25803                         ],
25804                         "if": [
25805                             "oic.if.r",
25806                             "oic.if.baseline"
25807                         ]
25808                     }
25809                 ],
25810                 "schema": {
25811                     "$ref": "#/definitions/links"
25812                 }
25813             }
25814         }
25815     },
25816     "/ActivityTrackerAMResURI?if=oic.if.baseline": {
25817         "get": {
25818             "description": "This Resource describes the Properties associated with Activity Tracker.\n
25819 The Resource is an Atomic Measurement of activity (\\"oic.r.activity\\"), heart rate
25820 (\\"oic.r.heartrate\\"), observed time (\\"oic.r.time.stamp\\"), and user ID (\\"oic.r.userid\\").",
25821             "parameters": [
25822                 {
25823                     "$ref": "#/parameters/interface-all"
25824                 }
25825             ],
25826             "responses": {
25827                 "200": {

```

```

25829         "description": "",
25830         "x-example":
25831             {
25832                 "rt": [
25833                     "oic.r.activitytracker-am",
25834                     "oic.wk.atomicmeasurement"
25835                 ],
25836                 "if": [
25837                     "oic.if.b",
25838                     "oic.if.ll",
25839                     "oic.if.baseline"
25840                 ],
25841                 "rts-m": [
25842                     "oic.r.activity"
25843                 ],
25844                 "rts": [
25845                     "oic.r.activity", "oic.r.heartrate", "oic.r.userid", "oic.r.time.stamp"
25846                 ],
25847                 "links": [
25848                     {
25849                         "href": "/myActivity",
25850                         "rt": [
25851                             "oic.r.activity"
25852                         ],
25853                         "if": [
25854                             "oic.if.s",
25855                             "oic.if.baseline"
25856                         ]
25857                     },
25858                     {
25859                         "href": "/myHeartRate",
25860                         "rt": [
25861                             "oic.r.heartrate"
25862                         ],
25863                         "if": [
25864                             "oic.if.s",
25865                             "oic.if.baseline"
25866                         ]
25867                     },
25868                     {
25869                         "href": "/myUserId",
25870                         "rt": [
25871                             "oic.r.userid"
25872                         ],
25873                         "if": [
25874                             "oic.if.r",
25875                             "oic.if.baseline"
25876                         ]
25877                     },
25878                     {
25879                         "href": "/myTimeStamp",
25880                         "rt": [
25881                             "oic.r.time.stamp"
25882                         ],
25883                         "if": [
25884                             "oic.if.r",
25885                             "oic.if.baseline"
25886                         ]
25887                     }
25888                 ],
25889             },
25890         "schema": {
25891             "$ref": "#/definitions/baseline"
25892         }
25893     }
25894 }
25895 }
25896 }
25897 },
25898 "parameters": {
25899     "interface-all": {
25900         "in": "query",

```

```

25901     "name": "if",
25902     "type": "string",
25903     "enum": [
25904         "oic.if.b",
25905         "oic.if.ll",
25906         "oic.if.baseline"
25907     ]
25908 }
25909 },
25910 "definitions": {
25911     "batch-retrieve": {
25912         "title": "Collection Batch Retrieve Format",
25913         "minItems": 1,
25914         "items": {
25915             "additionalProperties": true,
25916             "properties": {
25917                 "href": {
25918                     "$ref":
25919 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
25920 schema.json#/definitions/href"
25921                 },
25922                 "rep": {
25923                     "type": "object",
25924                     "anyOf": [
25925                         {
25926                             "$ref":
25927 "https://openconnectivityfoundation.github.io/IoTDataModels/Activity.swagger.json#/definitions/Activ
25928 ity"
25929                         },
25930                         {
25931                             "$ref":
25932 "https://openconnectivityfoundation.github.io/IoTDataModels/HeartRate.swagger.json#/definitions/Hear
25933 tRate"
25934                         },
25935                         {
25936                             "$ref":
25937 "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/U
25938 serID"
25939                         },
25940                         {
25941                             "$ref":
25942 "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definition
25943 s/TimeStamp"
25944                         }
25945                     ]
25946                 }
25947             },
25948             "required": [
25949                 "href",
25950                 "rep"
25951             ],
25952             "type": "object"
25953         },
25954         "type": "array"
25955     },
25956     "links": {
25957         "type": "array",
25958         "items": {
25959             "$ref": "#/definitions/oic.oic-link"
25960         }
25961     },
25962     "baseline": {
25963         "properties": {
25964             "rt": {
25965                 "items": {
25966                     "enum": [
25967                         "oic.r.activitytracker-am",
25968                         "oic.wk.atomicmeasurement"
25969                     ]
25970                 },
25971                 "minItems": 2,
25972                 "type": "array",

```

```

25973         "uniqueItems": true,
25974         "readOnly": true
25975     },
25976     "links": {
25977         "$ref": "#/definitions/links"
25978     },
25979     "n": {
25980         "$ref":
25981 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
25982 schema.json#/definitions/n"
25983     },
25984     "rts": {
25985         "description": "This Property contains all possible Resource Types for this Atomic
25986 Measurement.",
25987         "items": {
25988             "enum": [
25989                 "oic.r.activity",
25990                 "oic.r.heartrate",
25991                 "oic.r.time.stamp",
25992                 "oic.r.userid"
25993             ]
25994         },
25995         "minItems": 1,
25996         "type": "array",
25997         "uniqueItems": true
25998     },
25999     "id": {
26000         "$ref":
26001 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
26002 schema.json#/definitions/id"
26003     },
26004     "rts-m": {
26005         "description": "This Property contains all mandatory Resource Types for this Atomic
26006 Measurement.",
26007         "items": {
26008             "enum": [
26009                 "oic.r.activity"
26010             ]
26011         },
26012         "maxItems": 1,
26013         "minItems": 1,
26014         "type": "array",
26015         "readOnly": true,
26016         "uniqueItems": true
26017     },
26018     "if": {
26019         "description": "The OCF Interface set supported by this Resource.",
26020         "items": {
26021             "enum": [
26022                 "oic.if.baseline",
26023                 "oic.if.ll",
26024                 "oic.if.b"
26025             ],
26026             "type": "string"
26027         },
26028         "minItems": 1,
26029         "uniqueItems": true,
26030         "readOnly": true,
26031         "type": "array"
26032     }
26033 },
26034 "type": "object",
26035 "required": [
26036     "rts-m"
26037 ]
26038 },
26039 "oic.oic-link": {
26040     "properties": {
26041         "anchor": {
26042             "$ref":
26043 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26044 schema.json#/definitions/anchor"

```



```

26045         },
26046         "di": {
26047             "$ref":
26048             "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26049             schema.json#/definitions/di"
26050         },
26051         "eps": {
26052             "$ref":
26053             "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26054             schema.json#/definitions/eps"
26055         },
26056         "href": {
26057             "$ref":
26058             "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26059             schema.json#/definitions/href"
26060         },
26061         "if": {
26062             "description": "The OCF Interface set supported by this Resource.",
26063             "items": {
26064                 "enum": [
26065                     "oic.if.baseline",
26066                     "oic.if.s",
26067                     "oic.if.r"
26068                 ],
26069                 "type": "string"
26070             },
26071             "minItems": 1,
26072             "uniqueItems": true,
26073             "type": "array"
26074         },
26075         "ins": {
26076             "$ref":
26077             "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26078             schema.json#/definitions/ins"
26079         },
26080         "p": {
26081             "$ref":
26082             "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26083             schema.json#/definitions/p"
26084         },
26085         "rel": {
26086             "$ref":
26087             "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26088             schema.json#/definitions/rel_array"
26089         },
26090         "rt": {
26091             "description": "The Resource Type.",
26092             "items": {
26093                 "enum": [
26094                     "oic.r.activity",
26095                     "oic.r.heartrate",
26096                     "oic.r.time.stamp",
26097                     "oic.r.userid"
26098                 ],
26099                 "type": "string"
26100             },
26101             "minItems": 1,
26102             "uniqueItems": true,
26103             "readOnly": true,
26104             "type": "array"
26105         },
26106         "title": {
26107             "$ref":
26108             "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26109             schema.json#/definitions/title"
26110         },
26111         "type": {
26112             "$ref":
26113             "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26114             schema.json#/definitions/type"
26115         }
26116     },

```

```

26117     "required": [
26118         "href",
26119         "rt",
26120         "if"
26121     ],
26122     "type": "object"
26123 }
26124 }
26125 }

```

26126 6.128.5 Property definition

26127 Table 259 defines the Properties that are part of the "oic.r.activitytracker-am,
26128 oic.wk.atomicmeasurement" Resource Type.

26129 **Table 259 – The Property definitions of the Resource with type "rt" = "oic.r.activitytracker-
26130 am, oic.wk.atomicmeasurement".**

Property name	Value type	Mandatory	Access mode	Description
href	multiple types: see schema	Yes	Read Write	
rep	object: see schema	Yes	Read Write	
rt	array: see schema	No	Read Only	
links	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
rts	array: see schema	No	Read Write	This Property contains all possible Resource Types for this Atomic Measurement.
id	multiple types: see schema	No	Read Write	
rts-m	array: see schema	Yes	Read Only	This Property contains all mandatory Resource Types for this Atomic Measurement.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
if	array: see schema	Yes	Read Write	The OCF Interface set supported by this Resource.
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	

rel	multiple types: see schema	No	Read Write	
rt	array: see schema	Yes	Read Only	The Resource Type.
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	

6.128.6 CRUDN behaviour

Table 260 defines the CRUDN operations that are supported on the "oic.r.activitytracker-am, oic.wk.atomicmeasurement" Resource Type.

Table 260 – The CRUDN operations of the Resource with type "rt" = "oic.r.activitytracker-am, oic.wk.atomicmeasurement".

Create	Read	Update	Delete	Notify
	get			observe

6.129 Alarm

6.129.1 Introduction

This Resource describes the Properties associated with alarm status.

6.129.2 Example URI

/AlarmResURI

6.129.3 Resource type

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

6.129.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Alarm",
    "version": "2019-03-04",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/AlarmResURI": {
      "get": {
        "description": "This Resource describes the Properties associated with alarm status.",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ]
      }
    }
  }
}
```

```

26176     "responses": {
26177         "200": {
26178             "description": "",
26179             "x-example": {
26180                 "rt": [ "oic.r.alarm" ],
26181                 "if": [ "oic.if.rw", "oic.if.baseline"],
26182                 "status": false,
26183                 "duration": 0.0,
26184                 "time": "2018-06-20T14:30Z",
26185                 "alarmtype": "General"
26186             },
26187             "schema": {
26188                 "$ref": "#/definitions/Alarm"
26189             }
26190         }
26191     },
26192     "post": {
26193         "description": "This Resource describes the Properties associated with alarm status.",
26194         "parameters": [
26195             {
26196                 "$ref": "#/parameters/interface"
26197             },
26198             {
26199                 "name": "body",
26200                 "in": "body",
26201                 "required": true,
26202                 "schema": { "$ref": "#/definitions/Alarm" },
26203                 "x-example": {
26204                     "status": true,
26205                     "duration": 30.0,
26206                     "time": "2019-01-31T14:30Z"
26207                 }
26208             }
26209         ]
26210     },
26211     "responses": {
26212         "200": {
26213             "description": "",
26214             "x-example": {
26215                 "rt": [
26216                     "oic.r.alarm"
26217                 ],
26218                 "status": true,
26219                 "duration": 30.0,
26220                 "time": "2019-01-31T14:30Z",
26221                 "alarmtype": "General"
26222             },
26223             "schema": {
26224                 "$ref": "#/definitions/Alarm"
26225             }
26226         }
26227     }
26228 },
26229 ],
26230 },
26231 },
26232 "parameters": {
26233     "interface": {
26234         "in": "query",
26235         "name": "if",
26236         "type": "string",
26237         "enum": [
26238             "oic.if.rw",
26239             "oic.if.baseline"
26240         ]
26241     }
26242 },
26243 "definitions": {
26244     "Alarm": {
26245         "properties": {
26246             "rt": {
26247                 "description": "The Resource Type.",

```

```

26248         "items": {
26249             "enum": [
26250                 "oic.r.alarm"
26251             ],
26252             "type": "string"
26253         },
26254         "minItems": 1,
26255         "uniqueItems": true,
26256         "readOnly": true,
26257         "type": "array"
26258     },
26259     "status": {
26260         "description": "This Property describes the status of the alarm: true - on, false - off.",
26261         "type": "boolean",
26262         "readOnly": false
26263     },
26264     "duration": {
26265         "description": "This Property describes the alarm duration (seconds).",
26266         "type": "number",
26267         "minimum": 0.0,
26268         "readOnly": false
26269     },
26270     "time": {
26271         "description": "This Property describes the alarm time using ISO 8601 datetime format
26272 (e.g: 2007-04-05T14:30Z, 2007-04-05T14:30+09:00).",
26273         "type": "string",
26274         "readOnly": false
26275     },
26276     "alarmtype": {
26277         "description": "The Alarm Type.",
26278         "type": "string",
26279         "enum": [
26280             "General",
26281             "Fire",
26282             "Flood",
26283             "Weather",
26284             "Security"
26285         ],
26286         "readOnly": true
26287     },
26288     "n": {
26289         "$ref":
26290 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
26291 schema.json#/definitions/n"
26292     },
26293     "id": {
26294         "$ref":
26295 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
26296 schema.json#/definitions/id"
26297     },
26298     "if": {
26299         "description": "The OCF Interface set supported by this Resource.",
26300         "items": {
26301             "enum": [
26302                 "oic.if.baseline",
26303                 "oic.if.rw"
26304             ],
26305             "type": "string"
26306         },
26307         "minItems": 1,
26308         "uniqueItems": true,
26309         "readOnly": true,
26310         "type": "array"
26311     },
26312     "range": {
26313         "$ref":
26314 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
26315 schema.json#/definitions/range_number"
26316     },
26317     "step": {
26318         "$ref":
26319 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-

```

```

26320 schema.json#/definitions/step_number"
26321     },
26322     "precision": {
26323         "$ref":
26324         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
26325         schema.json#/definitions/precision"
26326     }
26327 },
26328 "type": "object",
26329 "required": [
26330     "status"
26331 ]
26332 }
26333 }
26334 }

```

26335 6.129.5 Property definition

26336 Table 261 defines the Properties that are part of the "oic.r.alarm" Resource Type.

26337 **Table 261 – The Property definitions of the Resource with type "rt" = "oic.r.alarm".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
status	boolean	Yes	Read Write	This Property describes the status of the alarm: true - on, false - off.
duration	number	No	Read Write	This Property describes the alarm duration (seconds).
time	string	No	Read Write	This Property describes the alarm time using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z, 2007-04-05T14:30+09:00).
alarmtype	string	No	Read Only	The Alarm Type.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	

26338 6.129.6 CRUDN behaviour

26339 Table 262 defines the CRUDN operations that are supported on the "oic.r.alarm" Resource Type.

26340 **Table 262 – The CRUDN operations of the Resource with type "rt" = "oic.r.alarm".**

Create	Read	Update	Delete	Notify
	get	post		observe

6.130 Continuous Glucose Meter (CGM) Atomic Measurement Representation

6.130.1 Introduction

This Resource describes the Properties associated with Continuous Glucose Meter. The Resource is an Atomic Measurement of glucose ("oic.r.glucose"), sensor ("oic.r.cgm.sensor"), observed time ("oic.r.time.stamp"), and user ID ("oic.r.userid").

6.130.2 Example URI

/ContinuousGlucoseMeterAMResURI

6.130.3 Resource type

The Resource Type is defined as: "oic.r.cgm-am, oic.wk.atomicmeasurement".

6.130.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Continuous Glucose Meter (CGM) Atomic Measurement Representation",
    "version": "2019-03-04",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/ContinuousGlucoseMeterAMResURI?if=oic.if.b": {
      "get": {
        "description": "This Resource describes the Properties associated with Continuous Glucose
Meter.\n The Resource is an Atomic Measurement of glucose (\\"oic.r.glucose\\"), sensor
(\\"oic.r.cgm.sensor\\"), observed time (\\"oic.r.time.stamp\\"), and user ID (\\"oic.r.userid\\").",
        "parameters": [
          {
            "$ref": "#/parameters/interface-all"
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": [
              {
                "href": "/myGlucose",
                "rep": {
                  "glucose": 100.0,
                  "units": "mg/dL"
                }
              },
              {
                "href": "/myContinuousGlucoseMeterSensor",
                "rep": {
                  "starttime": "2018-06-20T14:30Z",
                  "runtime": 7.0
                }
              }
            ],
            {
              "href": "/myUserId",
```

```

26405         "rep": {
26406             "userid": "USER1"
26407         }
26408     },
26409     {
26410         "href": "/myTimeStamp",
26411         "rep": {
26412             "timestamp": "2018-11-09T12:15:00+08:00"
26413         }
26414     }
26415 ],
26416 "schema": {
26417     "$ref": "#/definitions/batch-retrieve"
26418 }
26419 }
26420 }
26421 }
26422 },
26423 "/ContinuousGlucoseMeterAMResURI?if=oic.if.ll": {
26424     "get": {
26425         "description": "This Resource describes the Properties associated with Continuous Glucose
26426 Meter.\n The Resource is an Atomic Measurement of glucose (\\"oic.r.glucose\\"), sensor
26427 (\\"oic.r.cgm.sensor\\"), observed time (\\"oic.r.time.stamp\\"), and user ID (\\"oic.r.userid\\").",
26428         "parameters": [
26429             {
26430                 "$ref": "#/parameters/interface-all"
26431             }
26432         ],
26433         "responses": {
26434             "200": {
26435                 "description": "",
26436                 "x-example": [
26437                     {
26438                         "href": "/myGlucose",
26439                         "rt": [
26440                             "oic.r.glucose"
26441                         ],
26442                         "if": [
26443                             "oic.if.s",
26444                             "oic.if.baseline"
26445                         ]
26446                     },
26447                     {
26448                         "href": "/myContinuousGlucoseMeterSensor",
26449                         "rt": [
26450                             "oic.r.cgm.sensor"
26451                         ],
26452                         "if": [
26453                             "oic.if.s",
26454                             "oic.if.baseline"
26455                         ]
26456                     },
26457                     {
26458                         "href": "/myUserId",
26459                         "rt": [
26460                             "oic.r.userid"
26461                         ],
26462                         "if": [
26463                             "oic.if.r",
26464                             "oic.if.baseline"
26465                         ]
26466                     },
26467                     {
26468                         "href": "/myTimeStamp",
26469                         "rt": [
26470                             "oic.r.time.stamp"
26471                         ],
26472                         "if": [
26473                             "oic.if.r",
26474                             "oic.if.baseline"
26475                         ]
26476                     }
26477                 ]
26478             }
26479         }
26480     }
26481 }

```



```

26477         ],
26478         "schema": {
26479             "$ref": "#/definitions/links"
26480         }
26481     }
26482 }
26483 },
26484 ],
26485 "/ContinuousGlucoseMeterAMResURI?if=oic.if.baseline": {
26486     "get": {
26487         "description": "This Resource describes the Properties associated with Continuous Glucose
26488 Meter.\n The Resource is an Atomic Measurement of glucose (\\"oic.r.glucose\\"), sensor
26489 (\\"oic.r.cgm.sensor\\"), observed time (\\"oic.r.time.stamp\\"), and user ID (\\"oic.r.userid\\").",
26490         "parameters": [
26491             {
26492                 "$ref": "#/parameters/interface-all"
26493             }
26494         ],
26495         "responses": {
26496             "200": {
26497                 "description": "",
26498                 "x-example":
26499                     {
26500                         "rt": [
26501                             "oic.r.cgm-am",
26502                             "oic.wk.atomicmeasurement"
26503                         ],
26504                         "if": [
26505                             "oic.if.b",
26506                             "oic.if.ll",
26507                             "oic.if.baseline"
26508                         ],
26509                         "rts-m": [
26510                             "oic.r.glucose"
26511                         ],
26512                         "rts": [
26513                             "oic.r.glucose", "oic.r.cgm.sensor"
26514                         ],
26515                         "links": [
26516                             {
26517                                 "href": "/myGlucose",
26518                                 "rt": [
26519                                     "oic.r.glucose"
26520                                 ],
26521                                 "if": [
26522                                     "oic.if.s",
26523                                     "oic.if.baseline"
26524                                 ]
26525                             },
26526                             {
26527                                 "href": "/myContinuousGlucoseMeterSensor",
26528                                 "rt": [
26529                                     "oic.r.cgm.sensor"
26530                                 ],
26531                                 "if": [
26532                                     "oic.if.s",
26533                                     "oic.if.baseline"
26534                                 ]
26535                             },
26536                             {
26537                                 "href": "/myUserId",
26538                                 "rt": [
26539                                     "oic.r.userid"
26540                                 ],
26541                                 "if": [
26542                                     "oic.if.r",
26543                                     "oic.if.baseline"
26544                                 ]
26545                             },
26546                             {
26547                                 "href": "/myTimeStamp",
26548                                 "rt": [

```

```

26549         "oic.r.time.stamp"
26550     ],
26551     "if": [
26552         "oic.if.r",
26553         "oic.if.baseline"
26554     ]
26555 }
26556 ]
26557 },
26558 "schema": {
26559     "$ref": "#/definitions/baseline"
26560 }
26561 }
26562 }
26563 }
26564 },
26565 },
26566 "parameters": {
26567     "interface-all": {
26568         "in": "query",
26569         "name": "if",
26570         "type": "string",
26571         "enum": [
26572             "oic.if.b",
26573             "oic.if.ll",
26574             "oic.if.baseline"
26575         ]
26576     }
26577 },
26578 "definitions": {
26579     "batch-retrieve": {
26580         "title": "Collection Batch Retrieve Format",
26581         "minItems": 1,
26582         "items": {
26583             "properties": {
26584                 "href": {
26585                     "$ref":
26586 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26587 schema.json#/definitions/href"
26588                 },
26589                 "rep": {
26590                     "type": "object",
26591                     "anyOf": [
26592                         {
26593                             "$ref":
26594 "https://openconnectivityfoundation.github.io/IoTDataModels/GlucoseResURI.swagger.json#/definitions/
26595 Glucose"
26596                         },
26597                         {
26598                             "$ref":
26599 "https://openconnectivityfoundation.github.io/IoTDataModels/ContinuousGlucoseMeterSensor.swagger.jso
26600 n#/definitions/ContinuousGlucoseMeterSensor"
26601                         }
26602                     ],
26603                     "$ref":
26604 "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/U
26605 serID"
26606                 },
26607                 {
26608                     "$ref":
26609 "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definition
26610 s/TimeStamp"
26611                 }
26612             ]
26613         }
26614     },
26615     "required": [
26616         "href",
26617         "rep"
26618     ],
26619     "type": "object"
26620 },

```

```

26621     "type": "array"
26622   },
26623   "links": {
26624     "type": "array",
26625     "items": {
26626       "$ref": "#/definitions/oic.oic-link"
26627     }
26628   },
26629   "baseline": {
26630     "properties": {
26631       "rt": {
26632         "items": {
26633           "enum": [
26634             "oic.r.cgm-am",
26635             "oic.wk.atomicmeasurement"
26636           ]
26637         },
26638         "minItems": 2,
26639         "type": "array",
26640         "uniqueItems": true,
26641         "readOnly": true
26642       },
26643       "links": {
26644         "$ref": "#/definitions/links"
26645       },
26646       "n": {
26647         "$ref":
26648 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
26649 schema.json#/definitions/n"
26650       },
26651       "rts": {
26652         "description": "This Property contains all possible Resource Types for this Atomic
26653 Measurement.",
26654         "items": {
26655           "enum": [
26656             "oic.r.glucose",
26657             "oic.r.cgm.sensor",
26658             "oic.r.time.stamp",
26659             "oic.r.userid"
26660           ]
26661         },
26662         "minItems": 1,
26663         "type": "array",
26664         "uniqueItems": true
26665       },
26666       "id": {
26667         "$ref":
26668 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
26669 schema.json#/definitions/id"
26670       },
26671       "rts-m": {
26672         "description": "This Property contains all mandatory Resource Types for this Atomic
26673 Measurement.",
26674         "items": {
26675           "enum": [
26676             "oic.r.glucose"
26677           ]
26678         },
26679         "maxItems": 1,
26680         "minItems": 1,
26681         "type": "array",
26682         "readOnly": true,
26683         "uniqueItems": true
26684       },
26685       "if": {
26686         "description": "The OCF Interface set supported by this Resource.",
26687         "items": {
26688           "enum": [
26689             "oic.if.baseline",
26690             "oic.if.ll",
26691             "oic.if.b"
26692           ]

```

```

26693         "type": "string"
26694     },
26695     "minItems": 1,
26696     "uniqueItems": true,
26697     "readOnly": true,
26698     "type": "array"
26699 }
26700 },
26701 "type": "object",
26702 "required": [
26703     "rts-m"
26704 ]
26705 },
26706 "oic.oic-link": {
26707     "properties": {
26708         "anchor": {
26709             "$ref":
26710 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26711 schema.json#/definitions/anchor"
26712         },
26713         "di": {
26714             "$ref":
26715 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26716 schema.json#/definitions/di"
26717         },
26718         "eps": {
26719             "$ref":
26720 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26721 schema.json#/definitions/eps"
26722         },
26723         "href": {
26724             "$ref":
26725 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26726 schema.json#/definitions/href"
26727         },
26728         "if": {
26729             "description": "The OCF Interface set supported by this Resource.",
26730             "items": {
26731                 "enum": [
26732                     "oic.if.baseline",
26733                     "oic.if.s",
26734                     "oic.if.r"
26735                 ],
26736                 "type": "string"
26737             },
26738             "minItems": 1,
26739             "uniqueItems": true,
26740             "type": "array"
26741         },
26742         "ins": {
26743             "$ref":
26744 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26745 schema.json#/definitions/ins"
26746         },
26747         "p": {
26748             "$ref":
26749 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26750 schema.json#/definitions/p"
26751         },
26752         "rel": {
26753             "$ref":
26754 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26755 schema.json#/definitions/rel_array"
26756         },
26757         "rt": {
26758             "description": "The Resource Type.",
26759             "items": {
26760                 "enum": [
26761                     "oic.r.glucose",
26762                     "oic.r.cgm.sensor",
26763                     "oic.r.time.stamp",
26764                     "oic.r.userid"

```

```

26765         ],
26766         "type": "string"
26767     },
26768     "minItems": 1,
26769     "uniqueItems": true,
26770     "readOnly": true,
26771     "type": "array"
26772 },
26773 "title": {
26774     "$ref":
26775 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26776 schema.json#/definitions/title"
26777 },
26778 "type": {
26779     "$ref":
26780 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
26781 schema.json#/definitions/type"
26782 }
26783 },
26784 "required": [
26785     "href",
26786     "rt",
26787     "if"
26788 ],
26789 "type": "object"
26790 }
26791 }
26792 }

```

26793 6.130.5 Property definition

26794 Table 263 defines the Properties that are part of the "oic.r.cgm-am, oic.wk.atomicmeasurement"
26795 Resource Type.

26796 **Table 263 – The Property definitions of the Resource with type "rt" = "oic.r.cgm-am,**
26797 **oic.wk.atomicmeasurement".**

Property name	Value type	Mandatory	Access mode	Description
href	multiple types: see schema	Yes	Read Write	
rep	object: see schema	Yes	Read Write	
rt	array: see schema	No	Read Only	
links	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
rts	array: see schema	No	Read Write	This Property contains all possible Resource Types for this Atomic Measurement.
id	multiple types: see schema	No	Read Write	
rts-m	array: see schema	Yes	Read Only	This Property contains all mandatory Resource Types for this Atomic Measurement.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
if	array: see schema	Yes	Read Write	The OCF Interface set supported by this Resource.
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
rt	array: see schema	Yes	Read Only	The Resource Type.
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	

6.130.6 CRUDN behaviour

Table 264 defines the CRUDN operations that are supported on the "oic.r.cgm-am, oic.wk.atomicmeasurement" Resource Type.

Table 264 – The CRUDN operations of the Resource with type "rt" = "oic.r.cgm-am, oic.wk.atomicmeasurement".

Create	Read	Update	Delete	Notify
	get			observe

6.131 Calibrate for Continuous Glucose Meter (CGM)

6.131.1 Introduction

This Resource describes the Properties associated with Calibrate for Continuous Glucose Meter (CGM).

6.131.2 Example URI

/ContinuousGlucoseMeterCalibrateResURI

6.131.3 Resource type

The Resource Type is defined as: "oic.r.cgm.calibrate".

6.131.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Calibrate for Continuous Glucose Meter (CGM)",
    "version": "2019-03-04",
    "license": {
      "name": "OCF Data Model License",
      "url":
        "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
        CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    }
  }
}
```

```

26823     },
26824     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
26825 },
26826 "schemas": [
26827     "http"
26828 ],
26829 "consumes": [
26830     "application/json"
26831 ],
26832 "produces": [
26833     "application/json"
26834 ],
26835 "paths": {
26836     "/ContinuousGlucoseMeterCalibrateResURI": {
26837         "get": {
26838             "description": "This Resource describes the Properties associated with Calibrate for
Continuous Glucose Meter (CGM).",
26839             "parameters": [
26840                 {
26841                     "$ref": "#/parameters/interface"
26842                 }
26843             ],
26844             "responses": {
26845                 "200": {
26846                     "description": "",
26847                     "x-example": {
26848                         "rt": [
26849                             "oic.r.cgm.calibrate"
26850                         ],
26851                         "Cvalue": 128.0,
26852                         "Cstatus": true
26853                     },
26854                     "schema": {
26855                         "$ref": "#/definitions/ContinuousGlucoseMeterCalibrate"
26856                     }
26857                 }
26858             }
26859         },
26860         "post": {
26861             "description": "This Resource describes the Properties associated with Calibrate for
Continuous Glucose Meter (CGM).",
26862             "parameters": [
26863                 {
26864                     "$ref": "#/parameters/interface"
26865                 },
26866                 {
26867                     "name": "body",
26868                     "in": "body",
26869                     "required": true,
26870                     "schema": { "$ref": "#/definitions/ContinuousGlucoseMeterCalibrate" },
26871                     "x-example": {
26872                         "Cvalue": 130.0,
26873                         "Cstatus": true
26874                     }
26875                 }
26876             ]
26877         },
26878         "responses": {
26879             "200": {
26880                 "description": "",
26881                 "x-example": {
26882                     "rt": [
26883                         "oic.r.cgm.calibrate"
26884                     ],
26885                     "Cvalue": 130.0,
26886                     "Cstatus": true
26887                 },
26888                 "schema": {
26889                     "$ref": "#/definitions/ContinuousGlucoseMeterCalibrate"
26890                 }
26891             }
26892         }
26893     }
26894 }

```

```

26895     }
26896   },
26897   "parameters": {
26898     "interface": {
26899       "in": "query",
26900       "name": "if",
26901       "type": "string",
26902       "enum": [
26903         "oic.if.rw",
26904         "oic.if.baseline"
26905       ]
26906     }
26907   },
26908   "definitions": {
26909     "ContinuousGlucoseMeterCalibrate": {
26910       "properties": {
26911         "Cvalue": {
26912           "description": "This Property describes the Sensor Calibration Value in mg/dL units. This
26913 blood glucose measurement using other external glucose meter.",
26914           "type": "number",
26915           "minimum": 0,
26916           "readOnly": false
26917         },
26918         "Cstatus": {
26919           "description": "Sensor calibration required flag",
26920           "type": "boolean",
26921           "readOnly": true
26922         },
26923         "rt": {
26924           "description": "The Resource Type.",
26925           "items": {
26926             "enum": [
26927               "oic.r.cgm.calibrate"
26928             ],
26929             "type": "string"
26930           },
26931           "minItems": 1,
26932           "uniqueItems": true,
26933           "readOnly": true,
26934           "type": "array"
26935         },
26936         "n": {
26937           "$ref":
26938 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
26939 schema.json#/definitions/n"
26940         },
26941         "if": {
26942           "description": "The OCF Interface set supported by this Resource.",
26943           "items": {
26944             "enum": [
26945               "oic.if.rw",
26946               "oic.if.baseline"
26947             ],
26948             "type": "string"
26949           },
26950           "minItems": 1,
26951           "uniqueItems": true,
26952           "readOnly": true,
26953           "type": "array"
26954         },
26955         "range": {
26956           "$ref":
26957 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
26958 schema.json#/definitions/range_number"
26959         },
26960         "step": {
26961           "$ref":
26962 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
26963 schema.json#/definitions/step_number"
26964         },
26965         "precision": {
26966           "$ref":

```



```

26967 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
26968 schema.json#/definitions/precision"
26969     },
26970     "type": "object",
26971     "required": [
26972         "Cvalue", "Cstatus"
26973     ]
26974 }
26975 }
26976 }
26977 }

```

26978 6.131.5 Property definition

26979 Table 265 defines the Properties that are part of the "oic.r.cgm.calibrate" Resource Type.

26980 **Table 265 – The Property definitions of the Resource with type "rt" = "oic.r.cgm.calibrate".**

Property name	Value type	Mandatory	Access mode	Description
Cvalue	number	Yes	Read Write	This Property describes the Sensor Calibration Value in mg/dL units. This blood glucose measurement using other external glucose meter.
Cstatus	boolean	Yes	Read Only	Sensor calibration required flag
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	

26981 6.131.6 CRUDN behaviour

26982 Table 266 defines the CRUDN operations that are supported on the "oic.r.cgm.calibrate" Resource
26983 Type.

26984 **Table 266 – The CRUDN operations of the Resource with type "rt" = "oic.r.cgm.calibrate".**

Create	Read	Update	Delete	Notify
	get	post		observe

26985 6.132 Sampling Interval for Continuous Glucose Meter (CGM)

26986 6.132.1 Introduction

26987 This Resource describes the Properties associated with Sampling Interval for Continuous
26988 Glucose Meter (CGM).

26989 6.132.2 Example URI

26990 /ContinuousGlucoseMeterSamplingIntervalResURI

6.132.3 Resource type

The Resource Type is defined as: "oic.r.cgm.samplinginterval".

6.132.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Sampling Interval for Continuous Glucose Meter (CGM)",
    "version": "2019-03-04",
    "license": {
      "name": "OCF Data Model License",
      "url": "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/ContinuousGlucoseMeterSamplingIntervalResURI": {
      "get": {
        "description": "This Resource describes the Properties associated with Sampling Interval for
Continuous Glucose Meter (CGM).",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": [
                "oic.r.cgm.samplinginterval"
              ],
              "interval": 10.0
            },
            "schema": {
              "$ref": "#/definitions/ContinuousGlucoseMeterSamplingInterval"
            }
          }
        }
      },
      "post": {
        "description": "This Resource describes the Properties associated with Sampling Interval for
Continuous Glucose Meter (CGM).",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/ContinuousGlucoseMeterSamplingInterval" },
            "x-example": {
              "interval": 20.0
            }
          }
        ],
        "responses": {
```

```

27060         "200": {
27061             "description": "",
27062             "x-example": {
27063                 "rt": [
27064                     "oic.r.cgm.samplinginterval"
27065                 ],
27066                 "interval": 20.0
27067             },
27068             "schema": {
27069                 "$ref": "#/definitions/ContinuousGlucoseMeterSamplingInterval"
27070             }
27071         }
27072     }
27073 }
27074 },
27075 "parameters": {
27076     "interface": {
27077         "in": "query",
27078         "name": "if",
27079         "type": "string",
27080         "enum": [
27081             "oic.if.a",
27082             "oic.if.baseline"
27083         ]
27084     }
27085 },
27086 "definitions": {
27087     "ContinuousGlucoseMeterSamplingInterval": {
27088         "properties": {
27089             "interval": {
27090                 "description": "This Property describes the Sampling interval in seconds.",
27091                 "type": "number",
27092                 "minimum": 0.0,
27093                 "readOnly": false
27094             },
27095             "rt": {
27096                 "description": "The Resource Type.",
27097                 "items": {
27098                     "enum": [
27099                         "oic.r.cgm.samplinginterval"
27100                     ],
27101                     "type": "string"
27102                 },
27103                 "minItems": 1,
27104                 "uniqueItems": true,
27105                 "readOnly": true,
27106                 "type": "array"
27107             },
27108             "n": {
27109                 "$ref":
27110 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
27111 schema.json#/definitions/n"
27112             },
27113             "id": {
27114                 "$ref":
27115 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
27116 schema.json#/definitions/id"
27117             },
27118             "if": {
27119                 "description": "The OCF Interface set supported by this Resource.",
27120                 "items": {
27121                     "enum": [
27122                         "oic.if.a",
27123                         "oic.if.baseline"
27124                     ],
27125                     "type": "string"
27126                 },
27127                 "minItems": 1,
27128                 "uniqueItems": true,
27129                 "readOnly": true,
27130                 "type": "array"
27131             }
27132         }
27133     }
27134 }

```

```

27132     },
27133     "range": {
27134       "$ref":
27135       "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27136       schema.json#/definitions/range_number"
27137     },
27138     "step": {
27139       "$ref":
27140       "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27141       schema.json#/definitions/step_number"
27142     },
27143     "precision": {
27144       "$ref":
27145       "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27146       schema.json#/definitions/precision"
27147     }
27148   },
27149   "type": "object",
27150   "required": [
27151     "interval"
27152   ]
27153 }
27154 }
27155 }

```

27156 6.132.5 Property definition

27157 Table 267 defines the Properties that are part of the "oic.r.cgm.samplinginterval" Resource Type.

27158 **Table 267 – The Property definitions of the Resource with type "rt" =**
27159 **"oic.r.cgm.samplinginterval".**

Property name	Value type	Mandatory	Access mode	Description
interval	number	Yes	Read Write	This Property describes the Sampling interval in seconds.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	

27160 6.132.6 CRUDN behaviour

27161 Table 268 defines the CRUDN operations that are supported on the "oic.r.cgm.samplinginterval"
27162 Resource Type.

27163 **Table 268 – The CRUDN operations of the Resource with type "rt" =**
27164 **"oic.r.cgm.samplinginterval".**

Create	Read	Update	Delete	Notify
	get	post		observe

6.133 Sensor for Continuous Glucose Meter (CGM)

6.133.1 Introduction

This Resource describes the Properties associated with Sensor for Continuous Glucose Meter (CGM).

6.133.2 Example URI

/ContinuousGlucoseMeterSensorResURI

6.133.3 Resource type

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

6.133.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Sensor for Continuous Glucose Meter (CGM)",
    "version": "2019-03-04",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/ContinuousGlucoseMeterSensorResURI": {
      "get": {
        "description": "This Resource describes the Properties associated with Sensor for Continuous
Glucose Meter (CGM).",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": [
                "oic.r.cgm.sensor"
              ],
              "starttime": "2018-06-20T14:30Z",
              "runtime": 7.0
            },
            "schema": {
              "$ref": "#/definitions/ContinuousGlucoseMeterSensor"
            }
          }
        }
      }
    }
  },
  "parameters": {
    "interface": {
      "in": "query",
      "name": "if",
```

```

27229         "type": "string",
27230         "enum": [
27231             "oic.if.s",
27232             "oic.if.baseline"
27233         ]
27234     },
27235 },
27236 "definitions": {
27237     "ContinuousGlucoseMeterSensor": {
27238         "properties": {
27239             "starttime": {
27240                 "description": "This Property describes the Sensor start time using ISO 8601 datetime
27241 format (e.g: 2007-04-05T14:30Z, 2007-04-05T14:30+09:00)",
27242                 "type": "string",
27243                 "readOnly": true
27244             },
27245             "runtime": {
27246                 "description": "This Property describes the recommended runtime days using CGM",
27247                 "type": "number",
27248                 "minimum": 0.0,
27249                 "readOnly": true
27250             },
27251             "rt": {
27252                 "description": "The Resource Type.",
27253                 "items": {
27254                     "enum": [
27255                         "oic.r.cgm.sensor"
27256                     ],
27257                     "type": "string"
27258                 },
27259                 "minItems": 1,
27260                 "uniqueItems": true,
27261                 "readOnly": true,
27262                 "type": "array"
27263             },
27264             "n": {
27265                 "$ref":
27266 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
27267 schema.json#/definitions/n"
27268             },
27269             "if": {
27270                 "description": "The OCF Interface set supported by this Resource.",
27271                 "items": {
27272                     "enum": [
27273                         "oic.if.s",
27274                         "oic.if.baseline"
27275                     ],
27276                     "type": "string"
27277                 },
27278                 "minItems": 1,
27279                 "uniqueItems": true,
27280                 "readOnly": true,
27281                 "type": "array"
27282             },
27283             "range": {
27284                 "$ref":
27285 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27286 schema.json#/definitions/range_number"
27287             },
27288             "step": {
27289                 "$ref":
27290 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27291 schema.json#/definitions/step_number"
27292             },
27293             "precision": {
27294                 "$ref":
27295 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27296 schema.json#/definitions/precision"
27297             }
27298         },
27299         "type": "object",
27300         "required": [

```

```

27301         "starttime", "runtime"
27302     ]
27303 }
27304 }
27305 }

```

27306 6.133.5 Property definition

27307 Table 269 defines the Properties that are part of the "oic.r.cgm.sensor" Resource Type.

27308 **Table 269 – The Property definitions of the Resource with type "rt" = "oic.r.cgm.sensor".**

Property name	Value type	Mandatory	Access mode	Description
starttime	string	Yes	Read Only	This Property describes the Sensor start time using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z, 2007-04-05T14:30+09:00)
runtime	number	Yes	Read Only	This Property describes the recommended runtime days using CGM
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	

27309 6.133.6 CRUDN behaviour

27310 Table 270 defines the CRUDN operations that are supported on the "oic.r.cgm.sensor" Resource
 27311 Type.

27312 **Table 270 – The CRUDN operations of the Resource with type "rt" = "oic.r.cgm.sensor".**

Create	Read	Update	Delete	Notify
	get			observe

27313 6.134 Status for Continuous Glucose Meter (CGM)

27314 6.134.1 Introduction

27315 This Resource describes the Properties associated with Status for Continuous Glucose Meter
 27316 (CGM).

27317 6.134.2 Example URI

27318 /ContinuousGlucoseMeterStatusResURI

27319 6.134.3 Resource type

27320 The Resource Type is defined as: "oic.r.cgm.status".

6.134.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Status for Continuous Glucose Meter (CGM)",
    "version": "2019-03-04",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/ContinuousGlucoseMeterStatusResURI": {
      "get": {
        "description": "This Resource describes the Properties associated with Status for Continuous
Glucose Meter (CGM).",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": [
                "oic.r.cgm.status"
              ],
              "cgmttype": "Interstitial Fluid",
              "cgmstatus": "working",
              "gtrend": 100.0,
              "malfunction": false
            },
            "schema": {
              "$ref": "#/definitions/ContinuousGlucoseMeterStatus"
            }
          }
        }
      }
    }
  },
  "parameters": {
    "interface": {
      "in": "query",
      "name": "if",
      "type": "string",
      "enum": [
        "oic.if.s",
        "oic.if.baseline"
      ]
    }
  },
  "definitions": {
    "ContinuousGlucoseMeterStatus": {
      "properties": {
        "cgmttype": {
          "description": "This Property describes the CGM measurement type.",
          "type": "string",
```



```

27392         "enum": [
27393             "Capillary Whole blood",
27394             "Capillary Plasma",
27395             "Venous Plasma",
27396             "Arterial Whole blood",
27397             "Arterial Plasma",
27398             "Undetermined Whole blood",
27399             "Undetermined Plasma",
27400             "Interstitial Fluid"
27401         ],
27402         "readOnly": true
27403     },
27404     "cgmstatus": {
27405         "description": "This Property describes the specific notifications given by the CGM device
including, but not limited to, warnings, errors, and handling events.",
27406         "type": "string",
27407         "readOnly": true
27408     },
27409 },
27410 "gtrend": {
27411     "description": "This Property describes the rate of change in glucose measurements at a
time instant.",
27412     "type": "number",
27413     "minimum": 0.0,
27414     "readOnly": true
27415 },
27416 },
27417 "malfunction": {
27418     "description": "This Property describes the sensor malfunction detection check.",
27419     "type": "boolean",
27420     "readOnly": true
27421 },
27422 "rt": {
27423     "description": "The Resource Type.",
27424     "items": {
27425         "enum": [
27426             "oic.r.cgm.status"
27427         ],
27428         "type": "string"
27429     },
27430     "minItems": 1,
27431     "uniqueItems": true,
27432     "readOnly": true,
27433     "type": "array"
27434 },
27435 "n": {
27436     "$ref":
27437     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
27438     schema.json#/definitions/n"
27439 },
27440 "if": {
27441     "description": "The OCF Interface set supported by this Resource.",
27442     "items": {
27443         "enum": [
27444             "oic.if.s",
27445             "oic.if.baseline"
27446         ],
27447         "type": "string"
27448     },
27449     "minItems": 1,
27450     "uniqueItems": true,
27451     "readOnly": true,
27452     "type": "array"
27453 },
27454 "range": {
27455     "$ref":
27456     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27457     schema.json#/definitions/range_number"
27458 },
27459 "step": {
27460     "$ref":
27461     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27462     schema.json#/definitions/step_number"
27463 },

```

```

27464         "precision": {
27465             "$ref":
27466             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27467             schema.json#/definitions/precision"
27468         },
27469     },
27470     "type": "object",
27471     "required": [
27472         "cgmtime",
27473         "cgmstatus",
27474         "gtrend",
27475         "malfunction"
27476     ]
27477 }
27478 }
27479 }

```

27480 6.134.5 Property definition

27481 Table 271 defines the Properties that are part of the "oic.r.cgm.status" Resource Type.

27482 **Table 271 – The Property definitions of the Resource with type "rt" = "oic.r.cgm.status".**

Property name	Value type	Mandatory	Access mode	Description
cgmtime	string	Yes	Read Only	This Property describes the CGM measurement type.
cgmstatus	string	Yes	Read Only	This Property describes the specific notifications given by the CGM device including, but not limited to, warnings, errors, and handling events.
gtrend	number	Yes	Read Only	This Property describes the rate of change in glucose measurements at a time instant.
malfunction	boolean	Yes	Read Only	This Property describes the sensor malfunction detection check.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	

27483 6.134.6 CRUDN behaviour

27484 Table 272 defines the CRUDN operations that are supported on the "oic.r.cgm.status" Resource
27485 Type.

27486 **Table 272 – The CRUDN operations of the Resource with type "rt" = "oic.r.cgm.status".**

Create	Read	Update	Delete	Notify
	get			observe

27487 **6.135 Threshold for Continuous Glucose Meter (CGM)**

27488 **6.135.1 Introduction**

27489 This Resource describes the Properties associated with Threshold for Continuous Glucose Meter
27490 (CGM).

27491 **6.135.2 Example URI**

27492 /ContinuousGlucoseMeterThresholdResURI

27493 **6.135.3 Resource type**

27494 The Resource Type is defined as: "oic.r.cgm.threshold".

27495 **6.135.4 OpenAPI 2.0 definition**

```

27496 {
27497   "swagger": "2.0",
27498   "info": {
27499     "title": "Threshold for Continuous Glucose Meter (CGM)",
27500     "version": "2019-03-04",
27501     "license": {
27502       "name": "OCF Data Model License",
27503       "url":
27504         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
27505         CENSE.md",
27506       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
27507     },
27508     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
27509   },
27510   "schemes": [
27511     "http"
27512   ],
27513   "consumes": [
27514     "application/json"
27515   ],
27516   "produces": [
27517     "application/json"
27518   ],
27519   "paths": {
27520     "/ContinuousGlucoseMeterThresholdResURI": {
27521       "get": {
27522         "description": "This Resource describes the Properties associated with Threshold for
27523         Continuous Glucose Meter (CGM).",
27524         "parameters": [
27525           {
27526             "$ref": "#/parameters/interface"
27527           }
27528         ],
27529         "responses": {
27530           "200": {
27531             "description": "",
27532             "x-example": {
27533               "rt": [
27534                 "oic.r.cgm.threshold"
27535               ],
27536               "plow": 100.0,
27537               "phigh": 180.0,
27538               "dhypo": 80.0,
27539               "dhyper": 125.0,
27540               "gir": 5.0,
27541               "gdr": 5.0
27542             },
27543             "schema": {

```

```

27544         "$ref": "#/definitions/ContinuousGlucoseMeterThreshold"
27545     }
27546 }
27547 }
27548 },
27549 "post": {
27550     "description": "This Resource describes the Properties associated with Threshold for
27551 Continuous Glucose Meter (CGM).",
27552     "parameters": [
27553         {
27554             "$ref": "#/parameters/interface"
27555         },
27556         {
27557             "name": "body",
27558             "in": "body",
27559             "required": true,
27560             "schema": { "$ref": "#/definitions/ContinuousGlucoseMeterThreshold" },
27561             "x-example": {
27562                 "plow": 70.0,
27563                 "phigh": 150.0,
27564                 "dhypo": 60.0,
27565                 "dhyper": 90.0,
27566                 "gir": 3.0,
27567                 "gdr": 3.0
27568             }
27569         }
27570     ],
27571     "responses": {
27572         "200": {
27573             "description": "",
27574             "x-example": {
27575                 "rt": [
27576                     "oic.r.cgm.threshold"
27577                 ],
27578                 "plow": 70.0,
27579                 "phigh": 150.0,
27580                 "dhypo": 60.0,
27581                 "dhyper": 90.0,
27582                 "gir": 3.0,
27583                 "gdr": 3.0
27584             },
27585             "schema": {
27586                 "$ref": "#/definitions/ContinuousGlucoseMeterThreshold"
27587             }
27588         }
27589     }
27590 },
27591 }
27592 },
27593 "parameters": {
27594     "interface": {
27595         "in": "query",
27596         "name": "if",
27597         "type": "string",
27598         "enum": [
27599             "oic.if.rw",
27600             "oic.if.baseline"
27601         ]
27602     }
27603 },
27604 "definitions": {
27605     "ContinuousGlucoseMeterThreshold": {
27606         "properties": {
27607             "plow": {
27608                 "description": "This Property describes the Patient low threshold (mg/dL)",
27609                 "type": "number",
27610                 "minimum": 0.0,
27611                 "readOnly": false
27612             },
27613             "phigh": {
27614                 "description": "This Property describes the Patient high threshold (mg/dL)",
27615                 "type": "number",

```

```

27616         "minimum": 0.0,
27617         "readOnly": false
27618     },
27619     "dhypo": {
27620         "description": "This Property describes the Device hypoglycemia threshold (mg/dL)",
27621         "type": "number",
27622         "minimum": 0.0,
27623         "readOnly": false
27624     },
27625     "dhyper": {
27626         "description": "This Property describes the Device hyperglycemia threshold (mg/dL)",
27627         "type": "number",
27628         "minimum": 0.0,
27629         "readOnly": false
27630     },
27631     "gir": {
27632         "description": "This Property describes the Glucose Increase rate of change threshold
27633 (%)",
27634         "type": "number",
27635         "minimum": 0.0,
27636         "readOnly": false
27637     },
27638     "gdr": {
27639         "description": "This Property describes the Glucose Decrease rate of change threshold
27640 (%)",
27641         "type": "number",
27642         "minimum": 0.0,
27643         "readOnly": false
27644     },
27645     "rt": {
27646         "description": "The Resource Type.",
27647         "items": {
27648             "enum": [
27649                 "oic.r.cgm.threshold"
27650             ],
27651             "type": "string"
27652         },
27653         "minItems": 1,
27654         "uniqueItems": true,
27655         "readOnly": true,
27656         "type": "array"
27657     },
27658     "n": {
27659         "$ref":
27660 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
27661 schema.json#/definitions/n"
27662     },
27663     "if": {
27664         "description": "The OCF Interface set supported by this Resource.",
27665         "items": {
27666             "enum": [
27667                 "oic.if.rw",
27668                 "oic.if.baseline"
27669             ],
27670             "type": "string"
27671         },
27672         "minItems": 1,
27673         "uniqueItems": true,
27674         "readOnly": true,
27675         "type": "array"
27676     },
27677     "range": {
27678         "$ref":
27679 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27680 schema.json#/definitions/range_number"
27681     },
27682     "step": {
27683         "$ref":
27684 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27685 schema.json#/definitions/step_number"
27686     },
27687     "precision": {

```

```

27688         "$ref":
27689         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27690         schema.json#/definitions/precision"
27691     },
27692 },
27693     "type": "object",
27694     "required": [
27695         "plow",
27696         "phigh",
27697         "dhypo",
27698         "dhyper",
27699         "gir",
27700         "gdr"
27701     ]
27702 }
27703 }
27704 }

```

27705 6.135.5 Property definition

27706 Table 273 defines the Properties that are part of the "oic.r.cgm.threshold" Resource Type.

27707 **Table 273 – The Property definitions of the Resource with type "rt" = "oic.r.cgm.threshold".**

Property name	Value type	Mandatory	Access mode	Description
plow	number	Yes	Read Write	This Property describes the Patient low threshold (mg/dL)
phigh	number	Yes	Read Write	This Property describes the Patient high threshold (mg/dL)
dhypo	number	Yes	Read Write	This Property describes the Device hypoglycemia threshold (mg/dL)
dhyper	number	Yes	Read Write	This Property describes the Device hyperglycemia threshold (mg/dL)
gir	number	Yes	Read Write	This Property describes the Glucose Increase rate of change threshold (%)
gdr	number	Yes	Read Write	
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	

6.135.6 CRUDN behaviour

Table 274 defines the CRUDN operations that are supported on the "oic.r.cgm.threshold" Resource Type.

Table 274 – The CRUDN operations of the Resource with type "rt" = "oic.r.cgm.threshold".

Create	Read	Update	Delete	Notify
	get	post		observe

6.136 Heart Rate

6.136.1 Introduction

This Resource describes the Properties associated with a person's heart rate.

The unit, which is the default unit, is bpm.

The heartrate Property is a read-only value that is provided by the server.

When range (from "oic.r.baseresource") is omitted the default is 0 to +MAXFLOAT.

6.136.2 Example URI

/HeartRateResURI

6.136.3 Resource type

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

6.136.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Heart Rate",
    "version": "2019-03-04",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/HeartRateResURI": {
      "get": {
        "description": "This Resource describes the Properties associated with a person's heart
rate.\n The unit, which is the default unit, is bpm.\n The heartrate Property is a read-only value
that is provided by the server.\n When range (from \"oic.r.baseresource\") is omitted the default is
0 to +MAXFLOAT.",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": [
```

```

27763         "oic.r.heartrate"
27764     ],
27765     "heartrate": 80
27766 },
27767 "schema": {
27768     "$ref": "#/definitions/HeartRate"
27769 }
27770 }
27771 }
27772 }
27773 },
27774 },
27775 "parameters": {
27776     "interface": {
27777         "in": "query",
27778         "name": "if",
27779         "type": "string",
27780         "enum": [
27781             "oic.if.s",
27782             "oic.if.baseline"
27783         ]
27784     },
27785 },
27786 "definitions": {
27787     "HeartRate": {
27788         "properties": {
27789             "heartrate": {
27790                 "description": "This Property describes the heart rate in bpm.",
27791                 "type": "integer",
27792                 "minimum": 0,
27793                 "readOnly": true
27794             },
27795             "rt": {
27796                 "description": "The Resource Type.",
27797                 "items": {
27798                     "enum": [
27799                         "oic.r.heartrate"
27800                     ],
27801                     "type": "string"
27802                 },
27803                 "minItems": 1,
27804                 "uniqueItems": true,
27805                 "readOnly": true,
27806                 "type": "array"
27807             },
27808             "n": {
27809                 "$ref":
27810 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
27811 schema.json#/definitions/n"
27812             },
27813             "if": {
27814                 "description": "The OCF Interface set supported by this Resource.",
27815                 "items": {
27816                     "enum": [
27817                         "oic.if.s",
27818                         "oic.if.baseline"
27819                     ],
27820                     "type": "string"
27821                 },
27822                 "minItems": 1,
27823                 "uniqueItems": true,
27824                 "readOnly": true,
27825                 "type": "array"
27826             },
27827             "range": {
27828                 "$ref":
27829 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
27830 schema.json#/definitions/range_integer"
27831             },
27832             "step": {
27833                 "$ref":
27834 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-

```



```

27835 schema.json#/definitions/step_integer"
27836     },
27837     "type": "object",
27838     "required": [
27839         "heartrate"
27840     ]
27841 }
27842 }
27843 }
27844 }

```

27845 6.136.5 Property definition

27846 Table 275 defines the Properties that are part of the "oic.r.heartrate" Resource Type.

27847 **Table 275 – The Property definitions of the Resource with type "rt" = "oic.r.heartrate".**

Property name	Value type	Mandatory	Access mode	Description
heartrate	integer	Yes	Read Only	This Property describes the heart rate in bpm.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	

27848 6.136.6 CRUDN behaviour

27849 Table 276 defines the CRUDN operations that are supported on the "oic.r.heartrate" Resource
 27850 Type.

27851 **Table 276 – The CRUDN operations of the Resource with type "rt" = "oic.r.heartrate".**

Create	Read	Update	Delete	Notify
	get			observe

27852 6.137 Heart Rate Monitor Atomic Measurement Representation

27853 6.137.1 Introduction

27854 This Resource describes the Properties associated with Heart Rate Monitor.
 27855 The Resource is an Atomic Measurement of heart rate ("oic.r.heartrate"), observed time
 27856 ("oic.r.time.stamp"), and user ID ("oic.r.userid").

27857 6.137.2 Example URI

27858 /HeartRateMonitorAMResURI

27859 6.137.3 Resource type

27860 The Resource Type is defined as: "oic.r.heartratemonitor-am, oic.wk.atomicmeasurement".

27861 6.137.4 OpenAPI 2.0 definition

```

27862 {
27863     "swagger": "2.0",
27864     "info": {
27865         "title": "Heart Rate Monitor Atomic Measurement Representation",
27866         "version": "2019-03-04",

```

```

27867     "license": {
27868         "name": "OCF Data Model License",
27869         "url":
27870 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
27871 CENSE.md",
27872         "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
27873     },
27874     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
27875 },
27876     "schemas": [
27877         "http"
27878     ],
27879     "consumes": [
27880         "application/json"
27881     ],
27882     "produces": [
27883         "application/json"
27884     ],
27885     "paths": {
27886         "/HeartRateMonitorAMResURI?if=oic.if.b": {
27887             "get": {
27888                 "description": "This Resource describes the Properties associated with Heart Rate Monitor.\n
27889 The Resource is an Atomic Measurement of heart rate (\\"oic.r.heartrate\\"), observed time
27890 (\\"oic.r.time.stamp\\"), and user ID (\\"oic.r.userid\\").",
27891                 "parameters": [
27892                     {
27893                         "$ref": "#/parameters/interface-all"
27894                     }
27895                 ],
27896                 "responses": {
27897                     "200": {
27898                         "description": "",
27899                         "x-example": [
27900                             {
27901                                 "href": "/myHeartrate",
27902                                 "rep": {
27903                                     "heartrate": 80
27904                                 }
27905                             },
27906                             {
27907                                 "href": "/myUserId",
27908                                 "rep": {
27909                                     "userid": "USER1"
27910                                 }
27911                             },
27912                             {
27913                                 "href": "/myTimeStamp",
27914                                 "rep": {
27915                                     "timestamp": "2018-11-09T12:15:00+08:00"
27916                                 }
27917                             }
27918                         ],
27919                         "schema": {
27920                             "$ref": "#/definitions/batch-retrieve"
27921                         }
27922                     }
27923                 }
27924             },
27925             "/HeartRateMonitorAMResURI?if=oic.if.ll": {
27926                 "get": {
27927                     "description": "This Resource describes the Properties associated with Heart Rate Monitor.\n
27928 The Resource is an Atomic Measurement of heart rate (\\"oic.r.heartrate\\"), observed time
27929 (\\"oic.r.time.stamp\\"), and user ID (\\"oic.r.userid\\").",
27930                     "parameters": [
27931                         {
27932                             "$ref": "#/parameters/interface-all"
27933                         }
27934                     ],
27935                     "responses": {
27936                         "200": {
27937                             "description": "",

```

```

27939         "x-example": [
27940             {
27941                 "href": "/myHeartrate",
27942                 "rt": [
27943                     "oic.r.heartrate"
27944                 ],
27945                 "if": [
27946                     "oic.if.s",
27947                     "oic.if.baseline"
27948                 ]
27949             },
27950             {
27951                 "href": "/myUserId",
27952                 "rt": [
27953                     "oic.r.userid"
27954                 ],
27955                 "if": [
27956                     "oic.if.r",
27957                     "oic.if.baseline"
27958                 ]
27959             },
27960             {
27961                 "href": "/myTimeStamp",
27962                 "rt": [
27963                     "oic.r.time.stamp"
27964                 ],
27965                 "if": [
27966                     "oic.if.r",
27967                     "oic.if.baseline"
27968                 ]
27969             }
27970         ],
27971         "schema": {
27972             "$ref": "#/definitions/links"
27973         }
27974     }
27975 }
27976 },
27977 "/HeartRateMonitorAMResURI?if=oic.if.baseline": {
27978     "get": {
27979         "description": "This Resource describes the Properties associated with Heart Rate Monitor.\n
27980 The Resource is an Atomic Measurement of heart rate (\\"oic.r.heartrate\\"), observed time
27981 (\\"oic.r.time.stamp\\"), and user ID (\\"oic.r.userid\\").",
27982         "parameters": [
27983             {
27984                 "$ref": "#/parameters/interface-all"
27985             }
27986         ],
27987         "responses": {
27988             "200": {
27989                 "description": "",
27990                 "x-example": {
27991                     "rt": [
27992                         "oic.r.heartratemonitor-am",
27993                         "oic.wk.atomicmeasurement"
27994                     ],
27995                     "if": [
27996                         "oic.if.b",
27997                         "oic.if.ll",
28000                         "oic.if.baseline"
28001                     ],
28002                     "rts-m": [
28003                         "oic.r.heartrate"
28004                     ],
28005                     "rts": [
28006                         "oic.r.heartrate",
28007                         "oic.r.userid",
28008                         "oic.r.time.stamp"
28009                     ],
28010                     "links": [

```

```

28011         {
28012             "href": "/myHeartRateMonitor",
28013             "rt": [
28014                 "oic.r.heartrate"
28015             ],
28016             "if": [
28017                 "oic.if.s",
28018                 "oic.if.baseline"
28019             ]
28020         },
28021         {
28022             "href": "/myUserId",
28023             "rt": [
28024                 "oic.r.userid"
28025             ],
28026             "if": [
28027                 "oic.if.r",
28028                 "oic.if.baseline"
28029             ]
28030         },
28031         {
28032             "href": "/myTimeStamp",
28033             "rt": [
28034                 "oic.r.time.stamp"
28035             ],
28036             "if": [
28037                 "oic.if.r",
28038                 "oic.if.baseline"
28039             ]
28040         }
28041     ]
28042 }
28043
28044     "schema": {
28045         "$ref": "#/definitions/baseline"
28046     }
28047 }
28048 }
28049 }
28050 }
28051 },
28052 "parameters": {
28053     "interface-all": {
28054         "in": "query",
28055         "name": "if",
28056         "type": "string",
28057         "enum": [
28058             "oic.if.b",
28059             "oic.if.ll",
28060             "oic.if.baseline"
28061         ]
28062     }
28063 },
28064 "definitions": {
28065     "batch-retrieve": {
28066         "title": "Collection Batch Retrieve Format",
28067         "minItems": 1,
28068         "items": {
28069             "properties": {
28070                 "href": {
28071                     "$ref":
28072 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28073 schema.json#/definitions/href"
28074                 },
28075                 "rep": {
28076                     "type": "object",
28077                     "anyOf": [
28078                         {
28079                             "$ref":
28080 "https://openconnectivityfoundation.github.io/IoTDataModels/HeartRate.swagger.json#/definitions/Hear
28081 tRate"
28082                         },

```

```

28083         {
28084             "$ref":
28085             "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/U
28086             serID"
28087         },
28088         {
28089             "$ref":
28090             "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definition
28091             s/TimeStamp"
28092         }
28093     ]
28094 }
28095 },
28096 "required": [
28097     "href",
28098     "rep"
28099 ],
28100 "type": "object"
28101 },
28102 "type": "array"
28103 },
28104 "links": {
28105     "type": "array",
28106     "items": {
28107         "$ref": "#/definitions/oic.oic-link"
28108     }
28109 },
28110 "baseline": {
28111     "properties": {
28112         "rt": {
28113             "items": {
28114                 "enum": [
28115                     "oic.r.heartratemonitor-am",
28116                     "oic.wk.atomicmeasurement"
28117                 ]
28118             },
28119             "minItems": 2,
28120             "type": "array",
28121             "uniqueItems": true,
28122             "readOnly": true
28123         },
28124         "links": {
28125             "$ref": "#/definitions/links"
28126         },
28127         "n": {
28128             "$ref":
28129             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
28130             schema.json#/definitions/n"
28131         },
28132         "rts": {
28133             "description": "This Property contains all possible Resource Types for this Atomic
28134             Measurement.",
28135             "items": {
28136                 "enum": [
28137                     "oic.r.heartrate",
28138                     "oic.r.userid",
28139                     "oic.r.time.stamp"
28140                 ]
28141             },
28142             "minItems": 1,
28143             "type": "array",
28144             "uniqueItems": true,
28145             "readOnly": true
28146         },
28147         "rts-m": {
28148             "description": "This Property contains all mandatory Resource Types for this Atomic
28149             Measurement.",
28150             "items": {
28151                 "enum": [
28152                     "oic.r.heartrate"
28153                 ]
28154             },

```

```

28155         "maxItems": 1,
28156         "minItems": 1,
28157         "type": "array",
28158         "readOnly": true,
28159         "uniqueItems": true
28160     },
28161     "if": {
28162         "description": "The OCF Interface set supported by this Resource.",
28163         "items": {
28164             "enum": [
28165                 "oic.if.b",
28166                 "oic.if.ll",
28167                 "oic.if.baseline"
28168             ],
28169             "type": "string"
28170         },
28171         "minItems": 1,
28172         "uniqueItems": true,
28173         "readOnly": true,
28174         "type": "array"
28175     }
28176 },
28177 "type": "object",
28178 "required": [
28179     "rts-m"
28180 ],
28181 },
28182 "oic.oic-link": {
28183     "properties": {
28184         "anchor": {
28185             "$ref":
28186 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28187 schema.json#/definitions/anchor"
28188         },
28189         "di": {
28190             "$ref":
28191 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28192 schema.json#/definitions/di"
28193         },
28194         "eps": {
28195             "$ref":
28196 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28197 schema.json#/definitions/eps"
28198         },
28199         "href": {
28200             "$ref":
28201 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28202 schema.json#/definitions/href"
28203         },
28204         "if": {
28205             "description": "The OCF Interface set supported by this Resource.",
28206             "items": {
28207                 "enum": [
28208                     "oic.if.baseline",
28209                     "oic.if.s",
28210                     "oic.if.r"
28211                 ],
28212                 "type": "string"
28213             },
28214             "minItems": 1,
28215             "uniqueItems": true,
28216             "readOnly": true,
28217             "type": "array"
28218         },
28219         "ins": {
28220             "$ref":
28221 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28222 schema.json#/definitions/ins"
28223         },
28224         "p": {
28225             "$ref":
28226 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-

```

```

28227 schema.json#/definitions/p"
28228     },
28229     "rel": {
28230         "$ref":
28231         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28232         schema.json#/definitions/rel_array"
28233     },
28234     "rt": {
28235         "description": "The Resource Type.",
28236         "items": {
28237             "enum": [
28238                 "oic.r.heartrate",
28239                 "oic.r.time.stamp",
28240                 "oic.r.userid"
28241             ],
28242             "type": "string"
28243         },
28244         "minItems": 1,
28245         "uniqueItems": true,
28246         "readOnly": true,
28247         "type": "array"
28248     },
28249     "title": {
28250         "$ref":
28251         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28252         schema.json#/definitions/title"
28253     },
28254     "type": {
28255         "$ref":
28256         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28257         schema.json#/definitions/type"
28258     }
28259 },
28260 "required": [
28261     "href",
28262     "rt",
28263     "if"
28264 ],
28265 "type": "object"
28266 }
28267 }
28268 }

```

28269 6.137.5 Property definition

28270 Table 277 defines the Properties that are part of the "oic.r.heartratemonitor-am,
28271 oic.wk.atomicmeasurement" Resource Type.

28272 **Table 277 – The Property definitions of the Resource with type "rt" =**
28273 **"oic.r.heartratemonitor-am, oic.wk.atomicmeasurement".**

Property name	Value type	Mandatory	Access mode	Description
href	multiple types: see schema	Yes	Read Write	
rep	object: see schema	Yes	Read Write	
rt	array: see schema	No	Read Only	
links	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
rts	array: see schema	No	Read Only	This Property contains all possible Resource Types for this Atomic Measurement.

rts-m	array: see schema	Yes	Read Only	This Property contains all mandatory Resource Types for this Atomic Measurement.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
if	array: see schema	Yes	Read Only	The OCF Interface set supported by this Resource.
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
rt	array: see schema	Yes	Read Only	The Resource Type.
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	

28274 6.137.6 CRUDN behaviour

28275 Table 278 defines the CRUDN operations that are supported on the "oic.r.heartratemonitor-am,
28276 oic.wk.atomicmeasurement" Resource Type.

28277 **Table 278 – The CRUDN operations of the Resource with type "rt" =**
28278 **"oic.r.heartratemonitor-am, oic.wk.atomicmeasurement".**

Create	Read	Update	Delete	Notify
	get			observe

28279 6.138 Pulsatile Characteristic for Pulse Oximeter

28280 6.138.1 Introduction

28281 This Resource describes the Properties associated with a pulsatile characteristic of the pulsative
28282 wave of a Pulse Oximeter.

28283 The characteristic Property is a read-only value that is provided by the server.

28284 When range (from "oic.r.baseresource") is omitted the default is 0 to +MAXFLOAT.

28285 6.138.2 Example URI

28286 /PulsatileCharacteristicResURI

28287 6.138.3 Resource type

28288 The Resource Type is defined as: "oic.r.pulsatilecharacteristic".

6.138.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Pulsatile Characteristic for Pulse Oximeter",
    "version": "2019-03-04",
    "license": {
      "name": "OCF Data Model License",
      "url":
        "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
        CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/PulsatileCharacteristicResURI": {
      "get": {
        "description": "This Resource describes the Properties associated with a pulsatile
characteristic of the pulsative wave of a Pulse Oximeter.\n The characteristic Property is a read-
only value that is provided by the server.\n When range (from \"oic.r.baseresource\") is omitted the
default is 0 to +MAXFLOAT.",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": [
                "oic.r.pulsatilecharacteristic"
              ],
              "characteristic": 1
            },
            "schema": {
              "$ref": "#/definitions/pulsatilecharacteristic"
            }
          }
        }
      }
    }
  },
  "parameters": {
    "interface": {
      "in": "query",
      "name": "if",
      "type": "string",
      "enum": [
        "oic.if.s",
        "oic.if.baseline"
      ]
    }
  },
  "definitions": {
    "pulsatilecharacteristic": {
      "properties": {
        "characteristic": {
          "description": "This Property describes the current pulsatile characteristic measurement.
The value is an integer bit mapped value. The following describes what each integer means. 0 -
Quality of the detected pulse is nominal, in that there are no recognized abnormalities in the
```

```

28360 detected pulse. 1 - Perfusion or quality of the detected pulse is marginal. 2 - Perfusion or quality
28361 of the detected pulse is minimal. 3 - Perfusion or quality of the detected pulse is unacceptable.",
28362     "type": "integer",
28363     "minimum": 0,
28364     "maximum": 3,
28365     "readOnly": true
28366 },
28367 "rt": {
28368     "description": "The Resource Type.",
28369     "items": {
28370         "enum": [
28371             "oic.r.pulsatilecharacteristic"
28372         ],
28373         "type": "string"
28374     },
28375     "minItems": 1,
28376     "uniqueItems": true,
28377     "readOnly": true,
28378     "type": "array"
28379 },
28380 "n": {
28381     "$ref":
28382     "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
28383     schema.json#/definitions/n"
28384 },
28385 "if": {
28386     "description": "The OCF Interface set supported by this Resource.",
28387     "items": {
28388         "enum": [
28389             "oic.if.s",
28390             "oic.if.baseline"
28391         ],
28392         "type": "string"
28393     },
28394     "minItems": 1,
28395     "uniqueItems": true,
28396     "readOnly": true,
28397     "type": "array"
28398 },
28399 "range": {
28400     "$ref":
28401     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
28402     schema.json#/definitions/range_integer"
28403 },
28404 "step": {
28405     "$ref":
28406     "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
28407     schema.json#/definitions/step_integer"
28408 }
28409 },
28410 "type": "object",
28411 "required": [
28412     "characteristic"
28413 ]
28414 }
28415 }
28416 }

```

28417 6.138.5 Property definition

28418 Table 279 defines the Properties that are part of the "oic.r.pulsatilecharacteristic" Resource Type.

28419 **Table 279 – The Property definitions of the Resource with type "rt" =**
28420 **"oic.r.pulsatilecharacteristic".**

Property name	Value type	Mandatory	Access mode	Description
characteristic	integer	Yes	Read Only	This Property describes the current pulsatile characteristic measurement. The

				value is an integer bit mapped value. The following describes what each integer means. 0 - Quality of the detected pulse is nominal, in that there are no recognized abnormalities in the detected pulse. 1 - Perfusion or quality of the detected pulse is marginal. 2 - Perfusion or quality of the detected pulse is minimal. 3 - Perfusion or quality of the detected pulse is unacceptable.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	

6.138.6 CRUDN behaviour

Table 280 defines the CRUDN operations that are supported on the "oic.r.pulsatilecharacteristic" Resource Type.

Table 280 – The CRUDN operations of the Resource with type "rt" = "oic.r.pulsatilecharacteristic".

Create	Read	Update	Delete	Notify
	get			observe

6.139 Pulsatile Occurrence for Pulse Oximeter

6.139.1 Introduction

This Resource describes the Properties associated with a Pulsatile Occurrence detected by a Pulse Oximeter.

The occurrence Property is a read-only value that is provided by the server.

When range (from "oic.r.baseresource") is omitted the default is 0 to +MAXFLOAT.

6.139.2 Example URI

/PulsatileOccurrenceResURI

6.139.3 Resource type

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

6.139.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
```

```

28440     "title": "Pulsatile Occurrence for Pulse Oximeter",
28441     "version": "2019-03-04",
28442     "license": {
28443         "name": "OCF Data Model License",
28444         "url":
28445 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
28446 CENSE.md",
28447         "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
28448     },
28449     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
28450 },
28451     "schemes": [
28452         "http"
28453     ],
28454     "consumes": [
28455         "application/json"
28456     ],
28457     "produces": [
28458         "application/json"
28459     ],
28460     "paths": {
28461         "/PulsatileOccurrenceResURI": {
28462             "get": {
28463                 "description": "This Resource describes the Properties associated with a Pulsatile
28464 Occurrence detected by a Pulse Oximeter.\n The occurrence Property is a read-only value that is
28465 provided by the server.\n When range (from \"oic.r.baseresource\") is omitted the default is 0 to
28466 +MAXFLOAT.",
28467                 "parameters": [
28468                     {
28469                         "$ref": "#/parameters/interface"
28470                     }
28471                 ],
28472                 "responses": {
28473                     "200": {
28474                         "description": "",
28475                         "x-example": {
28476                             "rt": [
28477                                 "oic.r.pulsatileoccurrence"
28478                             ],
28479                             "occurrence": "BEAT"
28480                         },
28481                         "schema": {
28482                             "$ref": "#/definitions/pulsatileoccurrence"
28483                         }
28484                     }
28485                 }
28486             }
28487         }
28488     },
28489     "parameters": {
28490         "interface": {
28491             "in": "query",
28492             "name": "if",
28493             "type": "string",
28494             "enum": [
28495                 "oic.if.s",
28496                 "oic.if.baseline"
28497             ]
28498         }
28499     },
28500     "definitions": {
28501         "pulsatileoccurrence": {
28502             "properties": {
28503                 "occurrence": {
28504                     "type": "string",
28505                     "readOnly": true,
28506                     "enum": [
28507                         "BEAT",
28508                         "BEAT_MAX_INRUSH",
28509                         "NOS"
28510                     ]
28511                 },

```

```

28512 Oximeter. BEAT - Pulsatile occurrence has occurred. BEAT_MAX_INRUSH - Maximal inrush of the
28513 pulsatile wave has occurred. NOS - No pulsatile event occurred.",
28514     "default": "NOS"
28515 },
28516     "rt": {
28517         "description": "The Resource Type.",
28518         "items": {
28519             "enum": [
28520                 "oic.r.pulsatileoccurrence"
28521             ],
28522             "type": "string"
28523         },
28524         "minItems": 1,
28525         "uniqueItems": true,
28526         "readOnly": true,
28527         "type": "array"
28528     },
28529     "n": {
28530         "$ref":
28531         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
28532         schema.json#/definitions/n"
28533     },
28534     "if": {
28535         "description": "The OCF Interface set supported by this Resource.",
28536         "items": {
28537             "enum": [
28538                 "oic.if.s",
28539                 "oic.if.baseline"
28540             ],
28541             "type": "string"
28542         },
28543         "minItems": 1,
28544         "uniqueItems": true,
28545         "readOnly": true,
28546         "type": "array"
28547     }
28548 },
28549 "type": "object",
28550 "required": [
28551     "occurrence"
28552 ]
28553 }
28554 }
28555 }

```

6.139.5 Property definition

Table 281 defines the Properties that are part of the "oic.r.pulsatileoccurrence" Resource Type.

Table 281 – The Property definitions of the Resource with type "rt" = "oic.r.pulsatileoccurrence".

Property name	Value type	Mandatory	Access mode	Description
occurrence	string	Yes	Read Only	This Property describes the Pulsatile Occurrence detected by a Pulse Oximeter. BEAT - Pulsatile occurrence has occurred. BEAT_MAX_INRUSH - Maximal inrush of the pulsatile wave has occurred. NOS - No pulsatile event occurred.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	

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

6.139.6 CRUDN behaviour

Table 282 defines the CRUDN operations that are supported on the "oic.r.pulsatileoccurrence" Resource Type.

Table 282 – The CRUDN operations of the Resource with type "rt" = "oic.r.pulsatileoccurrence".

Create	Read	Update	Delete	Notify
	get			observe

6.140 Pulse Oximeter Atomic Measurement Representation

6.140.1 Introduction

This Resource describes the Properties associated with Pulse Oximeter. The Resource is an Atomic Measurement of SpO2 ("oic.r.spo2"), pulse rate ("oic.r.pulserate"), pulsatile characteristic ("oic.r.pulsatilecharacteristic"), pulsatileoccurrence ("oic.r.pulsatileoccurrence"), observed time ("oic.r.time.stamp"), and user ID ("oic.r.userid").

6.140.2 Example URI

/PulseOximeterAMResURI

6.140.3 Resource type

The Resource Type is defined as: "oic.r.pulseoximeter-am, oic.wk.atomicmeasurement".

6.140.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Pulse Oximeter Atomic Measurement Representation",
    "version": "2019-03-04",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/PulseOximeterAMResURI?if=oic.if.b": {
      "get": {
        "description": "This Resource describes the Properties associated with Pulse Oximeter.\n The
Resource is an Atomic Measurement of SpO2 (\\"oic.r.spo2\\"), pulse rate (\\"oic.r.pulserate\\"),
pulsatile characteristic (\\"oic.r.pulsatilecharacteristic\\"), pulsatileoccurrence
(\\"oic.r.pulsatileoccurrence\\"), observed time (\\"oic.r.time.stamp\\"), and user ID
(\\"oic.r.userid\\").",
        "parameters": [
          {
            "$ref": "#/parameters/interface-all"
          }
        ]
      }
    }
  }
}
```

```

28611 ],
28612 "responses": {
28613   "200": {
28614     "description": "",
28615     "x-example": [
28616       {
28617         "href": "/mySpO2",
28618         "rep": {
28619           "spo2": 99.0,
28620           "perfusion": 20.0
28621         }
28622       },
28623       {
28624         "href": "/myPulseRate",
28625         "rep": {
28626           "pulserate": 80
28627         }
28628       },
28629       {
28630         "href": "/myPulsatileOccurrence",
28631         "rep": {
28632           "occurrence": "BEAT"
28633         }
28634       },
28635       {
28636         "href": "/myPulsatileCharacteristic",
28637         "rep": {
28638           "characteristic": 1
28639         }
28640       },
28641       {
28642         "href": "/myUserId",
28643         "rep": {
28644           "userid": "USER1"
28645         }
28646       },
28647       {
28648         "href": "/myTimeStamp",
28649         "rep": {
28650           "timestamp": "2018-11-09T12:15:00+08:00"
28651         }
28652       }
28653     ],
28654     "schema": {
28655       "$ref": "#/definitions/batch-retrieve"
28656     }
28657   }
28658 },
28659 ],
28660 ],
28661 "/PulseOximeterAMResURI?if=oic.if.ll": {
28662   "get": {
28663     "description": "This Resource describes the Properties associated with Pulse Oximeter.\n The
28664 Resource is an Atomic Measurement of SpO2 (\\"oic.r.spo2\\"), pulse rate (\\"oic.r.pulserate\\"),
28665 pulsatile characteristic (\\"oic.r.pulsatilecharacteristic\\"), pulsatileoccurrence
28666 (\\"oic.r.pulsatileoccurrence\\"), observed time (\\"oic.r.time.stamp\\"), and user ID
28667 (\\"oic.r.userid\\").",
28668     "parameters": [
28669       {
28670         "$ref": "#/parameters/interface-all"
28671       }
28672     ],
28673     "responses": {
28674       "200": {
28675         "description": "",
28676         "x-example": [
28677           {
28678             "href": "/mySpO2",
28679             "rt": [
28680               "oic.r.spo2"
28681             ],
28682             "if": [

```

```

28683         "oic.if.s",
28684         "oic.if.baseline"
28685     ],
28686 },
28687 {
28688     "href": "/myPulseRate",
28689     "rt": [
28690         "oic.r.pulserate"
28691     ],
28692     "if": [
28693         "oic.if.s",
28694         "oic.if.baseline"
28695     ]
28696 },
28697 {
28698     "href": "/myPulsatileOccurrence",
28699     "rt": [
28700         "oic.r.pulsatileoccurrence"
28701     ],
28702     "if": [
28703         "oic.if.s",
28704         "oic.if.baseline"
28705     ]
28706 },
28707 {
28708     "href": "/myPulsatileCharacteristic",
28709     "rt": [
28710         "oic.r.pulsatilecharacteristic"
28711     ],
28712     "if": [
28713         "oic.if.s",
28714         "oic.if.baseline"
28715     ]
28716 },
28717 {
28718     "href": "/myUserId",
28719     "rt": [
28720         "oic.r.userid"
28721     ],
28722     "if": [
28723         "oic.if.r",
28724         "oic.if.baseline"
28725     ]
28726 },
28727 {
28728     "href": "/myTimeStamp",
28729     "rt": [
28730         "oic.r.time.stamp"
28731     ],
28732     "if": [
28733         "oic.if.r",
28734         "oic.if.baseline"
28735     ]
28736 }
28737 ],
28738 "schema": {
28739     "$ref": "#/definitions/links"
28740 }
28741 }
28742 }
28743 }
28744 },
28745 "/PulseOximeterAMResURI?if=oic.if.baseline": {
28746     "get": {
28747         "description": "This Resource describes the Properties associated with Pulse Oximeter.\n The
28748 Resource is an Atomic Measurement of SpO2 (\\"oic.r.spo2\\"), pulse rate (\\"oic.r.pulserate\\"),
28749 pulsatile characteristic (\\"oic.r.pulsatilecharacteristic\\"), pulsatileoccurrence
28750 (\\"oic.r.pulsatileoccurrence\\"), observed time (\\"oic.r.time.stamp\\"), and user ID
28751 (\\"oic.r.userid\\").",
28752         "parameters": [
28753             {
28754                 "$ref": "#/parameters/interface-all"

```



```

28755     }
28756 ],
28757 "responses": {
28758     "200": {
28759         "description": "",
28760         "x-example":
28761             {
28762                 "rt": [
28763                     "oic.r.pulseoximeter-am",
28764                     "oic.wk.atomicmeasurement"
28765                 ],
28766                 "if": [
28767                     "oic.if.b",
28768                     "oic.if.ll",
28769                     "oic.if.baseline"
28770                 ],
28771                 "rts-m": [
28772                     "oic.r.spo2",
28773                     "oic.r.pulserate"
28774                 ],
28775                 "rts": [
28776                     "oic.r.spo2",
28777                     "oic.r.pulserate",
28778                     "oic.r.pulsatileoccurrence",
28779                     "oic.r.pulsatilecharacteristic",
28780                     "oic.r.userid",
28781                     "oic.r.time.stamp"
28782                 ],
28783                 "links": [
28784                     {
28785                         "href": "/mySpO2",
28786                         "rt": [
28787                             "oic.r.spo2"
28788                         ],
28789                         "if": [
28790                             "oic.if.s",
28791                             "oic.if.baseline"
28792                         ]
28793                     },
28794                     {
28795                         "href": "/myPulseRate",
28796                         "rt": [
28797                             "oic.r.pulserate"
28798                         ],
28799                         "if": [
28800                             "oic.if.s",
28801                             "oic.if.baseline"
28802                         ]
28803                     },
28804                     {
28805                         "href": "/myPulsatileOccurrence",
28806                         "rt": [
28807                             "oic.r.pulsatileoccurrence"
28808                         ],
28809                         "if": [
28810                             "oic.if.s",
28811                             "oic.if.baseline"
28812                         ]
28813                     },
28814                     {
28815                         "href": "/myPulsatileCharacteristic",
28816                         "rt": [
28817                             "oic.r.pulsatilecharacteristic"
28818                         ],
28819                         "if": [
28820                             "oic.if.s",
28821                             "oic.if.baseline"
28822                         ]
28823                     },
28824                     {
28825                         "href": "/myUserId",
28826                         "rt": [

```

```

28827         "oic.r.userid"
28828     ],
28829     "if": [
28830         "oic.if.r",
28831         "oic.if.baseline"
28832     ]
28833 },
28834 {
28835     "href": "/myTimeStamp",
28836     "rt": [
28837         "oic.r.time.stamp"
28838     ],
28839     "if": [
28840         "oic.if.r",
28841         "oic.if.baseline"
28842     ]
28843 }
28844 ]
28845 },
28846 "schema": {
28847     "$ref": "#/definitions/baseline"
28848 }
28849 }
28850 }
28851 }
28852 },
28853 {
28854     "parameters": {
28855         "interface-all": {
28856             "in": "query",
28857             "name": "if",
28858             "type": "string",
28859             "enum": [
28860                 "oic.if.b",
28861                 "oic.if.ll",
28862                 "oic.if.baseline"
28863             ]
28864         }
28865     },
28866     "definitions": {
28867         "batch-retrieve": {
28868             "title": "Collection Batch Retrieve Format",
28869             "minItems": 1,
28870             "items": {
28871                 "additionalProperties": true,
28872                 "properties": {
28873                     "href": {
28874                         "$ref":
28875 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
28876 schema.json#/definitions/href"
28877                     },
28878                     "rep": {
28879                         "type": "object",
28880                         "anyOf": [
28881                             {
28882                                 "$ref":
28883 "https://openconnectivityfoundation.github.io/IoTDataModels/SpO2.swagger.json#/definitions/SpO2"
28884                             },
28885                             {
28886                                 "$ref":
28887 "https://openconnectivityfoundation.github.io/IoTDataModels/PulseRateResURI.swagger.json#/definition
28888 s/PulseRate"
28889                             },
28890                             {
28891                                 "$ref":
28892 "https://openconnectivityfoundation.github.io/IoTDataModels/PulsatileCharacteristic.swagger.json#/de
28893 finitions/pulsatilecharacteristic"
28894                             },
28895                             {
28896                                 "$ref":
28897 "https://openconnectivityfoundation.github.io/IoTDataModels/PulsatileOccurrence.swagger.json#/defini
28898 tions/pulsatileoccurrence"

```

```

28899         },
28900         {
28901             "$ref":
28902 "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/U
28903 serID"
28904         },
28905         {
28906             "$ref":
28907 "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definition
28908 s/TimeStamp"
28909         }
28910     ]
28911 },
28912 },
28913 "required": [
28914     "href",
28915     "rep"
28916 ],
28917 "type": "object"
28918 },
28919 "type": "array"
28920 },
28921 "links": {
28922     "type": "array",
28923     "items": {
28924         "$ref": "#/definitions/oic.oic-link"
28925     }
28926 },
28927 "baseline": {
28928     "properties": {
28929         "rt": {
28930             "items": {
28931                 "enum": [
28932                     "oic.r.pulseoximeter-am",
28933                     "oic.wk.atomicmeasurement"
28934                 ]
28935             },
28936             "minItems": 2,
28937             "type": "array",
28938             "uniqueItems": true,
28939             "readOnly": true
28940         },
28941         "links": {
28942             "$ref": "#/definitions/links"
28943         },
28944         "n": {
28945             "$ref":
28946 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
28947 schema.json#/definitions/n"
28948         },
28949         "rts": {
28950             "description": "This Property contains all possible Resource Types for this Atomic
28951 Measurement.",
28952             "items": {
28953                 "enum": [
28954                     "oic.r.spo2",
28955                     "oic.r.pulserate",
28956                     "oic.r.pulsatilecharacteristic",
28957                     "oic.r.pulsatileoccurrence",
28958                     "oic.r.time.stamp",
28959                     "oic.r.userid"
28960                 ]
28961             },
28962             "minItems": 1,
28963             "type": "array",
28964             "uniqueItems": true
28965         },
28966         "rts-m": {
28967             "description": "This Property contains all mandatory Resource Types for this Atomic
28968 Measurement.",
28969             "items": {
28970                 "enum": [

```

```

28971         "oic.r.spo2",
28972         "oic.r.pulserate"
28973     ]
28974 },
28975     "maxItems": 2,
28976     "minItems": 2,
28977     "type": "array",
28978     "readOnly": true,
28979     "uniqueItems": true
28980 },
28981     "if": {
28982         "description": "The OCF Interface set supported by this Resource.",
28983         "items": {
28984             "enum": [
28985                 "oic.if.b",
28986                 "oic.if.ll",
28987                 "oic.if.baseline"
28988             ],
28989             "type": "string"
28990         },
28991         "minItems": 1,
28992         "uniqueItems": true,
28993         "readOnly": true,
28994         "type": "array"
28995     }
28996 },
28997     "type": "object",
28998     "required": [
28999         "rts-m"
29000     ]
29001 },
29002     "oic.oic-link": {
29003         "properties": {
29004             "anchor": {
29005                 "$ref":
29006 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29007 schema.json#/definitions/anchor"
29008             },
29009             "di": {
29010                 "$ref":
29011 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29012 schema.json#/definitions/di"
29013             },
29014             "eps": {
29015                 "$ref":
29016 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29017 schema.json#/definitions/eps"
29018             },
29019             "href": {
29020                 "$ref":
29021 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29022 schema.json#/definitions/href"
29023             },
29024             "if": {
29025                 "description": "The interface set supported by this resource",
29026                 "items": {
29027                     "enum": [
29028                         "oic.if.baseline",
29029                         "oic.if.s",
29030                         "oic.if.r"
29031                     ],
29032                     "type": "string"
29033                 },
29034                 "minItems": 1,
29035                 "type": "array"
29036             },
29037             "ins": {
29038                 "$ref":
29039 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29040 schema.json#/definitions/ins"
29041             },
29042             "p": {

```

```

29043         "$ref":
29044         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29045         schema.json#/definitions/p"
29046     },
29047     "rel": {
29048         "$ref":
29049         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29050         schema.json#/definitions/rel_array"
29051     },
29052     "rt": {
29053         "description": "The Resource Type.",
29054         "items": {
29055             "enum": [
29056                 "oic.r.spo2",
29057                 "oic.r.pulserate",
29058                 "oic.r.pulsatilecharacteristic",
29059                 "oic.r.pulsatileoccurrence",
29060                 "oic.r.time.stamp",
29061                 "oic.r.userid"
29062             ],
29063             "type": "string"
29064         },
29065         "minItems": 1,
29066         "uniqueItems": true,
29067         "readOnly": true,
29068         "type": "array"
29069     },
29070     "title": {
29071         "$ref":
29072         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29073         schema.json#/definitions/title"
29074     },
29075     "type": {
29076         "$ref":
29077         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29078         schema.json#/definitions/type"
29079     },
29080     },
29081     "required": [
29082         "href",
29083         "rt",
29084         "if"
29085     ],
29086     "type": "object"
29087 }
29088 }
29089 }

```

29090 6.140.5 Property definition

29091 Table 283 defines the Properties that are part of the "oic.r.pulseoximeter-am,
29092 oic.wk.atomicmeasurement" Resource Type.

29093 **Table 283 – The Property definitions of the Resource with type "rt" = "oic.r.pulseoximeter-
29094 am, oic.wk.atomicmeasurement".**

Property name	Value type	Mandatory	Access mode	Description
href	multiple types: see schema	Yes	Read Write	
rep	object: see schema	Yes	Read Write	
rt	array: see schema	No	Read Only	
links	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
rts	array: see schema	No	Read Write	This Property contains all possible

				Resource Types for this Atomic Measurement.
rts-m	array: see schema	Yes	Read Only	This Property contains all mandatory Resource Types for this Atomic Measurement.
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
if	array: see schema	Yes	Read Write	The interface set supported by this resource
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
rt	array: see schema	Yes	Read Only	The Resource Type.
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	

29095 6.140.6 CRUDN behaviour

29096 Table 284 defines the CRUDN operations that are supported on the "oic.r.pulseoximeter-am,
29097 oic.wk.atomicmeasurement" Resource Type.

Table 284 – The CRUDN operations of the Resource with type "rt" = "oic.r.pulseoximeter-am, oic.wk.atomicmeasurement".

Create	Read	Update	Delete	Notify
	get			observe

29100 6.141 Sleep

29101 6.141.1 Introduction

29102 This Resource describes the Properties associated with Sleep.

29103 Sleep shows the time spent in each of the sleep stages (awake, nrem1, nrem2, nrem3, nrem4,
29104 rem, light sleep, deep sleep), along with a sleep score indicating the quality of sleep.

29105 6.141.2 Example URI

29106 /SleepResURI

29107 6.141.3 Resource type

29108 The Resource Type is defined as: "oic.r.sleep".

29109 6.141.4 OpenAPI 2.0 definition

```
29110 {
29111   "swagger": "2.0",
29112   "info": {
29113     "title": "Sleep",
29114     "version": "2018-07-12",
29115     "license": {
29116       "name": "OCF Data Model License",
29117       "url":
29118         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
29119         CENSE.md",
29120       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
29121     },
29122     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
29123   },
29124   "schemes": [
29125     "http"
29126   ],
29127   "consumes": [
29128     "application/json"
29129   ],
29130   "produces": [
29131     "application/json"
29132   ],
29133   "paths": {
29134     "/SleepResURI": {
29135       "get": {
29136         "description": "This Resource describes the Properties associated with Sleep.\nSleep shows
29137         the time spent in each of the sleep stages (awake, nrem1, nrem2, nrem3, nrem4, rem, light sleep,
29138         deep sleep), along with a sleep score indicating the quality of sleep.",
29139         "parameters": [
29140           {
29141             "$ref": "#/parameters/interface"
29142           }
29143         ],
29144         "responses": {
29145           "200": {
29146             "description": "Retrieves the sleep information.",
29147             "x-example": {
29148               "rt": [
29149                 "oic.r.sleep"
29150               ],
29151               "if": [
29152                 "oic.if.s",
29153                 "oic.if.baseline"
29154               ],
29155               "awake": 1440,
29156               "nrem1": 1440,
29157               "nrem2": 14400,
29158               "nrem3": 1440,
29159               "nrem4": 4320,
29160               "rem": 5760,
29161               "lightsleep": 15840,
29162               "deepsleep": 5760,
29163               "sleepscore": 70.0
29164             },
29165             "schema": {
29166               "$ref": "#/definitions/Sleep"
29167             }
29168           }
29169         }
29170       }
29171     }
29172   },
29173   "parameters": {
29174     "interface": {
29175       "in": "query",
```

```

29176         "name": "if",
29177         "type": "string",
29178         "enum": [
29179             "oic.if.s",
29180             "oic.if.baseline"
29181         ]
29182     },
29183 },
29184 "definitions": {
29185     "Sleep": {
29186         "properties": {
29187             "awake": {
29188                 "type": "integer",
29189                 "minimum": 0,
29190                 "readOnly": true,
29191                 "description": "Time spent in Awake stage (in seconds)"
29192             },
29193             "nrem1": {
29194                 "type": "integer",
29195                 "minimum": 0,
29196                 "readOnly": true,
29197                 "description": "Time spent in Non Rapid Eye Movement stage 1 (in seconds)"
29198             },
29199             "nrem2": {
29200                 "type": "integer",
29201                 "minimum": 0,
29202                 "readOnly": true,
29203                 "description": "Time spent in Non Rapid Eye Movement stage 2 (in seconds)"
29204             },
29205             "nrem3": {
29206                 "type": "integer",
29207                 "minimum": 0,
29208                 "readOnly": true,
29209                 "description": "Time spent in Non Rapid Eye Movement stage 3 (in seconds)"
29210             },
29211             "nrem4": {
29212                 "type": "integer",
29213                 "minimum": 0,
29214                 "readOnly": true,
29215                 "description": "Time spent in Non Rapid Eye Movement stage 4 (in seconds)"
29216             },
29217             "rem": {
29218                 "type": "integer",
29219                 "minimum": 0,
29220                 "readOnly": true,
29221                 "description": "Time spent in Rapid Eye Movement (in seconds)"
29222             },
29223             "lightsleep": {
29224                 "type": "integer",
29225                 "minimum": 0,
29226                 "readOnly": true,
29227                 "description": "Time spent in Light Sleep stage, consisting in NREM stages 1 and 2 (in
29228 seconds)"
29229             },
29230             "deepsleep": {
29231                 "type": "integer",
29232                 "minimum": 0,
29233                 "readOnly": true,
29234                 "description": "Time spent in Deep Sleep stage, consisting in NREM stages 3 and 4 (in
29235 seconds)"
29236             },
29237             "sleepscore": {
29238                 "type": "number",
29239                 "minimum": 0,
29240                 "readOnly": true,
29241                 "description": "Score computed from the time spent in each sleep stage, indicative of the
29242 quality of sleep"
29243             },
29244             "if": {
29245                 "description": "The Interface set supported by this Resource",
29246                 "type": "array",
29247                 "minItems": 1,

```



```

29248         "uniqueItems": true,
29249         "readOnly": true,
29250         "items": {
29251             "type": "string",
29252             "enum": [
29253                 "oic.if.s",
29254                 "oic.if.baseline"
29255             ]
29256         }
29257     },
29258     "rt": {
29259         "description": "Resource Type",
29260         "type": "array",
29261         "minItems": 1,
29262         "uniqueItems": true,
29263         "readOnly": true,
29264         "items": {
29265             "type": "string",
29266             "enum": [
29267                 "oic.r.sleep"
29268             ]
29269         }
29270     },
29271     "n": {
29272         "$ref":
29273         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
29274         schema.json#/definitions/n"
29275     },
29276     "range_phases": {
29277         "$ref":
29278         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
29279         schema.json#/definitions/range_integer"
29280     },
29281     "step_phases": {
29282         "$ref":
29283         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
29284         schema.json#/definitions/step_integer"
29285     },
29286     "range_score": {
29287         "$ref":
29288         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
29289         schema.json#/definitions/range_number"
29290     },
29291     "step_score": {
29292         "$ref":
29293         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
29294         schema.json#/definitions/step_number"
29295     },
29296     "precision": {
29297         "$ref":
29298         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
29299         schema.json#/definitions/precision"
29300     }
29301 },
29302 "type": "object",
29303 "required": [
29304     "awake",
29305     "nrem1",
29306     "nrem2",
29307     "nrem3",
29308     "rem"
29309 ]
29310 }
29311 }
29312 }

```

29313 6.141.5 Property definition

29314 Table 285 defines the Properties that are part of the "oic.r.sleep" Resource Type.

Table 285 – The Property definitions of the Resource with type "rt" = "oic.r.sleep".

Property name	Value type	Mandatory	Access mode	Description
awake	integer	Yes	Read Only	Time spent in Awake stage (in seconds)
nrem1	integer	Yes	Read Only	Time spent in Non Rapid Eye Movement stage 1 (in seconds)
nrem2	integer	Yes	Read Only	Time spent in Non Rapid Eye Movement stage 2 (in seconds)
nrem3	integer	Yes	Read Only	Time spent in Non Rapid Eye Movement stage 3 (in seconds)
nrem4	integer	No	Read Only	Time spent in Non Rapid Eye Movement stage 4 (in seconds)
rem	integer	Yes	Read Only	Time spent in Rapid Eye Movement (in seconds)
lightsleep	integer	No	Read Only	Time spent in Light Sleep stage, consisting in NREM stages 1 and 2 (in seconds)
deepsleep	integer	No	Read Only	Time spent in Deep Sleep stage, consisting in NREM stages 3 and 4 (in seconds)
sleepscore	number	No	Read Only	Score computed from the time spent in each sleep stage, indicative of the quality of sleep
if	array: see schema	No	Read Only	The Interface set supported by this Resource
rt	array: see schema	No	Read Only	Resource Type
n	multiple types: see schema	No	Read Write	
range_phases	multiple types: see schema	No	Read Write	
step_phases	multiple types: see schema	No	Read Write	
range_score	multiple types: see schema	No	Read Write	
step_score	multiple types: see schema	No	Read Write	
precision	multiple types: see schema	No	Read Write	

6.141.6 CRUDN behaviour

Table 286 defines the CRUDN operations that are supported on the "oic.r.sleep" Resource Type.

Table 286 – The CRUDN operations of the Resource with type "rt" = "oic.r.sleep".

Create	Read	Update	Delete	Notify
	get			observe

6.142 Sleep Monitor Atomic Measurement Batch Representation

6.142.1 Introduction

This Resource describes the Properties associated with Sleep Monitor.

The Resource is an Atomic Measurement of sleep (oic.r.sleep).

Sleep shows the time spent in each of the sleep stages (awake, nrem1, nrem2, nrem3, nrem4, rem, light sleep, deep sleep), along with a sleep score indicating the quality of sleep.

6.142.2 Example URI

/SleepMonitorAMResURI

6.142.3 Resource type

The Resource Type is defined as: "oic.r.sleepmonitor-am, oic.wk.atomicmeasurement".

6.142.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Sleep Monitor Atomic Measurement Batch Representation",
    "version": "2018-08-29",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/SleepMonitorAMResURI?if=oic.if.b": {
      "get": {
        "description": "This Resource describes the Properties associated with Sleep Monitor.\n\nThe
Resource is an Atomic Measurement of sleep (oic.r.sleep).\n\nSleep shows the time spent in each of the
sleep stages (awake, nrem1, nrem2, nrem3, nrem4, rem, light sleep, deep sleep), along with a sleep
score indicating the quality of sleep.",
        "parameters": [
          {
            "$ref": "#/parameters/interface-b"
          }
        ],
        "responses": {
          "200": {
            "description": "Retrieves the sleep monitor's information.",
            "x-example": [
              {
                "href": "/mySleepMonitor",
                "rep": {
```

```

29372         "awake": 1440,
29373         "nrem1": 1440,
29374         "nrem2": 14400,
29375         "nrem3": 1440,
29376         "nrem4": 4320,
29377         "rem": 5760,
29378         "lightsleep": 15840,
29379         "deepsleep": 5760,
29380         "sleepscore": 70.0
29381     }
29382 },
29383 {
29384     "href": "/myHeartRate",
29385     "rep": {
29386         "heartrate": 70
29387     }
29388 },
29389 {
29390     "href": "/myUserId",
29391     "rep": {
29392         "userid": "USER1"
29393     }
29394 },
29395 {
29396     "href": "/myTimeStamp",
29397     "rep": {
29398         "timestamp": "2018-11-08T21:00:00+08:00"
29399     }
29400 }
29401 ],
29402 "schema": {
29403     "$ref": "#/definitions/batch-retrieve"
29404 }
29405 }
29406 }
29407 }
29408 },
29409 "/SleepMonitorAMResURI?if=oic.if.ll": {
29410     "get": {
29411         "description": "This Resource describes the Properties associated with Sleep Monitor.\n\nThe
29412 Resource is an Atomic Measurement of sleep (oic.r.sleep).\n\nSleep shows the time spent in each of the
29413 sleep stages (awake, nrem1, nrem2, nrem3, nrem4, rem, light sleep, deep sleep), along with a sleep
29414 score indicating the quality of sleep.",
29415         "parameters": [
29416             {
29417                 "$ref": "#/parameters/interface-ll"
29418             }
29419         ],
29420         "responses": {
29421             "200": {
29422                 "description": "Retrieves the sleep monitor's information.",
29423                 "x-example": [
29424                     {
29425                         "href": "/mySleepMonitor",
29426                         "rt": [
29427                             "oic.r.sleep"
29428                         ],
29429                         "if": [
29430                             "oic.if.s",
29431                             "oic.if.baseline"
29432                         ]
29433                     },
29434                     {
29435                         "href": "/myHeartRate",
29436                         "rt": [
29437                             "oic.r.heartrate"
29438                         ],
29439                         "if": [
29440                             "oic.if.s",
29441                             "oic.if.baseline"
29442                         ]
29443                     }
29444                 ]
29445             }
29446         }
29447     }
29448 }

```

```

29444     {
29445         "href": "/myUserId",
29446         "rt": [
29447             "oic.r.userid"
29448         ],
29449         "if": [
29450             "oic.if.r",
29451             "oic.if.baseline"
29452         ]
29453     },
29454     {
29455         "href": "/myTimeStamp",
29456         "rt": [
29457             "oic.r.time.stamp"
29458         ],
29459         "if": [
29460             "oic.if.r",
29461             "oic.if.baseline"
29462         ]
29463     }
29464 ],
29465 "schema": {
29466     "$ref": "#/definitions/links"
29467 }
29468 }
29469 }
29470 }
29471 },
29472 "/SleepMonitorAMResURI?if=oic.if.baseline": {
29473     "get": {
29474         "description": "This Resource describes the Properties associated with Sleep Monitor.\n\nThe
29475 Resource is an Atomic Measurement of sleep (oic.r.sleep).\n\nSleep shows the time spent in each of the
29476 sleep stages (awake, nrem1, nrem2, nrem3, nrem4, rem, light sleep, deep sleep), along with a sleep
29477 score indicating the quality of sleep.",
29478         "parameters": [
29479             {
29480                 "$ref": "#/parameters/interface-baseline"
29481             }
29482         ],
29483         "responses": {
29484             "200": {
29485                 "description": "Retrieves the sleep monitor's information.",
29486                 "x-example": {
29487                     "rt": [
29488                         "oic.r.sleepmonitor-am",
29489                         "oic.wk.atomicmeasurement"
29490                     ],
29491                     "if": [
29492                         "oic.if.b",
29493                         "oic.if.ll",
29494                         "oic.if.baseline"
29495                     ],
29496                     "rts-m": [
29497                         "oic.r.sleep"
29498                     ],
29499                     "rts": [
29500                         "oic.r.sleep",
29501                         "oic.r.heartrate",
29502                         "oic.r.time.stamp",
29503                         "oic.r.userid"
29504                     ],
29505                     "links": [
29506                         {
29507                             "href": "/mySleepMonitor",
29508                             "rt": [
29509                                 "oic.r.sleep"
29510                             ],
29511                             "if": [
29512                                 "oic.if.s",
29513                                 "oic.if.baseline"
29514                             ]
29515                         }

```

```

29516         {
29517             "href": "/myHeartRate",
29518             "rt": [
29519                 "oic.r.heartrate"
29520             ],
29521             "if": [
29522                 "oic.if.s",
29523                 "oic.if.baseline"
29524             ]
29525         },
29526         {
29527             "href": "/myUserId",
29528             "rt": [
29529                 "oic.r.userid"
29530             ],
29531             "if": [
29532                 "oic.if.r",
29533                 "oic.if.baseline"
29534             ]
29535         },
29536         {
29537             "href": "/myTimeStamp",
29538             "rt": [
29539                 "oic.r.time.stamp"
29540             ],
29541             "if": [
29542                 "oic.if.r",
29543                 "oic.if.baseline"
29544             ]
29545         }
29546     ],
29547 },
29548 "schema": {
29549     "$ref": "#/definitions/baseline"
29550 },
29551 },
29552 },
29553 },
29554 },
29555 },
29556 "parameters": {
29557     "interface-ll": {
29558         "in": "query",
29559         "name": "if",
29560         "type": "string",
29561         "enum": [
29562             "oic.if.ll"
29563         ]
29564     },
29565     "interface-b": {
29566         "in": "query",
29567         "name": "if",
29568         "type": "string",
29569         "enum": [
29570             "oic.if.b"
29571         ]
29572     },
29573     "interface-baseline": {
29574         "in": "query",
29575         "name": "if",
29576         "type": "string",
29577         "enum": [
29578             "oic.if.baseline"
29579         ]
29580     },
29581     "interface-all": {
29582         "in": "query",
29583         "name": "if",
29584         "type": "string",
29585         "enum": [
29586             "oic.if.b",
29587             "oic.if.ll",

```

```

29588         "oic.if.baseline"
29589     ]
29590 }
29591 },
29592 "definitions": {
29593     "batch-retrieve": {
29594         "title": "Atomic Measurement Batch Retrieve Format",
29595         "minItems": 1,
29596         "uniqueItems": true,
29597         "readOnly": true,
29598         "items": {
29599             "properties": {
29600                 "href": {
29601                     "$ref":
29602 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29603 schema.json#/definitions/href"
29604                 },
29605                 "rep": {
29606                     "description": "The response payload from an Atomic Measurement (batch) resource",
29607                     "type": "object",
29608                     "items": {
29609                         "anyOf": [
29610                             {
29611                                 "$ref":
29612 "https://openconnectivityfoundation.github.io/IoTDataModels/Sleep.swagger.json#/definitions/Sleep"
29613                             },
29614                             {
29615                                 "$ref":
29616 "https://openconnectivityfoundation.github.io/IoTDataModels/HeartRate.swagger.json#/definitions/Hear
29617 tRate"
29618                             },
29619                             {
29620                                 "$ref":
29621 "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/U
29622 serID"
29623                             },
29624                             {
29625                                 "$ref":
29626 "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definition
29627 s/TimeStamp"
29628                             }
29629                         ]
29630                     }
29631                 }
29632             },
29633             "required": [
29634                 "href",
29635                 "rep"
29636             ],
29637             "type": "object"
29638         },
29639         "type": "array"
29640     },
29641     "links": {
29642         "type": "array",
29643         "items": {
29644             "$ref": "#/definitions/oic.oic-link"
29645         }
29646     },
29647     "baseline": {
29648         "properties": {
29649             "rt": {
29650                 "type": "array",
29651                 "readOnly": true,
29652                 "uniqueItems": true,
29653                 "minItems": 2,
29654                 "items": {
29655                     "type": "string",
29656                     "enum": [
29657                         "oic.r.sleepmonitor-am",
29658                         "oic.wk.atomicmeasurement"
29659                     ]

```

```

29660     }
29661   },
29662   "rts": {
29663     "description": "This contains all possible resource types for this atomic measurement.",
29664     "type": "array",
29665     "uniqueItems": true,
29666     "minItems": 1,
29667     "readOnly": true,
29668     "items": {
29669       "type": "string",
29670       "enum": [
29671         "oic.r.sleep",
29672         "oic.r.heartrate",
29673         "oic.r.userid",
29674         "oic.r.time.stamp"
29675       ]
29676     }
29677   },
29678   "rts-m": {
29679     "description": "This contains all mandatory resource types for this atomic measurement.",
29680     "type": "array",
29681     "uniqueItems": true,
29682     "minItems": 1,
29683     "maxItems": 1,
29684     "readOnly": true,
29685     "items": {
29686       "type": "string",
29687       "enum": [
29688         "oic.r.sleep"
29689       ]
29690     }
29691   },
29692   "if": {
29693     "description": "The interface set supported by this resource",
29694     "type": "array",
29695     "readOnly": true,
29696     "minItems": 3,
29697     "uniqueItems": true,
29698     "items": {
29699       "type": "string",
29700       "enum": [
29701         "oic.if.b",
29702         "oic.if.ll",
29703         "oic.if.baseline"
29704       ]
29705     }
29706   },
29707   "links": {
29708     "$ref": "#/definitions/links"
29709   },
29710   "n": {
29711     "$ref":
29712 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
29713 schema.json#/definitions/n"
29714   },
29715   },
29716   "type": "object",
29717   "required": [
29718     "rt",
29719     "if",
29720     "rts-m"
29721   ]
29722 },
29723 "oic.oic-link": {
29724   "properties": {
29725     "if": {
29726       "type": "array",
29727       "readOnly": true,
29728       "uniqueItems": true,
29729       "minItems": 1,
29730       "items": {
29731         "type": "string",

```



```

29732         "enum": [
29733             "oic.if.baseline",
29734             "oic.if.s",
29735             "oic.if.r"
29736         ]
29737     }
29738 },
29739     "rt": {
29740         "type": "array",
29741         "readOnly": true,
29742         "uniqueItems": true,
29743         "minItems": 1,
29744         "items": {
29745             "type": "string",
29746             "enum": [
29747                 "oic.r.sleep",
29748                 "oic.r.heartrate",
29749                 "oic.r.userid",
29750                 "oic.r.time.stamp"
29751             ]
29752         }
29753     },
29754     "anchor": {
29755         "$ref":
29756         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29757         schema.json#/definitions/anchor"
29758     },
29759     "di": {
29760         "$ref":
29761         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29762         schema.json#/definitions/di"
29763     },
29764     "eps": {
29765         "$ref":
29766         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29767         schema.json#/definitions/eps"
29768     },
29769     "href": {
29770         "$ref":
29771         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29772         schema.json#/definitions/href"
29773     },
29774     "ins": {
29775         "$ref":
29776         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29777         schema.json#/definitions/ins"
29778     },
29779     "p": {
29780         "$ref":
29781         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29782         schema.json#/definitions/p"
29783     },
29784     "rel": {
29785         "$ref":
29786         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29787         schema.json#/definitions/rel_array"
29788     },
29789     "title": {
29790         "$ref":
29791         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29792         schema.json#/definitions/title"
29793     },
29794     "type": {
29795         "$ref":
29796         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
29797         schema.json#/definitions/type"
29798     }
29799 },
29800     "required": [
29801         "href",
29802         "rt",
29803         "if"

```

```

29804     ],
29805     "type": "object"
29806   }
29807 }
29808 }

```

29809 6.142.5 Property definition

29810 Table 287 defines the Properties that are part of the "oic.r.sleepmonitor-am,
29811 oic.wk.atomicmeasurement" Resource Type.

29812 **Table 287 – The Property definitions of the Resource with type "rt" = "oic.r.sleepmonitor-**
29813 **am, oic.wk.atomicmeasurement".**

Property name	Value type	Mandatory	Access mode	Description
href	multiple types: see schema	Yes	Read Write	
rep	object: see schema	Yes	Read Write	The response payload from an Atomic Measurement (batch) resource
rt	array: see schema	Yes	Read Only	
rts	array: see schema	No	Read Only	This contains all possible resource types for this atomic measurement.
rts-m	array: see schema	Yes	Read Only	This contains all mandatory resource types for this atomic measurement.
if	array: see schema	Yes	Read Only	The interface set supported by this resource
links	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
if	array: see schema	Yes	Read Only	
rt	array: see schema	Yes	Read Only	
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	

6.142.6 CRUDN behaviour

Table 288 defines the CRUDN operations that are supported on the "oic.r.sleepmonitor-am, oic.wk.atomicmeasurement" Resource Type.

Table 288 – The CRUDN operations of the Resource with type "rt" = "oic.r.sleepmonitor-am, oic.wk.atomicmeasurement".

Create	Read	Update	Delete	Notify
	get			observe

6.143 SpO2 for Pulse Oximeter

6.143.1 Introduction

This Resource describes the Properties associated with a person's blood oxygen saturation level. The spo2 and perfusion Properties are read-only value that is provided by the server. When range (from "oic.r.baseresource") is omitted the default is 0 to +MAXFLOAT.

6.143.2 Example URI

/SpO2ResURI

6.143.3 Resource type

The Resource Type is defined as: "oic.r.spo2".

6.143.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "SpO2 for Pulse Oximeter",
    "version": "2019-03-04",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/SpO2ResURI": {
      "get": {
        "description": "This Resource describes the Properties associated with a person's blood
oxygen saturation level.\n The spo2 and perfusion Properties are read-only value that is provided by
the server.\n When range (from \"oic.r.baseresource\") is omitted the default is 0 to +MAXFLOAT.",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": [
                "oic.r.spo2"
              ]
            }
          }
        }
      }
    }
  }
}
```

```

29869         ],
29870         "spo2": 99.0,
29871         "perfusion": 20.0
29872     },
29873     "schema": {
29874         "$ref": "#/definitions/SpO2"
29875     }
29876 }
29877 }
29878 }
29879 },
29880 "parameters": {
29881     "interface": {
29882         "in": "query",
29883         "name": "if",
29884         "type": "string",
29885         "enum": [
29886             "oic.if.s",
29887             "oic.if.baseline"
29888         ]
29889     }
29890 },
29891 "definitions": {
29892     "SpO2": {
29893         "properties": {
29894             "spo2": {
29895                 "description": "This Property describes the estimation of the oxygen saturation level in
29896 percentage.",
29897                 "type": "number",
29898                 "minimum": 0.0,
29899                 "maximum": 100.0,
29900                 "readOnly": true
29901             },
29902             "perfusion": {
29903                 "description": "This Property describes the ratio of AC over DC of PPG.",
29904                 "type": "number",
29905                 "minimum": 0.0,
29906                 "readOnly": true
29907             },
29908             "rt": {
29909                 "description": "The Resource Type.",
29910                 "items": {
29911                     "enum": [
29912                         "oic.r.spo2"
29913                     ],
29914                     "type": "string"
29915                 },
29916                 "minItems": 1,
29917                 "uniqueItems": true,
29918                 "readOnly": true,
29919                 "type": "array"
29920             },
29921             "n": {
29922                 "$ref":
29923 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
29924 schema.json#/definitions/n"
29925             },
29926             "if": {
29927                 "description": "The OCF Interface set supported by this Resource.",
29928                 "items": {
29929                     "enum": [
29930                         "oic.if.s",
29931                         "oic.if.baseline"
29932                     ],
29933                     "type": "string"
29934                 },
29935                 "minItems": 1,
29936                 "uniqueItems": true,
29937                 "readOnly": true,
29938                 "type": "array"
29939             }
29940         },

```

```

29941         "spo2_range": {
29942             "$ref":
29943             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
29944             schema.json#/definitions/range_number"
29945         },
29946         "perfusion_range": {
29947             "$ref":
29948             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
29949             schema.json#/definitions/range_number"
29950         },
29951         "spo2_step": {
29952             "$ref":
29953             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
29954             schema.json#/definitions/step_number"
29955         },
29956         "perfusion_step": {
29957             "$ref":
29958             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
29959             schema.json#/definitions/step_number"
29960         },
29961         "spo2_precision": {
29962             "$ref":
29963             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
29964             schema.json#/definitions/precision"
29965         },
29966         "perfusion_precision": {
29967             "$ref":
29968             "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
29969             schema.json#/definitions/precision"
29970         }
29971     },
29972     "type": "object",
29973     "required": [
29974         "spo2"
29975     ]
29976 }
29977 }
29978 }

```

29979 6.143.5 Property definition

29980 Table 289 defines the Properties that are part of the "oic.r.spo2" Resource Type.

29981 **Table 289 – The Property definitions of the Resource with type "rt" = "oic.r.spo2".**

Property name	Value type	Mandatory	Access mode	Description
spo2	number	Yes	Read Only	This Property describes the estimation of the oxygen saturation level in percentage.
perfusion	number	No	Read Only	This Property describes the ratio of AC over DC of PPG.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
spo2_range	multiple types: see schema	No	Read Write	
perfusion_range	multiple types: see schema	No	Read Write	

spo2_step	multiple types: see schema	No	Read Write	
perfusion_step	multiple types: see schema	No	Read Write	
spo2_precision	multiple types: see schema	No	Read Write	
perfusion_precision	multiple types: see schema	No	Read Write	

6.143.6 CRUDN behaviour

Table 290 defines the CRUDN operations that are supported on the "oic.r.spo2" Resource Type.

Table 290 – The CRUDN operations of the Resource with type "rt" = "oic.r.spo2".

Create	Read	Update	Delete	Notify
	get			observe

6.144 Cadence

6.144.1 Introduction

This Resource describes the cadence, which is the number of revolutions of crank per minute when cyclists pedal the pedals.

The unit, which is the default unit, is rpm.

The cadence Property is a read-only value that is provided by the server.

When range (from "oic.r.baseresource") is omitted the default is 0 to +MAXFLOAT.

6.144.2 Example URI

/CadenceResURI

6.144.3 Resource type

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

6.144.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Cadence",
    "version": "2019-06-11",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/CadenceResURI": {
      "get": {
        "description": "This Resource describes the cadence, which is the number of revolutions of
crank per minute when cyclists pedal the pedals.\n The unit, which is the default unit, is rpm.\n
The cadence Property is a read-only value that is provided by the server.\n When range (from
```

```

30026 \ "oic.r.baseresource\) is omitted the default is 0 to +MAXFLOAT.",
30027     "parameters": [
30028         {
30029             "$ref": "#/parameters/interface"
30030         }
30031     ],
30032     "responses": {
30033         "200": {
30034             "description": "",
30035             "x-example": {
30036                 "rt": [
30037                     "oic.r.cadence"
30038                 ],
30039                 "cadence": 60
30040             },
30041             "schema": {
30042                 "$ref": "#/definitions/Cadence"
30043             }
30044         }
30045     }
30046 },
30047 },
30048 },
30049 "parameters": {
30050     "interface": {
30051         "in": "query",
30052         "name": "if",
30053         "type": "string",
30054         "enum": [
30055             "oic.if.s",
30056             "oic.if.baseline"
30057         ]
30058     }
30059 },
30060 "definitions": {
30061     "Cadence": {
30062         "properties": {
30063             "cadence": {
30064                 "description": "This Property describes the rate at which a cyclist is pedalling/turning
30065 the pedals.",
30066                 "type": "integer",
30067                 "minimum": 0,
30068                 "readOnly": true
30069             },
30070             "rt": {
30071                 "description": "The Resource Type.",
30072                 "items": {
30073                     "enum": [
30074                         "oic.r.cadence"
30075                     ],
30076                     "type": "string"
30077                 },
30078                 "minItems": 1,
30079                 "uniqueItems": true,
30080                 "readOnly": true,
30081                 "type": "array"
30082             },
30083             "n": {
30084                 "$ref":
30085 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
30086 schema.json#/definitions/n"
30087             },
30088             "if": {
30089                 "description": "The OCF Interface set supported by this Resource.",
30090                 "items": {
30091                     "enum": [
30092                         "oic.if.s",
30093                         "oic.if.baseline"
30094                     ],
30095                     "type": "string"
30096                 },
30097                 "minItems": 1,

```

```

30098         "uniqueItems": true,
30099         "readOnly": true,
30100         "type": "array"
30101     },
30102     "range": {
30103         "$ref":
30104         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
30105         schema.json#/definitions/range_integer"
30106     },
30107     "step": {
30108         "$ref":
30109         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
30110         schema.json#/definitions/step_integer"
30111     }
30112 },
30113 "type": "object",
30114 "required": [
30115     "cadence"
30116 ]
30117 }
30118 }
30119 }

```

30120 6.144.5 Property definition

30121 Table 291 defines the Properties that are part of the "oic.r.cadence" Resource Type.

30122 **Table 291 – The Property definitions of the Resource with type "rt" = "oic.r.cadence".**

Property name	Value type	Mandatory	Access mode	Description
cadence	integer	Yes	Read Only	This Property describes the rate at which a cyclist is pedalling/turning the pedals.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	

30123 6.144.6 CRUDN behaviour

30124 Table 292 defines the CRUDN operations that are supported on the "oic.r.cadence" Resource Type.

30125 **Table 292 – The CRUDN operations of the Resource with type "rt" = "oic.r.cadence".**

Create	Read	Update	Delete	Notify
	get			observe

30126 6.145 Circuit Breaker (IEC 61850)

30127 6.145.1 Introduction

30128 This Resource describes functions for the control and monitoring of IEC 61850 based circuit
30129 breaker.

30130 6.145.2 Example URI

30131 /CircuitBreakerResURI

6.145.3 Resource type

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

6.145.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Circuit Breaker (IEC 61850)",
    "version": "20190613",
    "license": {
      "name": "OCF Data Model License",
      "url": "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/CircuitBreakerResURI" : {
      "get": {
        "description": "This Resource describes functions for the control and monitoring of IEC
61850 based circuit breaker.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.circuitbreaker"],
              "if": ["oic.if.s", "oic.if.baseline"],
              "status": "on",
              "ratedcurrent": 10.0,
              "ratedbreakingcurrent": 2500.0,
              "ratedvoltage": 460.0,
              "leakagecurrent": 0.5,
              "insulationresistance": 0.3,
              "timestamp": "2015-11-05T14:30:00.10Z"
            },
            "schema": { "$ref": "#/definitions/CircuitBreaker" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface" : {
      "in": "query",
      "name": "if",
      "type": "string",
      "enum": ["oic.if.s", "oic.if.baseline"]
    }
  },
  "definitions": {
    "CircuitBreaker" : {
      "properties": {
        "rt" : {
          "description": "The Resource Type",
          "items": {
            "enum": ["oic.r.circuitbreaker"],
            "maxLength": 64,
            "type": "string"
          },
          "minItems": 1,
          "uniqueItems": true,

```

```

30201         "readOnly": true,
30202         "type": "array"
30203     },
30204     "status" : {
30205         "description": "The circuit breaker status. The status can only be reset out of bounds.",
30206         "readOnly": true,
30207         "type": "string",
30208         "enum" : [ "on", "off", "trip" ]
30209     },
30210     "ratedcurrent" : {
30211         "description": "The rated current in Ampere, defined at manufacturing time.",
30212         "readOnly": true,
30213         "type": "number"
30214     },
30215     "ratedbreakingcurrent" : {
30216         "description": "The rated breaking current in Ampere, defined at manufacturing time.",
30217         "readOnly": true,
30218         "type": "number"
30219     },
30220     "ratedvoltage" : {
30221         "description": "The rated voltage in Volts, defined at manufacturing time.",
30222         "readOnly": true,
30223         "type": "number"
30224     },
30225     "leakagecurrent" : {
30226         "description": "The leakage current in mA.",
30227         "readOnly": true,
30228         "type": "number"
30229     },
30230     "insulationresistance" : {
30231         "description": "Insulation resistance of circuit breaker (M Ohm).",
30232         "readOnly": true,
30233         "type": "number"
30234     },
30235     "timestamp": {
30236         "description": "An RFC3339 formatted time indicating when the data was observed (e.g.:
30237 2016-02-15T09:19Z, 1996-12-19T16:39:57-08:00). Note that 1/100 time resolution should be used.",
30238         "format": "date-time",
30239         "readOnly": true,
30240         "type": "string"
30241     },
30242     "n": {
30243         "$ref":
30244         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
30245         schema.json#/definitions/n"
30246     },
30247     "id": {
30248         "$ref":
30249         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
30250         schema.json#/definitions/id"
30251     },
30252     "if": {
30253         "description": "The OCF Interface set supported by this Resource.",
30254         "items": {
30255             "enum": [
30256                 "oic.if.s",
30257                 "oic.if.baseline"
30258             ],
30259             "type": "string"
30260         },
30261         "minItems": 2,
30262         "uniqueItems": true,
30263         "readOnly": true,
30264         "type": "array"
30265     }
30266 },
30267 "type": "object",
30268 "required": [ "status", "ratedcurrent", "ratedbreakingcurrent", "ratedvoltage", "timestamp" ]
30269 }
30270 }
30271 }
30272

```

30273 **6.145.5 Property definition**

30274 Table 293 defines the Properties that are part of the "oic.r.circuitbreaker" Resource Type.

30275 **Table 293 – The Property definitions of the Resource with type "rt" = "oic.r.circuitbreaker".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type
status	string	Yes	Read Only	The circuit breaker status. The status can only be reset out of bounds.
ratedcurrent	number	Yes	Read Only	The rated current in Ampere, defined at manufacturing time.
ratedbreakingcurrent	number	Yes	Read Only	The rated breaking current in Ampere, defined at manufacturing time.
ratedvoltage	number	Yes	Read Only	The rated voltage in Volts, defined at manufacturing time.
leakagecurrent	number	No	Read Only	The leakage current in mA.
insulationresistance	number	No	Read Only	Insulation resistance of circuit breaker (M Ohm).
timestamp	string	Yes	Read Only	An RFC3339 formatted time indicating when the data was observed (e.g.: 2016-02-15T09:19Z, 1996-12-19T16:39:57-08:00). Note that 1/100 time resolution should be used.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

30276 **6.145.6 CRUDN behaviour**

30277 Table 294 defines the CRUDN operations that are supported on the "oic.r.circuitbreaker" Resource Type.

30278 **Table 294 – The CRUDN operations of the Resource with type "rt" = "oic.r.circuitbreaker".**

Create	Read	Update	Delete	Notify
	get			observe

30280 **6.146 Cycling Power**

30281 **6.146.1 Introduction**

30282 This Resource describes the cycling power, which is the amount of energy transferred or
30283 converted per unit time.

30284 The unit, which is the default SI unit, is W (which is equal to one joule per second).
30285 The power Property is a read-only value that is provided by the server.
30286 When range (from "oic.r.baseresource") is omitted the default is 0 to +MAXFLOAT.

30287 **6.146.2 Example URI**

30288 /CyclingPowerResURI

30289 **6.146.3 Resource type**

30290 The Resource Type is defined as: "oic.r.cyclingpower".

30291 **6.146.4 OpenAPI 2.0 definition**

```
30292 {  
30293   "swagger": "2.0",  
30294   "info": {  
30295     "title": "Cycling Power",  
30296     "version": "2019-06-11",  
30297     "license": {  
30298       "name": "OCF Data Model License",  
30299       "url":  
30300 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI  
30301 CENSE.md",  
30302       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."  
30303     },  
30304     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"  
30305   },  
30306   "schemes": [  
30307     "http"  
30308   ],  
30309   "consumes": [  
30310     "application/json"  
30311   ],  
30312   "produces": [  
30313     "application/json"  
30314   ],  
30315   "paths": {  
30316     "/CyclingPowerResURI": {  
30317       "get": {  
30318         "description": "This Resource describes the cycling power, which is the amount of energy  
30319 transferred or converted per unit time.\n The unit, which is the default SI unit, is W (which is  
30320 equal to one joule per second).\n The power Property is a read-only value that is provided by the  
30321 server.\n When range (from \"oic.r.baseresource\") is omitted the default is 0 to +MAXFLOAT.",  
30322         "parameters": [  
30323           {  
30324             "$ref": "#/parameters/interface"  
30325           }  
30326         ],  
30327         "responses": {  
30328           "200": {  
30329             "description": "",  
30330             "x-example": {  
30331               "rt": [  
30332                 "oic.r.cyclingpower"  
30333               ],  
30334               "power": 200.0,  
30335               "power-left": 100.0,  
30336               "power-right": 100.0  
30337             },  
30338             "schema": {  
30339               "$ref": "#/definitions/CyclingPower"  
30340             }  
30341           }  
30342         }  
30343       }  
30344     }  
30345   },  
30346   "parameters": {  
30347     "interface": {  
30348       "in": "query",
```

```

30349         "name": "if",
30350         "type": "string",
30351         "enum": [
30352             "oic.if.s",
30353             "oic.if.baseline"
30354         ]
30355     },
30356 },
30357 "definitions": {
30358     "CyclingPower": {
30359         "properties": {
30360             "power": {
30361                 "description": "The current overall power output in watts.",
30362                 "$ref": "#/definitions/power"
30363             },
30364             "power-left": {
30365                 "description": "The current power output in watts from the left pedal.",
30366                 "$ref": "#/definitions/power"
30367             },
30368             "power-right": {
30369                 "description": "The current power output in watts from the right pedal.",
30370                 "$ref": "#/definitions/power"
30371             },
30372             "rt": {
30373                 "description": "The Resource Type.",
30374                 "items": {
30375                     "enum": [
30376                         "oic.r.cyclingpower"
30377                     ],
30378                     "type": "string"
30379                 },
30380                 "minItems": 1,
30381                 "uniqueItems": true,
30382                 "readOnly": true,
30383                 "type": "array"
30384             },
30385             "n": {
30386                 "$ref":
30387 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
30388 schema.json#/definitions/n"
30389             },
30390             "if": {
30391                 "description": "The OCF Interface set supported by this Resource.",
30392                 "items": {
30393                     "enum": [
30394                         "oic.if.s",
30395                         "oic.if.baseline"
30396                     ],
30397                     "type": "string"
30398                 },
30399                 "minItems": 1,
30400                 "uniqueItems": true,
30401                 "readOnly": true,
30402                 "type": "array"
30403             },
30404             "range": {
30405                 "$ref":
30406 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
30407 schema.json#/definitions/range_number"
30408             },
30409             "step": {
30410                 "$ref":
30411 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
30412 schema.json#/definitions/step_number"
30413             }
30414         },
30415         "type": "object",
30416         "required": [
30417             "power"
30418         ]
30419     },
30420     "power": {

```

```
30421         "description": "This Resource describes the power, which is the amount of energy transferred
30422 or converted per unit time, in W (which is equal to one joule per second).",
30423         "type": "number",
30424         "minimum": 0.0,
30425         "readOnly": true
30426     }
30427 }
30428 }
```

30429 **6.146.5 Property definition**

30430 Table 295 defines the Properties that are part of the "oic.r.cyclingpower" Resource Type.

30431 **Table 295 – The Property definitions of the Resource with type "rt" = "oic.r.cyclingpower".**

Property name	Value type	Mandatory	Access mode	Description
power	multiple types: see schema	Yes	Read Write	The current overall power output in watts.
power-left	multiple types: see schema	No	Read Write	The current power output in watts from the left pedal.
power-right	multiple types: see schema	No	Read Write	The current power output in watts from the right pedal.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	

30432 **6.146.6 CRUDN behaviour**

30433 Table 296 defines the CRUDN operations that are supported on the "oic.r.cyclingpower" Resource
30434 Type.

30435 **Table 296 – The CRUDN operations of the Resource with type "rt" = "oic.r.cyclingpower".**

Create	Read	Update	Delete	Notify
	get			observe

30436 **6.147 Inverter (IEC 61850)**

30437 **6.147.1 Introduction**

30438 This Resource describes functions for the control and monitoring of IEC 61850 based circuit
30439 breaker.

30440 **6.147.2 Example URI**

30441 /InverterResURI

30442 **6.147.3 Resource type**

30443 The Resource Type is defined as: "oic.r.inverter".

6.147.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Inverter (IEC 61850)",
    "version": "20190613",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/InverterResURI" : {
      "get": {
        "description": "This Resource describes functions for the control and monitoring of IEC
61850 based circuit breaker.",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example":
              {
                "rt": ["oic.r.inverter"],
                "if": ["oic.if.s", "oic.if.baseline"],
                "status": "on",
                "ratedpower": 36.0,
                "minvoltmppt": 200.0,
                "maxvoltmppt": 1000.0,
                "inputvoltage": 980.0,
                "inputcurrent": 22.0,
                "outputpower": 61.0,
                "timestamp": "2015-11-05T14:30:00.13Z"
              },
            "schema": { "$ref": "#/definitions/Inverter" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface" : {
      "in": "query",
      "name": "if",
      "type": "string",
      "enum": ["oic.if.s", "oic.if.baseline"]
    }
  },
  "definitions": {
    "Inverter" : {
      "properties": {
        "rt" : {
          "description": "The Resource Type",
          "items": {
            "enum": ["oic.r.inverter"],
            "maxLength": 64,
            "type": "string"
          },
          "minItems": 1,
          "uniqueItems": true,
          "readOnly": true,
          "type": "array"
        }
      }
    }
  }
}
```

```

30515     "status" : {
30516         "description": "The inverter status. The status can only be reset out of bounds.",
30517         "readOnly": true,
30518         "type": "string",
30519         "enum" : [ "on", "off", "trip"]
30520     },
30521     "ratedpower" : {
30522         "description": "The rated power in kW, defined at manufacturing time.",
30523         "readOnly": true,
30524         "type": "number"
30525     },
30526     "minvoltmppt" : {
30527         "description": "Minimum voltage for MPPT (Maximum power point tracking) control method
30528 (V), defined at manufacturing time.",
30529         "readOnly": true,
30530         "type": "number"
30531     },
30532     "maxvoltmppt" : {
30533         "description": "Maximum voltage for MPPT (Maximum power point tracking) control method
30534 (V), defined at manufacturing time.",
30535         "readOnly": true,
30536         "type": "number"
30537     },
30538     "inputvoltage" : {
30539         "description": "input voltage in Volts.",
30540         "readOnly": true,
30541         "type": "number"
30542     },
30543     "inputcurrent" : {
30544         "description": "input current in Amperes.",
30545         "readOnly": true,
30546         "type": "number"
30547     },
30548     "outputpower" : {
30549         "description": "output power in kW.",
30550         "readOnly": true,
30551         "type": "number"
30552     },
30553     "timestamp": {
30554         "description": "An RFC3339 formatted time indicating when the data was observed (e.g.:
30555 2016-02-15T09:19Z, 1996-12-19T16:39:57-08:00). Resolution in 1/100 second.",
30556         "format": "date-time",
30557         "readOnly": true,
30558         "type": "string"
30559     },
30560     "n": {
30561         "$ref":
30562 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
30563 schema.json#/definitions/n"
30564     },
30565     "id": {
30566         "$ref":
30567 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
30568 schema.json#/definitions/id"
30569     },
30570     "if": {
30571         "description": "The OCF Interface set supported by this Resource.",
30572         "items": {
30573             "enum": [
30574                 "oic.if.s",
30575                 "oic.if.baseline"
30576             ],
30577             "type": "string"
30578         },
30579         "minItems": 2,
30580         "uniqueItems": true,
30581         "readOnly": true,
30582         "type": "array"
30583     }
30584 },
30585 "type": "object",
30586 "required": ["status", "ratedpower", "minvoltmppt", "maxvoltmppt",

```



```

30587 "inputvoltage","inputcurrent","outputpower","timestamp"]
30588     }
30589   }
30590 }
30591

```

30592 6.147.5 Property definition

30593 Table 297 defines the Properties that are part of the "oic.r.inverter" Resource Type.

30594 **Table 297 – The Property definitions of the Resource with type "rt" = "oic.r.inverter".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type
status	string	Yes	Read Only	The inverter status. The status can only be reset out of bounds.
ratedpower	number	Yes	Read Only	The rated power in kW, defined at manufacturing time.
minvoltmppt	number	Yes	Read Only	Minimum voltage for MPPT (Maximum power point tracking) control method (V), defined at manufacturing time.
maxvoltmppt	number	Yes	Read Only	Maximum voltage for MPPT (Maximum power point tracking) control method (V), defined at manufacturing time.
inputvoltage	number	Yes	Read Only	input voltage in Volts.
inputcurrent	number	Yes	Read Only	input current in Amperes.
outputpower	number	Yes	Read Only	output power in kW.
timestamp	string	Yes	Read Only	An RFC3339 formatted time indicating when the data was observed (e.g.: 2016-02-15T09:19Z, 1996-12-19T16:39:57-08:00). Resolution in 1/100 second.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

30595 6.147.6 CRUDN behaviour

30596 Table 298 defines the CRUDN operations that are supported on the "oic.r.inverter" Resource Type.

30597 **Table 298 – The CRUDN operations of the Resource with type "rt" = "oic.r.inverter".**

Create	Read	Update	Delete	Notify
	get			observe

30598 **6.148 PV array system connection terminal (IEC 61850)**

30599 **6.148.1 Introduction**

30600 This Resource describes functions for the control and monitoring of IEC 61850 based PV Array
30601 system connection terminal.

30602 **6.148.2 Example URI**

30603 /PVConnectionTerminalResURI

30604 **6.148.3 Resource type**

30605 The Resource Type is defined as: "oic.r.pvconnectionterminal".

30606 **6.148.4 OpenAPI 2.0 definition**

```

30607 {
30608   "swagger": "2.0",
30609   "info": {
30610     "title": "PV array system connection terminal (IEC 61850)",
30611     "version": "20190613",
30612     "license": {
30613       "name": "OCF Data Model License",
30614       "url":
30615         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
30616         CENSE.md",
30617       "x-copyright": "copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
30618     },
30619     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
30620   },
30621   "schemes": ["http"],
30622   "consumes": ["application/json"],
30623   "produces": ["application/json"],
30624   "paths": {
30625     "/PVConnectionTerminalResURI" : {
30626       "get": {
30627         "description": "This Resource describes functions for the control and monitoring of IEC
30628         61850 based PV Array system connection terminal.",
30629         "parameters": [
30630           { "$ref": "#/parameters/interface" }
30631         ],
30632         "responses": {
30633           "200": {
30634             "description": "",
30635             "x-example":
30636               {
30637                 "rt": ["oic.r.pvconnectionterminal"],
30638                 "if": ["oic.if.s", "oic.if.baseline"],
30639                 "ratedarrayvoltage": 46.6,
30640                 "ratedarraycurrent": 10.2,
30641                 "arrayvoltage": 37.0,
30642                 "arraycurrent": 9.1,
30643                 "leakagecurrent": 0.5,
30644                 "insulationresistance": 0.3,
30645                 "timestamp": "2015-11-05T14:30:00.15Z"
30646               },
30647             "schema": { "$ref": "#/definitions/PVArrayConnectionTerminal" }
30648           }
30649         }
30650       }
30651     }
30652   },
30653   "parameters": {
30654     "interface" : {

```

```

30655     "in": "query",
30656     "name": "if",
30657     "type": "string",
30658     "enum": ["oic.if.s", "oic.if.baseline"]
30659   }
30660 },
30661 "definitions": {
30662   "PVArrayConnectionTerminal" : {
30663     "properties": {
30664       "rt" : {
30665         "description": "The Resource Type",
30666         "items": {
30667           "enum": ["oic.r.pvconnectionterminal"],
30668           "maxLength": 64,
30669           "type": "string"
30670         },
30671         "minItems": 1,
30672         "uniqueItems": true,
30673         "readOnly": true,
30674         "type": "array"
30675       },
30676       "ratedarrayvoltage" : {
30677         "description": "Rated voltage of array (Nominal values of maximum power voltage * number
30678 of modules) (V)",
30679         "readOnly": true,
30680         "type": "number"
30681       },
30682       "ratedarraycurrent" : {
30683         "description": "Rated current of array (Nominal values of maximum power current * number
30684 of modules) (A), defined at manufacturing time.",
30685         "readOnly": true,
30686         "type": "number"
30687       },
30688       "arrayvoltage" : {
30689         "description": "Output voltage of array in volts (V).",
30690         "readOnly": true,
30691         "type": "number"
30692       },
30693       "arraycurrent" : {
30694         "description": "Output current of array in Ampere (A).",
30695         "readOnly": true,
30696         "type": "number"
30697       },
30698       "leakagecurrent" : {
30699         "description": "The leakage current in mA.",
30700         "readOnly": true,
30701         "type": "number"
30702       },
30703       "insulationresistance" : {
30704         "description": "Insulation resistance of circuit breaker (M Ohm).",
30705         "readOnly": true,
30706         "type": "number"
30707       },
30708       "timestamp" : {
30709         "description": "An RFC3339 formatted time indicating when the data was observed (e.g.:
30710 2016-02-15T09:19Z, 1996-12-19T16:39:57-08:00). Note that 1/100 time resolution should be used.",
30711         "format": "date-time",
30712         "readOnly": true,
30713         "type": "string"
30714       },
30715       "n" : {
30716         "$ref":
30717 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
30718 schema.json#/definitions/n"
30719       },
30720       "id" : {
30721         "$ref":
30722 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
30723 schema.json#/definitions/id"
30724       },
30725       "if" : {
30726         "description": "The OCF Interface set supported by this Resource.",

```

```

30727     "items": {
30728         "enum": [
30729             "oic.if.s",
30730             "oic.if.baseline"
30731         ],
30732         "type": "string"
30733     },
30734     "minItems": 2,
30735     "uniqueItems": true,
30736     "readOnly": true,
30737     "type": "array"
30738 }
30739 },
30740 "type": "object",
30741 "required": ["ratedarrayvoltage", "ratedarraycurrent", "arrayvoltage", "arraycurrent",
30742 "timestamp"]
30743 }
30744 }
30745 }

```

6.148.5 Property definition

Table 299 defines the Properties that are part of the "oic.r.pvconnectionterminal" Resource Type.

Table 299 – The Property definitions of the Resource with type "rt" = "oic.r.pvconnectionterminal".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type
ratedarrayvoltage	number	Yes	Read Only	Rated voltage of array (Nominal values of maximum power voltage * number of modules) (V)
ratedarraycurrent	number	Yes	Read Only	Rated current of array (Nominal values of maximum power current * number of modules) (A), defined at manufacturing time.
arrayvoltage	number	Yes	Read Only	Output voltage of array in volts (V).
arraycurrent	number	Yes	Read Only	Output current of array in Ampere (A).
leakagecurrent	number	No	Read Only	The leakage current in mA.
insulationresistance	number	No	Read Only	Insulation resistance of circuit breaker (M Ohm).
timestamp	string	Yes	Read Only	An RFC3339 formatted time indicating when the data was observed (e.g.: 2016-02-15T09:19Z, 1996-12-19T16:39:57-08:00). Note that 1/100 time resolution should be used.
n	multiple types: see schema	No	Read Write	

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

6.148.6 CRUDN behaviour

Table 300 defines the CRUDN operations that are supported on the "oic.r.pvconnectionterminal" Resource Type.

Table 300 – The CRUDN operations of the Resource with type "rt" = "oic.r.pvconnectionterminal".

Create	Read	Update	Delete	Notify
	get			observe

6.149 Speed

6.149.1 Introduction

This Resource describes the speed of an object, which is the magnitude of its velocity. The unit, which is the default SI unit, is metre per second. The speed Property is a read-only value that is provided by the server. When range (from "oic.r.baseresource") is omitted the default is 0 to +MAXFLOAT.

6.149.2 Example URI

/SpeedResURI

6.149.3 Resource type

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

6.149.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Speed",
    "version": "2019-05-13",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/SpeedResURI": {
      "get": {
        "description": "This Resource describes the speed of an object, which is the magnitude of
its velocity.\n The unit, which is the default SI unit, is metre per second.\n The speed Property is
a read-only value that is provided by the server.\n When range (from \"oic.r.baseresource\") is
omitted the default is 0 to +MAXFLOAT.",
        "parameters": [
          {

```

```

30798         "$ref": "#/parameters/interface"
30799     }
30800 ],
30801 "responses": {
30802     "200": {
30803         "description": "",
30804         "x-example": {
30805             "rt": [
30806                 "oic.r.speed"
30807             ],
30808             "speed": 10.0
30809         },
30810         "schema": {
30811             "$ref": "#/definitions/Speed"
30812         }
30813     }
30814 }
30815 }
30816 },
30817 "parameters": {
30818     "interface": {
30819         "in": "query",
30820         "name": "if",
30821         "type": "string",
30822         "enum": [
30823             "oic.if.s",
30824             "oic.if.baseline"
30825         ]
30826     }
30827 },
30828 "definitions": {
30829     "Speed": {
30830         "properties": {
30831             "speed": {
30832                 "description": "This Property describes the speed of an object in metre per second (SI
30833 Unit). It should be noted, however, that the most common unit of speed everyday usage is the
30834 kilometre per hour or, in the US and the UK, miles per hour.",
30835                 "type": "number",
30836                 "minimum": 0.0,
30837                 "readOnly": true
30838             },
30839             "rt": {
30840                 "description": "The Resource Type.",
30841                 "items": {
30842                     "enum": [
30843                         "oic.r.speed"
30844                     ],
30845                     "type": "string"
30846                 },
30847                 "minItems": 1,
30848                 "uniqueItems": true,
30849                 "readOnly": true,
30850                 "type": "array"
30851             },
30852             "n": {
30853                 "$ref":
30854 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
30855 schema.json#/definitions/n"
30856             },
30857             "if": {
30858                 "description": "The OCF Interface set supported by this Resource.",
30859                 "items": {
30860                     "enum": [
30861                         "oic.if.s",
30862                         "oic.if.baseline"
30863                     ],
30864                     "type": "string"
30865                 },
30866                 "minItems": 1,
30867                 "uniqueItems": true,
30868                 "readOnly": true,
30869

```

```

30870         "type": "array"
30871     },
30872     "range": {
30873         "$ref":
30874         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
30875         schema.json#/definitions/range_number"
30876     },
30877     "step": {
30878         "$ref":
30879         "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
30880         schema.json#/definitions/step_number"
30881     }
30882 },
30883 "type": "object",
30884 "required": [
30885     "speed"
30886 ]
30887 }
30888 }
30889 }

```

30890 6.149.5 Property definition

30891 Table 301 defines the Properties that are part of the "oic.r.speed" Resource Type.

30892 **Table 301 – The Property definitions of the Resource with type "rt" = "oic.r.speed".**

Property name	Value type	Mandatory	Access mode	Description
speed	number	Yes	Read Only	This Property describes the speed of an object in metre per second (SI Unit). It should be noted, however, that the most common unit of speed everyday usage is the kilometre per hour or, in the US and the UK, miles per hour.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	

30893 6.149.6 CRUDN behaviour

30894 Table 302 defines the CRUDN operations that are supported on the "oic.r.speed" Resource Type.

30895 **Table 302 – The CRUDN operations of the Resource with type "rt" = "oic.r.speed".**

Create	Read	Update	Delete	Notify
	get			observe

30896 6.150 Torque

30897 6.150.1 Introduction

30898 This Resource describes the torque, which is the rotational equivalent of linear force.

30899 The unit, which is the default SI unit, is N*m (Newton metre).

30900 The torque Property is a read-only value that is provided by the server.

30901 When range (from "oic.r.baseresource") is omitted the default is 0 to +MAXFLOAT.

30902 6.150.2 Example URI

30903 /TorqueResURI

30904 6.150.3 Resource type

30905 The Resource Type is defined as: "oic.r.torque".

30906 6.150.4 OpenAPI 2.0 definition

```
30907 {
30908   "swagger": "2.0",
30909   "info": {
30910     "title": "Torque",
30911     "version": "2019-09-25",
30912     "license": {
30913       "name": "OCF Data Model License",
30914       "url":
30915         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
30916         CENSE.md",
30917       "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All rights reserved."
30918     },
30919     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
30920   },
30921   "schemes": [
30922     "http"
30923   ],
30924   "consumes": [
30925     "application/json"
30926   ],
30927   "produces": [
30928     "application/json"
30929   ],
30930   "paths": {
30931     "/TorqueResURI": {
30932       "get": {
30933         "description": "This Resource describes the torque, which is the rotational equivalent of
30934         linear force.\n The unit, which is the default SI unit, is N*m (Newton metre).\n The torque Property
30935         is a read-only value that is provided by the server.\n When range (from \"oic.r.baseresource\") is
30936         omitted the default is 0 to +MAXFLOAT.",
30937         "parameters": [
30938           {
30939             "$ref": "#/parameters/interface"
30940           }
30941         ],
30942         "responses": {
30943           "200": {
30944             "description": "",
30945             "x-example": {
30946               "rt": [
30947                 "oic.r.torque"
30948               ],
30949               "torque": 10.0
30950             },
30951             "schema": {
30952               "$ref": "#/definitions/Torque"
30953             }
30954           }
30955         }
30956       }
30957     }
30958   },
}
```



```

30959     "parameters": {
30960       "interface": {
30961         "in": "query",
30962         "name": "if",
30963         "type": "string",
30964         "enum": [
30965           "oic.if.s",
30966           "oic.if.baseline"
30967         ]
30968       }
30969     },
30970     "definitions": {
30971       "Torque": {
30972         "properties": {
30973           "torque": {
30974             "description": "This Resource describes the torque, which is the rotational equivalent of
30975 linear force, in N*m (Newton metre).",
30976             "type": "number",
30977             "minimum": 0.0,
30978             "readOnly": true
30979           },
30980           "rt": {
30981             "description": "The Resource Type.",
30982             "items": {
30983               "enum": [
30984                 "oic.r.torque"
30985               ],
30986               "type": "string"
30987             },
30988             "minItems": 1,
30989             "uniqueItems": true,
30990             "readOnly": true,
30991             "type": "array"
30992           },
30993           "n": {
30994             "$ref":
30995 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
30996 schema.json#/definitions/n"
30997           },
30998           "if": {
30999             "description": "The OCF Interface set supported by this Resource.",
31000             "items": {
31001               "enum": [
31002                 "oic.if.s",
31003                 "oic.if.baseline"
31004               ],
31005               "type": "string"
31006             },
31007             "minItems": 1,
31008             "uniqueItems": true,
31009             "readOnly": true,
31010             "type": "array"
31011           },
31012           "range": {
31013             "$ref":
31014 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
31015 schema.json#/definitions/range_number"
31016           },
31017           "step": {
31018             "$ref":
31019 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.baseresource.properties-
31020 schema.json#/definitions/step_number"
31021           },
31022           "type": "object",
31023           "required": [
31024             "torque"
31025           ]
31026         }
31027       }
31028     }
31029   }

```

31030 **6.150.5 Property definition**

31031 Table 303 defines the Properties that are part of the "oic.r.torque" Resource Type.

31032 **Table 303 – The Property definitions of the Resource with type "rt" = "oic.r.torque".**

Property name	Value type	Mandatory	Access mode	Description
torque	number	Yes	Read Only	This Resource describes the torque, which is the rotational equivalent of linear force, in N*m (Newton metre).
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
range	multiple types: see schema	No	Read Write	
step	multiple types: see schema	No	Read Write	

31033 **6.150.6 CRUDN behaviour**

31034 Table 304 defines the CRUDN operations that are supported on the "oic.r.torque" Resource Type.

31035 **Table 304 – The CRUDN operations of the Resource with type "rt" = "oic.r.torque".**

Create	Read	Update	Delete	Notify
	get			observe

31036 **6.151 Water Info**

31037 **6.151.1 Introduction**

31038 This Resource describes the water information to indicate type of water currently provided by the device. The water type can be read or set.

31040 The Property "supportedwatertypes" is an array of the possible water types are defined by the enumeration ["cold", "hot", "ambient", "ice"].

31042 The Property "supportedadditivetypes" is an array of the possible additive types for water. The additive types mean optional types that can be added to the specific water type according to Client's preference and are defined by the enumeration ["none", "soda", "mineral"]. If absent, the default value is "none".

31046 The Property "currentwatertype" is the currently desired water type.

31047 The Property "currentadditivetypes" is the currently desired additive type(s).

31048 For example, if "cold" is selected with the "currentwatertype", "soda" and "mineral" or both can be selected as "currentadditivetypes". Note that if "hot" is selected with the "currentwatertype", "soda" and "mineral" may be restricted for the "currentadditivetypes".

31051 **6.151.2 Example URI**

31052 /WaterInfoResURI

31053 **6.151.3 Resource type**

31054 The Resource Type is defined as: "oic.r.waterinfo".

6.151.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Water Info",
    "version": "2019-06-13",
    "license": {
      "name": "OCF Date Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/WaterInfoResURI": {
      "get": {
        "description": "This Resource describes the water information to indicate type of
water currently provided by the device. The water type can be read or set.\nThe Property
\"supportedwatertypes\" is an array of the possible water types are defined by the enumeration
[\"cold\", \"hot\", \"ambient\", \"ice\"].\nThe Property \"supportedadditivetypes\" is an array of
the possible additive types for water. The additive types mean optional types that can be added to
the specific water type according to Client's preference and are defined by the enumeration
[\"none\", \"soda\", \"mineral\"]. If absent, the default value is \"none\". \nThe Property
\"currentwatertype\" is the currently desired water type. \nThe Property \"currentadditivetypes\" is
the currently desired additive type(s). \nFor example, if \"cold\" is selected with the
\"currentwatertype\", \"soda\" and \"mineral\" or both can be selected as \"currentadditivetypes\".
Note that if \"hot\" is selected with the \"currentwatertype\", \"soda\" and \"mineral\" may be
restricted for the \"currentadditivetypes\".",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "RETRIEVES the set of supported water type information and
current desired water type information.",
            "x-example":
{
  "rt": ["oic.r.waterinfo"],
  "if": ["oic.if.rw", "oic.if.baseline"],
  "supportedwatertypes": ["cold", "hot", "ambient", "ice"],
  "supportedadditivetypes": ["none", "soda", "mineral"],
  "currentwatertype": "cold",
  "currentadditivetypes": ["soda", "mineral"]
},
            "schema": { "$ref": "#/definitions/WaterInfo" }
          }
        }
      },
      "post": {
        "description": "Sets the desired water type.",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/WaterInfoUpdate" },
            "x-example": {
              "currentwatertype": "hot",
              "currentadditivetypes": ["none"]
            }
          }
        ],
        "responses": {
```

```

31126         "200": {
31127             "description" : "Indicates that the current desired water type and additive
31128 type(s) were changed. \nThe new desired water type info is provided in the response.\n",
31129             "x-example": {
31130                 "currentwatertype": "hot",
31131                 "currentadditivetypes": ["none"]
31132             },
31133             "schema": { "$ref": "#/definitions/WaterInfoUpdate" }
31134         },
31135         "403":{
31136             "description" : "This response is generated by the OCF Server when the client
31137 sends:\n An UPDATE with an invalid property value for \"currentwatertype\".\nThe OCF Server
31138 responds with the current resource representation.\n",
31139             "x-example": {
31140                 "supportedwatertypes": ["cold", "hot", "ambient", "ice"],
31141                 "supportedadditivetypes": ["none", "soda", "mineral"],
31142                 "currentwatertype": "cold",
31143                 "currentadditivetypes": ["soda", "mineral"]
31144             },
31145             "schema": { "$ref": "#/definitions/WaterInfo" }
31146         }
31147     }
31148 }
31149 },
31150 {
31151     "parameters": {
31152         "interface": {
31153             "in": "query",
31154             "name": "if",
31155             "type": "string",
31156             "enum": ["oic.if.rw", "oic.if.baseline"]
31157         }
31158     },
31159     "definitions": {
31160         "WaterInfo" : {
31161             "properties": {
31162                 "rt": {
31163                     "description": "The Resource Type.",
31164                     "items": {
31165                         "enum": ["oic.r.waterinfo"],
31166                         "maxLength": 64,
31167                         "type": "string"
31168                     },
31169                     "minItems": 1,
31170                     "uniqueItems": true,
31171                     "readOnly": true,
31172                     "type": "array"
31173                 },
31174                 "supportedwatertypes":{
31175                     "description": "The array of the possible water types.",
31176                     "items": {
31177                         "type": "string"
31178                     },
31179                     "readOnly": true,
31180                     "type": "array"
31181                 },
31182                 "supportedadditivetypes":{
31183                     "description": "The array of the possible additive types.",
31184                     "items": {
31185                         "type": "string"
31186                     },
31187                     "readOnly": true,
31188                     "type": "array"
31189                 },
31190                 "currentwatertype": {
31191                     "description": " The currently desired water type.",
31192                     "type": "string"
31193                 },
31194                 "currentadditivetypes":{
31195                     "description": "The currently desired additive type(s) according to Client's
31196 preference.",
31197                     "items": {

```

```

31198         "type": "string"
31199     },
31200     "minItems": 1,
31201     "type": "array"
31202 },
31203 "n": {
31204     "$ref":
31205 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
31206 schema.json#/definitions/n"
31207 },
31208 "id": {
31209     "$ref":
31210 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
31211 schema.json#/definitions/id"
31212 },
31213 "if": {
31214     "description": "The OCF Interface set supported by this Resource.",
31215     "items": {
31216         "enum": [
31217             "oic.if.rw",
31218             "oic.if.baseline"
31219         ],
31220         "type": "string"
31221     },
31222     "minItems": 2,
31223     "uniqueItems": true,
31224     "readOnly": true,
31225     "type": "array"
31226 },
31227 },
31228 "type": "object",
31229 "required" : ["supportedwatertypes", "currentwatertype"]
31230 },
31231 "WaterInfoUpdate":{
31232     "properties":{
31233         "currentwatertype": {
31234             "description": "Set the desired water type.",
31235             "type": "string"
31236         },
31237         "currentadditivetypes": {
31238             "description": "Set the desired additive type(s).",
31239             "items": {
31240                 "type": "string"
31241             },
31242             "minItems": 1,
31243             "type": "array"
31244         }
31245     },
31246     "type": "object",
31247     "required": ["currentwatertype"]
31248 }
31249 }
31250 }
31251 }
31252
31253
31254

```

6.151.5 Property definition

Table 305 defines the Properties that are part of the "oic.r.waterinfo" Resource Type.

Table 305 – The Property definitions of the Resource with type "rt" = "oic.r.waterinfo".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
supportedwatertypes	array: see schema	Yes	Read Only	The array of the possible water types.

supportedadditivetypes	array: see schema	No	Read Only	The array of the possible additive types.
currentwatertype	string	Yes	Read Write	The currently desired water type.
currentadditivetypes	array: see schema	No	Read Write	The currently desired additive type(s) according to Client's preference.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
currentwatertype	string	Yes	Read Write	Set the desired water type.
currentadditivetypes	array: see schema	No	Read Write	Set the desired additive type(s).

6.151.6 CRUDN behaviour

Table 306 defines the CRUDN operations that are supported on the "oic.r.waterinfo" Resource Type.

Table 306 – The CRUDN operations of the Resource with type "rt" = "oic.r.waterinfo".

Create	Read	Update	Delete	Notify
	get	post		observe

6.152 Deodorization

6.152.1 Introduction

This Resource describes a deodorization function, which can be supported by controlling on air filter.

The Property "mode" is a mode of the deodorization function. The supported modes are defined by the enumeration ["off", "on", "auto"].

"off" means that the deodorization function is not enabled.

"on" means that the deodorization function is active.

"auto" means that the deodorization function is automatically controlled depending on sensed air condition in the device inside.

The Property "currentstate" is the current state of the deodorization function. In the case of "auto" mode, if the sensed air condition is determined to be bad, the function will be "on". Then, "mode" value is "auto" and "currentstate" value is "on". If not, the function is remaining "off" state. Then, "currentstate" value is "off".

6.152.2 Example URI

/DeodorizationResURI

6.152.3 Resource type

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

6.152.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Deodorization",
```

```

31285     "version": "20190820",
31286     "license": {
31287         "name": "OCF Data Model License",
31288         "url":
31289 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
31290 CENSE.md",
31291         "x-copyright": "copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
31292     },
31293     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
31294 },
31295     "schemes": ["http"],
31296     "consumes": ["application/json"],
31297     "produces": ["application/json"],
31298     "paths": {
31299         "/DeodorizationResURI" : {
31300             "get": {
31301                 "description": "This Resource describes a deodorization function, which can be supported by
31302 controlling on air filter. \n The Property \"mode\" is a mode of the deodorization function. The
31303 supported modes are defined by the enumeration [\"off\", \"on\", \"auto\"]. \n\"off\" means that the
31304 deodorization function is not enabled.\n\"on\" means that the deodorization function is
31305 active.\n\"auto\" means that the deodorization function is automatically controlled depending on
31306 sensed air condition in the device inside. \nThe Property \"currentstate\" is the current state of
31307 the deodorization function. In the case of \"auto\" mode, if the sensed air condition is determined
31308 to be bad, the function will be \"on\". Then, \"mode\" value is \"auto\" and \"currentstate\" value
31309 is \"on\". If not, the function is remaining \"off\" state. Then, \"currentstate\" value is
31310 \"off\".",
31311                 "parameters": [
31312                     { "$ref": "#/parameters/interface" }
31313                 ],
31314                 "responses": {
31315                     "200": {
31316                         "description": "RETRIEVES the current deodorization function state.",
31317                         "x-example":
31318                             {
31319                                 "rt": ["oic.r.deodorization"],
31320                                 "if": ["oic.if.a", "oic.if.baseline"],
31321                                 "mode": "auto",
31322                                 "currentstate": "off"
31323                             },
31324                         "schema": { "$ref": "#/definitions/Deodorization" }
31325                     }
31326                 }
31327             },
31328             "post": {
31329                 "description": "Sets the desired deodorization function state.",
31330                 "parameters": [
31331                     { "$ref": "#/parameters/interface" },
31332                     {
31333                         "name": "body",
31334                         "in": "body",
31335                         "required": true,
31336                         "schema": { "$ref": "#/definitions/DeodorizationUpdate" },
31337                         "x-example":
31338                             {
31339                                 "mode": "on"
31340                             }
31341                     }
31342                 ],
31343                 "responses": {
31344                     "200": {
31345                         "description": "Indicates that the Deodorization function state was changed.\nThe new
31346 state is provided in the response.\n",
31347                         "x-example":
31348                             {
31349                                 "mode": "on",
31350                                 "currentstate": "on"
31351                             },
31352                         "schema": { "$ref": "#/definitions/Deodorization" }
31353                     }
31354                 }
31355             }
31356         }

```

```

31357 },
31358 "parameters": {
31359   "interface": {
31360     "in": "query",
31361     "name": "if",
31362     "type": "string",
31363     "enum": ["oic.if.a", "oic.if.baseline"]
31364   }
31365 },
31366 "definitions": {
31367   "Deodorization" : {
31368     "properties": {
31369       "rt": {
31370         "description": "The Resource Type.",
31371         "items": {
31372           "enum": ["oic.r.deodorization"],
31373           "maxLength": 64,
31374           "type": "string"
31375         },
31376         "minItems": 1,
31377         "uniqueItems": true,
31378         "readOnly": true,
31379         "type": "array"
31380       },
31381       "mode": {
31382         "description": "The modes of the Deodorization function.",
31383         "enum": [
31384           "off",
31385           "on",
31386           "auto"
31387         ],
31388         "type": "string"
31389       },
31390       "currentstate": {
31391         "description": "The current state of the Deodorization function.",
31392         "enum": [
31393           "off",
31394           "on"
31395         ],
31396         "readOnly": true,
31397         "type": "string"
31398       },
31399       "n": {
31400         "$ref":
31401         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
31402         schema.json#/definitions/n"
31403       },
31404       "id": {
31405         "$ref":
31406         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
31407         schema.json#/definitions/id"
31408       },
31409       "if": {
31410         "description": "The OCF Interface set supported by this Resource.",
31411         "items": {
31412           "enum": [
31413             "oic.if.a",
31414             "oic.if.baseline"
31415           ],
31416           "type": "string"
31417         },
31418         "minItems": 2,
31419         "uniqueItems": true,
31420         "readOnly": true,
31421         "type": "array"
31422       }
31423     },
31424     "type": "object",
31425     "required": ["mode", "currentstate"]
31426   },
31427   "DeodorizationUpdate" : {
31428     "properties": {

```


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31443

```
        "mode": {
            "description": "The modes of the Deodorization function.",
            "enum": [
                "off",
                "on",
                "auto"
            ],
            "type": "string"
        },
    },
    "type": "object",
    "required": ["mode"]
}
}
```

6.152.5 Property definition

Table 307 defines the Properties that are part of the "oic.r.deodorization" Resource Type.

Table 307 – The Property definitions of the Resource with type "rt" = "oic.r.deodorization".

Property name	Value type	Mandatory	Access mode	Description
Rt	array: see schema	No	Read Only	The Resource Type.
Mode	string	Yes	Read Write	The modes of the Deodorization function.
currentstate	string	Yes	Read Only	The current state of the Deodorization function.
N	multiple types: see schema	No	Read Write	
Id	multiple types: see schema	No	Read Write	
If	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
Mode	string	Yes	Read Write	The modes of the Deodorization function.

6.152.6 CRUDN behaviour

Table 308 defines the CRUDN operations that are supported on the "oic.r.deodorization" Resource Type.

Table 308 – The CRUDN operations of the Resource with type "rt" = "oic.r.deodorization".

Create	Read	Update	Delete	Notify
	get	post		observe

6.153 KeyCard Switch

6.153.1 Introduction

This Resource describes the operation of a KeyCard style switch. It has one mandatory Property, "stateofcard", which is a string enum type. It has two enum values: "validCardInserted", "validCardNotInserted". "validCardInserted" means that a keycard was inserted and passed validation check. "validCardNotInserted" means that a keycard is not inserted or it was inserted but failed to pass validation check.

31458 6.153.2 Example URI

31459 /KeyCardSwitchResURI

31460 6.153.3 Resource type

31461 The Resource Type is defined as: "oic.r.keycardswitch".

31462 6.153.4 OpenAPI 2.0 definition

```
31463 {
31464     "swagger": "2.0",
31465     "info": {
31466         "title": "KeyCard Switch",
31467         "version": "20190807",
31468         "license": {
31469             "name": "OCF Data Model License",
31470             "url":
31471 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
31472 CENSE.md",
31473             "x-copyright": "Copyright 2018-2019 Open Connectivity Foundation, Inc. All
31474 rights reserved."
31475         },
31476         "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
31477     },
31478     "schemes": ["http"],
31479     "consumes": ["application/json"],
31480     "produces": ["application/json"],
31481     "paths": {
31482         "/KeyCardSwitchResURI" : {
31483             "get": {
31484                 "description": "This Resource describes the operation of a KeyCard
31485 style switch. It has one mandatory Property, \"stateofcard\", which is a string enum type. It has two
31486 enum values: \"validCardInserted\", \"validCardNotInserted\". \"validCardInserted\" means that a
31487 keycard was inserted and passed validation check. \"validCardNotInserted\" means that a keycard is
31488 not inserted or it was inserted but failed to pass validation check.",
31489                 "parameters": [
31490                     { "$ref": "#/parameters/interface" }
31491                 ],
31492                 "responses": {
31493                     "200": {
31494                         "description" : "",
31495                         "x-example":
31496                         {
31497                             "rt": ["oic.r.keycardswitch"],
31498                             "if": ["oic.if.s", "oic.if.baseline"],
31499                             "stateofcard": "validCardInserted"
31500                         }
31501                     },
31502                     "schema": { "$ref": "#/definitions/KeyCardSwitch" }
31503                 }
31504             }
31505         }
31506     },
31507     "parameters": {
31508         "interface" : {
31509             "in": "query",
31510             "name": "if",
31511             "type": "string",
31512             "enum": ["oic.if.s", "oic.if.baseline"]
31513         }
31514     },
31515     "definitions": {
31516         "KeyCardSwitch" : {
31517             "properties": {
31518                 "rt": {
31519                     "description": "The Resource Type of KeyCardSwitch",
31520                     "items": {
31521                         "enum": ["oic.r.keycardswitch"],
31522                         "maxLength": 64,
31523                         "type": "string"
31524                     }
31525                 }
31526             }
31527         }
31528     }
31529 }
```

```

31525         },
31526         "minItems": 1,
31527         "uniqueItems": true,
31528         "readOnly": true,
31529         "type": "array"
31530     },
31531     "stateofcard": {
31532         "description": "The status of the keycardswitch.
31533         \"validCardInserted\" means that a keycard was inserted and passed validation check.
31534         \"validCardNotInserted\" means that a keycard is not inserted or it was inserted but failed to pass
31535         validation check.",
31536         "readOnly": true,
31537         "type": "string",
31538         "enum": [
31539             "validCardInserted",
31540             "validCardNotInserted"
31541         ]
31542     },
31543     "n": {
31544         "$ref":
31545         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
31546         schema.json#/definitions/n"
31547     },
31548     "id": {
31549         "$ref":
31550         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
31551         schema.json#/definitions/id"
31552     },
31553     "if": {
31554         "description": "The OCF Interface set supported by this
31555         Resource.",
31556         "items": {
31557             "enum": [
31558                 "oic.if.s",
31559                 "oic.if.baseline"
31560             ],
31561             "type": "string"
31562         },
31563         "minItems": 2,
31564         "uniqueItems": true,
31565         "readOnly": true,
31566         "type": "array"
31567     }
31568 },
31569 "type": "object",
31570 "required": ["stateofcard"]
31571 }
31572 }
31573 }
31574

```

6.153.5 Property definition

Table 309 defines the Properties that are part of the "oic.r.keycardswitch" Resource Type.

Table 309 – The Property definitions of the Resource with type "rt" = "oic.r.keycardswitch".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type of KeyCardSwitch
stateofcard	string	Yes	Read Only	The status of the keycardswitch. "validCardInserted" means that a keycard was inserted and passed validation check. "validCardNotInserted" means that a keycard is not inserted or it

				was inserted but failed to pass validation check.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

6.153.6 CRUDN behaviour

Table 310 defines the CRUDN operations that are supported on the "oic.r.keycardswitch" Resource Type.

Table 310 – The CRUDN operations of the Resource with type "rt" = "oic.r.keycardswitch".

Create	Read	Update	Delete	Notify
	get			observe

6.154 Muscle Oxygen Saturation

6.154.1 Introduction

This Resource describes the muscle oxygen saturation (SmO2), which is the percentage of hemoglobin that is saturated with oxygen in the capillaries of a muscle.

The unit is percentage.

The smo2 Property is a read-only value that is provided by the server.

6.154.2 Example URI

/MuscleOxygenSaturationResURI

6.154.3 Resource type

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

6.154.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Muscle Oxygen Saturation",
    "version": "2019-08-20",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/MuscleOxygenSaturationResURI": {
      "get": {
        "description": "This Resource describes the muscle oxygen saturation (SmO2), which is the
```

```

31620 percentage of hemoglobin that is saturated with oxygen in the capillaries of a muscle.\n The unit is
31621 percentage.\n The smo2 Property is a read-only value that is provided by the server.",
31622     "parameters": [
31623         {
31624             "$ref": "#/parameters/interface"
31625         }
31626     ],
31627     "responses": {
31628         "200": {
31629             "description": "",
31630             "x-example": {
31631                 "rt": [
31632                     "oic.r.muscleoxygensaturation"
31633                 ],
31634                 "muscleoxygensaturation": 80.0
31635             },
31636             "schema": {
31637                 "$ref": "#/definitions/MuscleOxygenSaturation"
31638             }
31639         }
31640     }
31641 },
31642 },
31643 },
31644 "parameters": {
31645     "interface": {
31646         "in": "query",
31647         "name": "if",
31648         "type": "string",
31649         "enum": [
31650             "oic.if.s",
31651             "oic.if.baseline"
31652         ]
31653     }
31654 },
31655 "definitions": {
31656     "MuscleOxygenSaturation": {
31657         "properties": {
31658             "muscleoxygensaturation": {
31659                 "description": "This Property describes the muscle oxygen saturation (SmO2), which is the
31660 percentage of hemoglobin that is saturated with oxygen in the capillaries of a muscle. The unit is
31661 percentage.",
31662                 "type": "number",
31663                 "minimum": 0,
31664                 "maximum": 100,
31665                 "readOnly": true
31666             },
31667             "rt": {
31668                 "description": "The Resource Type.",
31669                 "items": {
31670                     "enum": [
31671                         "oic.r.muscleoxygensaturation"
31672                     ],
31673                     "type": "string"
31674                 },
31675                 "minItems": 1,
31676                 "uniqueItems": true,
31677                 "readOnly": true,
31678                 "type": "array"
31679             },
31680             "n": {
31681                 "$ref":
31682 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
31683 schema.json#/definitions/n"
31684             },
31685             "if": {
31686                 "description": "The OCF Interface set supported by this Resource.",
31687                 "items": {
31688                     "enum": [
31689                         "oic.if.s",
31690                         "oic.if.baseline"
31691                     ],

```

```

31692         "type": "string"
31693     },
31694     "minItems": 1,
31695     "uniqueItems": true,
31696     "readOnly": true,
31697     "type": "array"
31698 }
31699 },
31700 "type": "object",
31701 "required": [
31702     "muscleoxygensaturation"
31703 ]
31704 }
31705 }
31706 }

```

31707 6.154.5 Property definition

31708 Table 311 defines the Properties that are part of the "oic.r.muscleoxygensaturation" Resource Type.

31709 **Table 311 – The Property definitions of the Resource with type "rt" =**
31710 **"oic.r.muscleoxygensaturation".**

Property name	Value type	Mandatory	Access mode	Description
muscleoxygensaturation	number	Yes	Read Only	This Property describes the muscle oxygen saturation (SmO2), which is the percentage of hemoglobin that is saturated with oxygen in the capillaries of a muscle. The unit is percentage.
rt	array: see schema	No	Read Only	The Resource Type.
n	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.

31711 6.154.6 CRUDN behaviour

31712 Table 312 defines the CRUDN operations that are supported on the "oic.r.muscleoxygensaturation"
31713 Resource Type.

31714 **Table 312 – The CRUDN operations of the Resource with type "rt" =**
31715 **"oic.r.muscleoxygensaturation".**

Create	Read	Update	Delete	Notify
	get			observe

31716

31717 6.155 Body Composition Analyser Atomic Measurement

31718 6.155.1 Introduction

31719 This Resource describes the Properties associated with body composition analyser.
31720 The Resource is an Atomic Measurement of weight (oic.r.weight), body mass index (BMI)
31721 (oic.r.bmi), height (oic.r.height), body fat (oic.r.body.fat), body water (oic.r.body.water), body soft
31722 lean mass (oic.r.body.slm), body fat free mass (oic.r.body.ffmpeg), observed time (oic.r.time.stamp),
31723 and user id (oic.r.userid).

6.155.2 Example URI

/BodyCompositionAnalyserAMResURI

6.155.3 Resource type

The Resource Type is defined as: "oic.r.bodycompositionanalyser-am, oic.wk.atomicmeasurement".

6.155.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Body Composition Analyser Atomic Measurement",
    "version": "2019-03-22",
    "license": {
      "name": "OCF Data Model License",
      "url":
        "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
        CENSE.md",
      "x-copyright": "Copyright 2016-2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": [
    "http"
  ],
  "consumes": [
    "application/json"
  ],
  "produces": [
    "application/json"
  ],
  "paths": {
    "/BodyCompositionAnalyserAMResURI?if=oic.if.b": {
      "get": {
        "description": "This Resource describes the Properties associated with body composition
        analyser.\n\nThe Resource is an Atomic Measurement of weight (oic.r.weight), body mass index (BMI)
        (oic.r.bmi), height (oic.r.height), body fat (oic.r.body.fat), body water (oic.r.body.water), body
        soft lean mass (oic.r.body.slm), body fat free mass (oic.r.body.ffm), observed time
        (oic.r.time.stamp), and user id (oic.r.userid).",
        "parameters": [
          {
            "$ref": "#/parameters/interface-all"
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": [
              {
                "href": "/myWeight",
                "rep": {
                  "weight": 80.0,
                  "units": "kg"
                }
              },
              {
                "href": "/myBMI",
                "rep": {
                  "bmi": 20.0
                }
              },
              {
                "href": "/myHeight",
                "rep": {
                  "height": 1.8,
                  "units": "m"
                }
              },
              {
                "href": "/myBodyFat",
```

```

31791         "rep": {
31792             "bodyfat": 20.0,
31793             "units": "kg"
31794         }
31795     },
31796     {
31797         "href": "/myBodyWater",
31798         "rep": {
31799             "bwater": 20.0,
31800             "units": "kg"
31801         }
31802     },
31803     {
31804         "href": "/myBodySoftLeanMass",
31805         "rep": {
31806             "slm": 20.0,
31807             "units": "kg"
31808         }
31809     },
31810     {
31811         "href": "/myBodyFatFreeMass",
31812         "rep": {
31813             "ffm": 40.0,
31814             "units": "kg"
31815         }
31816     },
31817     {
31818         "href": "/myUserId",
31819         "rep": {
31820             "userid": "USER1"
31821         }
31822     },
31823     {
31824         "href": "/myTimeStamp",
31825         "rep": {
31826             "timestamp": "2018-11-09T12:15+08:00"
31827         }
31828     }
31829 ],
31830 "schema": {
31831     "$ref": "#/definitions/batch-retrieve"
31832 }
31833 }
31834 }
31835 }
31836 },
31837 "/BodyCompositionAnalyserAMResURI?if=oic.if.ll": {
31838     "get": {
31839         "description": "This Resource describes the Properties associated with body composition
31840 analyser.\n\nThe Resource is an Atomic Measurement of weight (oic.r.weight), body mass index (BMI)
31841 (oic.r.bmi), height (oic.r.height), body fat (oic.r.body.fat), body water (oic.r.body.water), body
31842 soft lean mass (oic.r.body.slm), body fat free mass (oic.r.body.ffmpeg), observed time
31843 (oic.r.time.stamp), and user id (oic.r.userid).",
31844         "parameters": [
31845             {
31846                 "$ref": "#/parameters/interface-all"
31847             }
31848         ],
31849         "responses": {
31850             "200": {
31851                 "description": "",
31852                 "x-example": [
31853                     {
31854                         "href": "/myWeight",
31855                         "rt": [
31856                             "oic.r.weight"
31857                         ],
31858                         "if": [
31859                             "oic.if.s",
31860                             "oic.if.baseline"
31861                         ]
31862                     }

```



```

31863 {
31864     "href": "/myBMI",
31865     "rt": [
31866         "oic.r.bmi"
31867     ],
31868     "if": [
31869         "oic.if.s",
31870         "oic.if.baseline"
31871     ]
31872 },
31873 {
31874     "href": "/myHeight",
31875     "rt": [
31876         "oic.r.height"
31877     ],
31878     "if": [
31879         "oic.if.s",
31880         "oic.if.baseline"
31881     ]
31882 },
31883 {
31884     "href": "/myBodyFat",
31885     "rt": [
31886         "oic.r.body.fat"
31887     ],
31888     "if": [
31889         "oic.if.s",
31890         "oic.if.baseline"
31891     ]
31892 },
31893 {
31894     "href": "/myBodyWater",
31895     "rt": [
31896         "oic.r.body.water"
31897     ],
31898     "if": [
31899         "oic.if.s",
31900         "oic.if.baseline"
31901     ]
31902 },
31903 {
31904     "href": "/myBodySoftLeanMass",
31905     "rt": [
31906         "oic.r.body.slm"
31907     ],
31908     "if": [
31909         "oic.if.s",
31910         "oic.if.baseline"
31911     ]
31912 },
31913 {
31914     "href": "/myBodyFatFreeMass",
31915     "rt": [
31916         "oic.r.body.ffm"
31917     ],
31918     "if": [
31919         "oic.if.s",
31920         "oic.if.baseline"
31921     ]
31922 },
31923 {
31924     "href": "/myUserId",
31925     "rt": [
31926         "oic.r.userid"
31927     ],
31928     "if": [
31929         "oic.if.r",
31930         "oic.if.baseline"
31931     ]
31932 },
31933 {
31934     "href": "/myTimeStamp",

```

```

31935         "rt": [
31936             "oic.r.time.stamp"
31937         ],
31938         "if": [
31939             "oic.if.r",
31940             "oic.if.baseline"
31941         ]
31942     }
31943 },
31944     "schema": {
31945         "$ref": "#/definitions/links"
31946     }
31947 }
31948 },
31949 },
31950 },
31951 "/BodyCompositionAnalyserAMResURI?if=oic.if.baseline": {
31952     "get": {
31953         "description": "This Resource describes the Properties associated with body composition
31954 analyser.\n\nThe Resource is an Atomic Measurement of weight (oic.r.weight), body mass index (BMI)
31955 (oic.r.bmi), height (oic.r.height), body fat (oic.r.body.fat), body water (oic.r.body.water), body
31956 soft lean mass (oic.r.body.slm), body fat free mass (oic.r.body.ffm), observed time
31957 (oic.r.time.stamp), and user id (oic.r.userid).",
31958         "parameters": [
31959             {
31960                 "$ref": "#/parameters/interface-all"
31961             }
31962         ],
31963         "responses": {
31964             "200": {
31965                 "description": "",
31966                 "x-example": {
31967                     "rt": [
31968                         "oic.r.bodycompositionanalyser-am",
31969                         "oic.wk.atomicmeasurement"
31970                     ],
31971                     "if": [
31972                         "oic.if.b",
31973                         "oic.if.ll",
31974                         "oic.if.baseline"
31975                     ],
31976                     "rts": [
31977                         "oic.r.weight",
31978                         "oic.r.bmi",
31979                         "oic.r.height",
31980                         "oic.r.body.fat",
31981                         "oic.r.body.water",
31982                         "oic.r.body.slm",
31983                         "oic.r.body.ffm",
31984                         "oic.r.userid",
31985                         "oic.r.time.stamp"
31986                     ],
31987                     "rts-m": [
31988                         "oic.r.weight",
31989                         "oic.r.body.fat",
31990                         "oic.r.height"
31991                     ],
31992                     "links": [
31993                         {
31994                             "href": "/myWeight",
31995                             "rt": [
31996                                 "oic.r.weight"
31997                             ],
31998                             "if": [
31999                                 "oic.if.s",
32000                                 "oic.if.baseline"
32001                             ]
32002                         },
32003                         {
32004                             "href": "/myBMI",
32005                             "rt": [
32006                                 "oic.r.bmi"

```

```

32007         ],
32008         "if": [
32009             "oic.if.s",
32010             "oic.if.baseline"
32011         ]
32012     },
32013     {
32014         "href": "/myHeight",
32015         "rt": [
32016             "oic.r.height"
32017         ],
32018         "if": [
32019             "oic.if.s",
32020             "oic.if.baseline"
32021         ]
32022     },
32023     {
32024         "href": "/myBodyFat",
32025         "rt": [
32026             "oic.r.body.fat"
32027         ],
32028         "if": [
32029             "oic.if.s",
32030             "oic.if.baseline"
32031         ]
32032     },
32033     {
32034         "href": "/myBodyWater",
32035         "rt": [
32036             "oic.r.body.water"
32037         ],
32038         "if": [
32039             "oic.if.s",
32040             "oic.if.baseline"
32041         ]
32042     },
32043     {
32044         "href": "/myBodySoftLeanMass",
32045         "rt": [
32046             "oic.r.body.slm"
32047         ],
32048         "if": [
32049             "oic.if.s",
32050             "oic.if.baseline"
32051         ]
32052     },
32053     {
32054         "href": "/myBodyFatFreeMass",
32055         "rt": [
32056             "oic.r.body.ffm"
32057         ],
32058         "if": [
32059             "oic.if.s",
32060             "oic.if.baseline"
32061         ]
32062     },
32063     {
32064         "href": "/myUserId",
32065         "rt": [
32066             "oic.r.userid"
32067         ],
32068         "if": [
32069             "oic.if.r",
32070             "oic.if.baseline"
32071         ]
32072     },
32073     {
32074         "href": "/myTimeStamp",
32075         "rt": [
32076             "oic.r.time.stamp"
32077         ],
32078         "if": [

```

```

32079         "oic.if.r",
32080         "oic.if.baseline"
32081     ]
32082     }
32083 ]
32084 },
32085 "schema": {
32086     "$ref": "#/definitions/baseline"
32087 }
32088 }
32089 }
32090 }
32091 },
32092 },
32093 "parameters": {
32094     "interface-all": {
32095         "in": "query",
32096         "name": "if",
32097         "type": "string",
32098         "enum": [
32099             "oic.if.b",
32100             "oic.if.ll",
32101             "oic.if.baseline"
32102         ]
32103     }
32104 },
32105 "definitions": {
32106     "links": {
32107         "type": "array",
32108         "items": {
32109             "$ref": "#/definitions/oic.oic-link"
32110         }
32111     },
32112     "baseline": {
32113         "properties": {
32114             "rt": {
32115                 "items": {
32116                     "enum": [
32117                         "oic.r.bodycompositionanalyser-am",
32118                         "oic.wk.atomicmeasurement"
32119                     ],
32120                     "type": "string",
32121                     "maxLength": 64
32122                 },
32123                 "minItems": 2,
32124                 "uniqueItems": true,
32125                 "readOnly": true,
32126                 "type": "array"
32127             },
32128             "rts": {
32129                 "description": "This contains all possible Resource Types for this Atomic Measurement.",
32130                 "items": {
32131                     "enum": [
32132                         "oic.r.weight",
32133                         "oic.r.bmi",
32134                         "oic.r.height",
32135                         "oic.r.body.fat",
32136                         "oic.r.body.water",
32137                         "oic.r.body.slm",
32138                         "oic.r.body.ffm",
32139                         "oic.r.time.stamp",
32140                         "oic.r.userid"
32141                     ],
32142                     "type": "string",
32143                     "maxLength": 64
32144                 },
32145                 "minItems": 1,
32146                 "uniqueItems": true,
32147                 "readOnly": true,
32148                 "type": "array"
32149             },
32150             "rts-m": {

```

```

32151         "description": "This contains all mandatory Resource Types for this Atomic Measurement.",
32152         "items": {
32153             "enum": [
32154                 "oic.r.weight",
32155                 "oic.r.body.fat",
32156                 "oic.r.height"
32157             ],
32158             "type": "string",
32159             "maxLength": 64
32160         },
32161         "maxItems": 3,
32162         "minItems": 3,
32163         "uniqueItems": true,
32164         "readOnly": true,
32165         "type": "array"
32166     },
32167     "if": {
32168         "description": "The OCF Interface set supported by this Resource",
32169         "items": {
32170             "enum": [
32171                 "oic.if.b",
32172                 "oic.if.ll",
32173                 "oic.if.baseline"
32174             ],
32175             "type": "string",
32176             "maxLength": 64
32177         },
32178         "minItems": 3,
32179         "uniqueItems": true,
32180         "readOnly": true,
32181         "type": "array"
32182     },
32183     "n": {
32184         "$ref":
32185         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
32186         schema.json#/definitions/n"
32187     },
32188     "id": {
32189         "$ref":
32190         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
32191         schema.json#/definitions/id"
32192     },
32193     "links": {
32194         "$ref": "#/definitions/links"
32195     }
32196 },
32197 "type": "object",
32198 "required": [
32199     "rt", "if", "links", "rts", "rts-m"
32200 ]
32201 },
32202 "batch-retrieve": {
32203     "minItems": 1,
32204     "items": {
32205         "properties": {
32206             "href": {
32207                 "$ref":
32208                 "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
32209                 schema.json#/definitions/href"
32210             },
32211             "rep": {
32212                 "type": "object",
32213                 "anyOf": [
32214                     {
32215                         "$ref":
32216                         "https://openconnectivityfoundation.github.io/IoTDataModels/WeightResURI.swagger.json#/definitions/W
32217                         eight"
32218                     },
32219                     {
32220                         "$ref":
32221                         "https://openconnectivityfoundation.github.io/IoTDataModels/BMIResURI.swagger.json#/definitions/BMI"
32222                     }

```

```

32223         {
32224             "$ref":
32225             "https://openconnectivityfoundation.github.io/IoTDataModels/HeightResURI.swagger.json#/definitions/H
32226             eight"
32227         },
32228         {
32229             "$ref":
32230             "https://openconnectivityfoundation.github.io/IoTDataModels/BodyFatResURI.swagger.json#/definitions/
32231             BodyFat"
32232         },
32233         {
32234             "$ref":
32235             "https://openconnectivityfoundation.github.io/IoTDataModels/BodyWaterResURI.swagger.json#/definition
32236             s/BodyWater"
32237         },
32238         {
32239             "$ref":
32240             "https://openconnectivityfoundation.github.io/IoTDataModels/BodySoftLeanMassResURI.swagger.json#/def
32241             initions/BodySoftLeanMass"
32242         },
32243         {
32244             "$ref":
32245             "https://openconnectivityfoundation.github.io/IoTDataModels/BodyFatFreeMassResURI.swagger.json#/defi
32246             nitions/BodyFatFreeMass"
32247         },
32248         {
32249             "$ref":
32250             "https://openconnectivityfoundation.github.io/IoTDataModels/UserIDResURI.swagger.json#/definitions/U
32251             serID"
32252         },
32253         {
32254             "$ref":
32255             "https://openconnectivityfoundation.github.io/IoTDataModels/TimeStampResURI.swagger.json#/definition
32256             s/TimeStamp"
32257         }
32258     ]
32259 }
32260 },
32261 "required": [
32262     "href",
32263     "rep"
32264 ],
32265 "type": "object"
32266 },
32267 "type": "array"
32268 },
32269 "oic.oic-link": {
32270     "properties": {
32271         "rt": {
32272             "description": "Resource Type of the target Resource",
32273             "items": {
32274                 "enum": [
32275                     "oic.r.weight",
32276                     "oic.r.bmi",
32277                     "oic.r.height",
32278                     "oic.r.body.fat",
32279                     "oic.r.body.water",
32280                     "oic.r.body.slm",
32281                     "oic.r.body.ffmpeg",
32282                     "oic.r.time.stamp",
32283                     "oic.r.userid"
32284                 ],
32285                 "type": "string",
32286                 "maxLength": 64
32287             },
32288             "minItems": 1,
32289             "uniqueItems": true,
32290             "readOnly": true,
32291             "type": "array"
32292         },
32293         "if": {
32294             "description": "The OCF Interface set supported by the target Resource",

```

```

32295         "items": {
32296             "enum": [
32297                 "oic.if.s",
32298                 "oic.if.r",
32299                 "oic.if.baseline"
32300             ],
32301             "type": "string",
32302             "maxLength": 64
32303         },
32304         "minItems": 1,
32305         "uniqueItems": true,
32306         "readOnly": true,
32307         "type": "array"
32308     },
32309     "anchor": {
32310         "$ref":
32311         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
32312         schema.json#/definitions/anchor"
32313     },
32314     "di": {
32315         "$ref":
32316         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
32317         schema.json#/definitions/di"
32318     },
32319     "eps": {
32320         "$ref":
32321         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
32322         schema.json#/definitions/eps"
32323     },
32324     "href": {
32325         "$ref":
32326         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
32327         schema.json#/definitions/href"
32328     },
32329     "ins": {
32330         "$ref":
32331         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
32332         schema.json#/definitions/ins"
32333     },
32334     "p": {
32335         "$ref":
32336         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
32337         schema.json#/definitions/p"
32338     },
32339     "rel": {
32340         "$ref":
32341         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
32342         schema.json#/definitions/rel_array"
32343     },
32344     "title": {
32345         "$ref":
32346         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
32347         schema.json#/definitions/title"
32348     },
32349     "type": {
32350         "$ref":
32351         "https://openconnectivityfoundation.github.io/core/schemas/oic.links.properties.core-
32352         schema.json#/definitions/type"
32353     }
32354 },
32355 "required": [
32356     "href",
32357     "rt",
32358     "if"
32359 ],
32360 "type": "object"
32361 }
32362 }
32363 }
32364

```

32365 **6.155.5 Property definition**

32366 Table 313 defines the Properties that are part of the "oic.r.bodycompositionanalyser-am,
32367 oic.wk.atomicmeasurement" Resource Type.

32368 **Table 313 – The Property definitions of the Resource with type "rt" =**
32369 **"oic.r.bodycompositionanalyser-am, oic.wk.atomicmeasurement".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	Yes	Read Only	
rts	array: see schema	Yes	Read Only	This contains all possible Resource Types for this Atomic Measurement.
rts-m	array: see schema	Yes	Read Only	This contains all mandatory Resource Types for this Atomic Measurement.
if	array: see schema	Yes	Read Only	The OCF Interface set supported by this Resource
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
links	multiple types: see schema	Yes	Read Write	
href	multiple types: see schema	Yes	Read Write	
rep	object: see schema	Yes	Read Write	
rt	array: see schema	Yes	Read Only	Resource Type of the target Resource
if	array: see schema	Yes	Read Only	The OCF Interface set supported by the target Resource
anchor	multiple types: see schema	No	Read Write	
di	multiple types: see schema	No	Read Write	
eps	multiple types: see schema	No	Read Write	
href	multiple types: see schema	Yes	Read Write	
ins	multiple types: see schema	No	Read Write	
p	multiple types: see schema	No	Read Write	
rel	multiple types: see schema	No	Read Write	
title	multiple types: see schema	No	Read Write	
type	multiple types: see schema	No	Read Write	

6.155.6 CRUDN behaviour

Table 314 defines the CRUDN operations that are supported on the "oic.r.bodycompositionanalyser-am, oic.wk.atomicmeasurement" Resource Type.

Table 314 – The CRUDN operations of the Resource with type "rt" = "oic.r.bodycompositionanalyser-am, oic.wk.atomicmeasurement".

Create	Read	Update	Delete	Notify
	get			observe

6.156 Fault Interrupter Switch

6.156.1 Introduction

This Resource describes a fault interrupter switch (on/off/faulted).

The Property "state" is an enum.

A state of "on" means that the switch is on.

A state of "off" means that the switch is off.

A state of "faulted" means the switch is faulted, in such a state an UPDATE is not possible.

6.156.2 Example URI

/FaultSwitchResURI

6.156.3 Resource type

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

6.156.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Fault Interrupter Switch",
    "version": "20191114",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/FaultSwitchResURI" : {
      "get": {
        "description": "This Resource describes a fault interrupter switch (on/off/faulted).\n\nThe
Property \"state\" is an enum.\n\nA state of \"on\" means that the switch is on.\n\nA state of \"off\"
means that the switch is off.\n\nA state of \"faulted\" means the switch is faulted, in such a state
an UPDATE is not possible.",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example":
              {
                "rt": ["oic.r.switch.fault"],
                "if": ["oic.if.a", "oic.if.baseline"],
                "state": "off"
              },
            "schema": { "$ref": "#/definitions/FaultSwitch" }
          }
        }
      }
    }
  }
}
```

```

32425     }
32426   },
32427   "post": {
32428     "description": "Setting a fault interrupter to a faulted state requires a manual human
32429 intervention, thus it is not allowed in an UPDATE. When in a faulted state it is not possible to
32430 reset to a non-faulted state without also manual human intervention.",
32431     "parameters": [
32432       { "$ref": "#/parameters/interface" },
32433       {
32434         "name": "body",
32435         "in": "body",
32436         "required": true,
32437         "schema": { "$ref": "#/definitions/FaultSwitchUpdate" },
32438         "x-example":
32439           {
32440             "state": "on"
32441           }
32442       }
32443     ],
32444     "responses": {
32445       "200": {
32446         "description": "Success path response as would be provided for an UPDATE as shown in
the example for \"post\".",
32448         "x-example":
32449           {
32450             "state": "on"
32451           },
32452         "schema": { "$ref": "#/definitions/FaultSwitch" }
32453       }
32454     }
32455   }
32456 },
32457 "parameters": {
32458   "interface": {
32459     "in": "query",
32460     "name": "if",
32461     "type": "string",
32462     "enum": ["oic.if.a", "oic.if.baseline"]
32463   }
32464 },
32465 "definitions": {
32466   "FaultSwitch": {
32467     "properties": {
32468       "rt": {
32469         "description": "The Resource Type.",
32470         "items": {
32471           "enum": ["oic.r.switch.fault"],
32472           "maxLength": 64,
32473           "type": "string"
32474         },
32475         "minItems": 1,
32476         "uniqueItems": true,
32477         "readOnly": true,
32478         "type": "array"
32479       },
32480       "state": {
32481         "description": "The status of the switch.",
32482         "enum": ["on", "off", "faulted"],
32483         "type": "string"
32484       }
32485     },
32486     "n": {
32487       "$ref":
32488         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
32489 schema.json#/definitions/n"
32490     },
32491     "id": {
32492       "$ref":
32493         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
32494 schema.json#/definitions/id"
32495     },
32496     "if": {

```

```
32497         "description": "The OCF Interface set supported by this Resource.",
32498         "items": {
32499             "enum": [
32500                 "oic.if.a",
32501                 "oic.if.baseline"
32502             ],
32503             "type": "string"
32504         },
32505         "minItems": 2,
32506         "uniqueItems": true,
32507         "readOnly": true,
32508         "type": "array"
32509     }
32510 },
32511 "type": "object",
32512 "required": ["state"]
32513 },
32514 "FaultSwitchUpdate" : {
32515     "properties": {
32516         "state": {
32517             "description": "The status of the switch.",
32518             "enum": ["on", "off"],
32519             "type": "string"
32520         }
32521     },
32522     "type": "object",
32523     "required": ["state"]
32524 }
32525 }
32526 }
32527 }
```

32528 **6.156.5 Property definition**

32529 Table 315 defines the Properties that are part of the "oic.r.switch.fault" Resource Type.

32530 **Table 315 – The Property definitions of the Resource with type "rt" = "oic.r.switch.fault".**

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

32531 **6.156.6 CRUDN behaviour**

32532 Table 316 defines the CRUDN operations that are supported on the "oic.r.switch.fault" Resource
32533 Type.

32534 **Table 316 – The CRUDN operations of the Resource with type "rt" = "oic.r.switch.fault".**

Create	Read	Update	Delete	Notify
	get	post		observe

32535 **6.157 HVAC Capacity**

32536 **6.157.1 Introduction**

32537 This Resource describes the capacity (heating or cooling) of a HVAC system.

32538 "capacity" is a number in units of kW (kilowatts).

32539 To convert from kW to other units that may be commonly used in certain geographic locales the following conversions should be applied:

32540 - to convert to BTU/hr: $\text{BTU/hr} = 3412.142 * \text{kW}$

32542 - to convert to ton: $\text{ton} = \text{kW}/3.5168525$

32543 **6.157.2 Example URI**

32544 /HVACCapacityResURI

32545 **6.157.3 Resource type**

32546 The Resource Type is defined as: "oic.r.hvac.capacity".

32547 **6.157.4 OpenAPI 2.0 definition**

```
32548 {
32549   "swagger": "2.0",
32550   "info": {
32551     "title": "HVAC Capacity",
32552     "version": "20190724",
32553     "license": {
32554       "name": "OCF Data Model License",
32555       "url":
32556         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
32557         CENSE.md",
32558       "x-copyright": "copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
32559     },
32560     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
32561   },
32562   "schemes": ["http"],
32563   "consumes": ["application/json"],
32564   "produces": ["application/json"],
32565   "paths": {
32566     "/HVACCapacityResURI" : {
32567       "get": {
32568         "description": "This Resource describes the capacity (heating or cooling) of a HVAC
32569         system.\n \"capacity\" is a number in units of kW (kilowatts).\n To convert from kW to other units
32570         that may be commonly used in certain geographic locales the following conversions should be
32571         applied:\n - to convert to BTU/hr:  $\text{BTU/hr} = 3412.142 * \text{kW}$ \n - to convert to ton:  $\text{ton} =$ 
32572          $\text{kW}/3.5168525$ ",
32573         "parameters": [
32574           { "$ref": "#/parameters/interface" }
32575         ],
32576         "responses": {
32577           "200": {
32578             "description": "RETRIEVES the current capacity.",
32579             "x-example":
32580               {
32581                 "rt": ["oic.r.hvac.capacity"],
32582                 "if": ["oic.if.r", "oic.if.baseline"],
32583                 "capacity": 2.5
32584               },
32585             "schema": { "$ref": "#/definitions/capacity" }
32586           }
32587         }
32588       }
32589     },
32590     "parameters": {
32591       "interface": {
32592         "in": "query",
32593         "name": "if",
32594         "type": "string",
32595         "enum": ["oic.if.r", "oic.if.baseline"]
32596       }
32597     }
32598   }
32599 }
```

```

32598 },
32599 "definitions": {
32600   "capacity": {
32601     "properties": {
32602       "rt": {
32603         "description": "The Resource Type.",
32604         "items": {
32605           "enum": ["oic.r.hvac.capacity"],
32606           "maxLength": 64,
32607           "type": "string"
32608         },
32609         "minItems": 1,
32610         "uniqueItems": true,
32611         "readOnly": true,
32612         "type": "array"
32613       },
32614       "capacity": {
32615         "description": "The rated capacity for the Device.",
32616         "minimum": 0,
32617         "exclusiveMinimum": true,
32618         "readOnly": true,
32619         "type": "number"
32620       },
32621       "n": {
32622         "$ref":
32623         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
32624         schema.json#/definitions/n"
32625       },
32626       "id": {
32627         "$ref":
32628         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
32629         schema.json#/definitions/id"
32630       },
32631       "if": {
32632         "description": "The OCF Interface set supported by this Resource.",
32633         "items": {
32634           "enum": [
32635             "oic.if.r",
32636             "oic.if.baseline"
32637           ],
32638           "type": "string"
32639         },
32640         "minItems": 2,
32641         "uniqueItems": true,
32642         "readOnly": true,
32643         "type": "array"
32644       }
32645     },
32646     "type": "object",
32647     "required": ["capacity"]
32648   }
32649 }
32650 }
32651

```

32652 6.157.5 Property definition

32653 Table 317 defines the Properties that are part of the "oic.r.hvac.capacity" Resource Type.

32654 **Table 317 – The Property definitions of the Resource with type "rt" = "oic.r.hvac.capacity".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
capacity	number	Yes	Read Only	The rated capacity for the Device.
n	multiple types: see schema	No	Read Write	

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

6.157.6 CRUDN behaviour

Table 318 defines the CRUDN operations that are supported on the "oic.r.hvac.capacity" Resource Type.

Table 318 – The CRUDN operations of the Resource with type "rt" = "oic.r.hvac.capacity".

Create	Read	Update	Delete	Notify
	get			observe

6.158 Media Audio Resource Type

6.158.1 Introduction

This OCF Resource specifies the audio media types that an OCF Device supports.

6.158.2 Example URI

/MediaAudioResURI

6.158.3 Resource type

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

6.158.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Media Audio Resource Type",
    "version": "2019-11-27",
    "license": {
      "name": "OCF Data Model License",
      "url": "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/MediaAudioResURI" : {
      "get": {
        "description": "This OCF Resource specifies the audio media types that an OCF Device
supports.",
        "parameters": [
          {"$ref": "#/parameters/interface-r"}
        ],
        "responses": {
          "200": {
            "description": "Retrieves the audio information for the specified or the current
media.",
            "x-example": {
              "rt": ["oic.r.media.audio"],
              "id": "unique_example_id",
              "mediacore": {
                "title": "Song 1",
                "description": "Long user-friendly synopsis of Song 1",
                "mimetype": "audio/mpeg3",
                "mediafile": "file://example/url/Song1.mp3",
```

```

32704         "genres": [{"category": "Music", "subcategory": "Rock"}, {"category": "Music",
32705 "subcategory": "Pop"}],
32706         "ratinginfo": [{"ratingorganization": "none", "rating": "Parental Advisory -
32707 Explicit Content"}],
32708         "identificationnumber": "ISSN:1234-5678",
32709         "datetime": "2018-06-23T20:22:59-08:00",
32710         "mediaartwork": [
32711             {
32712                 "rt": ["oic.r.icon"],
32713                 "mimetype": "image/png",
32714                 "width": 256,
32715                 "height": 256,
32716                 "media": "file://example/url/song1.png"
32717             }
32718         ],
32719         "copyright": "Copyright notice by the copyright holder for Song 1"
32720     },
32721     "artists": [
32722         "Artist 1",
32723         "Artist 2"
32724     ],
32725     "album": "Album Title 1",
32726     "albumartwork": [
32727         {
32728             "rt": ["oic.r.icon"],
32729             "mimetype": "image/png",
32730             "width": 256,
32731             "height": 256,
32732             "media": "file://example/url/album1.png"
32733         }
32734     ],
32735     "sdp": [
32736         "m=audio 2 RTP/AVP 97",
32737         "a=rtpmap:97 MP4A-LATM/90000"
32738     ],
32739     "duration": "P0Y0M0DT0H4M27S",
32740     "tracknumber": 2,
32741     "producers": [
32742         "Producer 1",
32743         "Producer 2"
32744     ],
32745     "composers": [
32746         "Composer 1",
32747         "Composer 2"
32748     ],
32749     "language": "en"
32750 },
32751 "schema": {"$ref": "#/definitions/MediaAudio"}
32752 }
32753 }
32754 },
32755 "post": {
32756     "description": "Sets the Media Audio properties.",
32757     "parameters": [
32758         {"$ref": "#/parameters/interface-rw"},
32759         {
32760             "name": "body",
32761             "in": "body",
32762             "required": true,
32763             "x-example": {
32764                 "mediacore": {
32765                     "title": "Song 1",
32766                     "description": "Long user-friendly synopsis of Song 1",
32767                     "mimetype": "audio/mpeg3",
32768                     "mediafile": "file://example/url/Song1.mp3",
32769                     "genres": [{"category": "Music", "subcategory": "Rock"}, {"category": "Music",
32770 "subcategory": "Pop"}],
32771                     "ratinginfo": [{"ratingorganization": "none", "rating": "Parental Advisory -
32772 Explicit Content"}],
32773                     "identificationnumber": "ISSN:1234-5678",
32774                     "datetime": "2018-06-23T20:22:59-08:00",
32775                     "mediaartwork": [

```

```

32776         {
32777             "mimetype": "image/png",
32778             "width": 256,
32779             "height": 256,
32780             "media": "file://example/url/song1.png"
32781         }
32782     ],
32783     "copyright": "Copyright notice by the copyright holder for Song 1"
32784 },
32785     "artists": [
32786         "Artist 1",
32787         "Artist 2"
32788     ],
32789     "album": "Album Title 1",
32790     "albumartwork": [
32791         {
32792             "mimetype": "image/png",
32793             "width": 256,
32794             "height": 256,
32795             "media": "file://example/url/album1.png"
32796         }
32797     ],
32798     "sdp": [
32799         "m=audio 2 RTP/AVP 97",
32800         "a=rtpmap:97 MP4A-LATM/90000"
32801     ],
32802     "duration": "P0Y0M0DT0H4M27S",
32803     "tracknumber": 2,
32804     "producers": [
32805         "Producer 1",
32806         "Producer 2"
32807     ],
32808     "composers": [
32809         "Composer 1",
32810         "Composer 2"
32811     ],
32812     "language": "en"
32813 },
32814     "schema": {"$ref": "#/definitions/MediaAudioUpdate"}
32815 }
32816 ],
32817 "responses": {
32818     "200": {
32819         "description": "Sets the audio information for the specified or the current media.",
32820         "x-example": {
32821             "mediacore": {
32822                 "title": "Song 1",
32823                 "description": "Long user-friendly synopsis of Song 1",
32824                 "mimetype": "audio/mpeg3",
32825                 "mediafile": "file://example/url/Song1.mp3",
32826                 "genres": [{"category": "Music", "subcategory": "Rock"}, {"category": "Music",
32827 "subcategory": "Pop"}],
32828                 "ratinginfo": [{"ratingorganization": "none", "rating": "Parental Advisory -
32829 Explicit Content"}],
32830                 "identificationnumber": "ISSN:1234-5678",
32831                 "datetime": "2018-06-23T20:22:59-08:00",
32832                 "mediaartwork": [
32833                     {
32834                         "rt": ["oic.r.icon"],
32835                         "mimetype": "image/png",
32836                         "width": 256,
32837                         "height": 256,
32838                         "media": "file://example/url/song1.png"
32839                     }
32840                 ],
32841                 "copyright": "Copyright notice by the copyright holder for Song 1"
32842             },
32843             "artists": [
32844                 "Artist 1",
32845                 "Artist 2"
32846             ],
32847             "album": "Album Title 1",

```



```

32848         "albumartwork": [
32849             {
32850                 "rt": ["oic.r.icon"],
32851                 "mimetype": "image/png",
32852                 "width": 256,
32853                 "height": 256,
32854                 "media": "file://example/url/album1.png"
32855             }
32856         ],
32857         "sdp": [
32858             "m=audio 2 RTP/AVP 97",
32859             "a=rtpmap:97 MP4A-LATM/90000"
32860         ],
32861         "duration": "P0Y0M0DT0H4M27S",
32862         "tracknumber": 2,
32863         "producers": [
32864             "Producer 1",
32865             "Producer 2"
32866         ],
32867         "composers": [
32868             "Composer 1",
32869             "Composer 2"
32870         ],
32871         "language": "en"
32872     },
32873     "schema": {"$ref": "#/definitions/MediaAudioUpdate"}
32874 }
32875 }
32876 }
32877 },
32878 {
32879     "parameters": {
32880         "interface-r" : {
32881             "in" : "query",
32882             "name" : "if",
32883             "type" : "string",
32884             "enum" : ["oic.if.rw", "oic.if.baseline"]
32885         },
32886         "interface-rw" : {
32887             "in" : "query",
32888             "name" : "if",
32889             "type" : "string",
32890             "enum" : ["oic.if.rw"]
32891         }
32892     },
32893     "definitions": {
32894         "MediaAudio" : {
32895             "properties": {
32896                 "rt": {
32897                     "description": "The Resource Type of Media Audio",
32898                     "items": {
32899                         "enum": ["oic.r.media.audio"],
32900                         "type": "string"
32901                     },
32902                     "minItems": 1,
32903                     "uniqueItems": true,
32904                     "readOnly": true,
32905                     "type": "array"
32906                 },
32907                 "mediacore": {
32908                     "description": "The Media Core Properties common on all Media Resource Types",
32909                     "$ref":
32910 "https://openconnectivityfoundation.github.io/IoTDataModels/MediaCoreResURI.swagger.json#/definitions/MediaCore"
32911                 },
32912                 "artists": {
32913                     "description": "List of artists that recorded the song",
32914                     "items": {
32915                         "type": "string"
32916                     },
32917                     "minItems": 1,
32918                     "type": "array"
32919                 }

```

```

32920     },
32921     "album" : {
32922         "description": "Which album the song and picture belong to (if applicable)",
32923         "type": "string"
32924     },
32925     "albumartwork" : {
32926         "description": "The array of icons that are used as the album artwork.",
32927         "items": {
32928             "$ref": "https://openconnectivityfoundation.github.io/core-
32929 extensions/swagger2.0/oic.r.icon.swagger.json#/definitions/Icon"
32930         },
32931         "minItems": 1,
32932         "type": "array"
32933     },
32934     "tracknumber" : {
32935         "description": "The track number from the album",
32936         "type": "integer"
32937     },
32938     "sdp" : {
32939         "description": "Array of strings, a string for each Session Description Protocol syntax.",
32940         "items": {
32941             "description": "Session Description Protocol is a format for describing streaming media
32942 communications parameters using the media and attribute lines defined in RFC4566.",
32943             "type": "string"
32944         },
32945         "minItems": 1,
32946         "type": "array"
32947     },
32948     "duration": {
32949         "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
32950 schema.json#/definitions/duration",
32951         "description": "Duration is the total length of the media audio with format pattern
32952 according to ISO 8601 duration. For example, P0Y0M0DT0H4M27S represents a duration of 4 minutes, and
32953 27 seconds."
32954     },
32955     "producers" : {
32956         "description": "List of producers that produced the song",
32957         "items": {
32958             "type": "string"
32959         },
32960         "minItems": 1,
32961         "type": "array"
32962     },
32963     "composers" : {
32964         "description": "List of composers that wrote the song",
32965         "items": {
32966             "type": "string"
32967         },
32968         "minItems": 1,
32969         "type": "array"
32970     },
32971     "language": {
32972         "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
32973 schema.json#/definitions/language-tag",
32974         "description": "Current language of the audio media content with format pattern according
32975 to RFC 5646 language tag"
32976     },
32977     "n": {
32978         "$ref":
32979 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
32980 schema.json#/definitions/n"
32981     },
32982     "id": {
32983         "$ref":
32984 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
32985 schema.json#/definitions/id"
32986     },
32987     "if": {
32988         "description": "The OCF Interface set supported by this Resource",
32989         "items": {
32990             "enum": ["oic.if.rw", "oic.if.baseline"],
32991             "type": "string"

```

```

32992         },
32993         "minItems": 1,
32994         "uniqueItems": true,
32995         "readOnly": true,
32996         "type": "array"
32997     }
32998 },
32999 "type": "object",
33000 "required": ["mediacore"]
33001 },
33002 "MediaAudioUpdate" : {
33003     "properties": {
33004         "mediacore": {
33005             "description": "The Media Core Properties common on all Media Resource Types,",
33006             "$ref":
33007 "https://openconnectivityfoundation.github.io/IoTDataModels/MediaCoreResURI.swagger.json#/definition
33008 s/MediaCore"
33009         },
33010         "artists" : {
33011             "description": "List of artists that recorded the song",
33012             "items": {
33013                 "type": "string"
33014             },
33015             "minItems": 1,
33016             "type": "array"
33017         },
33018         "album" : {
33019             "description": "Which album the song and picture belong to (if applicable)",
33020             "type": "string"
33021         },
33022         "albumartwork" : {
33023             "description": "The array of icons that are used as the album artwork.",
33024             "items": {
33025                 "$ref": "https://openconnectivityfoundation.github.io/core-
33026 extensions/swagger2.0/oic.r.icon.swagger.json#/definitions/Icon"
33027             },
33028             "minItems": 1,
33029             "type": "array"
33030         },
33031         "tracknumber" : {
33032             "description": "The track number from the album",
33033             "type": "integer"
33034         },
33035         "sdp" : {
33036             "description": "Array of strings, a string for each Session Description Protocol syntax.",
33037             "items": {
33038                 "description": "Session Description Protocol is a format for describing streaming media
33039 communications parameters using the media and attribute lines defined in RFC4566.",
33040                 "type": "string"
33041             },
33042             "minItems": 1,
33043             "type": "array"
33044         },
33045         "duration": {
33046             "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
33047 schema.json#/definitions/duration",
33048             "description": "Duration is the total length of the media audio with format pattern
33049 according to ISO 8601 duration. For example, P0Y0M0DT0H4M27S represents a duration of 4 minutes, and
33050 27 seconds."
33051         },
33052         "producers" : {
33053             "description": "List of producers that produced the song",
33054             "items": {
33055                 "type": "string"
33056             },
33057             "minItems": 1,
33058             "type": "array"
33059         },
33060         "composers" : {
33061             "description": "List of composers that wrote the song",
33062             "items": {
33063                 "type": "string"

```

```

33064     },
33065     "minItems": 1,
33066     "type": "array"
33067 },
33068 "language": {
33069   "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
33070 schema.json#/definitions/language-tag",
33071   "description": "Current language of the audio media content with format pattern according
33072 to RFC 5646 language tag"
33073 },
33074 "n": {
33075   "$ref":
33076 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
33077 schema.json#/definitions/n"
33078 }
33079 },
33080 "type" : "object",
33081 "required": ["mediacore"]
33082 }
33083 }
33084 }
33085

```

33086 6.158.5 Property definition

33087 Table 319 defines the Properties that are part of the "oic.r.media.audio" Resource Type.

33088 **Table 319 – The Property definitions of the Resource with type "rt" = "oic.r.media.audio".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type of Media Audio
mediacore	multiple types: see schema	Yes	Read Write	The Media Core Properties common on all Media Resource Types
artists	array: see schema	No	Read Write	List of artists that recorded the song
album	string	No	Read Write	Which album the song and picture belong to (if applicable)
albumartwork	array: see schema	No	Read Write	The array of icons that are used as the album artwork.
tracknumber	integer	No	Read Write	The track number from the album
sdp	array: see schema	No	Read Write	Array of strings, a string for each Session Description Protocol syntax.
duration	multiple types: see schema	No	Read Write	Duration is the total length of the media audio with format pattern according to ISO 8601 duration. For example, P0Y0M0DT0H4M27S represents a duration of 4 minutes, and 27 seconds.

producers	array: see schema	No	Read Write	List of producers that produced the song
composers	array: see schema	No	Read Write	List of composers that wrote the song
language	multiple types: see schema	No	Read Write	Current language of the audio media content with format pattern according to RFC 5646 language tag
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
mediacore	multiple types: see schema	Yes	Read Write	The Media Core Properties common on all Media Resource Types,
artists	array: see schema	No	Read Write	List of artists that recorded the song
album	string	No	Read Write	Which album the song and picture belong to (if applicable)
albumartwork	array: see schema	No	Read Write	The array of icons that are used as the album artwork.
tracknumber	integer	No	Read Write	The track number from the album
sdp	array: see schema	No	Read Write	Array of strings, a string for each Session Description Protocol syntax.
duration	multiple types: see schema	No	Read Write	Duration is the total length of the media audio with format pattern according to ISO 8601 duration. For example, P0Y0M0DT0H4M27S represents a duration of 4 minutes, and 27 seconds.
producers	array: see schema	No	Read Write	List of producers that produced the song
composers	array: see schema	No	Read Write	List of composers that wrote the song
language	multiple types: see schema	No	Read Write	Current language of the audio media content with format pattern according to RFC 5646 language tag

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

6.158.6 CRUDN behaviour

Table 320 defines the CRUDN operations that are supported on the "oic.r.media.audio" Resource Type.

Table 320 – The CRUDN operations of the Resource with type "rt" = "oic.r.media.audio".

Create	Read	Update	Delete	Notify
	get	post		observe

6.159 Media Core Resource Type

6.159.1 Introduction

This OCF Resource specifies the core media types that an OCF Device supports.

6.159.2 Example URI

/MediaCoreResURI

6.159.3 Resource type

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

6.159.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Media Core Resource Type",
    "version": "2019-11-27",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/MediaCoreResURI" : {
      "get": {
        "description": "This OCF Resource specifies the core media types that an OCF Device
supports.",
        "parameters": [
          {"$ref": "#/parameters/interface-r"}
        ],
        "responses": {
          "200": {
            "description" : "Retrieves the core information for the specified or the current
media.",
            "x-example": {
              "rt": ["oic.r.media.core"],
              "id": "unique_example_id",
              "title": "PDF File 1",
              "description": "Long user-friendly synopsis of PDF File 1",
              "mimetype": "application/pdf",
              "mediafile": "file://example/url/PDF_File1.pdf",
              "genres": [{"category": "Music", "subcategory": "Rock"}, {"category": "Music",
"subcategory": "Pop"}],
              "ratinginfo": [{"ratingorganization": "none", "rating": "Parental Advisory - Explicit
Content"}],
              "identificationnumber": "ISSN:1234-5678",
```

```

33142         "datetime": "2018-06-23T20:22:59-08:00",
33143         "mediaartwork": [
33144             {
33145                 "rt": ["oic.r.icon"],
33146                 "mimetype": "image/png",
33147                 "width": 256,
33148                 "height": 256,
33149                 "media": "file://example/url/medial.png"
33150             }
33151         ],
33152         "copyright": "Copyright notice by the copyright holder for PDF File 1"
33153     },
33154     "schema": {"$ref": "#/definitions/MediaCore"}
33155 }
33156 },
33157 "post": {
33158     "description": "Sets the Media Core properties.",
33159     "parameters": [
33160         {"$ref": "#/parameters/interface-rw"},
33161         {
33162             "name": "body",
33163             "in": "body",
33164             "required": true,
33165             "x-example": {
33166                 "title": "New PDF File 1",
33167                 "description": "Long user-friendly synopsis of PDF File 1",
33168                 "mimetype": "application/pdf",
33169                 "mediafile": "file://example/url/PDF_File1.pdf",
33170                 "genres": [{"category": "Music", "subcategory": "Rock"}, {"category": "Music",
33171 "subcategory": "Pop"}],
33172                 "ratinginfo": [{"ratingorganization": "none", "rating": "Parental Advisory - Explicit
33173 Content"}],
33174                 "identificationnumber": "ISSN:1234-5678",
33175                 "datetime": "2018-06-23T20:22:59-08:00",
33176                 "mediaartwork": [
33177                     {
33178                         "mimetype": "image/png",
33179                         "width": 256,
33180                         "height": 256,
33181                         "media": "file://example/url/medial.png"
33182                     }
33183                 ],
33184                 "copyright": "Copyright notice by the copyright holder for PDF File 1"
33185             },
33186             "schema": {"$ref": "#/definitions/MediaCoreUpdate"}
33187         }
33188     ],
33189     "responses": {
33190         "200": {
33191             "description": "Sets the core information for the specified or the current media.",
33192             "x-example": {
33193                 "title": "PDF File 1",
33194                 "description": "Long user-friendly synopsis of PDF File 1",
33195                 "mimetype": "application/pdf",
33196                 "mediafile": "file://example/url/PDF_File1.pdf",
33197                 "genres": [{"category": "Music", "subcategory": "Rock"}, {"category": "Music",
33198 "subcategory": "Pop"}],
33199                 "ratinginfo": [{"ratingorganization": "none", "rating": "Parental Advisory - Explicit
33200 Content"}],
33201                 "identificationnumber": "ISSN:1234-5678",
33202                 "datetime": "2018-06-23T20:22:59-08:00",
33203                 "mediaartwork": [
33204                     {
33205                         "rt": ["oic.r.icon"],
33206                         "mimetype": "image/png",
33207                         "width": 256,
33208                         "height": 256,
33209                         "media": "file://example/url/medial.png"
33210                     }
33211                 ],
33212                 "copyright": "Copyright notice by the copyright holder for PDF File 1"
33213             }
33214         }
33215     }
33216 }

```

```

33214         },
33215         "schema": {"$ref": "#/definitions/MediaCoreUpdate"}
33216     }
33217 }
33218 }
33219 }
33220 },
33221 "parameters": {
33222     "interface-r" : {
33223         "in" : "query",
33224         "name" : "if",
33225         "type" : "string",
33226         "enum" : ["oic.if.rw", "oic.if.baseline"]
33227     },
33228     "interface-rw" : {
33229         "in" : "query",
33230         "name" : "if",
33231         "type" : "string",
33232         "enum" : ["oic.if.rw"]
33233     }
33234 },
33235 "definitions": {
33236     "MediaCore" : {
33237         "properties": {
33238             "rt": {
33239                 "description": "The Resource Type of Media Core",
33240                 "items": {
33241                     "enum": ["oic.r.media.core"],
33242                     "type": "string"
33243                 },
33244                 "minItems": 1,
33245                 "uniqueItems": true,
33246                 "readOnly": true,
33247                 "type": "array"
33248             },
33249             "title" : {
33250                 "description": "Specifies the Short user-friendly name of the media.",
33251                 "type": "string"
33252             },
33253             "description" : {
33254                 "description": "Specifies the Long user-friendly synopsis of the media content.",
33255                 "readOnly": true,
33256                 "type": "string"
33257             },
33258             "mimetype" : {
33259                 "description": "Specifies the Mime Type for the media content.",
33260                 "type": "string"
33261             },
33262             "mediafile" : {
33263                 "description": "uri of the Media File for media content. It can be specified as a Relative
33264 Reference or fully-qualified URI.",
33265                 "format": "uri",
33266                 "maxLength": 256,
33267                 "type": "string"
33268             },
33269             "genres" : {
33270                 "description": "Genres for media content.",
33271                 "items": {
33272                     "$ref": "#/definitions/MediaGenre"
33273                 },
33274                 "minItems": 1,
33275                 "type": "array"
33276             },
33277             "ratinginfo" : {
33278                 "description": "The rating information which includes the rating organization and
33279 rating.",
33280                 "items": {
33281                     "properties": {
33282                         "rating": {
33283                             "description": "A category of artistic composition, as in music or literature,
33284 characterized by similarities in form, style, or subject matter. (For instance, the type of song,
33285 e.g. speech, rock, pop)",

```



```

33286         "type": "string"
33287     },
33288     "ratingorganization": {
33289         "description": "These are media content rating organization.",
33290         "type": "string"
33291     }
33292 },
33293 "type": "object"
33294 },
33295 "type": "array"
33296 },
33297 "identificationnumber" : {
33298     "description": "Unique identification number for media content (ISSN:
33299 International_Standard_Serial_Number)",
33300     "type": "string"
33301 },
33302 "datetime" : {
33303     "description": "This is date, time, and timezone of the media content was created using
33304 RFC3339 date-time format.\n\r (e.g: '2018-06-23T20:22:59Z' - Date+Time+Timezone'UTC' or '2018-06-
33305 23T20:22:59-08:00' - Date+Time+Timezone'PST')",
33306     "format": "date-time",
33307     "type": "string"
33308 },
33309 "mediaartwork" : {
33310     "description": "The array of icons that are used as the media artwork.",
33311     "items": {
33312         "$ref": "https://openconnectivityfoundation.github.io/core-
33313 extensions/swagger2.0/oic.r.icon.swagger.json#/definitions/Icon"
33314     },
33315     "minItems": 1,
33316     "type": "array"
33317 },
33318 "copyright" : {
33319     "description": "Copyright notice by the copyright holder.",
33320     "readOnly": true,
33321     "type": "string"
33322 },
33323 "n": {
33324     "$ref":
33325 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
33326 schema.json#/definitions/n"
33327 },
33328 "id": {
33329     "$ref":
33330 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
33331 schema.json#/definitions/id"
33332 },
33333 "if": {
33334     "description": "The OCF Interface set supported by this Resource",
33335     "items": {
33336         "enum": ["oic.if.rw", "oic.if.baseline"],
33337         "type": "string"
33338     },
33339     "minItems": 1,
33340     "uniqueItems": true,
33341     "readOnly": true,
33342     "type": "array"
33343 }
33344 },
33345 "type": "object",
33346 "required": ["title", "mimetype", "mediafile"]
33347 },
33348 "MediaCoreUpdate" : {
33349     "properties": {
33350         "title" : {
33351             "description": "Specifies the Short user-friendly name of the media.",
33352             "type": "string"
33353         },
33354         "description" : {
33355             "description": "Specifies the Long user-friendly synopsis of the media content.",
33356             "readOnly": true,
33357             "type": "string"

```

```

33358     },
33359     "mimetype" : {
33360         "description": "Specifies the Mime Type for the media content.",
33361         "type": "string"
33362     },
33363     "mediafile" : {
33364         "description": "uri of the Media File for media content. It can be specified as a Relative
33365 Reference or fully-qualified URI.",
33366         "format": "uri",
33367         "maxLength": 256,
33368         "type": "string"
33369     },
33370     "genres" : {
33371         "description": "Genres for media content.",
33372         "items": {
33373             "$ref": "#/definitions/MediaGenre"
33374         },
33375         "minItems": 1,
33376         "type": "array"
33377     },
33378     "ratinginfo" : {
33379         "description": "The rating information which includes the rating organization and
33380 rating.",
33381         "items": {
33382             "properties": {
33383                 "rating": {
33384                     "description": "A category of artistic composition, as in music or literature,
33385 characterized by similarities in form, style, or subject matter. (For instance, the type of song,
33386 e.g. speech, rock, pop)",
33387                     "type": "string"
33388                 },
33389                 "ratingorganization": {
33390                     "description": "These are media content rating organization.",
33391                     "type": "string"
33392                 }
33393             },
33394             "type": "object"
33395         },
33396         "type": "array"
33397     },
33398     "identificationnumber" : {
33399         "description": "Unique identification number for media content (ISSN:
33400 International_Standard_Serial_Number)",
33401         "type": "string"
33402     },
33403     "datetime" : {
33404         "description": "This is date, time, and timezone of the media content was created using
33405 RFC3339 date-time format.\n\r (e.g: '2018-06-23T20:22:59Z' - Date+Time+Timezone'UTC' or '2018-06-
33406 23T20:22:59-08:00' - Date+Time+Timezone'PST')",
33407         "format": "date-time",
33408         "type": "string"
33409     },
33410     "mediaartwork" : {
33411         "description": "The array of icons that are used as the media artwork.",
33412         "items": {
33413             "$ref": "https://openconnectivityfoundation.github.io/core-
33414 extensions/swagger2.0/oic.r.icon.swagger.json#/definitions/Icon"
33415         },
33416         "minItems": 1,
33417         "type": "array"
33418     },
33419     "copyright" : {
33420         "description": "Copyright notice by the copyright holder.",
33421         "readOnly": true,
33422         "type": "string"
33423     },
33424     "n": {
33425         "$ref":
33426 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
33427 schema.json#/definitions/n"
33428     }
33429 },

```

```

33430     "type": "object"
33431   },
33432   "MediaGenre": {
33433     "properties": {
33434       "category": {
33435         "$ref":
33436 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.genre.properties-
33437 schema.json#/definitions/category",
33438         "description": "Genre Category for Media Information.",
33439         "readOnly": true
33440       },
33441       "subcategory": {
33442         "$ref":
33443 "https://openconnectivityfoundation.github.io/IoTDataModels/schemas/oic.genre.properties-
33444 schema.json#/definitions/subcategory",
33445         "description": "Genre Sub-Category for Media Information.",
33446         "readOnly": true
33447       }
33448     },
33449     "type": "object",
33450     "required": ["category"]
33451   }
33452 }
33453 }
33454

```

33455 6.159.5 Property definition

33456 Table 321 defines the Properties that are part of the "oic.r.media.core" Resource Type.

33457 **Table 321 – The Property definitions of the Resource with type "rt" = "oic.r.media.core".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type of Media Core
title	string	Yes	Read Write	Specifies the Short user-friendly name of the media.
description	string	No	Read Only	Specifies the Long user-friendly synopsis of the media content.
mimetype	string	Yes	Read Write	Specifies the Mime Type for the media content.
mediafile	string	Yes	Read Write	uri of the Media File for media content. It can be specified as a Relative Reference or fully-qualified URI.
genres	array: see schema	No	Read Write	Genres for media content.
ratinginfo	array: see schema	No	Read Write	The rating information which includes the rating organization and rating.
identificationnumber	string	No	Read Write	Unique identification number for media content (ISSN: International_Standard_Serial_Number)
datetime	string	No	Read Write	This is date, time, and timezone of the media content was created using RFC3339 date-time format. (e.g: '2018-06-23T20:22:59Z' - Date+Time+Timezone'UTC' or '2018-06-23T20:22:59-08:00' - Date+Time+Timezone'PST')
mediaartwork	array: see schema	No	Read Write	The array of icons that are used as the media artwork.
copyright	string	No	Read Only	Copyright notice by the copyright holder.

n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
title	string		Read Write	Specifies the Short user-friendly name of the media.
description	string		Read Only	Specifies the Long user-friendly synopsis of the media content.
mimetype	string		Read Write	Specifies the Mime Type for the media content.
mediafile	string		Read Write	uri of the Media File for media content. It can be specified as a Relative Reference or fully-qualified URI.
genres	array: see schema		Read Write	Genres for media content.
ratinginfo	array: see schema		Read Write	The rating information which includes the rating organization and rating.
identificationnumber	string		Read Write	Unique identification number for media content (ISSN: International_Standard_Serial_Number)
datetime	string		Read Write	This is date, time, and timezone of the media content was created using RFC3339 date-time format. (e.g: '2018-06-23T20:22:59Z' - Date+Time+Timezone'UTC' or '2018- 06-23T20:22:59-08:00' - Date+Time+Timezone'PST')
mediaartwork	array: see schema		Read Write	The array of icons that are used as the media artwork.
copyright	string		Read Only	Copyright notice by the copyright holder.
n	multiple types: see schema		Read Write	
category	multiple types: see schema	Yes	Read Only	Genre Category for Media Information.
subcategory	multiple types: see schema	No	Read Only	Genre Sub-Category for Media Information.

6.159.6 CRUDN behaviour

Table 322 defines the CRUDN operations that are supported on the "oic.r.media.core" Resource Type.

Table 322 – The CRUDN operations of the Resource with type "rt" = "oic.r.media.core".

Create	Read	Update	Delete	Notify
	get	post		observe

6.160 Media Image Resource Type

6.160.1 Introduction

This OCF Resource specifies the image media types that an OCF Device supports.

6.160.2 Example URI

/MediaImageResURI

6.160.3 Resource type

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

6.160.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Media Image Resource Type",
    "version": "2019-11-27",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/MediaImageResURI" : {
      "get": {
        "description": "This OCF Resource specifies the image media types that an OCF Device
supports.",
        "parameters": [
          {"$ref": "#/parameters/interface-r"}
        ],
        "responses": {
          "200": {
            "description": "Retrieves the image information for the specified or the current
media.",
            "x-example": {
              "rt": ["oic.r.media.image"],
              "id": "unique_example_id",
              "mediacore": {
                "title": "Image 1",
                "description": "Long user-friendly synopsis of Image 1",
                "mimetype": "image/png",
                "mediafile": "file://example/url/Image1.png",
                "genres": [{"category": "Arts", "subcategory": "Culture"}, {"category": "Arts",
"subcategory": "Religion"}],
                "ratinginfo": [{"ratingorganization": "none", "rating": "General"}],
                "identificationnumber": "ISSN:1234-5678",
                "datetime": "2018-06-23T20:22:59-08:00",
                "copyright": "Copyright notice by the copyright holder for Image 1"
              },
              "artists": [ "Artist 1", "Artist 2" ],
              "album": "Album Title 1",
              "albumartwork": [
                {
                  "rt": ["oic.r.icon"],
                  "mimetype": "image/png",
                  "width": 256,
                  "height": 256,
                  "media": "file://example/url/album1.png"
                }
              ],
              "width": 2460,
              "height": 1667,
              "size": 496.765,
              "resolution": 200,
              "location": "Death Valley National Park, Furnace Creek, CA 92328, USA",
              "geolocation": {"latitude": 36.4643308, "longitude": -116.86906640000001, "alt": -62.1}
            }
          }
        }
      }
    }
  }
}
```

```

33532         "schema": {"$ref": "#/definitions/MediaImage"}
33533     }
33534 }
33535 },
33536 "post": {
33537     "description": "Sets the Media Image properties.",
33538     "parameters": [
33539         {"$ref": "#/parameters/interface-rw"},
33540     ],
33541     "name": "body",
33542     "in": "body",
33543     "required": true,
33544     "x-example": {
33545         "mediacore": {
33546             "title": "Image 1",
33547             "description": "Long user-friendly synopsis of Image 1",
33548             "mimetype": "image/png",
33549             "mediafile": "file://example/url/Image1.png",
33550             "genres": [{"category": "Arts", "subcategory": "Culture"}, {"category": "Arts",
33551 "subcategory": "Religion"}],
33552             "ratinginfo": [{"ratingorganization": "none", "rating": "General"}],
33553             "identificationnumber": "ISSN:1234-5678",
33554             "datetime": "2018-06-23T20:22:59-08:00",
33555             "copyright": "Copyright notice by the copyright holder for Image 1"
33556         },
33557         "artists": [ "Artist 1", "Artist 2" ],
33558         "album": "Album Title 1",
33559         "albumartwork": [
33560             {
33561                 "rt": ["oic.r.icon"],
33562                 "mimetype": "image/png",
33563                 "width": 256,
33564                 "height": 256,
33565                 "media": "file://example/url/album1.png"
33566             }
33567         ],
33568         "width": 2460,
33569         "height": 1667,
33570         "size": 496.765,
33571         "resolution": 200,
33572         "location": "Death Valley National Park, Furnace Creek, CA 92328, USA",
33573         "geolocation": {"latitude": 36.4643308, "longitude": -116.86906640000001, "alt": -62.1}
33574     },
33575     "schema": {"$ref": "#/definitions/MediaImageUpdate"}
33576 }
33577 ],
33578 "responses": {
33579     "200": {
33580         "description": "Sets the image information for the specified or the current media.",
33581         "x-example": {
33582             "mediacore": {
33583                 "title": "Image 1",
33584                 "description": "Long user-friendly synopsis of Image 1",
33585                 "mimetype": "image/png",
33586                 "mediafile": "file://example/url/Image1.png",
33587                 "genres": [{"category": "Arts", "subcategory": "Culture"}, {"category": "Arts",
33588 "subcategory": "Religion"}],
33589                 "ratinginfo": [{"ratingorganization": "none", "rating": "General"}],
33590                 "identificationnumber": "ISSN:1234-5678",
33591                 "datetime": "2018-06-23T20:22:59-08:00",
33592                 "copyright": "Copyright notice by the copyright holder for Image 1"
33593             },
33594             "artists": [ "Artist 1", "Artist 2" ],
33595             "album": "Album Title 1",
33596             "albumartwork": [
33597                 {
33598                     "rt": ["oic.r.icon"],
33599                     "mimetype": "image/png",
33600                     "width": 256,
33601                     "height": 256,
33602                     "media": "file://example/url/album1.png"
33603                 }

```

```

33604         ],
33605         "width": 2460,
33606         "height": 1667,
33607         "size": 496.765,
33608         "resolution": 200,
33609         "location": "Death Valley National Park, Furnace Creek, CA 92328, USA",
33610         "geolocation": {"latitude": 36.4643308, "longitude": -116.86906640000001, "alt": -62.1}
33611     },
33612     "schema": {"$ref": "#/definitions/MediaImageUpdate"}
33613 }
33614 }
33615 }
33616 }
33617 },
33618 "parameters": {
33619     "interface-r" : {
33620         "in" : "query",
33621         "name" : "if",
33622         "type" : "string",
33623         "enum" : ["oic.if.rw", "oic.if.baseline"]
33624     },
33625     "interface-rw" : {
33626         "in" : "query",
33627         "name" : "if",
33628         "type" : "string",
33629         "enum" : ["oic.if.rw"]
33630     }
33631 },
33632 "definitions": {
33633     "MediaImage" : {
33634         "properties": {
33635             "rt": {
33636                 "description": "The Resource Type of Media Image",
33637                 "items": {
33638                     "enum": ["oic.r.media.image"],
33639                     "type": "string"
33640                 },
33641                 "minItems": 1,
33642                 "uniqueItems": true,
33643                 "readOnly": true,
33644                 "type": "array"
33645             },
33646             "mediacore": {
33647                 "description": "The Media Core Properties common on all Media Resource Types",
33648                 "$ref":
33649 "https://openconnectivityfoundation.github.io/IoTDataModels/MediaCoreResURI.swagger.json#/definition
33650 s/MediaCore"
33651             },
33652             "artists" : {
33653                 "description": "List of artists",
33654                 "items": {
33655                     "type": "string"
33656                 },
33657                 "minItems": 1,
33658                 "type": "array"
33659             },
33660             "album" : {
33661                 "description": "Which album the picture belongs to (if applicable).",
33662                 "type": "string"
33663             },
33664             "albumartwork" : {
33665                 "description": "The array of icons that are used as the album artwork.",
33666                 "items": {
33667                     "$ref": "https://openconnectivityfoundation.github.io/core-
33668 extensions/swagger2.0/oic.r.icon.swagger.json#/definitions/Icon"
33669                 },
33670                 "minItems": 1,
33671                 "type": "array"
33672             },
33673             "width" : {
33674                 "description": "The resolution of the image",
33675                 "type": "integer"

```

```

33676     },
33677     "height" : {
33678         "description": "The resolution of the image",
33679         "type": "integer"
33680     },
33681     "size" : {
33682         "description": "The size of the image in KB - Kilo-Bytes",
33683         "type": "number"
33684     },
33685     "resolution" : {
33686         "description": "The resolution of the image in pixels",
33687         "type": "integer"
33688     },
33689     "location" : {
33690         "description": "Location is the user-friendly string of the geographic location of the
33691 image.",
33692         "type": "string"
33693     },
33694     "geolocation" : {
33695         "$ref":
33696 "https://openconnectivityfoundation.github.io/IoTDataModels/GeolocationResURI.swagger.json#/definiti
33697 ons/Geolocation"
33698     },
33699     "n": {
33700         "$ref":
33701 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
33702 schema.json#/definitions/n"
33703     },
33704     "id": {
33705         "$ref":
33706 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
33707 schema.json#/definitions/id"
33708     },
33709     "if": {
33710         "description": "The OCF Interface set supported by this Resource",
33711         "items": {
33712             "enum": ["oic.if.rw", "oic.if.baseline"],
33713             "type": "string"
33714         },
33715         "minItems": 1,
33716         "uniqueItems": true,
33717         "readOnly": true,
33718         "type": "array"
33719     }
33720 },
33721 "type" : "object",
33722 "required": ["mediacore"]
33723 },
33724 "MediaImageUpdate" : {
33725     "properties": {
33726         "mediacore": {
33727             "description": "The Media Core Properties common on all Media Resource Types",
33728             "$ref":
33729 "https://openconnectivityfoundation.github.io/IoTDataModels/MediaCoreResURI.swagger.json#/definition
33730 s/MediaCore"
33731         },
33732         "artists" : {
33733             "description": "List of artists",
33734             "items": {
33735                 "type": "string"
33736             },
33737             "minItems": 1,
33738             "type": "array"
33739         },
33740         "album" : {
33741             "description": "Which album the picture belongs to (if applicable).",
33742             "type": "string"
33743         },
33744         "albumartwork" : {
33745             "description": "The array of icons that are used as the album artwork.",
33746             "items": {
33747                 "$ref": "https://openconnectivityfoundation.github.io/core-

```



```

33748 extensions/swagger2.0/oic.r.icon.swagger.json#/definitions/Icon"
33749     },
33750     "minItems": 1,
33751     "type": "array"
33752   },
33753   "width" : {
33754     "description": "The resolution of the image",
33755     "type": "integer"
33756   },
33757   "height" : {
33758     "description": "The resolution of the image",
33759     "type": "integer"
33760   },
33761   "size" : {
33762     "description": "The size of the image in KB - Kilo-Bytes",
33763     "type": "number"
33764   },
33765   "resolution" : {
33766     "description": "The resolution of the image in pixels",
33767     "type": "integer"
33768   },
33769   "location" : {
33770     "description": "Location is the user-friendly string of the geographic location of the
33771 image.",
33772     "type": "string"
33773   },
33774   "geolocation" : {
33775     "$ref":
33776 "https://openconnectivityfoundation.github.io/IoTDataModels/GeolocationResURI.swagger.json#/definiti
33777 ons/Geolocation"
33778   },
33779   "n": {
33780     "$ref":
33781 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
33782 schema.json#/definitions/n"
33783   }
33784 },
33785 "type" : "object",
33786 "required": ["mediacore"]
33787 }
33788 }
33789 }
33790

```

33791 6.160.5 Property definition

33792 Table 323 defines the Properties that are part of the "oic.r.media.image" Resource Type.

33793 **Table 323 – The Property definitions of the Resource with type "rt" = "oic.r.media.image".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type of Media Image
mediacore	multiple types: see schema	Yes	Read Write	The Media Core Properties common on all Media Resource Types,
artists	array: see schema	No	Read Write	List of artists
album	string	No	Read Write	Which album the picture belongs to (if applicable).
albumartwork	array: see schema	No	Read Write	The array of icons that are used as the album artwork.
width	integer	No	Read Write	The resolution of the image

height	integer	No	Read Write	The resolution of the image
size	number	No	Read Write	The size of the image in KB - Kilo-Bytes
resolution	integer	No	Read Write	The resolution of the image in pixels
location	string	No	Read Write	Location is the user-friendly string of the geographic location of the image.
geolocation	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
mediacore	multiple types: see schema	Yes	Read Write	The Media Core Properties common on all Media Resource Types,
artists	array: see schema	No	Read Write	List of artists
album	string	No	Read Write	Which album the picture belongs to (if applicable).
albumartwork	array: see schema	No	Read Write	The array of icons that are used as the album artwork.
width	integer	No	Read Write	The resolution of the image
height	integer	No	Read Write	The resolution of the image
size	number	No	Read Write	The size of the image in KB - Kilo-Bytes
resolution	integer	No	Read Write	The resolution of the image in pixels
location	string	No	Read Write	Location is the user-friendly string of the geographic location of the image.
geolocation	multiple types: see schema	No	Read Write	
n	multiple types: see schema	No	Read Write	

6.160.6 CRUDN behaviour

Table 324 defines the CRUDN operations that are supported on the "oic.r.media.image" Resource Type.

33797 **Table 324 – The CRUDN operations of the Resource with type "rt" = "oic.r.media.image".**

Create	Read	Update	Delete	Notify
	get	post		observe

33798 **6.161 Media Text Resource Type**

33799 **6.161.1 Introduction**

33800 This OCF Resource specifies the text media types that an OCF Device supports.

33801 **6.161.2 Example URI**

33802 /MediaTextResURI

33803 **6.161.3 Resource type**

33804 The Resource Type is defined as: "oic.r.media.text".

33805 **6.161.4 OpenAPI 2.0 definition**

```

33806 {
33807   "swagger": "2.0",
33808   "info": {
33809     "title": "Media Text Resource Type",
33810     "version": "2019-11-27",
33811     "license": {
33812       "name": "OCF Data Model License",
33813       "url":
33814         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
33815         CENSE.md",
33816       "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
33817     },
33818     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
33819   },
33820   "schemes": ["http"],
33821   "consumes": ["application/json"],
33822   "produces": ["application/json"],
33823   "paths": {
33824     "/MediaTextResURI" : {
33825       "get": {
33826         "description": "This OCF Resource specifies the text media types that an OCF Device
33827         supports.",
33828         "parameters": [
33829           {"$ref": "#/parameters/interface-r"}
33830         ],
33831         "responses": {
33832           "200": {
33833             "description": "Retrieves the text information for the specified or the current
33834             media.",
33835             "x-example": {
33836               "rt": ["oic.r.media.text"],
33837               "id": "unique_example_id",
33838               "mediacore": {
33839                 "title": "Book 1",
33840                 "description": "Long user-friendly synopsis of Book 1",
33841                 "mimetype": "text",
33842                 "mediafile": "file://example/url/Book1.pdf",
33843                 "genres": [{"category": "Sports", "subcategory": "Other"}, {"category": "Youth",
33844                 "subcategory": "Other"}],
33845                 "ratinginfo": [{"ratingorganization": "none", "rating": "adult-content"}],
33846                 "identificationnumber": "ISBN: 978-3-16-148410-0",
33847                 "datetime": "2018-06-23T20:22:59-08:00",
33848                 "mediaartwork": [
33849                   {
33850                     "rt": ["oic.r.icon"],
33851                     "mimetype": "image/png",
33852                     "width": 256,
33853                     "height": 256,
33854                     "media": "file://example/url/book1.png"
33855                   }

```

```

33856         ],
33857         "copyright": "Copyright notice by the copyright holder for Book 1"
33858     },
33859     "sdp": [
33860         "m=text 49156 RTP/AVP 100 101",
33861         "a=rtpmap:100 1140/1000",
33862         "a=rtpmap:101 red/1000",
33863         "a=fmtp:101 100/100/100"
33864     ],
33865     "authors": [
33866         "Author 1",
33867         "Author 2"
33868     ],
33869     "publishers": [
33870         "Publisher 1",
33871         "Publisher 2"
33872     ],
33873     "series": [
33874         "Series 1",
33875         "Series 2"
33876     ],
33877     "totalchapters": 28,
33878     "totalpages": 499,
33879     "language": "en"
33880 },
33881 "schema": {"$ref": "#/definitions/MediaText"}
33882 }
33883 }
33884 },
33885 "post": {
33886     "description": "Sets the Media Text properties.",
33887     "parameters": [
33888         {"$ref": "#/parameters/interface-rw"},
33889         {
33890             "name": "body",
33891             "in": "body",
33892             "required": true,
33893             "x-example": {
33894                 "mediacore": {
33895                     "title": "Book 1",
33896                     "description": "Long user-friendly synopsis of Book 1",
33897                     "mimetype": "text",
33898                     "mediafile": "file://example/url/Book1.pdf",
33899                     "genres": [{"category": "Sports", "subcategory": "Other"}, {"category": "Youth",
33900 "subcategory": "Other"}],
33901                     "ratinginfo": [{"ratingorganization": "none", "rating": "adult-content"}],
33902                     "identificationnumber": "ISBN: 978-3-16-148410-0",
33903                     "datetime": "2018-06-23T20:22:59-08:00",
33904                     "mediaartwork": [
33905                         {
33906                             "mimetype": "image/png",
33907                             "width": 256,
33908                             "height": 256,
33909                             "media": "file://example/url/book1.png"
33910                         }
33911                     ],
33912                     "copyright": "Copyright notice by the copyright holder for Book 1"
33913                 },
33914                 "sdp": [
33915                     "m=text 49156 RTP/AVP 100 101",
33916                     "a=rtpmap:100 1140/1000",
33917                     "a=rtpmap:101 red/1000",
33918                     "a=fmtp:101 100/100/100"
33919                 ],
33920                 "authors": [
33921                     "Author 1",
33922                     "Author 2"
33923                 ],
33924                 "publishers": [
33925                     "Publisher 1",
33926                     "Publisher 2"
33927                 ],

```

```

33928         "series": [
33929             "Series 1",
33930             "Series 2"
33931         ],
33932         "totalchapters": 28,
33933         "totalpages": 499,
33934         "language": "en"
33935     },
33936     "schema": {"$ref": "#/definitions/MediaTextUpdate"}
33937 },
33938 ],
33939 "responses": {
33940     "200": {
33941         "description": "Sets the text information for the specified or the current media.",
33942         "x-example": {
33943             "mediacore": {
33944                 "title": "Book 1",
33945                 "description": "Long user-friendly synopsis of Book 1",
33946                 "mimetype": "text",
33947                 "mediafile": "file://example/url/Book1.pdf",
33948                 "genres": [{"category": "Sports", "subcategory": "Other"}, {"category": "Youth",
33949 "subcategory": "Other"}],
33950                 "ratinginfo": [{"ratingorganization": "none", "rating": "adult-content"}],
33951                 "identificationnumber": "ISBN: 978-3-16-148410-0",
33952                 "datetime": "2018-06-23T20:22:59-08:00",
33953                 "mediaartwork": [
33954                     {
33955                         "rt": ["oic.r.icon"],
33956                         "mimetype": "image/png",
33957                         "width": 256,
33958                         "height": 256,
33959                         "media": "file://example/url/book1.png"
33960                     }
33961                 ],
33962                 "copyright": "Copyright notice by the copyright holder for Book 1"
33963             },
33964             "sdp": [
33965                 "m=text 49156 RTP/AVP 100 101",
33966                 "a=rtpmap:100 1140/1000",
33967                 "a=rtpmap:101 red/1000",
33968                 "a=fmtp:101 100/100/100"
33969             ],
33970             "authors": [
33971                 "Author 1",
33972                 "Author 2"
33973             ],
33974             "publishers": [
33975                 "Publisher 1",
33976                 "Publisher 2"
33977             ],
33978             "series": [
33979                 "Series 1",
33980                 "Series 2"
33981             ],
33982             "totalchapters": 28,
33983             "totalpages": 499,
33984             "language": "en"
33985         },
33986         "schema": {"$ref": "#/definitions/MediaTextUpdate"}
33987     }
33988 }
33989 }
33990 },
33991 },
33992 "parameters": {
33993     "interface-r" : {
33994         "in" : "query",
33995         "name" : "if",
33996         "type" : "string",
33997         "enum" : ["oic.if.rw", "oic.if.baseline"]
33998     },
33999     "interface-rw" : {

```

```

34000         "in" : "query",
34001         "name" : "if",
34002         "type" : "string",
34003         "enum" : ["oic.if.rw"]
34004     }
34005 },
34006 "definitions": {
34007     "MediaText" : {
34008         "properties": {
34009             "rt": {
34010                 "description": "The Resource Type of Media Text",
34011                 "items": {
34012                     "enum": ["oic.r.media.text"],
34013                     "type": "string"
34014                 },
34015                 "minItems": 1,
34016                 "uniqueItems": true,
34017                 "readOnly": true,
34018                 "type": "array"
34019             },
34020             "mediacore": {
34021                 "description": "The Media Core Properties common on all Media Resource Types",
34022                 "$ref":
34023 "https://openconnectivityfoundation.github.io/IoTDataModels/MediaCoreResURI.swagger.json#/definitions/MediaCore"
34024             },
34025             "sdp" : {
34026                 "description": "Array of strings, a string for each Session Description Protocol syntax.",
34027                 "items": {
34028                     "description": "Session Description Protocol is a format for describing streaming media
34029 communications parameters using the media and attribute lines defined in RFC4566.",
34030                     "type": "string"
34031                 },
34032                 "minItems": 1,
34033                 "type": "array"
34034             },
34035             "authors" : {
34036                 "description": "List of authors that wrote the text",
34037                 "items": {
34038                     "type": "string"
34039                 },
34040                 "minItems": 1,
34041                 "type": "array"
34042             },
34043             "publishers" : {
34044                 "description": "List of publishers that released the text",
34045                 "items": {
34046                     "type": "string"
34047                 },
34048                 "minItems": 1,
34049                 "type": "array"
34050             },
34051             "series" : {
34052                 "description": "List of series for the text",
34053                 "items": {
34054                     "type": "string"
34055                 },
34056                 "minItems": 1,
34057                 "type": "array"
34058             },
34059             "totalchapters" : {
34060                 "description": "The total number of chapters in the text",
34061                 "type": "integer"
34062             },
34063             "totalpages" : {
34064                 "description": "The total number of pages in the text",
34065                 "type": "integer"
34066             },
34067             "language": {
34068                 "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
34069 schema.json#/definitions/language-tag",
34070                 "description": "Current language of the text media content with format pattern according
34071

```

```

34072 to RFC 5646 language tag"
34073     },
34074     "n": {
34075         "$ref":
34076         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
34077         schema.json#/definitions/n"
34078     },
34079     "id": {
34080         "$ref":
34081         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
34082         schema.json#/definitions/id"
34083     },
34084     "if": {
34085         "description": "The OCF Interface set supported by this Resource",
34086         "items": {
34087             "enum": ["oic.if.rw", "oic.if.baseline"],
34088             "type": "string"
34089         },
34090         "minItems": 1,
34091         "uniqueItems": true,
34092         "readOnly": true,
34093         "type": "array"
34094     }
34095 },
34096 "type" : "object",
34097 "required": ["mediacore"]
34098 },
34099 "MediaTextUpdate" : {
34100     "properties": {
34101         "mediacore": {
34102             "description": "The Media Core Properties common on all Media Resource Types,",
34103             "$ref":
34104             "https://openconnectivityfoundation.github.io/IoTDataModels/MediaCoreResURI.swagger.json#/definition
34105             s/MediaCore"
34106         },
34107         "sdp" : {
34108             "description": "Array of strings, a string for each Session Description Protocol syntax.",
34109             "items": {
34110                 "description": "Session Description Protocol is a format for describing streaming media
34111                 communications parameters using the media and attribute lines defined in RFC4566.",
34112                 "type": "string"
34113             },
34114             "minItems": 1,
34115             "type": "array"
34116         },
34117         "authors" : {
34118             "description": "List of authors that wrote the text",
34119             "items": {
34120                 "type": "string"
34121             },
34122             "minItems": 1,
34123             "type": "array"
34124         },
34125         "publishers" : {
34126             "description": "List of publishers that released the text",
34127             "items": {
34128                 "type": "string"
34129             },
34130             "minItems": 1,
34131             "type": "array"
34132         },
34133         "series" : {
34134             "description": "List of series for the text",
34135             "items": {
34136                 "type": "string"
34137             },
34138             "minItems": 1,
34139             "type": "array"
34140         },
34141         "totalchapters" : {
34142             "description": "The total number of chapters in the text",
34143             "type": "integer"

```

```

34144     },
34145     "totalpages" : {
34146         "description": "The total number of pages in the text",
34147         "type": "integer"
34148     },
34149     "language": {
34150         "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
34151 schema.json#/definitions/language-tag",
34152         "description": "Current language of the text media content with format pattern according
34153 to RFC 5646 language tag"
34154     },
34155     "n": {
34156         "$ref":
34157 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
34158 schema.json#/definitions/n"
34159     }
34160 },
34161 "type" : "object",
34162 "required": ["mediacore"]
34163 }
34164 }
34165 }
34166

```

34167 6.161.5 Property definition

34168 Table 325 defines the Properties that are part of the "oic.r.media.text" Resource Type.

34169 **Table 325 – The Property definitions of the Resource with type "rt" = "oic.r.media.text".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type of Media Text
mediacore	multiple types: see schema	Yes	Read Write	The Media Core Properties common on all Media Resource Types,
sdp	array: see schema	No	Read Write	Array of strings, a string for each Session Description Protocol syntax.
authors	array: see schema	No	Read Write	List of authors that wrote the text
publishers	array: see schema	No	Read Write	List of publishers that released the text
series	array: see schema	No	Read Write	List of series for the text
totalchapters	integer	No	Read Write	The total number of chapters in the text
totalpages	integer	No	Read Write	The total number of pages in the text
language	multiple types: see schema	No	Read Write	Current language of the text media content with format pattern according to RFC 5646 language tag
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	

if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
mediacore	multiple types: see schema	Yes	Read Write	The Media Core Properties common on all Media Resource Types,
sdp	array: see schema	No	Read Write	Array of strings, a string for each Session Description Protocol syntax.
authors	array: see schema	No	Read Write	List of authors that wrote the text
publishers	array: see schema	No	Read Write	List of publishers that released the text
series	array: see schema	No	Read Write	List of series for the text
totalchapters	integer	No	Read Write	The total number of chapters in the text
totalpages	integer	No	Read Write	The total number of pages in the text
language	multiple types: see schema	No	Read Write	Current language of the text media content with format pattern according to RFC 5646 language tag
n	multiple types: see schema	No	Read Write	

6.161.6 CRUDN behaviour

Table 326 defines the CRUDN operations that are supported on the "oic.r.media.text" Resource Type.

Table 326 – The CRUDN operations of the Resource with type "rt" = "oic.r.media.text".

Create	Read	Update	Delete	Notify
	get	post		observe

6.162 Media Video Resource Type

6.162.1 Introduction

This OCF Resource specifies the video media types that an OCF Device supports.

6.162.2 Example URI

/MediaVideoResURI

6.162.3 Resource type

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

6.162.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Media Video Resource Type",
    "version": "2019-11-27",
    "license": {
```

```

34188         "name": "OCF Data Model License",
34189         "url":
34190 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
34191 CENSE.md",
34192         "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
34193     },
34194     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
34195 },
34196 "schemes": ["http"],
34197 "consumes": ["application/json"],
34198 "produces": ["application/json"],
34199 "paths": {
34200     "/MediaVideoResURI" : {
34201         "get": {
34202             "description": "This OCF Resource specifies the video media types that an OCF Device
34203 supports.",
34204             "parameters": [
34205                 {"$ref": "#/parameters/interface-r"}
34206             ],
34207             "responses": {
34208                 "200": {
34209                     "description": "Retrieves the video information for the specified or the current
34210 media.",
34211                     "x-example": {
34212                         "rt": ["oic.r.media.video"],
34213                         "id": "unique_example_id",
34214                         "mediacore": {
34215                             "title": "Video 1",
34216                             "description": "Long user-friendly synopsis of Video 1",
34217                             "mimetype": "video/mp4",
34218                             "mediafile": "file://example/url/Videol.mp4",
34219                             "genres": [{"category": "Movie", "subcategory": "Action"}, {"category": "Movie",
34220 "subcategory": "Western"}],
34221                             "ratinginfo": [{"ratingorganization": "MPAA", "rating": "PG-13"}],
34222                             "identificationnumber": "EDID:1234-5678",
34223                             "datetime": "2018-06-23T20:22:59-08:00",
34224                             "mediaartwork": [
34225                                 {
34226                                     "rt": ["oic.r.icon"],
34227                                     "mimetype": "image/png",
34228                                     "width": 256,
34229                                     "height": 256,
34230                                     "media": "file://example/url/videol.png"
34231                                 }
34232                             ],
34233                             "copyright": "Copyright notice by the copyright holder for Video 1"
34234                         },
34235                         "series": [
34236                             "Series 1",
34237                             "Series 2"
34238                         ],
34239                         "studio": [
34240                             "Studio 1",
34241                             "Studio 2"
34242                         ],
34243                         "cast": [
34244                             "Actor 1",
34245                             "Actress 2"
34246                         ],
34247                         "directors": [
34248                             "Dircector 1",
34249                             "Director 2"
34250                         ],
34251                         "producers": [
34252                             "Producer 1",
34253                             "Producer 2"
34254                         ],
34255                         "writers": [
34256                             "Writer 1",
34257                             "Writer 2"
34258                         ],
34259                         "composers": [

```

```

34260         "Composer 1",
34261         "Composer 2"
34262     ],
34263     "sdp": [
34264         "m=video 51372 RTP/AVP 99",
34265         "a=rtpmap:99 h263-1998/90000"
34266     ],
34267     "width": 1920,
34268     "height": 1080,
34269     "resolution": 200,
34270     "format": "progressive",
34271     "framerate": 30,
34272     "bitdepth": 8,
34273     "size": 44.064,
34274     "duration": "P0Y0M0DT1H22M59S",
34275     "location": "Death Valley National Park, Furnace Creek, CA 92328, USA",
34276     "geolocation": {"latitude": 36.4643308, "longitude": -116.86906640000001, "alt": -
34277 62.1},
34278     "language": "en"
34279 },
34280 "schema": {"$ref": "#/definitions/MediaVideo"}
34281 }
34282 }
34283 },
34284 "post": {
34285     "description": "Sets the Media Video properties.",
34286     "parameters": [
34287         {"$ref": "#/parameters/interface-rw"},
34288         {
34289             "name": "body",
34290             "in": "body",
34291             "required": true,
34292             "x-example": {
34293                 "mediacore": {
34294                     "title": "Video 1",
34295                     "description": "Long user-friendly synopsis of Video 1",
34296                     "mimetype": "video/mp4",
34297                     "mediafile": "file://example/url/Video1.mp4",
34298                     "genres": [{"category": "Movie", "subcategory": "Action"}, {"category": "Movie",
34299 "subcategory": "Western"}],
34300                     "ratinginfo": [{"ratingorganization": "MPAA", "rating": "PG-13"}],
34301                     "identificationnumber": "EDID:1234-5678",
34302                     "datetime": "2018-06-23T20:22:59-08:00",
34303                     "mediaartwork": [
34304                         {
34305                             "mimetype": "image/png",
34306                             "width": 256,
34307                             "height": 256,
34308                             "media": "file://example/url/video1.png"
34309                         }
34310                     ],
34311                     "copyright": "Copyright notice by the copyright holder for Video 1"
34312                 }
34313             },
34314             "series": [
34315                 "Series 1",
34316                 "Series 2"
34317             ],
34318             "studio": [
34319                 "Studio 1",
34320                 "Studio 2"
34321             ],
34322             "cast": [
34323                 "Actor 1",
34324                 "Actress 2"
34325             ],
34326             "directors": [
34327                 "Director 1",
34328                 "Director 2"
34329             ],
34330             "producers": [
34331                 "Producer 1",
34332                 "Producer 2"

```

```

34332     ],
34333     "writers": [
34334         "Writer 1",
34335         "Writer 2"
34336     ],
34337     "composers": [
34338         "Composer 1",
34339         "Composer 2"
34340     ],
34341     "sdp": [
34342         "m=video 51372 RTP/AVP 99",
34343         "a=rtpmap:99 h263-1998/90000"
34344     ],
34345     "width": 1920,
34346     "height": 1080,
34347     "resolution": 2073600,
34348     "format": "progressive",
34349     "framerate": 30,
34350     "bitdepth": 8,
34351     "size": 44.064,
34352     "duration": "P0Y0M0DT1H22M59S",
34353     "location": "Death Valley National Park, Furnace Creek, CA 92328, USA",
34354     "geolocation": {"latitude": 36.4643308, "longitude": -116.86906640000001, "alt": -
62.1},
34355     "language": "en"
34356 },
34357 },
34358     "schema": {"$ref": "#/definitions/MediaVideoUpdate"}
34359 }
34360 ],
34361 "responses": {
34362     "200": {
34363         "description": "Sets the video information for the specified or the current media.",
34364         "x-example": {
34365             "mediacore": {
34366                 "title": "Video 1",
34367                 "description": "Long user-friendly synopsis of Video 1",
34368                 "mimetype": "video/mp4",
34369                 "mediafile": "file://example/url/Video1.mp4",
34370                 "genres": [{"category": "Movie", "subcategory": "Action"}, {"category": "Movie",
"subcategory": "Western"}],
34371                 "ratinginfo": [{"ratingorganization": "MPAA", "rating": "PG-13"}],
34372                 "identificationnumber": "EDID:1234-5678",
34373                 "datetime": "2018-06-23T20:22:59-08:00",
34374                 "mediaartwork": [
34375                     {
34376                         "rt": ["oic.r.icon"],
34377                         "mimetype": "image/png",
34378                         "width": 256,
34379                         "height": 256,
34380                         "media": "file://example/url/video1.png"
34381                     }
34382                 ],
34383                 "copyright": "Copyright notice by the copyright holder for Video 1"
34384             },
34385             "series": [
34386                 "Series 1",
34387                 "Series 2"
34388             ],
34389             "studio": [
34390                 "Studio 1",
34391                 "Studio 2"
34392             ],
34393             "cast": [
34394                 "Actor 1",
34395                 "Actress 2"
34396             ],
34397             "directors": [
34398                 "Dircector 1",
34399                 "Director 2"
34400             ],
34401             "producers": [
34402                 "Producer 1",
34403

```

```

34404         "Producer 2"
34405     ],
34406     "writers": [
34407         "Writer 1",
34408         "Writer 2"
34409     ],
34410     "composers": [
34411         "Composer 1",
34412         "Composer 2"
34413     ],
34414     "sdp": [
34415         "m=video 51372 RTP/AVP 99",
34416         "a=rtpmap:99 h263-1998/90000"
34417     ],
34418     "width": 1920,
34419     "height": 1080,
34420     "resolution": 200,
34421     "format": "progressive",
34422     "framerate": 30,
34423     "bitdepth": 8,
34424     "size": 44.064,
34425     "duration": "POY0MODT1H22M59S",
34426     "location": "Death Valley National Park, Furnace Creek, CA 92328, USA",
34427     "geolocation": {"latitude": 36.4643308, "longitude": -116.86906640000001, "alt": -
34428 62.1},
34429     "language": "en"
34430 },
34431     "schema": {"$ref": "#/definitions/MediaVideoUpdate"}
34432 }
34433 }
34434 }
34435 }
34436 },
34437 "parameters": {
34438     "interface-r" : {
34439         "in" : "query",
34440         "name" : "if",
34441         "type" : "string",
34442         "enum" : ["oic.if.rw", "oic.if.baseline"]
34443     },
34444     "interface-rw" : {
34445         "in" : "query",
34446         "name" : "if",
34447         "type" : "string",
34448         "enum" : ["oic.if.rw"]
34449     }
34450 },
34451 "definitions": {
34452     "MediaVideo" : {
34453         "properties": {
34454             "rt": {
34455                 "description": "The Resource Type of Media Video",
34456                 "items": {
34457                     "enum": ["oic.r.media.video"],
34458                     "type": "string"
34459                 },
34460                 "minItems": 1,
34461                 "uniqueItems": true,
34462                 "readOnly": true,
34463                 "type": "array"
34464             },
34465             "mediacore": {
34466                 "description": "The Media Core Properties common on all Media Resource Types,",
34467                 "$ref":
34468 "https://openconnectivityfoundation.github.io/IoTDataModels/MediaCoreResURI.swagger.json#/definition
34469 s/MediaCore"
34470             },
34471             "series" : {
34472                 "description": "List of TV Series and episode",
34473                 "items": {
34474                     "type": "string"
34475                 }

```

```

34476         "minItems": 1,
34477         "type": "array"
34478     },
34479     "studio" : {
34480         "description": "List of studios that produced the movie",
34481         "items": {
34482             "type": "string"
34483         },
34484         "minItems": 1,
34485         "type": "array"
34486     },
34487     "cast" : {
34488         "description": "List of casts that acted in the movie",
34489         "items": {
34490             "type": "string"
34491         },
34492         "minItems": 1,
34493         "type": "array"
34494     },
34495     "directors" : {
34496         "description": "List of directors that directed the movie",
34497         "items": {
34498             "type": "string"
34499         },
34500         "minItems": 1,
34501         "type": "array"
34502     },
34503     "producers" : {
34504         "description": "List of producers that produced the movie",
34505         "items": {
34506             "type": "string"
34507         },
34508         "minItems": 1,
34509         "type": "array"
34510     },
34511     "writers" : {
34512         "description": "List of writers that wrote the movie",
34513         "items": {
34514             "type": "string"
34515         },
34516         "minItems": 1,
34517         "type": "array"
34518     },
34519     "composers" : {
34520         "description": "List of composers that wrote the music",
34521         "items": {
34522             "type": "string"
34523         },
34524         "minItems": 1,
34525         "type": "array"
34526     },
34527     "sdp" : {
34528         "description": "Array of strings, a string for each Session Description Protocol syntax.",
34529         "items": {
34530             "description": "Session Description Protocol is a format for describing streaming media
34531 communications parameters using the media and attribute lines defined in RFC4566.",
34532             "type": "string"
34533         },
34534         "minItems": 1,
34535         "type": "array"
34536     },
34537     "width" : {
34538         "description": "The resolution width of the video",
34539         "type": "integer"
34540     },
34541     "height" : {
34542         "description": "The resolution height of the video",
34543         "type": "integer"
34544     },
34545     "resolution" : {
34546         "description": "The resolution of the video in pixels",
34547         "type": "integer"

```

```

34548 },
34549 "format": {
34550   "type": "string",
34551   "description": "The available video formats.",
34552   "enum": [
34553     "progressive",
34554     "interlaced",
34555     "HDR",
34556     "HDR10",
34557     "HDR10+",
34558     "Dolby Vision"
34559   ]
34560 },
34561 "framerate" : {
34562   "description": "The frame rate of the video in frames per second.",
34563   "type": "integer"
34564 },
34565 "bitdepth" : {
34566   "description": "Bit (Colour) depth is either the number of bits used to indicate the
34567 colour of a single pixel, in a bitmapped image or video framebuffer, or the number of bits used for
34568 each colour component of a single pixel.",
34569   "type": "integer"
34570 },
34571 "size" : {
34572   "description": "The size of the video in KB - Kilo-Bytes",
34573   "type": "number"
34574 },
34575 "duration": {
34576   "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
34577 schema.json#/definitions/duration",
34578   "description": "Duration is the total length of the media audio with format pattern
34579 according to ISO 8601 (duration). For example, P0Y0M0DT1H22M59S represents a duration of 1 hour, 22
34580 minutes, and 59 seconds."
34581 },
34582 "location" : {
34583   "description": "Location is the user-friendly string of the geographic location of the
34584 video.",
34585   "type": "string"
34586 },
34587 "geolocation" : {
34588   "$ref":
34589 "https://openconnectivityfoundation.github.io/IoTDataModels/GeolocationResURI.swagger.json#/definiti
34590 ons/Geolocation"
34591 },
34592 "language": {
34593   "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
34594 schema.json#/definitions/language-tag",
34595   "description": "Current language of the video media content with format pattern according
34596 to RFC 5646 language tag"
34597 },
34598 "n": {
34599   "$ref":
34600 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
34601 schema.json#/definitions/n"
34602 },
34603 "id": {
34604   "$ref":
34605 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
34606 schema.json#/definitions/id"
34607 },
34608 "if": {
34609   "description": "The OCF Interface set supported by this Resource",
34610   "items": {
34611     "enum": ["oic.if.rw", "oic.if.baseline"],
34612     "type": "string"
34613   },
34614   "minItems": 1,
34615   "uniqueItems": true,
34616   "readOnly": true,
34617   "type": "array"
34618 }
34619 },

```

```

34620         "type" : "object",
34621         "required": ["mediacore"]
34622     },
34623     "MediaVideoUpdate" : {
34624         "properties": {
34625             "mediacore": {
34626                 "description": "The Media Core Properties common on all Media Resource Types,",
34627                 "$ref":
34628                 "https://openconnectivityfoundation.github.io/IoTDataModels/MediaCoreResURI.swagger.json#/definitions/MediaCore"
34629             },
34630             "series" : {
34631                 "description": "List of TV Series and episode",
34632                 "items": {
34633                     "type": "string"
34634                 },
34635                 "minItems": 1,
34636                 "type": "array"
34637             },
34638             "studio" : {
34639                 "description": "List of studios that produced the movie",
34640                 "items": {
34641                     "type": "string"
34642                 },
34643                 "minItems": 1,
34644                 "type": "array"
34645             },
34646             "cast" : {
34647                 "description": "List of casts that acted in the movie",
34648                 "items": {
34649                     "type": "string"
34650                 },
34651                 "minItems": 1,
34652                 "type": "array"
34653             },
34654             "directors" : {
34655                 "description": "List of directors that directed the movie",
34656                 "items": {
34657                     "type": "string"
34658                 },
34659                 "minItems": 1,
34660                 "type": "array"
34661             },
34662             "producers" : {
34663                 "description": "List of producers that produced the movie",
34664                 "items": {
34665                     "type": "string"
34666                 },
34667                 "minItems": 1,
34668                 "type": "array"
34669             },
34670             "writers" : {
34671                 "description": "List of writers that wrote the movie",
34672                 "items": {
34673                     "type": "string"
34674                 },
34675                 "minItems": 1,
34676                 "type": "array"
34677             },
34678             "composers" : {
34679                 "description": "List of composers that wrote the music",
34680                 "items": {
34681                     "type": "string"
34682                 },
34683                 "minItems": 1,
34684                 "type": "array"
34685             },
34686             "sdp" : {
34687                 "description": "Array of strings, a string for each Session Description Protocol syntax.",
34688                 "items": {
34689                     "description": "Session Description Protocol is a format for describing streaming media
34690                     communications parameters using the media and attribute lines defined in RFC4566.",

```



```

34692         "type": "string"
34693     },
34694     "minItems": 1,
34695     "type": "array"
34696 },
34697 "width" : {
34698     "description": "The width of the video",
34699     "type": "integer"
34700 },
34701 "height" : {
34702     "description": "The height of the video",
34703     "type": "integer"
34704 },
34705 "resolution" : {
34706     "description": "The resolution of the video in pixels",
34707     "type": "integer"
34708 },
34709 "format": {
34710     "type": "string",
34711     "description": "The available video formats.",
34712     "enum": [
34713         "progressive",
34714         "interlaced",
34715         "HDR",
34716         "HDR10",
34717         "HDR10+",
34718         "Dolby Vision"
34719     ]
34720 },
34721 "framerate" : {
34722     "description": "The frame rate of the video in frames per second.",
34723     "type": "integer"
34724 },
34725 "bitdepth" : {
34726     "description": "Bit (Colour) depth is either the number of bits used to indicate the
34727 colour of a single pixel, in a bitmapped image or video framebuffer, or the number of bits used for
34728 each colour component of a single pixel.",
34729     "type": "integer"
34730 },
34731 "size" : {
34732     "description": "The size of the video in KB - Kilo-Bytes",
34733     "type": "number"
34734 },
34735 "duration": {
34736     "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
34737 schema.json#/definitions/duration",
34738     "description": "Duration is the total length of the media audio with format pattern
34739 according to ISO 8601 (duration). For example, P0Y0M0DT1H22M59S represents a duration of 1 hour, 22
34740 minutes, and 59 seconds."
34741 },
34742 "location" : {
34743     "description": "Location is the user-friendly string of the geographic location of the
34744 video.",
34745     "type": "string"
34746 },
34747 "geolocation" : {
34748     "$ref":
34749 "https://openconnectivityfoundation.github.io/IoTDataModels/GeolocationResURI.swagger.json#/definiti
34750 ons/Geolocation"
34751 },
34752 "language": {
34753     "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
34754 schema.json#/definitions/language-tag",
34755     "description": "Current language of the video media content with format pattern according
34756 to RFC 5646 language tag"
34757 },
34758 "n": {
34759     "$ref":
34760 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
34761 schema.json#/definitions/n"
34762 }
34763 },

```

```

34764     "type" : "object",
34765     "required": ["mediacore"]
34766   }
34767 }
34768 }
34769

```

6.162.5 Property definition

Table 327 defines the Properties that are part of the "oic.r.media.video" Resource Type.

Table 327 – The Property definitions of the Resource with type "rt" = "oic.r.media.video".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type of Media Video
mediacore	multiple types: see schema	Yes	Read Write	The Media Core Properties common on all Media Resource Types,
series	array: see schema	No	Read Write	List of TV Series and episode
studio	array: see schema	No	Read Write	List of studios that produced the movie
cast	array: see schema	No	Read Write	List of casts that acted in the movie
directors	array: see schema	No	Read Write	List of directors that directed the movie
producers	array: see schema	No	Read Write	List of producers that produced the movie
writers	array: see schema	No	Read Write	List of writers that wrote the movie
composers	array: see schema	No	Read Write	List of composers that wrote the music
sdp	array: see schema	No	Read Write	Array of strings, a string for each Session Description Protocol syntax.
width	integer	No	Read Write	The resolution width of the video
height	integer	No	Read Write	The resolution height of the video
resolution	integer	No	Read Write	The resolution of the video in pixels
format	string	No	Read Write	The available video formats.
framerate	integer	No	Read Write	The frame rate of the video in frames per second.
bitdepth	integer	No	Read Write	Bit (Colour) depth is either the number of bits used to indicate the colour of a single pixel, in a bitmapped image or video framebuffer, or the number of bits used for each colour

				component of a single pixel.
size	number	No	Read Write	The size of the video in KB - Kilo-Bytes
duration	multiple types: see schema	No	Read Write	Duration is the total length of the media audio with format pattern according to ISO 8601 (duration). For example, P0Y0M0DT1H22M59S represents a duration of 1 hour, 22 minutes, and 59 seconds.
location	string	No	Read Write	Location is the user-friendly string of the geographic location of the video.
geolocation	multiple types: see schema	No	Read Write	
language	multiple types: see schema	No	Read Write	Current language of the video media content with format pattern according to RFC 5646 language tag
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource
mediacore	multiple types: see schema	Yes	Read Write	The Media Core Properties common on all Media Resource Types,
series	array: see schema	No	Read Write	List of TV Series and episode
studio	array: see schema	No	Read Write	List of studios that produced the movie
cast	array: see schema	No	Read Write	List of casts that acted in the movie
directors	array: see schema	No	Read Write	List of directors that directed the movie
producers	array: see schema	No	Read Write	List of producers that produced the movie
writers	array: see schema	No	Read Write	List of writers that wrote the movie
composers	array: see schema	No	Read Write	List of composers that wrote the music
sdp	array: see schema	No	Read Write	Array of strings, a string for each Session Description Protocol syntax.
width	integer	No	Read Write	The width of the video

height	integer	No	Read Write	The height of the video
resolution	integer	No	Read Write	The resolution of the video in pixels
format	string	No	Read Write	The available video formats.
framerate	integer	No	Read Write	The frame rate of the video in frames per second.
bitdepth	integer	No	Read Write	Bit (Colour) depth is either the number of bits used to indicate the colour of a single pixel, in a bitmapped image or video framebuffer, or the number of bits used for each colour component of a single pixel.
size	number	No	Read Write	The size of the video in KB - Kilo-Bytes
duration	multiple types: see schema	No	Read Write	Duration is the total length of the media audio with format pattern according to ISO 8601 (duration). For example, P0Y0M0DT1H22M59S represents a duration of 1 hour, 22 minutes, and 59 seconds.
location	string	No	Read Write	Location is the user-friendly string of the geographic location of the video.
geolocation	multiple types: see schema	No	Read Write	
language	multiple types: see schema	No	Read Write	Current language of the video media content with format pattern according to RFC 5646 language tag
n	multiple types: see schema	No	Read Write	

34773 6.162.6 CRUDN behaviour

34774 Table 328 defines the CRUDN operations that are supported on the "oic.r.media.video" Resource
34775 Type.

34776 **Table 328 – The CRUDN operations of the Resource with type "rt" = "oic.r.media.video".**

Create	Read	Update	Delete	Notify
	get	post		observe

34777 6.163 Restricted Switch

34778 6.163.1 Introduction

34779 This Resource describes a switch(on/off) restricting UPDATE for 'on'.

34780 The Property "state" is a Boolean.

34781 A state of True means that the switch is turned on.

34782 A state of False means that the switch is turned off.

34783 6.163.2 Example URI

34784 /RestrictedSwitchResURI

34785 6.163.3 Resource type

34786 The Resource Type is defined as: "oic.r.switch.restricted".

34787 6.163.4 OpenAPI 2.0 definition

```
34788 {
34789   "swagger": "2.0",
34790   "info": {
34791     "title": "Restricted Switch",
34792     "version": "20191119",
34793     "license": {
34794       "name": "OCF Data Model License",
34795       "url":
34796         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
34797         CENSE.md",
34798       "x-copyright": "Copyright 2019 Open Connectivity Foundation, Inc. All rights reserved."
34799     },
34800     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
34801   },
34802   "schemes": ["http"],
34803   "consumes": ["application/json"],
34804   "produces": ["application/json"],
34805   "paths": {
34806     "/RestrictedSwitchResURI" : {
34807       "get": {
34808         "description": "This Resource describes a switch(on/off) restricting UPDATE for 'on'.
34809         Property \"state\" is a Boolean.
34810         A state of True means that the switch is turned on.
34811         A state of False means that the switch is turned off.",
34812         "parameters": [
34813           { "$ref": "#/parameters/interface" }
34814         ],
34815         "responses": {
34816           "200": {
34817             "description": "",
34818             "x-example":
34819               {
34820                 "rt": ["oic.r.switch.restricted"],
34821                 "if": ["oic.if.a", "oic.if.baseline"],
34822                 "state": true
34823               },
34824             "schema": { "$ref": "#/definitions/RestrictedSwitch" }
34825           }
34826         },
34827         "post": {
34828           "description": "A request to set the state to true is not allowed in an UPDATE",
34829           "parameters": [
34830             { "$ref": "#/parameters/interface" },
34831             {
34832               "name": "body",
34833               "in": "body",
34834               "required": true,
34835               "schema": { "$ref": "#/definitions/RestrictedSwitchUpdate" },
34836               "x-example":
34837                 {
34838                   "state": false
34839                 }
34840             }
34841           ]
34842         }
34843       }
34844     }
34845   }
34846 }
```

```

34840     }
34841   ],
34842   "responses": {
34843     "200": {
34844       "description": "",
34845       "x-example": {
34846         "state": false
34847       },
34848       "schema": { "$ref": "#/definitions/RestrictedSwitch" }
34849     },
34850     "403": {
34851       "description": "This response is generated by the OCF server when the client
34852 sends:\nAn UPDATE with an value for True.\n403 means the request is forbidden.\n",
34853       "x-example": {
34854       }
34855     }
34856   }
34857 }
34858 }
34859 }
34860 },
34861 },
34862 "parameters": {
34863   "interface": {
34864     "in": "query",
34865     "name": "if",
34866     "type": "string",
34867     "enum": ["oic.if.a", "oic.if.baseline"]
34868   }
34869 },
34870 "definitions": {
34871   "RestrictedSwitch": {
34872     "properties": {
34873       "rt": {
34874         "description": "The Resource Type.",
34875         "items": {
34876           "enum": ["oic.r.switch.restricted"],
34877           "maxLength": 64,
34878           "type": "string"
34879         },
34880         "minItems": 1,
34881         "uniqueItems": true,
34882         "readOnly": true,
34883         "type": "array"
34884       },
34885       "state": {
34886         "description": "The status of the restricted switch.",
34887         "type": "boolean"
34888       }
34889     },
34890     "n": {
34891       "$ref":
34892 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
34893 schema.json#/definitions/n"
34894     },
34895     "id": {
34896       "$ref":
34897 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
34898 schema.json#/definitions/id"
34899     },
34900     "if": {
34901       "description": "The OCF Interface set supported by this Resource.",
34902       "items": {
34903         "enum": [
34904           "oic.if.a",
34905           "oic.if.baseline"
34906         ],
34907         "type": "string"
34908       },
34909       "minItems": 2,
34910       "uniqueItems": true,
34911       "readOnly": true,
34912       "type": "array"

```

```
34912     },
34913   },
34914   "type": "object",
34915   "required": ["state"]
34916 },
34917 "RestrictedSwitchUpdate" : {
34918   "properties": {
34919     "state": {
34920       "description": "Only False, which means 'off', is allowed in an UPDATE.",
34921       "enum": [false],
34922       "type": "boolean"
34923     }
34924   },
34925   "type": "object",
34926   "required": ["state"]
34927 }
34928 }
34929 }
34930 }
```

34931 **6.163.5 Property definition**

34932 Table 329 defines the Properties that are part of the "oic.r.switch.restricted" Resource Type.

34933 **Table 329 – The Property definitions of the Resource with type "rt" =**
34934 **"oic.r.switch.restricted".**

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type.
state	boolean	Yes	Read Write	The status of the restricted switch.
n	multiple types: see schema	No	Read Write	
id	multiple types: see schema	No	Read Write	
if	array: see schema	No	Read Only	The OCF Interface set supported by this Resource.
state	boolean	Yes	Read Write	Only False, which means 'off', is allowed in an UPDATE.

34935 **6.163.6 CRUDN behaviour**

34936 Table 330 defines the CRUDN operations that are supported on the "oic.r.switch.restricted"
34937 Resource Type.

34938 **Table 330 – The CRUDN operations of the Resource with type "rt" =**
34939 **"oic.r.switch.restricted".**

Create	Read	Update	Delete	Notify
	get	post		observe

34940 **6.164 Device Settings Accessibility Resource Type**

34941 **6.164.1 Introduction**

34942 Gets current device accessibility settings.

34943 **6.164.2 Example URI**

34944 /SettingsAccessibilityResURI

6.164.3 Resource type

The Resource Type is defined as: "oic.r.settings.accessibility".

6.164.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Device Settings Accessibility Resource Type",
    "version": "2020-04-09",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2020 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/SettingsAccessibilityResURI": {
      "get": {
        "description": "Gets current device accessibility settings.",
        "parameters": [
          {"$ref": "#/parameters/interface-r"}
        ],
        "responses": {
          "200": {
            "description": "Gives the information for the device accessibility settings.",
            "x-example": {
              "rt": ["oic.r.settings.accessibility"],
              "id": "unique_example_id",
              "voice-guide": false,
              "video-description": false,
              "caption": false,
              "caption-mode": "default",
              "supported-caption-modes": ["cc1", "cc2", "cc3", "cc4", "text1", "text2", "text3",
"text4", "default"],
              "high-contrast": false,
              "enlarge": false
            },
            "schema": {"$ref": "#/definitions/settings-accessibility"}
          }
        }
      },
      "post": {
        "description": "Changes the device accessibility settings.",
        "parameters": [
          {"$ref": "#/parameters/interface-rw"},
          {
            "name": "body",
            "in": "body",
            "required": true,
            "x-example": {
              "voice-guide": false,
              "video-description": false,
              "caption": false,
              "caption-mode": "default",
              "high-contrast": false,
              "enlarge": false
            },
            "schema": {"$ref": "#/definitions/settings-accessibility-update"}
          }
        ],
        "responses": {
          "200": {
            "description": "Gives the information for the new device accessibility settings.",
            "x-example": {
```



```

35014         "voice-guide": false,
35015         "video-description": false,
35016         "caption": false,
35017         "caption-mode": "default",
35018         "high-contrast": false,
35019         "enlarge": false
35020     },
35021     "schema": {"$ref": "#/definitions/settings-accessibility-update"}
35022 }
35023 }
35024 }
35025 }
35026 },
35027 "parameters": {
35028     "interface-r": {
35029         "in": "query",
35030         "name": "if",
35031         "type": "string",
35032         "enum": ["oic.if.rw", "oic.if.baseline"]
35033     },
35034     "interface-rw": {
35035         "in": "query",
35036         "name": "if",
35037         "type": "string",
35038         "enum": ["oic.if.rw"]
35039     }
35040 },
35041 "definitions": {
35042     "settings-accessibility": {
35043         "title": "Retrieve device settings for accessibility",
35044         "type": "object",
35045         "properties": {
35046             "rt": {
35047                 "description": "The Resource Type of Device Settings for accessibility",
35048                 "items": {
35049                     "enum": ["oic.r.settings.accessibility"],
35050                     "type": "string"
35051                 },
35052                 "minItems": 1,
35053                 "uniqueItems": true,
35054                 "readOnly": true,
35055                 "type": "array"
35056             },
35057             "if": {
35058                 "items": {
35059                     "enum": ["oic.if.rw", "oic.if.baseline"],
35060                     "type": "string"
35061                 },
35062                 "minItems": 1,
35063                 "uniqueItems": true,
35064                 "readOnly": true,
35065                 "type": "array"
35066             },
35067             "id": {
35068                 "$ref":
35069 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
35070 schema.json#/definitions/id"
35071             },
35072             "voice-guide": {
35073                 "description": "Turns on or off voice guide.",
35074                 "type": "boolean"
35075             },
35076             "video-description": {
35077                 "description": "Turns on or off video description.",
35078                 "type": "boolean"
35079             },
35080             "caption": {
35081                 "description": "Turns on or off accessibility caption.",
35082                 "type": "boolean"
35083             },
35084             "caption-mode": {
35085                 "description": "Accessibility Caption Mode. Client can change caption-mode using

```

```

supported-caption-modes property.",
    "type": "string"
  },
  "supported-caption-modes": {
    "description": "The array of possible caption modes the device supports. This property
should be added if caption-mode is supported.",
    "items": {
      "type": "string"
    },
    "readOnly": true,
    "minItems": 1,
    "type": "array"
  },
  "high-contrast": {
    "description": "Turns on or off high contrast.",
    "type": "boolean"
  },
  "enlarge": {
    "description": "Turns on or off print enlargement.",
    "type": "boolean"
  }
},
"required": ["caption"]
},
"settings-accessibility-update": {
  "title": "Update device settings for accessibility",
  "type": "object",
  "properties": {
    "voice-guide": {
      "description": "Turns on or off voice guide.",
      "type": "boolean"
    },
    "video-description": {
      "description": "Turns on or off video description.",
      "type": "boolean"
    },
    "caption": {
      "description": "Turns on or off accessibility caption.",
      "type": "boolean"
    },
    "caption-mode": {
      "description": "Accessibility Caption Mode. Client can change caption-mode using
supported-caption-modes property.",
      "type": "string"
    },
    "high-contrast": {
      "description": "Turns on or off high contrast.",
      "type": "boolean"
    },
    "enlarge": {
      "description": "Turns on or off print enlargement.",
      "type": "boolean"
    }
  }
}
}
}
}

```

6.164.5 Property definition

Table 331 defines the Properties that are part of the "oic.r.settings.accessibility" Resource Type.

Table 331 – The Property definitions of the Resource with type "rt" = "oic.r.settings.accessibility".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type of Device Settings for accessibility

if	array: see schema	No	Read Only	
id	multiple types: see schema	No	Read Write	
voice-guide	boolean	No	Read Write	Turns on or off voice guide.
video-description	boolean	No	Read Write	Turns on or off video description.
caption	boolean	Yes	Read Write	Turns on or off accessibility caption.
caption-mode	string	No	Read Write	Accessibility Caption Mode. Client can change caption-mode using supported-caption-modes property.
supported-caption-modes	array: see schema	No	Read Only	The array of possible caption modes the device supports. This property should be added if caption-mode is supported.
high-contrast	boolean	No	Read Write	Turns on or off high contrast.
enlarge	boolean	No	Read Write	Turns on or off print enlargement.
voice-guide	boolean		Read Write	Turns on or off voice guide.
video-description	boolean		Read Write	Turns on or off video description.
caption	boolean		Read Write	Turns on or off accessibility caption.
caption-mode	string		Read Write	Accessibility Caption Mode. Client can change caption-mode using supported-caption-modes property.
high-contrast	boolean		Read Write	Turns on or off high contrast.
enlarge	boolean		Read Write	Turns on or off print enlargement.

6.164.6 CRUDN behaviour

Table 332 defines the CRUDN operations that are supported on the "oic.r.settings.accessibility" Resource Type.

Table 332 – The CRUDN operations of the Resource with type "rt" = "oic.r.settings.accessibility".

Create	Read	Update	Delete	Notify
	get	post		observe

6.165 Device Settings Broadcasting Resource Type

6.165.1 Introduction

Gets current device broadcasting settings.

6.165.2 Example URI

/SettingsBroadcastingResURI

6.165.3 Resource type

The Resource Type is defined as: "oic.r.settings.broadcasting".

6.165.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Device Settings Broadcasting Resource Type",
    "version": "2020-04-09",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2020 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/SettingsBroadcastingResURI": {
      "get": {
        "description": "Gets current device broadcasting settings.",
        "parameters": [
          {"$ref": "#/parameters/interface-r"}
        ],
        "responses": {
          "200": {
            "description": "Gives the information for the device broadcasting settings.",
            "x-example": {
              "rt": ["oic.r.settings.broadcasting"],
              "id": "unique_example_id",
              "antenna": "tv",
              "supported-antennas": ["composite", "hdtv", "tv"],
              "location-info": "location1",
              "carrier-info": "carrier1",
              "auto-program": false
            },
            "schema": {"$ref": "#/definitions/settings-broadcasting"}
          }
        }
      },
      "post": {
        "description": "Changes the device broadcasting settings.",
        "parameters": [
          {"$ref": "#/parameters/interface-rw"},
          {
            "name": "body",
            "in": "body",
            "required": true,
            "x-example": {
              "antenna": "tv",
              "location-info": "location1",
              "carrier-info": "carrier1",
              "auto-program": false
            },
            "schema": {"$ref": "#/definitions/settings-broadcasting-update"}
          }
        ],
        "responses": {
          "200": {
            "description": "Gives the information for the new device broadcasting settings.",
            "x-example": {
              "antenna": "tv",
```

```

35223         "location-info": "location1",
35224         "carrier-info": "carrier1",
35225         "auto-program": false
35226     },
35227     "schema": {"$ref": "#/definitions/settings-broadcasting-update"}
35228 }
35229 }
35230 }
35231 },
35232 },
35233 "parameters": {
35234     "interface-r": {
35235         "in": "query",
35236         "name": "if",
35237         "type": "string",
35238         "enum": ["oic.if.rw", "oic.if.baseline"]
35239     },
35240     "interface-rw": {
35241         "in": "query",
35242         "name": "if",
35243         "type": "string",
35244         "enum": ["oic.if.rw"]
35245     }
35246 },
35247 "definitions": {
35248     "settings-broadcasting": {
35249         "title": "Retrieve device settings for broadcasting",
35250         "type": "object",
35251         "properties": {
35252             "rt": {
35253                 "description": "The Resource Type of Device Settings for broadcasting",
35254                 "items": {
35255                     "enum": ["oic.r.settings.broadcasting"],
35256                     "type": "string"
35257                 },
35258                 "minItems": 1,
35259                 "uniqueItems": true,
35260                 "readOnly": true,
35261                 "type": "array"
35262             },
35263             "if": {
35264                 "items": {
35265                     "enum": ["oic.if.rw", "oic.if.baseline"],
35266                     "type": "string"
35267                 },
35268                 "minItems": 1,
35269                 "uniqueItems": true,
35270                 "readOnly": true,
35271                 "type": "array"
35272             },
35273             "id": {
35274                 "$ref":
35275 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
35276 schema.json#/definitions/id"
35277             },
35278             "antenna": {
35279                 "description": "Type of antenna",
35280                 "type": "string"
35281             },
35282             "supported-antennas": {
35283                 "description": "The array of possible antennas the device supports. This property should
35284 be added if antenna is supported.",
35285                 "items": {
35286                     "type": "string"
35287                 },
35288                 "readOnly": true,
35289                 "minItems": 1,
35290                 "type": "array"
35291             },
35292             "location-info": {
35293                 "description": "Location information of the broadcast system.",
35294                 "type": "string"

```

```

35295     },
35296     "carrier-info": {
35297         "description": "Carrier information of the broadcast system.",
35298         "type": "string"
35299     },
35300     "auto-program": {
35301         "description": "Scan for channels using Auto Program.",
35302         "type": "boolean"
35303     }
35304 },
35305 "required": ["antenna"]
35306 },
35307 "settings-broadcasting-update": {
35308     "title": "Update device settings for broadcasting",
35309     "type": "object",
35310     "properties": {
35311         "antenna": {
35312             "description": "Type of antenna. Client can change antenna using supported-antennas
35313 property.",
35314             "type": "string"
35315         },
35316         "location-info": {
35317             "description": "Location information of the broadcast system.",
35318             "type": "string"
35319         },
35320         "carrier-info": {
35321             "description": "Carrier information of the broadcast system.",
35322             "type": "string"
35323         },
35324         "auto-program": {
35325             "description": "Scan for channels using Auto Program.",
35326             "type": "boolean"
35327         }
35328     }
35329 }
35330 }
35331 }
35332

```

6.165.5 Property definition

Table 333 defines the Properties that are part of the "oic.r.settings.broadcasting" Resource Type.

Table 333 – The Property definitions of the Resource with type "rt" = "oic.r.settings.broadcasting".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type of Device Settings for broadcasting
if	array: see schema	No	Read Only	
id	multiple types: see schema	No	Read Write	
antenna	string	Yes	Read Write	Type of antenna
supported-antennas	array: see schema	No	Read Only	The array of possible antennas the device supports. This property should be added if antenna is supported.
location-info	string	No	Read Write	Location information of the broadcast system.
carrier-info	string	No	Read Write	Carrier information of the broadcast system.

auto-program	boolean	No	Read Write	Scan for channels using Auto Program.
antenna	string		Read Write	Type of antenna. Client can change antenna using supported-antennas property.
location-info	string		Read Write	Location information of the broadcast system.
carrier-info	string		Read Write	Carrier information of the broadcast system.
auto-program	boolean		Read Write	Scan for channels using Auto Program.

6.165.6 CRUDN behaviour

Table 334 defines the CRUDN operations that are supported on the "oic.r.settings.broadcasting" Resource Type.

Table 334 – The CRUDN operations of the Resource with type "rt" = "oic.r.settings.broadcasting".

Create	Read	Update	Delete	Notify
	get	post		observe

6.166 Device Settings Picture Resource Type

6.166.1 Introduction

Gets current device picture settings.

6.166.2 Example URI

/SettingsPictureResURI

6.166.3 Resource type

The Resource Type is defined as: "oic.r.settings.picture".

6.166.4 OpenAPI 2.0 definition

```
{
  "swagger": "2.0",
  "info": {
    "title": "Device Settings Picture Resource Type",
    "version": "2020-04-09",
    "license": {
      "name": "OCF Data Model License",
      "url":
"https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
CENSE.md",
      "x-copyright": "Copyright 2020 Open Connectivity Foundation, Inc. All rights reserved."
    },
    "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/SettingsPictureResURI": {
      "get": {
        "description": "Gets current device picture settings.",
        "parameters": [
          {"$ref": "#/parameters/interface-r"}
        ]
      }
    }
  }
}
```

```

35373     ],
35374     "responses": {
35375         "200": {
35376             "description": "Gives the information for the device picture settings.",
35377             "x-example": {
35378                 "rt": ["oic.r.settings.picture"],
35379                 "id": "unique_example_id",
35380                 "picture-mode": "standard",
35381                 "supported-picture-modes": ["dynamic", "movie", "natural", "standard"],
35382                 "backlight": 5,
35383                 "contrast": 95,
35384                 "brightness": 45,
35385                 "sharpness": 50,
35386                 "colour": 50,
35387                 "colour-temperature": 0,
35388                 "tint": 0,
35389                 "picture-reset": false,
35390                 "picture-off": false,
35391                 "aspect-ratio": "16:9",
35392                 "supported-aspect-ratio": ["16:9", "4:3", "Set by Program", "Zoom", "Just Scan",
35393 "Cinema Zoom"]
35394             },
35395             "schema": {"$ref": "#/definitions/settings-picture"}
35396         }
35397     }
35398 },
35399 "post": {
35400     "description": "Changes the device picture settings.",
35401     "parameters": [
35402         {"$ref": "#/parameters/interface-rw"},
35403         {
35404             "name": "body",
35405             "in": "body",
35406             "required": true,
35407             "x-example": {
35408                 "picture-mode": "standard",
35409                 "backlight": 5,
35410                 "contrast": 95,
35411                 "brightness": 45,
35412                 "sharpness": 50,
35413                 "colour": 50,
35414                 "colour-temperature": 0,
35415                 "tint": 0,
35416                 "picture-reset": false,
35417                 "picture-off": false,
35418                 "aspect-ratio": "16:9"
35419             },
35420             "schema": {"$ref": "#/definitions/settings-picture-update"}
35421         }
35422     ],
35423     "responses": {
35424         "200": {
35425             "description": "Gives the information for the new device picture settings.",
35426             "x-example": {
35427                 "picture-mode": "standard",
35428                 "backlight": 5,
35429                 "contrast": 95,
35430                 "brightness": 45,
35431                 "sharpness": 50,
35432                 "colour": 50,
35433                 "colour-temperature": 0,
35434                 "tint": 0,
35435                 "picture-reset": false,
35436                 "picture-off": false,
35437                 "aspect-ratio": "16:9"
35438             },
35439             "schema": {"$ref": "#/definitions/settings-picture-update"}
35440         }
35441     }
35442 }
35443 },
35444 },

```



```

35445 "parameters": {
35446   "interface-r": {
35447     "in": "query",
35448     "name": "if",
35449     "type": "string",
35450     "enum": ["oic.if.rw", "oic.if.baseline"]
35451   },
35452   "interface-rw": {
35453     "in": "query",
35454     "name": "if",
35455     "type": "string",
35456     "enum": ["oic.if.rw"]
35457   }
35458 },
35459 "definitions": {
35460   "settings-picture": {
35461     "title": "Retrieve device settings for picture",
35462     "type": "object",
35463     "properties": {
35464       "rt": {
35465         "description": "The Resource Type of Device Settings for picture",
35466         "items": {
35467           "enum": ["oic.r.settings.picture"],
35468           "type": "string"
35469         },
35470         "minItems": 1,
35471         "uniqueItems": true,
35472         "readOnly": true,
35473         "type": "array"
35474       },
35475       "if": {
35476         "items": {
35477           "enum": ["oic.if.rw", "oic.if.baseline"],
35478           "type": "string"
35479         },
35480         "minItems": 1,
35481         "uniqueItems": true,
35482         "readOnly": true,
35483         "type": "array"
35484       },
35485       "id": {
35486         "$ref":
35487         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
35488         schema.json#/definitions/id"
35489       },
35490       "picture-mode": {
35491         "description": "Device Settings Picture Mode. Client can change picture-mode using
35492 supported-picture-modes property.",
35493         "type": "string"
35494       },
35495       "supported-picture-modes": {
35496         "description": "An array of possible picture modes the device supports. This property
35497 should be
35498 added if picture-mode property is supported.",
35499         "items": {
35500           "type": "string"
35501         },
35502         "readOnly": true,
35503         "minItems": 1,
35504         "type": "array"
35505       },
35506       "backlight": {
35507         "description": "Quantized representation in the range -10 to 10 of the current sensed or
35508 set value for Device Settings Picture Backlight.",
35509         "maximum": 10,
35510         "minimum": -10,
35511         "type": "integer"
35512       },
35513       "contrast": {
35514         "description": "Quantized representation in the range 0-100 of the current sensed or set
35515 value for Device Settings Picture Contrast.",
35516         "maximum": 100,
35517         "minimum": 0,

```

```

35517         "type": "integer"
35518     },
35519     "brightness": {
35520         "description": "Quantized representation in the range 0-100 of the current sensed or set
35521 value for Device Settings Picture Brightness.",
35522         "maximum": 100,
35523         "minimum": 0,
35524         "type": "integer"
35525     },
35526     "sharpness": {
35527         "description": "Quantized representation in the range 0-100 of the current sensed or set
35528 value for Device Settings Picture Sharpness.",
35529         "maximum": 100,
35530         "minimum": 0,
35531         "type": "integer"
35532     },
35533     "colour": {
35534         "description": "Quantized representation in the range 0-100 of the current sensed or set
35535 value for Device Settings Picture Colour.",
35536         "maximum": 100,
35537         "minimum": 0,
35538         "type": "integer"
35539     },
35540     "colour-temperature": {
35541         "description": "Colour temperature range of -50 (Cool) to 50 (Warm).",
35542         "maximum": 50,
35543         "minimum": -50,
35544         "type": "integer"
35545     },
35546     "tint": {
35547         "description": "Quantized representation in the range 0-100 of the current sensed or set
35548 value for Device Settings Picture Tint. The closer to 100, the more saturated the red colour
35549 becomes. The closer to 0, the more saturated the green colour becomes.",
35550         "maximum": 100,
35551         "minimum": 0,
35552         "type": "integer"
35553     },
35554     "picture-reset": {
35555         "description": "Resets all picture settings to the default values.",
35556         "type": "boolean"
35557     },
35558     "picture-off": {
35559         "description": "This turns picture on and off.",
35560         "type": "boolean"
35561     },
35562     "aspect-ratio": {
35563         "description": "Device Settings Aspect Ratio. Client can change aspect-ratio using
35564 supported-aspect-ratio property.",
35565         "type": "string"
35566     },
35567     "supported-aspect-ratio": {
35568         "description": "An array of possible aspect ratio the device supports. This property
35569 should be added if aspect-ratio property is supported.",
35570         "items": {
35571             "type": "string"
35572         },
35573         "readOnly": true,
35574         "minItems": 1,
35575         "type": "array"
35576     },
35577 },
35578 "required": ["brightness", "contrast"]
35579 },
35580 "settings-picture-update": {
35581     "title": "Update device settings for picture",
35582     "type": "object",
35583     "properties": {
35584         "picture-mode": {
35585             "description": "Device Settings Picture Mode. Client can change picture-mode using
35586 supported-picture-modes property.",
35587             "type": "string"
35588         },

```

```

35589         "backlight": {
35590             "description": "Quantized representation in the range 0-10 of the current sensed or set
35591 value for Device Settings Picture Backlight.",
35592             "maximum": 10,
35593             "minimum": 0,
35594             "type": "integer"
35595         },
35596         "contrast": {
35597             "description": "Quantized representation in the range 0-100 of the current sensed or set
35598 value for Device Settings Picture Contrast.",
35599             "maximum": 100,
35600             "minimum": 0,
35601             "type": "integer"
35602         },
35603         "brightness": {
35604             "description": "Quantized representation in the range 0-100 of the current sensed or set
35605 value for Device Settings Picture Brightness.",
35606             "maximum": 100,
35607             "minimum": 0,
35608             "type": "integer"
35609         },
35610         "sharpness": {
35611             "description": "Quantized representation in the range 0-100 of the current sensed or set
35612 value for Device Settings Picture Sharpness.",
35613             "maximum": 100,
35614             "minimum": 0,
35615             "type": "integer"
35616         },
35617         "colour": {
35618             "description": "Quantized representation in the range 0-100 of the current sensed or set
35619 value for Device Settings Picture Colour.",
35620             "maximum": 100,
35621             "minimum": 0,
35622             "type": "integer"
35623         },
35624         "colour-temperature": {
35625             "description": "Colour temperature range of -50 (Cool) to 50 (Warm).",
35626             "maximum": 50,
35627             "minimum": -50,
35628             "type": "integer"
35629         },
35630         "tint": {
35631             "description": "Quantized representation in the range 0-100 of the current sensed or set
35632 value for Device Settings Picture Tint. The closer to 100, the more saturated the red colour
35633 becomes. The closer to 0, the more saturated the green colour becomes.",
35634             "maximum": 100,
35635             "minimum": 0,
35636             "type": "integer"
35637         },
35638         "picture-reset": {
35639             "description": "Resets all picture settings to the default values.",
35640             "type": "boolean"
35641         },
35642         "picture-off": {
35643             "description": "This turns picture on and off.",
35644             "type": "boolean"
35645         },
35646         "aspect-ratio": {
35647             "description": "Device Settings Aspect Ratio. Client can change aspect-ratio using
35648 supported-aspect-ratio property.",
35649             "type": "string"
35650         }
35651     }
35652 }
35653 }
35654 }
35655

```

6.166.5 Property definition

Table 335 defines the Properties that are part of the "oic.r.settings.picture" Resource Type.

Table 335 – The Property definitions of the Resource with type "rt" = "oic.r.settings.picture".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type of Device Settings for picture
if	array: see schema	No	Read Only	
id	multiple types: see schema	No	Read Write	
picture-mode	string	No	Read Write	Device Settings Picture Mode. Client can change picture-mode using supported-picture-modes property.
supported-picture-modes	array: see schema	No	Read Only	An array of possible picture modes the device supports. This property should be added if picture-mode property is supported.
backlight	integer	No	Read Write	Quantized representation in the range -10 to 10 of the current sensed or set value for Device Settings Picture Backlight.
contrast	integer	Yes	Read Write	Quantized representation in the range 0-100 of the current sensed or set value for Device Settings Picture Contrast.
brightness	integer	Yes	Read Write	Quantized representation in the range 0-100 of the current sensed or set value for Device Settings Picture Brightness.
sharpness	integer	No	Read Write	Quantized representation in the range 0-100 of the current sensed or set value for Device Settings Picture Sharpness.
colour	integer	No	Read Write	Quantized representation in the range 0-100 of the current sensed or set value for Device Settings Picture Colour.
colour-temperature	integer	No	Read Write	Colour temperature range of -50 (Cool) to 50 (Warm).

tint	integer	No	Read Write	Quantized representation in the range 0-100 of the current sensed or set value for Device Settings Picture Tint. The closer to 100, the more saturated the red colour becomes. The closer to 0, the more saturated the green colour becomes.
picture-reset	boolean	No	Read Write	Resets all picture settings to the default values.
picture-off	boolean	No	Read Write	This turns picture on and off.
aspect-ratio	string	No	Read Write	Device Settings Aspect Ratio. Client can change aspect-ratio using supported-aspect-ratio property.
supported-aspect-ratio	array: see schema	No	Read Only	An array of possible aspect ratio the device supports. This property should be added if aspect-ratio property is supported.
picture-mode	string		Read Write	Device Settings Picture Mode. Client can change picture-mode using supported-picture-modes property.
backlight	integer		Read Write	Quantized representation in the range 0-10 of the current sensed or set value for Device Settings Picture Backlight.
contrast	integer		Read Write	Quantized representation in the range 0-100 of the current sensed or set value for Device Settings Picture Contrast.
brightness	integer		Read Write	Quantized representation in the range 0-100 of the current sensed or set value for Device Settings Picture Brightness.
sharpness	integer		Read Write	Quantized representation in the range 0-100 of the current sensed or set value for Device

				Settings Picture Sharpness.
Colour	integer		Read Write	Quantized representation in the range 0-100 of the current sensed or set value for Device Settings Picture Colour.
colour-temperature	integer		Read Write	Colour temperature range of -50 (Cool) to 50 (Warm).
Tint	integer		Read Write	Quantized representation in the range 0-100 of the current sensed or set value for Device Settings Picture Tint. The closer to 100, the more saturated the red colour becomes. The closer to 0, the more saturated the green colour becomes.
picture-reset	boolean		Read Write	Resets all picture settings to the default values.
picture-off	boolean		Read Write	This turns picture on and off.
aspect-ratio	string		Read Write	Device Settings Aspect Ratio. Client can change aspect-ratio using supported-aspect-ratio property.

35660 6.166.6 CRUDN behaviour

35661 Table 336 defines the CRUDN operations that are supported on the "oic.r.settings.picture"
35662 Resource Type.

35663 **Table 336 – The CRUDN operations of the Resource with type "rt" = "oic.r.settings.picture".**

Create	Read	Update	Delete	Notify
	get	post		observe

35664 6.167 Device Settings Sound Resource Type

35665 6.167.1 Introduction

35666 Gets current device sound settings.

35667 6.167.2 Example URI

35668 /SettingsSoundResURI

35669 6.167.3 Resource type

35670 The Resource Type is defined as: "oic.r.settings.sound".

35671 6.167.4 OpenAPI 2.0 definition

35672 {
35673 "swagger": "2.0",

```

35674     "info": {
35675         "title": "Device Settings Sound Resource Type",
35676         "version": "2020-04-09",
35677         "license": {
35678             "name": "OCF Data Model License",
35679             "url":
35680 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
35681 CENSE.md",
35682             "x-copyright": "Copyright 2020 Open Connectivity Foundation, Inc. All rights reserved."
35683         },
35684         "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
35685     },
35686     "schemes": ["http"],
35687     "consumes": ["application/json"],
35688     "produces": ["application/json"],
35689     "paths": {
35690         "/SettingsSoundResURI": {
35691             "get": {
35692                 "description": "Gets current device sound settings.",
35693                 "parameters": [
35694                     {"$ref": "#/parameters/interface-r"}
35695                 ],
35696                 "responses": {
35697                     "200": {
35698                         "description": "Gives the information for the device sound settings.",
35699                         "x-example": {
35700                             "rt": ["oic.r.settings.sound"],
35701                             "id": "unique_example_id",
35702                             "speaker": "internal",
35703                             "supported-speakers": ["hdmi", "headphone", "internal", "optical", "soundbar",
35704 "wireless"],
35705                             "sound-mode": "standard",
35706                             "supported-sound-modes": ["clearVoice", "custom", "music", "standard"],
35707                             "auto-volume": true,
35708                             "dolby-atmos-compatibility": false
35709                         },
35710                         "schema": {"$ref": "#/definitions/settings-sound"}
35711                     }
35712                 }
35713             },
35714             "post": {
35715                 "description": "Changes the device sound settings.",
35716                 "parameters": [
35717                     {"$ref": "#/parameters/interface-rw"},
35718                     {
35719                         "name": "body",
35720                         "in": "body",
35721                         "required": true,
35722                         "x-example": {
35723                             "speaker": "internal",
35724                             "sound-mode": "standard",
35725                             "auto-volume": true,
35726                             "dolby-atmos-compatibility": false
35727                         },
35728                         "schema": {"$ref": "#/definitions/settings-sound-update"}
35729                     }
35730                 ],
35731                 "responses": {
35732                     "200": {
35733                         "description": "Gives the information for the new device sound settings.",
35734                         "x-example": {
35735                             "speaker": "internal",
35736                             "sound-mode": "standard",
35737                             "auto-volume": true,
35738                             "dolby-atmos-compatibility": false
35739                         },
35740                         "schema": {"$ref": "#/definitions/settings-sound-update"}
35741                     }
35742                 }
35743             }
35744         }
35745     },

```

```

35746 "parameters": {
35747   "interface-r": {
35748     "in": "query",
35749     "name": "if",
35750     "type": "string",
35751     "enum": ["oic.if.rw", "oic.if.baseline"]
35752   },
35753   "interface-rw": {
35754     "in": "query",
35755     "name": "if",
35756     "type": "string",
35757     "enum": ["oic.if.rw"]
35758   }
35759 },
35760 "definitions": {
35761   "settings-sound": {
35762     "title": "Retrieve device settings for sound",
35763     "type": "object",
35764     "properties": {
35765       "rt": {
35766         "description": "The Resource Type of Device Settings for sound",
35767         "items": {
35768           "enum": ["oic.r.settings.sound"],
35769           "type": "string"
35770         },
35771         "minItems": 1,
35772         "uniqueItems": true,
35773         "readOnly": true,
35774         "type": "array"
35775       },
35776       "if": {
35777         "items": {
35778           "enum": ["oic.if.rw", "oic.if.baseline"],
35779           "type": "string"
35780         },
35781         "minItems": 1,
35782         "uniqueItems": true,
35783         "readOnly": true,
35784         "type": "array"
35785       },
35786       "id": {
35787         "$ref":
35788         "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
35789         schema.json#/definitions/id"
35790       },
35791       "speaker": {
35792         "description": "Device Settings Sound - Speaker. Client can change speaker using
35793 supported-speakers property.",
35794         "type": "string"
35795       },
35796       "supported-speakers": {
35797         "description": "The array of possible speakers the device supports. This property should
35798 be added if speaker is supported.",
35799         "items": {
35800           "type": "string"
35801         },
35802         "readOnly": true,
35803         "minItems": 1,
35804         "type": "array"
35805       },
35806       "sound-mode": {
35807         "description": "Device Settings Sound - Sound Mode. Client can change sound-mode using
35808 supported-sound-modes property.",
35809         "type": "string"
35810       },
35811       "supported-sound-modes": {
35812         "description": "The array of possible sound modes the device supports. This property
35813 should be added if sound-mode is supported.",
35814         "items": {
35815           "type": "string"
35816         },
35817         "readOnly": true,

```



```

35818         "minItems": 1,
35819         "type": "array"
35820     },
35821     "auto-volume": {
35822         "description": "Automatically equalizes the volume level when switching to antother
35823 channel.",
35824         "type": "boolean"
35825     },
35826     "dolby-atmos-compatibility": {
35827         "description": "Supports dolby-atmos mode.",
35828         "type": "boolean"
35829     }
35830 },
35831 "required": ["speaker"]
35832 },
35833 "settings-sound-update": {
35834     "title": "Update device settings for sound",
35835     "type": "object",
35836     "properties": {
35837         "speaker": {
35838             "description": "Device Settings Sound - Speaker. Client can change speaker using
35839 supported-speakers property.",
35840             "type": "string"
35841         },
35842         "sound-mode": {
35843             "description": "Device Settings Sound - Sound Mode. Client can change sound-mode using
35844 supported-sound-modes property.",
35845             "type": "string"
35846         },
35847         "auto-volume": {
35848             "description": "Automatically equalizes the volume level when switching to antother
35849 channel.",
35850             "type": "boolean"
35851         },
35852         "dolby-atmos-compatibility": {
35853             "description": "Recent devices support dolby-atmos mode.",
35854             "type": "boolean"
35855         }
35856     }
35857 }
35858 }
35859 }
35860

```

6.167.5 Property definition

Table 337 defines the Properties that are part of the "oic.r.settings.sound" Resource Type.

Table 337 – The Property definitions of the Resource with type "rt" = "oic.r.settings.sound".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema	No	Read Only	The Resource Type of Device Settings for sound
if	array: see schema	No	Read Only	
id	multiple types: see schema	No	Read Write	
speaker	string	Yes	Read Write	Device Settings Sound - Speaker. Client can change speaker using supported-speakers property.
supported-speakers	array: see schema	No	Read Only	The array of possible speakers the device supports. This property should

				be added if speaker is supported.
sound-mode	string	No	Read Write	Device Settings Sound - Sound Mode. Client can change sound-mode using supported-sound-modes property.
supported-sound-modes	array: see schema	No	Read Only	The array of possible sound modes the device supports. This property should be added if sound-mode is supported.
auto-volume	boolean	No	Read Write	Automatically equalizes the volume level when switching to another channel.
dolby-atmos-compatibility	boolean	No	Read Write	Supports dolby-atmos mode.
speaker	string		Read Write	Device Settings Sound - Speaker. Client can change speaker using supported-speakers property.
sound-mode	string		Read Write	Device Settings Sound - Sound Mode. Client can change sound-mode using supported-sound-modes property.
auto-volume	boolean		Read Write	Automatically equalizes the volume level when switching to another channel.
dolby-atmos-compatibility	boolean		Read Write	Recent devices support dolby-atmos mode.

6.167.6 CRUDN behaviour

Table 338 defines the CRUDN operations that are supported on the "oic.r.settings.sound" Resource Type.

Table 338 – The CRUDN operations of the Resource with type "rt" = "oic.r.settings.sound".

Create	Read	Update	Delete	Notify
	get	post		observe

6.168 Device Settings Support Resource Type

6.168.1 Introduction

Gets current device support settings.

6.168.2 Example URI

/SettingsSupportResURI

35874 6.168.3 Resource type

35875 The Resource Type is defined as: "oic.r.settings.support".

35876 6.168.4 OpenAPI 2.0 definition

```
35877 {
35878   "swagger": "2.0",
35879   "info": {
35880     "title": "Device Settings Support Resource Type",
35881     "version": "2020-04-09",
35882     "license": {
35883       "name": "OCF Data Model License",
35884       "url":
35885         "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
35886         CENSE.md",
35887       "x-copyright": "Copyright 2020 Open Connectivity Foundation, Inc. All rights reserved."
35888     },
35889     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
35890   },
35891   "schemes": ["http"],
35892   "consumes": ["application/json"],
35893   "produces": ["application/json"],
35894   "paths": {
35895     "/SettingsSupportResURI": {
35896       "get": {
35897         "description": "Gets current device support settings.",
35898         "parameters": [
35899           {"$ref": "#/parameters/interface-r"}
35900         ],
35901         "responses": {
35902           "200": {
35903             "description": "Gives the information for the device support settings.",
35904             "x-example": {
35905               "rt": ["oic.r.settings.support"],
35906               "id": "unique_example_id",
35907               "remote-management": false,
35908               "software-auto-update": false
35909             },
35910             "schema": {"$ref": "#/definitions/settings-support"}
35911           }
35912         }
35913       },
35914       "post": {
35915         "description": "Changes the device support settings.",
35916         "parameters": [
35917           {"$ref": "#/parameters/interface-rw"},
35918           {
35919             "name": "body",
35920             "in": "body",
35921             "required": true,
35922             "x-example": {
35923               "remote-management": false,
35924               "software-auto-update": false
35925             },
35926             "schema": {"$ref": "#/definitions/settings-support-update"}
35927           }
35928         ],
35929         "responses": {
35930           "200": {
35931             "description": "Gives the information for the new device support settings.",
35932             "x-example": {
35933               "remote-management": false,
35934               "software-auto-update": false
35935             },
35936             "schema": {"$ref": "#/definitions/settings-support-update"}
35937           }
35938         }
35939       }
35940     }
35941   },
35942   "parameters": {
```

```

35943     "interface-r": {
35944         "in": "query",
35945         "name": "if",
35946         "type": "string",
35947         "enum": ["oic.if.rw", "oic.if.baseline"]
35948     },
35949     "interface-rw": {
35950         "in": "query",
35951         "name": "if",
35952         "type": "string",
35953         "enum": ["oic.if.rw"]
35954     }
35955 },
35956 "definitions": {
35957     "settings-support": {
35958         "title": "Retrieve device settings for support",
35959         "type": "object",
35960         "properties": {
35961             "rt": {
35962                 "description": "The Resource Type of Device Settings for support",
35963                 "items": {
35964                     "enum": ["oic.r.settings.support"],
35965                     "type": "string"
35966                 },
35967                 "minItems": 1,
35968                 "uniqueItems": true,
35969                 "readOnly": true,
35970                 "type": "array"
35971             },
35972             "if": {
35973                 "items": {
35974                     "enum": ["oic.if.rw", "oic.if.baseline"],
35975                     "type": "string"
35976                 },
35977                 "minItems": 1,
35978                 "uniqueItems": true,
35979                 "readOnly": true,
35980                 "type": "array"
35981             },
35982             "id": {
35983                 "$ref":
35984                 "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
35985                 schema.json#/definitions/id"
35986             },
35987             "remote-management": {
35988                 "description": "Allows support remote access so support can control user setting and
35989 troubleshoot problem.",
35990                 "type": "boolean"
35991             },
35992             "software-auto-update": {
35993                 "description": "Software - Auto Update.",
35994                 "type": "boolean"
35995             }
35996         }
35997     },
35998     "settings-support-update": {
35999         "title": "Update device settings for support",
36000         "type": "object",
36001         "properties": {
36002             "remote-management": {
36003                 "description": "Allows support remote access so support can control user setting and
36004 troubleshoot problem.",
36005                 "type": "boolean"
36006             },
36007             "software-auto-update": {
36008                 "description": "Software - Auto Update.",
36009                 "type": "boolean"
36010             }
36011         }
36012     }
36013 }

```

36014 }
36015

36016 6.168.5 Property definition

36017 Table 339 defines the Properties that are part of the "oic.r.settings.support" Resource Type.

36018 **Table 339 – The Property definitions of the Resource with type "rt" =**
36019 **"oic.r.settings.support".**

Property name	Value type	Mandatory	Access mode	Description
Rt	array: see schema		Read Only	The Resource Type of Device Settings for support
If	array: see schema		Read Only	
Id	multiple types: see schema		Read Write	
remote-management	boolean		Read Write	Allows support remote access so support can control user setting and troubleshoot problem.
software-auto-update	boolean		Read Write	Software - Auto Update.
remote-management	boolean		Read Write	Allows support remote access so support can control user setting and troubleshoot problem.
software-auto-update	boolean		Read Write	Software - Auto Update.

36020 6.168.6 CRUDN behaviour

36021 Table 340 defines the CRUDN operations that are supported on the "oic.r.settings.support"
36022 Resource Type.

36023 **Table 340 – The CRUDN operations of the Resource with type "rt" =**
36024 **"oic.r.settings.support".**

Create	Read	Update	Delete	Notify
	get	post		observe

36025 6.169 Device Settings System Resource Type

36026 6.169.1 Introduction

36027 Gets current device system settings.

36028 6.169.2 Example URI

36029 /SettingsSystemResURI

36030 6.169.3 Resource type

36031 The Resource Type is defined as: "oic.r.settings.system".

36032 6.169.4 OpenAPI 2.0 definition

36033 {
36034 "swagger": "2.0",
36035 "info": {

```

36036     "title": "Device Settings System Resource Type",
36037     "version": "2020-04-09",
36038     "license": {
36039         "name": "OCF Data Model License",
36040         "url":
36041 "https://github.com/openconnectivityfoundation/core/blob/e28a9e0a92e17042ba3e83661e4c0fbce8bdc4ba/LI
36042 CENSE.md",
36043         "x-copyright": "Copyright 2020 Open Connectivity Foundation, Inc. All rights reserved."
36044     },
36045     "termsOfService": "https://openconnectivityfoundation.github.io/core/DISCLAIMER.md"
36046 },
36047     "schemes": ["http"],
36048     "consumes": ["application/json"],
36049     "produces": ["application/json"],
36050     "paths": {
36051         "/SettingsSystemResURI": {
36052             "get": {
36053                 "description": "Gets current device system settings.",
36054                 "parameters": [
36055                     {"$ref": "#/parameters/interface-r"}
36056                 ],
36057                 "responses": {
36058                     "200": {
36059                         "description": "Gives the information for the device system settings.",
36060                         "x-example": {
36061                             "rt": ["oic.r.settings.system"],
36062                             "id": "unique_example_id",
36063                             "n": "Living Room TV",
36064                             "language": "en"
36065                         },
36066                         "schema": {"$ref": "#/definitions/settings-system"}
36067                     }
36068                 }
36069             },
36070             "post": {
36071                 "description": "Changes the device system settings.",
36072                 "parameters": [
36073                     {"$ref": "#/parameters/interface-rw"},
36074                     {
36075                         "name": "body",
36076                         "in": "body",
36077                         "required": true,
36078                         "x-example": {
36079                             "language": "en"
36080                         },
36081                         "schema": {"$ref": "#/definitions/settings-system-update"}
36082                     }
36083                 ],
36084                 "responses": {
36085                     "200": {
36086                         "description": "Gives the information for the new device system settings.",
36087                         "x-example": {
36088                             "language": "en"
36089                         },
36090                         "schema": {"$ref": "#/definitions/settings-system-update"}
36091                     }
36092                 }
36093             }
36094         }
36095     },
36096     "parameters": {
36097         "interface-r": {
36098             "in": "query",
36099             "name": "if",
36100             "type": "string",
36101             "enum": ["oic.if.rw", "oic.if.baseline"]
36102         },
36103         "interface-rw": {
36104             "in": "query",
36105             "name": "if",
36106             "type": "string",
36107             "enum": ["oic.if.rw"]

```

```

36108     }
36109   },
36110   "definitions": {
36111     "settings-system": {
36112       "title": "Retrieve device settings for system",
36113       "type": "object",
36114       "properties": {
36115         "rt": {
36116           "description": "The Resource Type of Device Settings for system",
36117           "items": {
36118             "enum": ["oic.r.settings.system"],
36119             "type": "string"
36120           },
36121           "minItems": 1,
36122           "uniqueItems": true,
36123           "readOnly": true,
36124           "type": "array"
36125         },
36126         "if": {
36127           "items": {
36128             "enum": ["oic.if.rw", "oic.if.baseline"],
36129             "type": "string"
36130           },
36131           "minItems": 1,
36132           "uniqueItems": true,
36133           "readOnly": true,
36134           "type": "array"
36135         },
36136         "id": {
36137           "$ref":
36138             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
36139             schema.json#/definitions/id"
36140         },
36141         "n": {
36142           "description": "Friendly name of the Device.",
36143           "$ref":
36144             "https://openconnectivityfoundation.github.io/core/schemas/oic.common.properties.core-
36145             schema.json#/definitions/n"
36146         },
36147         "language": {
36148           "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
36149             schema.json#/definitions/language-tag",
36150           "description": "Current language of the device settings with format pattern according to
36151             RFC 5646 language tag"
36152         }
36153       }
36154     },
36155     "settings-system-update": {
36156       "title": "Update device settings for system",
36157       "type": "object",
36158       "properties": {
36159         "language": {
36160           "$ref": "https://openconnectivityfoundation.github.io/core/schemas/oic.types-
36161             schema.json#/definitions/language-tag",
36162           "description": "Current language of the device settings with format pattern according to
36163             RFC 5646 language tag"
36164         }
36165       }
36166     }
36167   }
36168 }
36169

```

6.169.5 Property definition

Table 341 defines the Properties that are part of the "oic.r.settings.system" Resource Type.

36172
36173

Table 341 – The Property definitions of the Resource with type "rt" = "oic.r.settings.system".

Property name	Value type	Mandatory	Access mode	Description
rt	array: see schema		Read Only	The Resource Type of Device Settings for system
if	array: see schema		Read Only	
id	multiple types: see schema		Read Write	
n	multiple types: see schema		Read Write	Friendly name of the Device.
language	multiple types: see schema		Read Write	Current language of the device settings with format pattern according to RFC 5646 language tag
language	multiple types: see schema		Read Write	Current language of the device settings with format pattern according to RFC 5646 language tag

36174

6.169.6 CRUDN behaviour

36175
36176

Table 342 defines the CRUDN operations that are supported on the "oic.r.settings.system" Resource Type.

36177
36178

Table 342 – The CRUDN operations of the Resource with type "rt" = "oic.r.settings.system".

Create	Read	Update	Delete	Notify
	get	post		observe

36179
36180