



OIC RESOURCE TYPE SPECIFICATION V1.1.0

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1 Scope

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

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

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

2 Normative references

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

OIC Core Specification, *Open Interconnect Consortium Core Specification*, Version 1.1.

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

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

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

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

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

3 Terms, definitions, symbols and abbreviations

3.1 Terms and definitions

3.1.1

Actuator

Resource with support of the UPDATE operation.

3.1.2

Composite Resource Type

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

3.1.3

Sensor

Resource without support of the UPDATE operation.

544 **3.2 Symbols and abbreviations**

545 **3.2.1**

546 **CRUDN**

547 Create Retrieve Update Delete Notify

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

549 **3.2.2**

550 **CSV**

551 Comma Separated Value List

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

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

554 **3.2.3**

555 **OIC**

556 Open Interconnect Consortium

557 OIC is the standards organization which created and owns this specification.

558 **3.2.4**

559 **RAML**

560 RESTful API modelling language

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

562 **3.2.5**

563 **REST**

564 Representational State Transfer

565 REST is an architecture style for designing networked applications and relies on a stateless, client-server, cacheable communications protocol.

566

567 **3.2.6**

568 **TBD**

569 To Be Determined

570 **3.3 Conventions**

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

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

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

574 English meaning.

575 **4 Document conventions and organization**

576 This document lists all the Resource Types currently specified by OIC. The Resources are used

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

578 used by any OIC conforming device in any OIC Collection or device representation.

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

580 **4.1 Notation**

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

582 follows:

583 Required (or shall or mandatory).

584 These basic features shall be implemented to comply with OIC Core Architecture. The phrases

585 “shall not”, and “PROHIBITED” indicate behaviour that is prohibited, i.e. that if performed

586 means the implementation is not in compliance.

587 Recommended (or should).

These features add functionality supported by OIC Core Architecture and should be implemented. Recommended features take advantage of the capabilities OIC Core Architecture, 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 OIC Core Architecture, 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 specification, they should not be implemented except for backward compatibility. The occurrence of a deprecated feature during operation of an implementation compliant with the current specification 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 specification.

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*.

4.2 Data types

This specification adopts the types defined in the OIC Core Specification with the exceptions defined in this Section

All Properties in this specification 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 the OIC Core Specification. See OIC Core Specification Section 12.3 for specifics.

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 OIC Device, different URIs for the different Resource instances shall be used.

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

5.2 Interfaces

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

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

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

5.3 RAML definition

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

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

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

Table 5-1 Conversion between OIC CRUDN and RAML definitions¹

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

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

¹ Please refer to OIC Core Specification Table 31 for detailed semantics around the appropriate use of CoAP request methods

5.4 Property definition

5.4.1 Common Properties

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

If an OIC 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 OIC Core Specification defined baseline interface (oic.if.baseline) by specifying this in a query parameter.

It is recommended that a Smart Home Device that hosts a collection that supports the batch interface makes use of the ‘bp’ Link parameter populated with oic.if.baseline for all Resources within the collection; this is to ensure that a RETRIEVE operation on the collection provides the Common Properties ‘rt’ and ‘if’ in the response.

Table 5-2 Common Properties for OIC Resources

Property Name	Property Title	Property Value	Value Type	Access Modes	Description
if	Interface	See OIC Core Specification Section 7.5	string	Readonly	Core defined; Interface(s) supported by the Resource
rt	Resource type	See OIC Core Specification Section 7.4	string	Readonly	Core defined; Resource type. The Resource Types are defined in this document. See Section 6
n	Name	See OIC Core Specification Section 7.3.2.6	string	Readonly	Core defined; human understandable name for the Resource.
id	Resource Identity	See OIC Core Specification Section 7.3.2.7	string	Readonly	Core defined; Unique identifier of the Resource (over all Resources in the OIC device)

5.4.2 Resource Properties

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

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

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

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

Property Name	Friendly Alias Name	Property Value	Value Type	Value Rules	Access Modes	Mandatory	Description
<value>, name may change dependent on the Resource	<value>, name may change dependent on the Resource	Dependent on the Resource	Dependent on the Resource	Dependent on the Resource	Dependent on the Resource	yes	The current value of the Resource
range	Range	[Min,Max]	array	Linear range	Read-only	no	Range of input values, specified as a two element array.

694

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

700 5.4.3 Basic Resource Schema

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

703 5.4.4 CRUDN Operation Response Codes

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

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

Response Code	Meaning
200	Payload of the response will confirm the change. The RAML definition will contain a schema to define the payload.
201	Payload is the URL of the Resource that was created by the server as a result of a CREATE operation. The RAML definition will contain schema to define the payload.
204	Ok, everything went well, no payload provided. The RAML definition does not contain a schema.

	The RAML definition may even omit this value, since it is regarded as default behaviour of an OIC 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 Vendor specified extensions

This section describes how a vendor may add vendor defined Resource Types, vendor defined Properties to an existing or vendor defined Resource Type and vendor defined enumeration values to an existing enumeration.

A vendor may specify additional (non-OIC) Resources within an OIC Device. A vendor may also specify additional Properties within an existing OIC defined Resource Type. Further a vendor may extend an OIC defined enumeration with vendor defined values.

A vendor defined Resource Type shall include any mandatory Properties defined in the OIC Core Specification and also any vertical specified mandatory Properties. All Properties defined within a vendor defined Resource Type that are part of the OIC namespace that are not Common Properties as defined in the OIC Core Specification shall follow the vendor defined Property rules in Table 5-5 Vendor Defined Resource Elements.

The following table defines the syntax rules for vendor defined Resource Type elements. Within the table the term "Domain_Name" refers to a domain name that is owned by the vendor that is defining the new element.

Table 5-5 Vendor Defined Resource Elements

	Resource Element	Vendor Definition Rules
New vendor defined Resource Type	"rt" Property Value	x.<Domain_Name>.<resource identification>
New vendor defined Property within the OIC namespace	Resource Property Name	x.<Domain_Name>.<property>
Additional vendor defined values in an OIC specified enumeration	Enumeration Property Value	x.<Domain_Name>.<enum value>

With respect to the use of the Domain_Name in this scheme the labels are reversed from how they appear in DNS or other resolution mechanisms.

For example:

728 x.com.samsung.galaxyphone.accelerator

729 x.com.cisco.ciscorouterport

730 x.com.hp.printerhead

731 5.6 Example Resource Definitions

732 Table 5-6 RAML example of an Resource representing an Actuator

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

/ActuatorExample:
  description: |
    ResourceActuatorExample description.
    If the ActuatorExample is implemented as the example in the RAML the next values apply:
    The name of the Resource is "ResourceExample Name"
    The Resource Type is "oic.r.actuatorexample"
    The Interface (if) is denoting an Actuator by having the value oic.if.a.
    The unique identification is "actuator_example_id"
    The value of the ActuatorExample is modeled as an integer
    The range of the value of ActuatorExample is between 0 and 100
  get:
    description: |
      retrieves the example Resource.
    responses:
      200:
        body:
          application/json:
            schema: |
              {
                "id": "http://openinterconnect.org/schemas/oic.r.actuatorexample.json",
                "$schema": "http://json-schema.org/draft-04/schema#",
                "title": "AcutatorExample",
                "definitions": {
                  "oic.r.actuatorexample": {
                    "type": "object",
                    "properties": {
                      "value": { "type": "integer" },
                      "range": {
                        "type": "array",
                        "items": {
                          "type": "integer"
                        }
                      }
                    }
                  }
                },
                "type": "object",
                "allof": [
                  {"$ref": "oic.core.json#/definitions/oic.core"},
                  {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
                  {"$ref": "#/definitions/oic.r.actuatorexample"}
                ],
                "required": ["value"]
              }
            example: |
              {
                "n": "ActuatorExample Name",
                "id": "actuator_example_id",
```

```

        "rt": ["oic.r.actuatorexample"],
        "value": 0,
        "range": [0,100]
    }

post:
  description: |
    sets the Actuator value
    example only updates the value of the Resource
    it does not change the Resource name, although it is allowed to do so.
  body:
    application/json:
      schema: |
        {
          "id": "http://openinterconnect.org/schemas/oic.r.actuatorexample.json",
          "$schema": "http://json-schema.org/draft-04/schema#",
          "title": "AcutatorExample",
          "definitions": {
            "oic.r.actuatorexample": {
              "type": "object",
              "properties": {
                "value": { "type": "integer" },
                "range": {
                  "type": "array",
                  "items": {
                    "type": "integer"
                  }
                }
              }
            }
          },
          "type": "object",
          "allof": [
            {"$ref": "oic.core.json#/definitions/oic.core"},
            {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
            {"$ref": "#/definitions/oic.r.actuatorexample"}
          ],
          "required": ["value"]
        }

      example: |
        {
          "id": "actuator_example_id",
          "value" : 5
        }

  responses:
    200:
      body:
        application/json:
          schema: |
            {
              "id": "http://openinterconnect.org/schemas/oic.r.actuatorexample.json",
              "$schema": "http://json-schema.org/draft-04/schema#",
              "title": "AcutatorExample",
              "definitions": {
                "oic.r.actuatorexample": {
                  "type": "object",
                  "properties": {
                    "value": { "type": "integer" },
                    "range": {
                      "type": "array",
                      "items": {
                        "type": "integer"
                      }
                    }
                  }
                }
              }
            }

```



```

    },
    "type": "object",
    "allof": [
      {"$ref": "oic.core.json#/definitions/oic.core"},
      {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
      {"$ref": "#/definitions/oic.r.actuatorexample"}
    ],
    "required": ["value"]
  }
  example: |
    {
      "id": "actuator_example_id",
      "value": 5
    }

```

204:

733

734

Table 5-7 RAML example of an Resource specifying a Sensor

```

##RAML 0.8
title: OICExampleSensor
version: v1.0

/SensorExample:
  description: |
    SensorExample description.
    If the SensorExample is implemented as the example in the RAML the next values apply:
    The name of the Resource is "ResourceExample_Name"
    The Resource Type is "oic.r.sensorexample"
    The Interface (if) is denoting a Sensor by having the value oic.if.s.
    The unique identification is "sensor_example_id"
    The value of the ResourceSensorExample is modeled as integer
  get:
    description: |
      retrieves the example Resource.
    responses:
      200:
        body:
          application/json:
            schema: |
              {
                "id": "http://openinterconnect.org/schemas/oic.r.sensorexample.json",
                "$schema": "http://json-schema.org/draft-04/schema#",
                "title": "SensorExample",
                "definitions": {
                  "oic.r.sensorexample": {
                    "type": "object",
                    "properties": {
                      "value": { "type": "integer" },
                      "range": {
                        "type": "array",
                        "items": {
                          "type": "integer"
                        }
                      }
                    }
                  }
                }
              }

```

```

    "type": "object",
    "allof": [
      {"$ref": "oic.core.json#/definitions/oic.core"},
      {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
      {"$ref": "#/definitions/oic.r.sensorexample"},
    ],
    "required": ["value"]
  }
  example: |
    {
      "n":      "SensorExample_Name",
      "rt":     ["oic.r.sensorexample"],
      "id":     "sensor_example_id",
      "value": 3
    }

```

5.7 Observable Resource Types

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

5.8 Composite Resource Types

Composite Resource Types are Resources that comprises of one or more single or other composite Resource Types, an example of which is shown in Table 5-8 RAML example of Composite Resource Type. The Composite Resource Type can be viewed upon as a new single Resource Type. The Composite Resource Type mechanism is a powerful concept since it uses existing Resource Types in a new combination to express more contexts to a Resource without specifying new single unit Resource Types.

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

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

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

Table 5-8 RAML example of Composite Resource

```

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

/CompositeExample:
  description: |
    CompositeExample description.
    If the CompositeExample is implemented as per the example RAML the following values apply:
    The name of the Resource is “CompositeExample Name”
    The Resource Type is “oic.r.compositeexample”
    The Interface (if) can denote Sensor or Actuator
    The value of the ActuatorExample is modeled as 2 references to other implemented Resources
    In the example oic.r.SensorExample and oic.r.ActuatorExample are used.

```

```

get:
  description: |
    retrieves the composite example Resource.
  responses:
    200:
      body:
        application/json:
          schema: |
            {
              "id": "http://openinterconnect.org/schemas/oic.r.compositeresource#",
              "$schema": "http://json-schema.org/schema#",
              "title": "CompositeExample",
              "definitions": {
                "oic.r.compositeexample": {
                  "type": "object",
                  "properties": {
                    "links": {
                      "type": "array",
                      "items": {
                        "$ref": "oic.oic-link-schema.json#"
                      }
                    }
                  }
                }
              },
              "type": "object",
              "allOf": [
                {"$ref": "oic.core.json#/definitions/oic.core"},
                {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
                {"$ref": "#/definitions/oic.r.compositeexample"}
              ],
              "required": ["n", "id", "links"]
            }
          example: |
            {
              "n": "CompositeExample Name",
              "id": "composite_example_id",
              "links": [
                {
                  "href": "/my_1st_reference",
                  "rel": "contains",
                  "rt": ["oic.r.actuatorexample"],
                  "if": ["oic.if.a"]
                },
                {
                  "href": "/my_2nd_reference",
                  "rel": "contains",
                  "rt": ["oic.r.sensorexample"],
                  "if": ["oic.if.s"]
                }
              ]
            }

```

758

759 5.9 Specification Version

760 Devices conformant to this specification version shall add the string “res.1.1.0” to the OIC Core
 761 Specification, Section 11.3.4 defined dmV Property in oic.wk.d.

6 Resource Type definitions

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

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

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

Table 6-1 Alphabetical list of Resource Types

Friendly (informative)	Name	Resource Type (rt)	Section
Acceleration Sensor		oic.r.sensor.acceleration	6.53
Activity Count		oic.r.sensor.activity.count	6.23
Altimeter		oic.r.altimeter	6.58
Atmospheric Pressure		oic.r.sensor.atmosphericpressure	6.24
Air Flow		oic.r.airflow	6.1
Air Flow Control		oic.r.airflowcontrol	6.2
Audio Controls		oic.r.audio	6.25
Auto Focus		oic.r.autofocus	6.26
Automatic Document Feeder		oic.r.automaticdocumentfeeder	6.27
Auto White Balance		oic.r.colour.autowhitebalance	6.31
Basic Resource Schema		Not Applicable	Annex A.1
Battery		oic.r.energy.battery	6.3
Binary switch		oic.r.switch.binary	6.4
Brightness		oic.r.light.brightness	6.5

Button Switch	oic.r.button	6.28
Carbon Dioxide Sensor	oic.r.sensor.carbondioxide	6.29
Carbon Monoxide Sensor	oic.r.sensor.carbonmonoxide	6.30
Clock	oic.r.clock	6.59
Colour Chroma	oic.r.colour.chroma	6.6
Colour RGB	oic.r.colour.rgb	6.7
Colour Saturation	oic.r.colour.saturation	6.32
Contact Sensor	oic.r.sensor.contact	6.33
Demand Response Load Control (DRLC)	oic.r.energy.drlc	6.34
Dimming	oic.r.light.dimming	6.8
Door	oic.r.door	6.9
Energy Consumption	oic.r.energy.consumption	6.10
Energy Overload/Circuit Breaker	oic.r.energy.overload	6.35
Energy Usage	oic.r.energy.usage	6.11
Generic Sensor	oic.r.sensor	6.36
Geolocation Sensor	oic.r.sensor.geolocation	6.60
Glass Break Sensor	oic.r.sensor.glassbreak	6.37
Heart Rate Zone Sensor	oic.r.sensor.heart.zone	6.38
Height	oic.r.height	6.61
Humidity	oic.r.humidity	6.12
Ice Maker	oic.r.icemaker	6.13
Illuminance Sensor	oic.r.sensor.illuminance	6.39
Lock	oic.r.lock.status	6.14

Lock Code	oic.r.lock.code	6.15
Magnetic Field Direction	oic.r.sensor.magneticfielddirection	6.40
Media	oic.r.media	6.41
Media Source Input	oic.r.media.input	6.42
Media Source Output	oic.r.media.output	6.43
Mode	oic.r.mode	6.16
Movement	oic.r.movement.linear	6.55
Motion Sensor	oic.r.sensor.motion	6.44
Night Mode	oic.r.nightmode	6.45
Open Level	oic.r.openlevel	6.17
Operational State	oic.r.operational.state	6.18
Pan Tilt Zoom Movement	oic.r.ptz	6.47
Presence Sensor	oic.r.sensor.presence	6.46
Ramp Time	oic.r.light.ramptime	6.19
Refrigeration	oic.r.refrigeration	6.20
Signal Strength	oic.r.signalstrength	6.48
Sleep Sensor	oic.r.sensor.sleep	6.55
Smoke Sensor	oic.r.sensor.smoke	6.56
Speech Synthesis	oic.r.speech.tts	6.49
Temperature	oic.r.temperature	6.21
Three Axis Sensor	oic.r.sensor.threeaxis	6.57
Time Period	oic.r.time.period	6.22
Touch Sensor	oic.r.sensor.touch	6.50

UV Radiation	oic.r.sensor.radiation.uv	6.51
Water Sensor	oic.r.sensor.water	6.52
Weight	oic.r.weight	6.62

775

776 6.1 Air Flow

777 6.1.1 Introduction

778 This resource describes the properties associated with air flow. The direction is the directionality
779 of the air flow if applicable. Direction values are dependent on the capabilities of the unit. The
780 speed is an integer representing the current speed level for the unit. The range is an array of the
781 min,max values for the speed level.

782 6.1.2 Example URI

783 /AirFlowResURI

784 6.1.3 Resource Type

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

786 6.1.4 RAML Definition

787 *##RAML 0.8*

788 *title: OICAirFlow*

789 *version: v1.1.0-20160519*

790 *traits:*

791 *- interface :*

792 *queryParameters:*

793 *if:*

794 *enum: ["oic.if.a", "oic.if.baseline"]*

795

796 */AirFlowResURI:*

797 *description: |*

798 *This resource describes the properties associated with air flow.*

799 *The direction is the directionality of the air flow if applicable.*

800 *Direction values are dependent on the capabilities of the unit.*

801 *The speed is an integer representing the current speed level for the unit.*

802 *The range is an array of the min,max values for the speed level.*

803

804 *is : ['interface']*

805 *get:*

806 *description: |*

807 *Retrieves the current air flow values.*

808

809 *responses :*

810 *200:*

811 *body:*

812 *application/json:*

813 *schema: |*

814 *{*
815 *"id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlow.json#",*

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

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

818 *reserved.",*

819 *"title": "Air Flow",*

```

820         "definitions": {
821             "oic.r.airflow": {
822                 "type": "object",
823                 "properties": {
824                     "direction": {
825                         "type": "string",
826                         "description": "Directionality of the air flow"
827                     },
828                     "speed": {
829                         "type": "integer",
830                         "description": "Current speed level"
831                     },
832                     "range": {
833                         "type": "array",
834                         "readOnly": true,
835                         "description": "Min,max values for the speed level",
836                         "items": {
837                             "type": "integer"
838                         }
839                     }
840                 }
841             },
842             "type": "object",
843             "allof": [
844                 {"$ref": "oic.core.json#/definitions/oic.core"},
845                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
846                 {"$ref": "#/definitions/oic.r.airflow"}
847             ],
848             "required": ["speed"]
849         }
850     }
851
852     example: |
853         {
854             "rt":          ["oic.r.airflow"],
855             "id":          "unique_example_id",
856             "direction":   "left",
857             "speed":       5,
858             "range":       [1,7]
859         }
860
861     post:
862         description: |
863             Sets the current air flow values.
864             Only direction and speed may be set by an update operation.
865
866         body:
867             application/json:
868                 schema: |
869                     {
870                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlow.json#",
871                         "$schema": "http://json-schema.org/draft-04/schema#",
872                         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
873 reserved.",
874                         "title": "Air Flow",
875                         "definitions": {
876                             "oic.r.airflow": {
877                                 "type": "object",
878                                 "properties": {
879                                     "direction": {
880                                         "type": "string",
881                                         "description": "Directionality of the air flow"
882                                     },
883                                     "speed": {
884                                         "type": "integer",
885                                         "description": "Current speed level"
886                                     }

```



```

887         "range": {
888             "type": "array",
889             "readOnly": true,
890             "description": "Min,max values for the speed level",
891             "items": {
892                 "type": "integer"
893             }
894         }
895     }
896 },
897 "type": "object",
898 "allOf": [
899     {"$ref": "oic.core.json#/definitions/oic.core"},
900     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
901     {"$ref": "#/definitions/oic.r.airflow"}
902 ],
903 "required": ["speed"]
904 }
905
906
907 example: |
908 {
909     "id":         "unique_example_id",
910     "direction":  "right",
911     "speed":      3
912 }
913
914 responses :
915     200:
916         body:
917             application/json:
918                 schema: |
919                     {
920                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlow.json#",
921                         "$schema": "http://json-schema.org/draft-04/schema#",
922                         "description": "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
923 reserved.",
924                         "title": "Air Flow",
925                         "definitions": {
926                             "oic.r.airflow": {
927                                 "type": "object",
928                                 "properties": {
929                                     "direction": {
930                                         "type": "string",
931                                         "description": "Directionality of the air flow"
932                                     },
933                                     "speed": {
934                                         "type": "integer",
935                                         "description": "Current speed level"
936                                     },
937                                     "range": {
938                                         "type": "array",
939                                         "readOnly": true,
940                                         "description": "Min,max values for the speed level",
941                                         "items": {
942                                             "type": "integer"
943                                         }
944                                     }
945                                 }
946                             }
947                         },
948                         "type": "object",
949                         "allOf": [
950                             {"$ref": "oic.core.json#/definitions/oic.core"},
951                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
952                             {"$ref": "#/definitions/oic.r.airflow"}
953                         ],

```

```

954         "required": ["speed"]
955     }
956
957     example: |
958         {
959             "id":         "unique_example_id",
960             "direction":  "right",
961             "speed":      3
962         }
963
964     403:
965         description: |
966             This response is generated by the OIC Server when the client sends:
967             An update with an invalid property value for direction.
968             An update with an out of range property value for speed.
969             The server responds with the current resource representation.
970
971     body:
972         application/json:
973             schema: |
974                 {
975                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlow.json#",
976                     "$schema": "http://json-schema.org/draft-04/schema#",
977                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
978 reserved.",
979                     "title": "Air Flow",
980                     "definitions": {
981                         "oic.r.airflow": {
982                             "type": "object",
983                             "properties": {
984                                 "direction": {
985                                     "type": "string",
986                                     "description": "Directionality of the air flow"
987                                 },
988                                 "speed": {
989                                     "type": "integer",
990                                     "description": "Current speed level"
991                                 },
992                                 "range": {
993                                     "type": "array",
994                                     "readOnly": true,
995                                     "description": "Min,max values for the speed level",
996                                     "items": {
997                                         "type": "integer"
998                                     }
999                                 }
1000                             }
1001                         }
1002                     },
1003                     "type": "object",
1004                     "allof": [
1005                         {"$ref": "oic.core.json#/definitions/oic.core"},
1006                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1007                         {"$ref": "#/definitions/oic.r.airflow"}
1008                     ],
1009                     "required": ["speed"]
1010                 }
1011
1012             example: |
1013                 {
1014                     "id":         "unique_example_id",
1015                     "direction":  "right",
1016                     "speed":      3
1017                 }
1018

```

6.1.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
direction	string		Read Write	Directionality of the air flow
speed	integer	yes	Read Write	Current speed level
range	array		Read Only	Min,max values for the speed level

6.1.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/AirFlowResURI		get	post		get

6.2 Air Flow Control

6.2.1 Introduction

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

6.2.2 Example URI

/AirFlowControlResURI

6.2.3 Resource Type

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

6.2.4 RAML Definition

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

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

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

  is : ['interface-all']

  get:
    description: |
      Retrieves the current air flow control values.

    responses :
      200:
```

```

1059     body:
1060         application/json:
1061             schema: |
1062                 {
1063                     "id":
1064 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlowControl.json#",
1065                     "$schema": "http://json-schema.org/draft-04/schema#",
1066                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
1067 reserved.",
1068                     "title": "Air Flow Control",
1069                     "definitions": {
1070                         "oic.r.airflowcontrol": {
1071                             "type": "object",
1072                             "properties": {
1073                                 "airFlowControl": {
1074                                     "type": "array",
1075                                     "minItems": 2,
1076                                     "maxItems": 2,
1077                                     "items": {
1078                                         "$ref": "oic.oic-link-schema.json#"
1079                                     }
1080                                 }
1081                             }
1082                         },
1083                     },
1084                     "type": "object",
1085                     "allof": [
1086                         {"$ref": "oic.core.json#/definitions/oic.core"},
1087                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1088                         {"$ref": "#/definitions/oic.r.airflowcontrol"}
1089                     ],
1090                     "required": ["airFlowControl"]
1091                 }
1092
1093     example: |
1094         {
1095             "rt": ["oic.r.airflowControl"],
1096             "id": "unique_example_id",
1097             "airFlowControl": [
1098                 {
1099                     "href": "/BinarySwitchResURI",
1100                     "rel": "contains",
1101                     "rt": ["oic.r.switch.binary"],
1102                     "if": ["oic.if.a"]
1103                 },
1104                 {
1105                     "href": "/AirFlowResURI",
1106                     "rel": "contains",
1107                     "rt": ["oic.r.airflow"],
1108                     "if": ["oic.if.a"]
1109                 }
1110             ]
1111         }
1112
1113     post:
1114         description: |
1115             Sets the current air flow control values using the batch interface
1116
1117         body:
1118             application/json:
1119                 schema: |
1120                     {
1121                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlowControl-
1122 Batch.json#",
1123                         "$schema": "http://json-schema.org/draft-04/schema#",
1124                         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights

```

```

1125     reserved.",
1126         "title": "Air Flow Control",
1127         "definitions": {
1128             "oic.r.airflowcontrol": {
1129                 "type": "object",
1130                 "properties": {
1131                     "airFlowControl": {
1132                         "type": "array",
1133                         "items": {
1134                             "anyOf": [
1135                                 {"$ref": "oic.r.switch.binary.json#"},
1136                                 {"$ref": "oic.r.airflow.json#"}
1137                             ]
1138                         }
1139                     }
1140                 }
1141             },
1142             "type": "object",
1143             "allOf": [
1144                 {"$ref": "oic.core.json#/definitions/oic.core"},
1145                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1146                 {"$ref": "#/definitions/oic.r.airflowcontrol"}
1147             ],
1148             "required": ["airFlowControl"]
1149         }
1150     }
1151
1152     example: |
1153     {
1154         "id": "unique_example_id",
1155         "airFlowControl": [
1156             {
1157                 "id": "unique_example_id",
1158                 "value": true
1159             },
1160             {
1161                 "id": "unique_example_id",
1162                 "direction": "right",
1163                 "speed": 3
1164             }
1165         ]
1166     }
1167
1168     responses :
1169         200:
1170             body:
1171                 application/json:
1172                     schema: |
1173                     {
1174                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlowControl-
1175 Batch.json#",
1176                         "$schema": "http://json-schema.org/draft-04/schema#",
1177                         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
1178 reserved.",
1179                         "title": "Air Flow Control",
1180                         "definitions": {
1181                             "oic.r.airflowcontrol": {
1182                                 "type": "object",
1183                                 "properties": {
1184                                     "airFlowControl": {
1185                                         "type": "array",
1186                                         "items": {
1187                                             "anyOf": [
1188                                                 {"$ref": "oic.r.switch.binary.json#"},
1189                                                 {"$ref": "oic.r.airflow.json#"}
1190                                             ]
1191                                         }
1192                                     }
1193                                 }
1194                             }
1195                         }
1196                     }

```

```

1192         }
1193     }
1194 }
1195 },
1196 "type": "object",
1197 "allof": [
1198     {"$ref": "oic.core.json#/definitions/oic.core"},
1199     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1200     {"$ref": "#/definitions/oic.r.airflowcontrol"}
1201 ],
1202 "required": ["airFlowControl"]
1203 }
1204
1205 example: |
1206 {
1207     "id": "unique_example_id",
1208     "airFlowControl": [
1209         {
1210             "id": "unique_example_id",
1211             "value": true
1212         },
1213         {
1214             "id": "unique_example_id",
1215             "direction": "right",
1216             "speed": 3
1217         }
1218     ]
1219 }
1220
1221 403:
1222 description: |
1223     This response is generated by the OIC Server when the client sends:
1224     An update with an invalid property value for direction.
1225     An update with an out of range property value for speed.
1226     The server responds with the current resource representation.
1227
1228 body:
1229 application/json:
1230     schema: |
1231 {
1232     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlowControl-
Batch.json#",
1233     "$schema": "http://json-schema.org/draft-04/schema#",
1234     "description": "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
reserved.",
1235     "title": "Air Flow Control",
1236     "definitions": {
1237         "oic.r.airflowcontrol": {
1238             "type": "object",
1239             "properties": {
1240                 "airFlowControl": {
1241                     "type": "array",
1242                     "items": {
1243                         "anyOf": [
1244                             {"$ref": "oic.r.switch.binary.json#"},
1245                             {"$ref": "oic.r.airflow.json#"}
1246                         ]
1247                     }
1248                 }
1249             }
1250         }
1251     }
1252 },
1253 "type": "object",
1254 "allof": [
1255     {"$ref": "oic.core.json#/definitions/oic.core"},
1256     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1257     {"$ref": "#/definitions/oic.r.airflowcontrol"}
1258 ]

```

```

1259         ],
1260         "required": ["airFlowControl"]
1261     }
1262
1263     example: |
1264         {
1265             "id": "unique_example_id",
1266             "airFlowControl": [
1267                 {
1268                     "id": "unique_example_id",
1269                     "value": true
1270                 },
1271                 {
1272                     "id": "unique_example_id",
1273                     "direction": "right",
1274                     "speed": 3
1275                 }
1276             ]
1277         }
1278

```

1279 6.2.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
airFlowControl	array	yes	Read Write	

1280 6.2.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/AirFlowControlResURI		get	post		get

1281 6.3 Battery

1282 6.3.1 Introduction

1283 This resource describes a battery function. The charge is an integer showing the current battery
 1284 charge level. The charge is a percentage in the range 0-100. A value of 0 means fully discharged.
 1285 A value of 100 means fully charged.

1286 6.3.2 Example URI

1287 /BatteryResURI

1288 6.3.3 Resource Type

1289 The resource type (rt) is defined as: oic.r.energy.battery.

1290 6.3.4 RAML Definition

```

1291 ##RAML 0.8
1292 title: OICBattery
1293 version: v1.1.0-20160519
1294 traits:
1295   - interface :
1296     queryParameters:
1297       if:
1298         enum: ["oic.if.s", "oic.if.baseline"]
1299
1300 /BatteryResURI:
1301   description: |
1302     This resource describes a battery function.
1303     The charge is an integer showing the current battery charge level.
1304     The charge is a percentage in the range 0-100.
1305     A value of 0 means fully discharged.
1306     A value of 100 means fully charged.
1307
1308   is : ['interface']

```

```

1309     get:
1310         description: |
1311             Retrieves the state of the battery.
1312
1313     responses :
1314         200:
1315             body:
1316                 application/json:
1317                     schema: |
1318                         {
1319                             "id":
1320 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.battery.json#",
1321                             "$schema": "http://json-schema.org/draft-04/schema#",
1322                             "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
1323 reserved.",
1324                             "title": "Battery",
1325                             "definitions": {
1326                                 "oic.r.energy.battery": {
1327                                     "type": "object",
1328                                     "properties": {
1329                                         "charge" : {
1330                                             "type": "integer",
1331                                             "description": "The current charge percentage.",
1332                                             "readOnly": true,
1333                                             "minimum": 0,
1334                                             "maximum": 100
1335                                         }
1336                                     }
1337                                 }
1338                             },
1339                             "type": "object",
1340                             "allof": [
1341                                 {"$ref": "oic.core.json#/definitions/oic.core"},
1342                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1343                                 {"$ref": "#/definitions/oic.r.energy.battery"}
1344                             ],
1345                             "required": [ "charge" ]
1346                         }
1347
1348         example: |
1349             {
1350                 "rt":      ["oic.r.energy.battery"],
1351                 "id":      "unique_example_id",
1352                 "charge": 50
1353             }
1354

```

6.3.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
charge	integer	yes	Read Only	The current charge percentage.

6.3.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/BatteryResURI		get			get

6.4 Binary Switch

6.4.1 Introduction

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


```

1361 6.4.2 Example URI
1362 /BinarySwitchResURI
1363 6.4.3 Resource Type
1364 The resource type (rt) is defined as: oic.r.switch.binary.
1365 6.4.4 RAML Definition
1366 ##RAML 0.8
1367 title: OICBinarySwitch
1368 version: v1.1.0-20160519
1369 traits:
1370 - interface :
1371   queryParameters:
1372     if:
1373       enum: ["oic.if.a", "oic.if.baseline"]
1374
1375 /BinarySwitchResURI:
1376   description: |
1377     This resource describes a binary switch (on/off).
1378     The value is a boolean.
1379     A value of 'true' means that the switch is on.
1380     A value of 'false' means that the switch is off.
1381
1382 is : ['interface']
1383 get:
1384   responses :
1385     200:
1386       body:
1387         application/json:
1388           schema: |
1389             {
1390               "id":
1391 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.switch.binary.json#",
1392 "$schema": "http://json-schema.org/draft-04/schema#",
1393 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
1394 reserved.",
1395       "title": "Binary Switch",
1396       "definitions": {
1397         "oic.r.switch.binary": {
1398           "type": "object",
1399           "properties": {
1400             "value": {
1401               "type": "boolean",
1402               "description": "Status of the switch"
1403             }
1404           }
1405         }
1406       },
1407       "type": "object",
1408       "allof": [
1409         {"$ref": "oic.core.json#/definitions/oic.core"},
1410         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1411         {"$ref": "#/definitions/oic.r.switch.binary"}
1412       ],
1413       "required": [ "value" ]
1414     }
1415
1416 example: |
1417   {
1418     "rt":      ["oic.r.switch.binary"],
1419     "id":      "unique_example_id",

```

```

1420         "value": false
1421     }
1422
1423     post:
1424     body:
1425     application/json:
1426         schema: |
1427             {
1428                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.switch.binary.json#",
1429                 "$schema": "http://json-schema.org/draft-04/schema#",
1430                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
1431 reserved.",
1432                 "title": "Binary Switch",
1433                 "definitions": {
1434                     "oic.r.switch.binary": {
1435                         "type": "object",
1436                         "properties": {
1437                             "value": {
1438                                 "type": "boolean",
1439                                 "description": "Status of the switch"
1440                             }
1441                         }
1442                     }
1443                 },
1444                 "type": "object",
1445                 "allof": [
1446                     {"$ref": "oic.core.json#/definitions/oic.core"},
1447                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1448                     {"$ref": "#/definitions/oic.r.switch.binary"}
1449                 ],
1450                 "required": [ "value" ]
1451             }
1452
1453         example: |
1454             {
1455                 "id": "unique_example_id",
1456                 "value": true
1457             }
1458
1459     responses :
1460     200:
1461     body:
1462     application/json:
1463         schema: |
1464             {
1465                 "id":
1466 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.switch.binary.json#",
1467                 "$schema": "http://json-schema.org/draft-04/schema#",
1468                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
1469 reserved.",
1470                 "title": "Binary Switch",
1471                 "definitions": {
1472                     "oic.r.switch.binary": {
1473                         "type": "object",
1474                         "properties": {
1475                             "value": {
1476                                 "type": "boolean",
1477                                 "description": "Status of the switch"
1478                             }
1479                         }
1480                     }
1481                 },
1482                 "type": "object",
1483                 "allof": [
1484                     {"$ref": "oic.core.json#/definitions/oic.core"},

```

```

1485         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1486         {"$ref": "#/definitions/oic.r.switch.binary"}
1487     ],
1488     "required": [ "value" ]
1489 }
1490
1491 example: |
1492     {
1493         "id": "unique_example_id",
1494         "value": true
1495     }
1496

```

6.4.5 Property Definition

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

6.4.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/BinarySwitchResURI		get	post		get

6.5 Brightness

6.5.1 Introduction

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

6.5.2 Example URI

/BrightnessResURI

6.5.3 Resource Type

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

6.5.4 RAML Definition

```

1509 #%RAML 0.8
1510 title: OICBrightness
1511 version: v1.1.0-20160519
1512 traits:
1513   - interface :
1514       queryParameters:
1515         if:
1516           enum: ["oic.if.a", "oic.if.baseline"]
1517
1518 /BrightnessResURI:
1519   description: |
1520     This resource describes the brightness of a light or lamp.
1521     brightness is an integer showing the current brightness level as a quantized representation in
1522     the range 0-100.
1523     A brightness of 0 is the minimum for the resource.
1524     A brightness of 100 is the maximum for the resource.
1525
1526   is : ['interface']
1527   get:
1528     description: |
1529       Retrieves the current brightness level.
1530
1531   responses :

```

```

1532     200:
1533     body:
1534         application/json:
1535         schema: |
1536             {
1537                 "id":
1538 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.brightness.json#",
1539                 "$schema": "http://json-schema.org/draft-04/schema#",
1540                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
1541 reserved.",
1542                 "title": "Brightness",
1543                 "definitions": {
1544                     "oic.r.light.brightness": {
1545                         "type": "object",
1546                         "properties": {
1547                             "brightness": {
1548                                 "type": "integer",
1549                                 "description": "Quantized representation in the range 0-100 of the current
1550 sensed or set value for Brightness",
1551                                 "minimum": 0,
1552                                 "maximum": 100
1553                             }
1554                         }
1555                     }
1556                 },
1557                 "type": "object",
1558                 "allOf": [
1559                     {"$ref": "oic.core.json#/definitions/oic.core"},
1560                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1561                     {"$ref": "#/definitions/oic.r.light.brightness"}
1562                 ],
1563                 "required": [ "brightness" ]
1564             }
1565
1566         example: |
1567             {
1568                 "rt":          ["oic.r.light.brightness"],
1569                 "id":          "unique_example_id",
1570                 "brightness": 50
1571             }
1572
1573     post:
1574         description: |
1575             Sets the desired brightness level.
1576
1577         body:
1578             application/json:
1579             schema: |
1580                 {
1581                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.brightness.json#",
1582                     "$schema": "http://json-schema.org/draft-04/schema#",
1583                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
1584 reserved.",
1585                     "title": "Brightness",
1586                     "definitions": {
1587                         "oic.r.light.brightness": {
1588                             "type": "object",
1589                             "properties": {
1590                                 "brightness": {
1591                                     "type": "integer",
1592                                     "description": "Quantized representation in the range 0-100 of the current
1593 sensed or set value for Brightness",
1594                                     "minimum": 0,
1595                                     "maximum": 100
1596                                 }
1597                             }
1598                         }
1599                     }
1600                 }

```

```

1597         }
1598     },
1599 },
1600 "type": "object",
1601 "allOf": [
1602     {"$ref": "oic.core.json#/definitions/oic.core"},
1603     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1604     {"$ref": "#/definitions/oic.r.light.brightness"}
1605 ],
1606 "required": [ "brightness" ]
1607 }
1608
1609 example: |
1610 {
1611     "id":          "unique_example_id",
1612     "brightness": 10
1613 }
1614
1615 responses :
1616 200:
1617     description: |
1618         Indicates that the brightness was changed.
1619         The new brightness level is provided in the response.
1620
1621     body:
1622         application/json:
1623             schema: |
1624                 {
1625                     "id":
1626 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.brightness.json#",
1627                     "$schema": "http://json-schema.org/draft-04/schema#",
1628                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
1629 reserved.",
1630                     "title": "Brightness",
1631                     "definitions": {
1632                         "oic.r.light.brightness": {
1633                             "type": "object",
1634                             "properties": {
1635                                 "brightness": {
1636                                     "type": "integer",
1637                                     "description": "Quantized representation in the range 0-100 of the current
1638 sensed or set value for Brightness",
1639                                     "minimum": 0,
1640                                     "maximum": 100
1641                                 }
1642                             }
1643                         },
1644                     },
1645                     "type": "object",
1646                     "allOf": [
1647                         {"$ref": "oic.core.json#/definitions/oic.core"},
1648                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1649                         {"$ref": "#/definitions/oic.r.light.brightness"}
1650                     ],
1651                     "required": [ "brightness" ]
1652                 }
1653
1654             example: |
1655                 {
1656                     "id":          "unique_example_id",
1657                     "brightness": 10
1658                 }
1659

```

6.5.5 Property Definition

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

6.5.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/BrightnessResURI		get	post		get

6.6 Colour Chroma

6.6.1 Introduction

This resource describes the colour using chroma conventions. Properties are hue, saturation, csc, and ct. Hue and saturation are integer values as defined by the CIECAM02 model definition (see reference [CIE CIE159:2004]). 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. ct is the Mired colour temperature.

6.6.2 Example URI

/ColourChromaResURI

6.6.3 Resource Type

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

6.6.4 RAML Definition

```
##RAML 0.8
title: OICColourChroma
version: v1.1.0-20160519
traits:
  - interface :
      queryParameters:
        if:
          enum: ["oic.if.a", "oic.if.baseline"]

/ColourChromaResURI:
  description: |
    This resource describes the colour using chroma conventions.
    Properties are hue, saturation, csc, and ct.
    Hue and saturation are integer values as defined by the CIECAM02 model definition (see
    reference [CIE CIE159:2004]).
    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.
    ct is the Mired colour temperature.

  is : ['interface']
  get:
    description: |
      Provides the colour using chroma conventions.

  responses :
    200:
```

```

1701     body:
1702         application/json:
1703             schema: |
1704                 {
1705                     "id":
1706 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.chroma.json#",
1707                     "$schema": "http://json-schema.org/draft-04/schema#",
1708                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
1709 reserved.",
1710                     "title": "Colour Chroma",
1711                     "definitions": {
1712                         "oic.r.colour.chroma": {
1713                             "type": "object",
1714                             "properties": {
1715                                 "hue": {
1716                                     "type": "integer",
1717                                     "description": "Hue as defined by the CIECAM02 model definition"
1718                                 },
1719                                 "saturation": {
1720                                     "type": "integer",
1721                                     "description": "Saturation as defined by the CIECAM02 model definition"
1722                                 },
1723                                 "csc": {
1724                                     "type": "array",
1725                                     "description": "X and Y coordinates of the colour in CIE colour space",
1726                                     "minItems": 2,
1727                                     "maxItems": 2,
1728                                     "items": {
1729                                         "type": "number",
1730                                         "minimum": 0,
1731                                         "maximum": 1
1732                                     }
1733                                 },
1734                                 "ct": {
1735                                     "type": "integer",
1736                                     "description": "Mired colour temperature"
1737                                 }
1738                             }
1739                         }
1740                     },
1741                     "type": "object",
1742                     "allOf": [
1743                         {"$ref": "oic.core.json#/definitions/oic.core"},
1744                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1745                         {"$ref": "#/definitions/oic.r.colour.chroma"}
1746                     ],
1747                     "required": [ "hue", "saturation", "csc" ]
1748                 }
1749             }
1750
1751     example: |
1752         {
1753             "rt":          ["oic.r.colour.chroma"],
1754             "id":          "unique_example_id",
1755             "hue":         13088,
1756             "saturation":  212,
1757             "csc":         [0.41,0.51],
1758             "ct":         457
1759         }
1760
1761     post:
1762         description: |
1763             Sets current colour chroma values
1764
1765     body:
1766         application/json:
1767             schema: |

```

```

1768     {
1769         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.chroma.json#",
1770         "$schema": "http://json-schema.org/draft-04/schema#",
1771         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
1772 reserved.",
1773         "title": "Colour Chroma",
1774         "definitions": {
1775             "oic.r.colour.chroma": {
1776                 "type": "object",
1777                 "properties": {
1778                     "hue": {
1779                         "type": "integer",
1780                         "description": "Hue as defined by the CIECAM02 model definition"
1781                     },
1782                     "saturation": {
1783                         "type": "integer",
1784                         "description": "Saturation as defined by the CIECAM02 model definition"
1785                     },
1786                     "csc": {
1787                         "type": "array",
1788                         "description": "X and Y coordinates of the colour in CIE colour space",
1789                         "minItems": 2,
1790                         "maxItems": 2,
1791                         "items": {
1792                             "type": "number",
1793                             "minimum": 0,
1794                             "maximum": 1
1795                         }
1796                     },
1797                     "ct": {
1798                         "type": "integer",
1799                         "description": "Mired colour temperature"
1800                     }
1801                 }
1802             }
1803         },
1804         "type": "object",
1805         "allOf": [
1806             {"$ref": "oic.core.json#/definitions/oic.core"},
1807             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1808             {"$ref": "#/definitions/oic.r.colour.chroma"}
1809         ],
1810         "required": [ "hue", "saturation", "csc" ]
1811     }
1812 }
1813
1814 example: |
1815 {
1816     "id":          "unique_example_id",
1817     "hue":         13088,
1818     "saturation":  212,
1819     "csc":         [0.41,0.51],
1820     "ct":         457
1821 }
1822
1823 responses :
1824 200:
1825     body:
1826     application/json:
1827         schema: |
1828             {
1829                 "id":
1830 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.chroma.json#",
1831                 "$schema": "http://json-schema.org/draft-04/schema#",
1832                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
1833 reserved.",
1834                 "title": "Colour Chroma",

```



```

1835     "definitions": {
1836         "oic.r.colour.chroma": {
1837             "type": "object",
1838             "properties": {
1839                 "hue": {
1840                     "type": "integer",
1841                     "description": "Hue as defined by the CIECAM02 model definition"
1842                 },
1843                 "saturation": {
1844                     "type": "integer",
1845                     "description": "Saturation as defined by the CIECAM02 model definition"
1846                 },
1847                 "csc": {
1848                     "type": "array",
1849                     "description": "X and Y coordinates of the colour in CIE colour space",
1850                     "minItems": 2,
1851                     "maxItems": 2,
1852                     "items": {
1853                         "type": "number",
1854                         "minimum": 0,
1855                         "maximum": 1
1856                     }
1857                 },
1858                 "ct": {
1859                     "type": "integer",
1860                     "description": "Mired colour temperature"
1861                 }
1862             }
1863         },
1864         "type": "object",
1865         "allof": [
1866             {"$ref": "oic.core.json#/definitions/oic.core"},
1867             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1868             {"$ref": "#/definitions/oic.r.colour.chroma"}
1869         ],
1870         "required": [ "hue", "saturation", "csc" ]
1871     }
1872 }
1873
1874
1875 example: |
1876 {
1877     "id":          "unique_example_id",
1878     "hue":         13088,
1879     "saturation":  212,
1880     "csc":         [0.41,0.51],
1881     "ct":         467
1882 }
1883

```

6.6.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
hue	integer	yes	Read Write	Hue as defined by the CIECAM02 model definition
saturation	integer	yes	Read Write	Saturation as defined by the CIECAM02 model definition
csc	array	yes	Read Write	X and Y coordinates of the colour in CIE colour space

ct	integer		Read Write	Mired colour temperature
----	---------	--	------------	--------------------------

6.6.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/ColourChromaResURI		get	post		get

6.7 Colour RGB

6.7.1 Introduction

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

6.7.2 Example URI

/ColourRGBResURI

6.7.3 Resource Type

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

6.7.4 RAML Definition

```

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

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

/ColourRGBResURI:
    description: |
        This resource specifies the actual colour in the RGB space represented as an array of integers.
        Each colour value is described with a Red, Green, Blue component.
        These colour values are encoded as an array of integer values ([R,G,B]).
        The minimum and maximum colour value per component is described by the range array.
        When the range value is omitted, then the range is [0,255].

    is : ['interface']

    get:
        description: |
            Retrieves the current colour in RGB.
            Value is an array of integer values in the order R,G,B.

        responses :
            200:
                body:
                    application/json:
                        schema: |
                            {
                                "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.rgb.json#",
                                "$schema": "http://json-schema.org/draft-04/schema#",
                                "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
reserved.",
                                "title": "Colour RGB",
                                "definitions": {

```

```

1933         "oic.r.colour.rgb": {
1934             "type": "object",
1935             "properties": {
1936                 "rgbValue": {
1937                     "type": "array",
1938                     "description": "RGB value; the first item is the R, second the G, third the
1939 B.",
1940                     "minItems": 3,
1941                     "maxItems": 3,
1942                     "items": {
1943                         "type": "integer"
1944                     }
1945                 },
1946                 "range": {
1947                     "type": "array",
1948                     "readOnly": true,
1949                     "description": "min max value of RGB",
1950                     "minItems": 2,
1951                     "maxItems": 2,
1952                     "items": {
1953                         "type": "integer"
1954                     }
1955                 }
1956             }
1957         },
1958         "type": "object",
1959         "allof": [
1960             {"$ref": "oic.core.json#/definitions/oic.core"},
1961             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1962             {"$ref": "#/definitions/oic.r.colour.rgb"}
1963         ],
1964         "required": ["rgbValue"]
1965     }
1966 }
1967
1968 example: |
1969 {
1970     "rt":         ["oic.r.colour.rgb"],
1971     "id":         "unique_example_id",
1972     "rgbValue":   [255,255,255],
1973     "range":      [0,255]
1974 }
1975
1976 post:
1977     description: |
1978         Sets the current colourRGB value
1979
1980 body:
1981     application/json:
1982         schema: |
1983             {
1984                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.rgb.json#",
1985                 "$schema": "http://json-schema.org/draft-04/schema#",
1986                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
1987 reserved.",
1988                 "title": "Colour RGB",
1989                 "definitions": {
1990                     "oic.r.colour.rgb": {
1991                         "type": "object",
1992                         "properties": {
1993                             "rgbValue": {
1994                                 "type": "array",
1995                                 "description": "RGB value; the first item is the R, second the G, third the
1996 B.",
1997                                 "minItems": 3,
1998                                 "maxItems": 3,
1999                                 "items": {

```

```

2000         "type": "integer"
2001     },
2002 },
2003     "range": {
2004         "type": "array",
2005         "readOnly": true,
2006         "description": "min max value of RGB",
2007         "minItems": 2,
2008         "maxItems": 2,
2009         "items": {
2010             "type": "integer"
2011         }
2012     }
2013 }
2014 }
2015 },
2016 "type": "object",
2017 "allOf": [
2018     {"$ref": "oic.core.json#/definitions/oic.core"},
2019     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2020     {"$ref": "#/definitions/oic.r.colour.rgb"}
2021 ],
2022 "required": ["rgbValue"]
2023 }
2024
2025 example: |
2026 {
2027     "id": "unique_example_id",
2028     "rgbValue": [255,0,0]
2029 }
2030
2031 responses :
2032 200:
2033     body:
2034         application/json:
2035             schema: |
2036                 {
2037                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.rgb.json#",
2038                     "$schema": "http://json-schema.org/draft-04/schema#",
2039                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
2040 reserved.",
2041                     "title": "Colour RGB",
2042                     "definitions": {
2043                         "oic.r.colour.rgb": {
2044                             "type": "object",
2045                             "properties": {
2046                                 "rgbValue": {
2047                                     "type": "array",
2048                                     "description": "RGB value; the first item is the R, second the G, third the
2049 B.",
2050                                     "minItems": 3,
2051                                     "maxItems": 3,
2052                                     "items": {
2053                                         "type": "integer"
2054                                     }
2055                                 },
2056                                 "range": {
2057                                     "type": "array",
2058                                     "readOnly": true,
2059                                     "description": "min max value of RGB",
2060                                     "minItems": 2,
2061                                     "maxItems": 2,
2062                                     "items": {
2063                                         "type": "integer"
2064                                     }
2065                                 }
2066                             }
2067                         }
2068                     }
2069                 }

```

```

2067     }
2068   },
2069   "type": "object",
2070   "allof": [
2071     {"$ref": "oic.core.json#/definitions/oic.core"},
2072     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2073     {"$ref": "#/definitions/oic.r.colour.rgb"}
2074   ],
2075   "required": ["rgbValue"]
2076 }
2077
2078 example: |
2079 {
2080   "id":          "unique_example_id",
2081   "rgbValue":    [255,0,0]
2082 }
2083

```

6.7.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
rgbValue	array	yes	Read Write	RGB value; the first item is the R, second the G, third the B.
range	array		Read Only	Min Max Value Of Rgb

6.7.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/ColourRGBResURI		get	post		get

6.8 Dimming

6.8.1 Introduction

This resource describes a dimming function. The value is an integer showing the current dimming level. The step is the increment between dimmer values. The range is the maximum and minimum values for the dimming value. If the range is omitted [0,100] is assumed. A value of 0 means total dimming; a value of 100 means no dimming.

6.8.2 Example URI

/DimmingResURI

6.8.3 Resource Type

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

6.8.4 RAML Definition

```

2097 #%RAML 0.8
2098 title: OICDimming
2099 version: v1.1.0-20160519
2100 traits:
2101   - interface :
2102       queryParameters:
2103         if:
2104           enum: ["oic.if.a", "oic.if.baseline"]
2105
2106 /DimmingResURI:
2107   description: |
2108     This resource describes a dimming function.
2109     The value is an integer showing the current dimming level.
2110     The step is the increment between dimmer values.

```

```

2111     The range is the maximum and minimum values for the dimming value.
2112     If the range is omitted [0,100] is assumed.
2113     A value of 0 means total dimming; a value of 100 means no dimming.
2114
2115     is : ['interface']
2116
2117     get:
2118         description: |
2119             Retrieves the current dimming level.
2120
2121     responses :
2122         200:
2123             body:
2124                 application/json:
2125                     schema: |
2126                         {
2127                             "id":
2128 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.dimming.json#",
2129                             "$schema": "http://json-schema.org/draft-04/schema#",
2130                             "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
2131 reserved.",
2132                             "title": "Dimming",
2133                             "definitions": {
2134                                 "oic.r.light.dimming": {
2135                                     "type": "object",
2136                                     "properties": {
2137                                         "dimmingSetting": {
2138                                             "type": "integer",
2139                                             "description": "Current dimming value"
2140                                         },
2141                                         "step": {
2142                                             "type": "integer",
2143                                             "readOnly": true,
2144                                             "description": "step increment for dimming values"
2145                                         },
2146                                         "range": {
2147                                             "type": "array",
2148                                             "readOnly": true,
2149                                             "description": "Min and Max values for the dimming setting",
2150                                             "items": {
2151                                                 "type": "integer"
2152                                             }
2153                                         }
2154                                     }
2155                                 },
2156                                 "type": "object",
2157                                 "allOf": [
2158                                     {"$ref": "oic.core.json#/definitions/oic.core"},
2159                                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2160                                     {"$ref": "#/definitions/oic.r.light.dimming"}
2161                                 ],
2162                                 "required": ["dimmingSetting"]
2163                             }
2164
2165         example: |
2166             {
2167                 "rt":          ["oic.r.light.dimming"],
2168                 "id":          "unique_example_id",
2169                 "dimmingSetting": 30,
2170                 "step":         5,
2171                 "range":        [0,100]
2172             }
2173
2174     post:

```

```

2175     description: |
2176         Sets the desired dimming level.
2177
2178     body:
2179         application/json:
2180             schema: |
2181                 {
2182                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.dimming.json#",
2183                     "$schema": "http://json-schema.org/draft-04/schema#",
2184                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
2185 reserved.",
2186                     "title": "Dimming",
2187                     "definitions": {
2188                         "oic.r.light.dimming": {
2189                             "type": "object",
2190                             "properties": {
2191                                 "dimmingSetting": {
2192                                     "type": "integer",
2193                                     "description": "Current dimming value"
2194                                 },
2195                                 "step": {
2196                                     "type": "integer",
2197                                     "readOnly": true,
2198                                     "description": "step increment for dimming values"
2199                                 },
2200                                 "range": {
2201                                     "type": "array",
2202                                     "readOnly": true,
2203                                     "description": "Min and Max values for the dimming setting",
2204                                     "items": {
2205                                         "type": "integer"
2206                                     }
2207                                 }
2208                             }
2209                         }
2210                     },
2211                     "type": "object",
2212                     "allOf": [
2213                         {"$ref": "oic.core.json#/definitions/oic.core"},
2214                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2215                         {"$ref": "#/definitions/oic.r.light.dimming"}
2216                     ],
2217                     "required": ["dimmingSetting"]
2218                 }
2219
2220     example: |
2221         {
2222             "id": "unique_example_id",
2223             "dimmingSetting": 40
2224         }
2225
2226     responses :
2227         200:
2228             description: |
2229                 Indicates that the dimming was changed.
2230                 The new dimming level is provided in the response.
2231
2232             body:
2233                 application/json:
2234                     schema: |
2235                         {
2236                             "id":
2237 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.dimming.json#",
2238                             "$schema": "http://json-schema.org/draft-04/schema#",
2239                             "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights

```

```

2240 reserved.",
2241     "title": "Dimming",
2242     "definitions": {
2243         "oic.r.light.dimming": {
2244             "type": "object",
2245             "properties": {
2246                 "dimmingSetting": {
2247                     "type": "integer",
2248                     "description": "Current dimming value"
2249                 },
2250                 "step": {
2251                     "type": "integer",
2252                     "readOnly": true,
2253                     "description": "step increment for dimming values"
2254                 },
2255                 "range": {
2256                     "type": "array",
2257                     "readOnly": true,
2258                     "description": "Min and Max values for the dimming setting",
2259                     "items": {
2260                         "type": "integer"
2261                     }
2262                 }
2263             }
2264         },
2265         "type": "object",
2266         "allof": [
2267             {"$ref": "oic.core.json#/definitions/oic.core"},
2268             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2269             {"$ref": "#/definitions/oic.r.light.dimming"}
2270         ],
2271         "required": ["dimmingSetting"]
2272     }
2273 }
2274
2275 example: |
2276 {
2277     "id": "unique_example_id",
2278     "dimmingSetting": 40
2279 }
2280
2281 403:
2282 description: |
2283     This response is generated by the OIC Server when the client sends:
2284     An update with an out of range property value for dimmingSetting.
2285     The server responds with the current resource representation.
2286
2287 body:
2288     application/json:
2289         schema: |
2290             {
2291                 "id":
2292 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.dimming.json#",
2293                 "$schema": "http://json-schema.org/draft-04/schema#",
2294                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
2295 reserved.",
2296                 "title": "Dimming",
2297                 "definitions": {
2298                     "oic.r.light.dimming": {
2299                         "type": "object",
2300                         "properties": {
2301                             "dimmingSetting": {
2302                                 "type": "integer",
2303                                 "description": "Current dimming value"
2304                             },
2305                             "step": {
2306                                 "type": "integer",

```



```

2307         "readOnly": true,
2308         "description": "step increment for dimming values"
2309     },
2310     "range": {
2311         "type": "array",
2312         "readOnly": true,
2313         "description": "Min and Max values for the dimming setting",
2314         "items": {
2315             "type": "integer"
2316         }
2317     }
2318 }
2319 }
2320 },
2321 "type": "object",
2322 "allof": [
2323     {"$ref": "oic.core.json#/definitions/oic.core"},
2324     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2325     {"$ref": "#/definitions/oic.r.light.dimming"}
2326 ],
2327 "required": ["dimmingSetting"]
2328 }
2329
2330 example: |
2331 {
2332     "id": "unique_example_id",
2333     "dimmingSetting": 40
2334 }
2335

```

2336 6.8.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
dimmingSetting	integer	yes	Read Write	Current dimming value
step	integer		Read Only	Step Increment For Dimming Values
range	array		Read Only	Min and Max values for the dimming setting

2337 6.8.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/DimmingResURI		get	post		get

2338 6.9 Door

2339 6.9.1 Introduction

2340 This resource describes a door. A door is modelled by means of openState (Open/Closed),
 2341 openDuration (ISO 8601 Time), and openAlarm (boolean). For openState, the value 'Open'
 2342 indicates the door is open. The value 'Closed' indicates the door is closed. The type of
 2343 openDuration is an ISO 8601 Time encoded string. The openAlarm value 'true' indicates that the
 2344 open alarm is active. The openAlarm value 'false' indicates that open alarm is not active.

2345 6.9.2 Example URI

2346 /DoorResURI

2347 6.9.3 Resource Type

2348 The resource type (rt) is defined as: oic.r.door.

2349 6.9.4 RAML Definition

2350 ##RAML 0.8

```

2351 title: OICDoor
2352 version: v1.1.0-20160519
2353 traits:
2354   - interface-actuator :
2355     queryParameters:
2356       if:
2357         enum: ["oic.if.a", "oic.if.baseline"]
2358   - interface-all :
2359     queryParameters:
2360       if:
2361         enum: ["oic.if.a", "oic.if.s", "oic.if.baseline"]
2362
2363 /DoorResURI:
2364   description: |
2365     This resource describes a door.
2366     A door is modelled by means of openState (Open/Closed), openDuration (ISO 8601 Time), and
2367     openAlarm (boolean).
2368     For openState, the value 'Open' indicates the door is open.
2369     The value 'Closed' indicates the door is closed.
2370     The type of openDuration is an ISO 8601 Time encoded string.
2371     The openAlarm value 'true' indicates that the open alarm is active.
2372     The openAlarm value 'false' indicates that open alarm is not active.
2373
2374   get:
2375     description: |
2376       retrieves the state of the Door.
2377
2378   responses :
2379     200:
2380       body:
2381         application/json:
2382           schema: |
2383             {
2384               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.door.json#",
2385               "$schema": "http://json-schema.org/draft-04/schema#",
2386               "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
2387 reserved.",
2388               "title": "Door",
2389               "definitions": {
2390                 "oic.r.door": {
2391                   "type": "object",
2392                   "properties": {
2393                     "openState" : {
2394                       "enum": ["Open", "Closed"],
2395                       "readOnly": true,
2396                       "description": "The state of the door (open or closed)"
2397                     },
2398                     "openDuration": {
2399                       "type": "string",
2400                       "readOnly": true,
2401                       "description": "The time duration the door has been open"
2402                     },
2403                     "openAlarm": {
2404                       "type": "boolean",
2405                       "description": "The state of the door open alarm"
2406                     }
2407                   }
2408                 }
2409               },
2410               "type": "object",
2411               "allOf": [
2412                 {"$ref": "oic.core.json#/definitions/oic.core"},
2413                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"}],

```

```

2414         {"$ref": "#/definitions/oic.r.door"}
2415     ],
2416     "required": ["openState"]
2417 }
2418
2419     example: |
2420         {
2421             "rt" :           ["oic.r.door"],
2422             "id":           "unique_example_id",
2423             "openState":    "Open",
2424             "openDuration": "P0Y0M0DT2H25M5S",
2425             "openAlarm":    true
2426         }
2427
2428     post:
2429         description: |
2430             Sets the current Door properties.
2431             The only property that can be set as part of an update operation is
2432             the openAlarm.
2433             This can be made active (true) or inactive (false)
2434
2435         body:
2436             application/json:
2437                 schema: |
2438                     {
2439                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.door-Update.json#",
2440                         "$schema": "http://json-schema.org/draft-04/schema#",
2441                         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
2442 reserved.",
2443                         "title": "Door",
2444                         "definitions": {
2445                             "oic.r.door": {
2446                                 "type": "object",
2447                                 "properties": {
2448                                     "openAlarm": {
2449                                         "type": "boolean",
2450                                         "description": "The state of the door open alarm"
2451                                     }
2452                                 }
2453                             }
2454                         },
2455                         "type": "object",
2456                         "allOf": [
2457                             {"$ref": "oic.core.json#/definitions/oic.core"},
2458                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2459                             {"$ref": "#/definitions/oic.r.door"}
2460                         ]
2461                     }
2462
2463                 example: |
2464                     {
2465                         "id":           "unique_example_id",
2466                         "openAlarm":    false
2467                     }
2468
2469     responses :
2470         200:
2471             body:
2472                 application/json:
2473                     schema: |
2474                         {
2475                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.door-Update.json#",
2476                             "$schema": "http://json-schema.org/draft-04/schema#",

```

```

2477         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
2478 reserved.",
2479         "title": "Door",
2480         "definitions": {
2481             "oic.r.door": {
2482                 "type": "object",
2483                 "properties": {
2484                     "openAlarm": {
2485                         "type": "boolean",
2486                         "description": "The state of the door open alarm"
2487                     }
2488                 }
2489             }
2490         },
2491         "type": "object",
2492         "allof": [
2493             {"$ref": "oic.core.json#/definitions/oic.core"},
2494             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2495             {"$ref": "#/definitions/oic.r.door"}
2496         ]
2497     }
2498
2499     example: |
2500     {
2501         "id":          "unique_example_id",
2502         "openAlarm":  false
2503     }
2504

```

2505 6.9.5 Property Definition

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

2506 6.9.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/DoorResURI		get	post		get

2507 6.10 Energy Consumption

2508 6.10.1 Introduction

2509 This resource describes the energy consumed by the device since power up (the energy value is
2510 in Watt Hours [Wh]) and the instantaneous power draw of the device (the power value is in Watts
2511 [W]) at the time the resource was queried. The power value is in Watts [W]. The energy value is in
2512 Watt Hours [Wh].

2513 6.10.2 Example URI

2514 /EnergyConsumptionResURI

2515 6.10.3 Resource Type

2516 The resource type (rt) is defined as: oic.r.energy.consumption.

2517 6.10.4 RAML Definition

```

2518 #%RAML 0.8
2519 title: OICEnergyConsumption
2520 version: v1.1.0-20160519

```

```

2521 traits:
2522   - interface :
2523     queryParameters:
2524       if:
2525         enum: ["oic.if.s", "oic.if.baseline"]
2526
2527 /EnergyConsumptionResURI:
2528   description: |
2529     This resource describes the energy consumed by the device since power up (the energy value is
2530 in Watt Hours [Wh])
2531 and the instantaneous power draw of the device (the power value is in Watts [W]) at the time
2532 the resource was queried.
2533 The power value is in Watts [W].
2534 The energy value is in Watt Hours [Wh].
2535
2536 is : ['interface']
2537 get:
2538   description: |
2539     Provides the current power draw and cumulative energy usage.
2540
2541   responses :
2542     200:
2543       body:
2544         application/json:
2545           schema: |
2546             {
2547               "id":
2548 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.consumption.json#",
2549 "$schema": "http://json-schema.org/draft-04/schema#",
2550 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
2551 reserved.",
2552 "title": "Energy Consumption",
2553 "definitions": {
2554   "oic.r.energy.consumption": {
2555     "type": "object",
2556     "properties": {
2557       "power": {
2558         "type": "number",
2559         "readOnly": true,
2560         "description": "Instantaneous Power"
2561       },
2562       "energy": {
2563         "type": "number",
2564         "readOnly": true,
2565         "description": "Energy consumed"
2566       }
2567     }
2568   },
2569   "type": "object",
2570   "allof": [
2571     {"$ref": "oic.core.json#/definitions/oic.core"},
2572     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2573     {"$ref": "#/definitions/oic.r.energy.consumption"}
2574   ],
2575   "required": ["power", "energy"]
2576 }
2577
2578   example: |
2579     {
2580       "rt":      ["oic.r.energy.consumption"],
2581       "id":      "unique_example_id",
2582       "power":   2000.1,
2583       "energy":  3500.4

```

2584 }
2585

2586 6.10.5 Property Definition

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

2587 6.10.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/EnergyConsumptionResURI		get			get

2588 6.11 Energy Usage

2589 6.11.1 Introduction

2590 This resource describes an energy usage query. The resource is a composite resource being made
2591 up as a collection of: TimePeriod Resource EnergyConsumption Resource

2592 6.11.2 Example URI

2593 /EnergyUsageResURI

2594 6.11.3 Resource Type

2595 The resource type (rt) is defined as: oic.r.energy.usage.

2596 6.11.4 RAML Definition

```
2597 #%RAML 0.8
2598 title: OICEnergyUsage
2599 version: v1.1.0-20160519
2600 traits:
2601   - interface :
2602       queryParameters:
2603         if:
2604           enum: ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
2605
2606 /EnergyUsageResURI:
2607   description: |
2608     This resource describes an energy usage query.
2609     The resource is a composite resource being made up as a collection of:
2610     TimePeriod Resource
2611     EnergyConsumption Resource
2612
2613   is : ['interface']
2614   get:
2615     description: |
2616       Retrieves the energy usage information as a composite of consumption over time.
2617
2618   responses :
2619     200:
2620       body:
2621         application/json:
2622           schema: |
2623             {
2624               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.usage.json#",
2625               "$schema": "http://json-schema.org/draft-04/schema#",
2626               "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
2627 reserved.",
```

```

2628         "title": "Energy Usage",
2629         "definitions": {
2630             "oic.r.energy.usage": {
2631                 "type": "object",
2632                 "properties": {
2633                     "resources": {
2634                         "type": "array",
2635                         "minItems": 2,
2636                         "maxItems": 2,
2637                         "items": {
2638                             "$ref": "oic.oic-link-schema.json#"
2639                         }
2640                     }
2641                 }
2642             },
2643         },
2644         "type": "object",
2645         "allof": [
2646             {"$ref": "oic.core.json#/definitions/oic.core"},
2647             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2648             {"$ref": "#/definitions/oic.r.energy.usage"}
2649         ],
2650         "required": ["resources"]
2651     }
2652
2653     example: |
2654     {
2655         "rt": ["oic.r.energy.usage"],
2656         "id": "unique_example_id",
2657         "resources": [
2658             {
2659                 "href": "/TimeIntervalResURI",
2660                 "rel": "contains",
2661                 "rt": ["oic.r.time.period"],
2662                 "if": ["oic.if.a"]
2663             },
2664             {
2665                 "href": "/EnergyConsumptionResURI",
2666                 "rel": "contains",
2667                 "rt": ["oic.r.energy.consumption"],
2668                 "if": ["oic.if.s"]
2669             }
2670         ]
2671     }
2672

```

2673 6.11.5 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/EnergyUsageResURI		get			get

2674 6.12 Humidity

2675 6.12.1 Introduction

2676 This resource describes a sensed or desired humidity. The value humidity is an integer describing
2677 the percentage measured relative humidity. The value desiredHumidity is an integer showing the
2678 desired target relative humidity.

2679 6.12.2 Example URI

2680 /HumidityResURI

2681 6.12.3 Resource Type

2682 The resource type (rt) is defined as: oic.r.humidity.

2683 6.12.4 RAML Definition

2684 *##RAML 0.8*

2685 *title: OIcHumidity*

```

2686 version: v1.1.0-20160519
2687 traits:
2688   - interface :
2689     queryParameters:
2690       if:
2691         enum: ["oic.if.a", "oic.if.s", "oic.if.baseline"]
2692
2693 /HumidityResURI:
2694   description: |
2695     This resource describes a sensed or desired humidity.
2696     The value humidity is an integer describing the percentage measured relative humidity.
2697     The value desiredHumidity is an integer showing the desired target relative humidity.
2698
2699   is : ['interface']
2700   get:
2701     description: |
2702       Retrieves the current (relative) humidity level.
2703
2704   responses :
2705     200:
2706       body:
2707         application/json:
2708           schema: |
2709             {
2710               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.humidity.json#",
2711               "$schema": "http://json-schema.org/draft-04/schema#",
2712               "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
2713 reserved.",
2714               "title": "Humidity",
2715               "definitions": {
2716                 "oic.r.humidity": {
2717                   "type": "object",
2718                   "properties": {
2719                     "humidity": {
2720                       "type": "integer",
2721                       "readOnly": true,
2722                       "description": "Current sensed value for Humidity"
2723                     },
2724                     "desiredHumidity": {
2725                       "type": "integer",
2726                       "description": "Desired value for Humidity"
2727                     }
2728                   }
2729                 },
2730               "type": "object",
2731               "allof": [
2732                 {"$ref": "oic.core.json#/definitions/oic.core"},
2733                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2734                 {"$ref": "#/definitions/oic.r.humidity"}
2735               ],
2736               "required": ["humidity"]
2737             }
2738
2739   example: |
2740     {
2741       "rt": ["oic.r.humidity"],
2742       "id": "unique_example_id",
2743       "humidity": 40,
2744       "desiredHumidity": 40
2745     }
2746
2747

```



```

2748     post:
2749         description: |
2750             Sets the desired relative humidity level.
2751
2752         body:
2753             application/json:
2754                 schema: |
2755                     {
2756                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.humidity-Update.json#",
2757                         "$schema": "http://json-schema.org/draft-04/schema#",
2758                         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
2759 reserved.",
2760                         "title": "Humidity",
2761                         "definitions": {
2762                             "oic.r.humidity": {
2763                                 "type": "object",
2764                                 "properties": {
2765                                     "desiredHumidity": {
2766                                         "type": "integer",
2767                                         "description": "Desired value for Humidity"
2768                                     }
2769                                 }
2770                             },
2771                         },
2772                         "type": "object",
2773                         "allOf": [
2774                             {"$ref": "oic.core.json#/definitions/oic.core"},
2775                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2776                             {"$ref": "#/definitions/oic.r.humidity"}
2777                         ]
2778                     }
2779
2780                 example: |
2781                     {
2782                         "id": "unique_example_id",
2783                         "desiredHumidity" : 45
2784                     }
2785
2786     responses :
2787         200:
2788             description: |
2789                 Indicates that the relative humidity level was changed.
2790                 The new relative humidity level is provided in the response.
2791
2792             body:
2793                 application/json:
2794                     schema: |
2795                         {
2796                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.humidity-
2797 Update.json#",
2798                             "$schema": "http://json-schema.org/draft-04/schema#",
2799                             "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
2800 reserved.",
2801                             "title": "Humidity",
2802                             "definitions": {
2803                                 "oic.r.humidity": {
2804                                     "type": "object",
2805                                     "properties": {
2806                                         "desiredHumidity": {
2807                                             "type": "integer",
2808                                             "description": "Desired value for Humidity"
2809                                         }
2810                                     }
2811                                 }
2812                             },
2813                         }

```

```

2812     },
2813     "type": "object",
2814     "allof": [
2815         {"$ref": "oic.core.json#/definitions/oic.core"},
2816         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2817         {"$ref": "#/definitions/oic.r.humidity"}
2818     ]
2819 }
2820
2821 example: |
2822 {
2823     "id": "unique_example_id",
2824     "desiredHumidity": 45
2825 }
2826

```

2827 6.12.5 Property Definition

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

2828 6.12.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/HumidityResURI		get	post		get

2829 6.13 Ice Maker

2830 6.13.1 Introduction

2831 This resource describes an Ice Maker. The status is a string containing a value from the set of
2832 possible ice maker statuses. The possible statuses are defined by the enumeration [on, off, full] A
2833 status of 'on' means that the Ice Maker is operating. A status of 'off' means that the Ice Maker is
2834 not operating. A status of 'full' means that the ice collection bin is full (Ice Maker is operating).

2835 6.13.2 Example URI

2836 /IceMakerResURI

2837 6.13.3 Resource Type

2838 The resource type (rt) is defined as: oic.r.icemaker.

2839 6.13.4 RAML Definition

```

2840 #%RAML 0.8
2841 title: OICIceMaker
2842 version: v1.1.0-20160519
2843 traits:
2844   - interface :
2845       queryParameters:
2846           if:
2847               enum: ["oic.if.a", "oic.if.baseline"]
2848
2849 /IceMakerResURI:
2850   description: |
2851       This resource describes an Ice Maker.
2852       The status is a string containing a value from the set of possible ice maker statuses.
2853       The possible statuses are defined by the enumeration [on, off, full]
2854       A status of 'on' means that the Ice Maker is operating.
2855       A status of 'off' means that the Ice Maker is not operating.

```

```

2856     A status of 'full' means that the ice collection bin is full (Ice Maker is operating).
2857
2858     is : ['interface']
2859     get:
2860         description: |
2861             Retrieves the current Ice Maker status.
2862
2863     responses :
2864         200:
2865             body:
2866                 application/json:
2867                     schema: |
2868                         {
2869                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.iceMaker.json#",
2870                             "$schema": "http://json-schema.org/draft-04/schema#",
2871                             "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
2872 reserved.",
2873                             "title": "Ice Maker",
2874                             "definitions": {
2875                                 "oic.r.iceMaker": {
2876                                     "type": "object",
2877                                     "properties": {
2878                                         "status": {
2879                                             "enum": ["on", "off", "full"],
2880                                             "description": "Status of the Ice Maker"
2881                                         }
2882                                     }
2883                                 }
2884                             },
2885                             "type": "object",
2886                             "allOf": [
2887                                 {"$ref": "oic.core.json#/definitions/oic.core"},
2888                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2889                                 {"$ref": "#/definitions/oic.r.iceMaker"}
2890                             ],
2891                             "required": ["status"]
2892                         }
2893
2894         example: |
2895             {
2896                 "rt": ["oic.r.icemaker"],
2897                 "id": "unique_example_id",
2898                 "status": "on"
2899             }
2900
2901     post:
2902         description: |
2903             Sets the desired Ice Maker status.
2904             Only valid settings for status in a Post shall be [on,off].
2905
2906         body:
2907             application/json:
2908                 schema: |
2909                     {
2910                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.iceMaker-Update.json#",
2911                         "$schema": "http://json-schema.org/draft-04/schema#",
2912                         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
2913 reserved.",
2914                         "title": "Ice Maker",
2915                         "definitions": {
2916                             "oic.r.icemaker": {
2917                                 "type": "object",
2918                                 "properties": {

```

```

2919         "status": {
2920             "enum": ["on", "off"],
2921             "description": "Set the status of the Ice Maker"
2922         }
2923     }
2924 }
2925 },
2926 "type": "object",
2927 "allOf": [
2928     {"$ref": "oic.core.json#/definitions/oic.core"},
2929     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2930     {"$ref": "#/definitions/oic.r.icemaker"}
2931 ],
2932 "required": ["status"]
2933 }
2934
2935 example: |
2936 {
2937     "id": "unique_example_id",
2938     "status": "off"
2939 }
2940
2941 responses :
2942 200:
2943     description: |
2944         Indicates that the Ice Maker status was changed.
2945         The new status is provided in the response.
2946
2947     body:
2948         application/json:
2949             schema: |
2950                 {
2951                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.iceMaker-
2952 Update.json#",
2953                     "$schema": "http://json-schema.org/draft-04/schema#",
2954                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
2955 reserved.",
2956                     "title": "Ice Maker",
2957                     "definitions": {
2958                         "oic.r.icemaker": {
2959                             "type": "object",
2960                             "properties": {
2961                                 "status": {
2962                                     "enum": ["on", "off"],
2963                                     "description": "Set the status of the Ice Maker"
2964                                 }
2965                             }
2966                         }
2967                     },
2968                     "type": "object",
2969                     "allOf": [
2970                         {"$ref": "oic.core.json#/definitions/oic.core"},
2971                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2972                         {"$ref": "#/definitions/oic.r.icemaker"}
2973                     ],
2974                     "required": ["status"]
2975                 }
2976
2977             example: |
2978                 {
2979                     "id": "unique_example_id",
2980                     "status": "off"
2981                 }
2982
2983 403:

```

```

2984     description: |
2985         This response is generated by the OIC Server when the client sends:
2986         An update with an invalid property value for status.
2987         The server responds with the current resource representation.
2988
2989     body:
2990         application/json:
2991             schema: |
2992                 {
2993                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.iceMaker-
Update.json#",
2994                     "$schema": "http://json-schema.org/draft-04/schema#",
2995                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
reserved.",
2996                     "title": "Ice Maker",
2997                     "definitions": {
2998                         "oic.r.icemaker": {
2999                             "type": "object",
3000                             "properties": {
3001                                 "status": {
3002                                     "enum": ["on", "off"],
3003                                     "description": "Set the status of the Ice Maker"
3004                                 }
3005                             }
3006                         }
3007                     },
3008                     "type": "object",
3009                     "allof": [
3010                         {"$ref": "oic.core.json#/definitions/oic.core"},
3011                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3012                         {"$ref": "#/definitions/oic.r.icemaker"}
3013                     ],
3014                     "required": ["status"]
3015                 }
3016
3017             example: |
3018                 {
3019                     "id": "unique_example_id",
3020                     "status": "off"
3021                 }
3022
3023
3024

```

6.13.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
status	enum	yes	Read Write	Status of the Ice Maker

6.13.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/IceMakerResURI		get	post		get

6.14 Lock

6.14.1 Introduction

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

6.14.2 Example URI

/LockStatusResURI

6.14.3 Resource Type

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

3035 6.14.4 RAML Definition

```
3036 #%RAML 0.8
3037 title: OICLock
3038 version: v1.1.0-20160519
3039 traits:
3040   - interface :
3041       queryParameters:
3042         if:
3043           enum: ["oic.if.a", "oic.if.baseline"]
3044
3045 /LockStatusResURI:
3046   description: |
3047     Resource describing a lock.
3048     For the type of lockState, the value 'Locked' indicates that the door is Locked.
3049     The value 'Unlocked' indicates that the door is Unlocked.
3050
3051   is : ['interface']
3052   get:
3053     description: |
3054       Retrieves the state of the lock.
3055
3056   responses :
3057     200:
3058       body:
3059         application/json:
3060           schema: |
3061             {
3062               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.status.json#",
3063               "$schema": "http://json-schema.org/draft-04/schema#",
3064               "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
3065 reserved.",
3066               "title": "Lock",
3067               "definitions": {
3068                 "oic.r.lock.status": {
3069                   "type": "object",
3070                   "properties": {
3071                     "lockState" : {
3072                       "type": "string",
3073                       "enum": ["Locked", "Unlocked"],
3074                       "description": "State of the lock."
3075                     }
3076                   }
3077               }
3078             },
3079           "type": "object",
3080           "allof": [
3081             {"$ref": "oic.core.json#/definitions/oic.core"},
3082             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3083             {"$ref": "#/definitions/oic.r.lock.status"}
3084           ],
3085           "required": ["lockState"]
3086         }
3087
3088   example: |
3089     {
3090       "rt": ["oic.r.lock.status"],
3091       "id": "unique_example_id",
3092       "lockState": "Locked"
3093     }
3094
3095   post:
```

```

3096     description: |
3097         Sets the current lock state.
3098
3099     body:
3100         application/json:
3101             schema: |
3102                 {
3103                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.status.json#",
3104                     "$schema": "http://json-schema.org/draft-04/schema#",
3105                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
3106 reserved.",
3107                     "title": "Lock",
3108                     "definitions": {
3109                         "oic.r.lock.status": {
3110                             "type": "object",
3111                             "properties": {
3112                                 "lockState" : {
3113                                     "type": "string",
3114                                     "enum": ["Locked", "Unlocked"],
3115                                     "description": "State of the lock."
3116                                 }
3117                             }
3118                         }
3119                     },
3120                     "type": "object",
3121                     "allof": [
3122                         {"$ref": "oic.core.json#/definitions/oic.core"},
3123                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3124                         {"$ref": "#/definitions/oic.r.lock.status"}
3125                     ],
3126                     "required": ["lockState"]
3127                 }
3128
3129     example: |
3130         {
3131             "id": "unique_example_id",
3132             "lockState": "Unlocked"
3133         }
3134
3135     responses :
3136         200:
3137             body:
3138                 application/json:
3139                     schema: |
3140                         {
3141                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.status.json#",
3142                             "$schema": "http://json-schema.org/draft-04/schema#",
3143                             "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
3144 reserved.",
3145                             "title": "Lock",
3146                             "definitions": {
3147                                 "oic.r.lock.status": {
3148                                     "type": "object",
3149                                     "properties": {
3150                                         "lockState" : {
3151                                             "type": "string",
3152                                             "enum": ["Locked", "Unlocked"],
3153                                             "description": "State of the lock."
3154                                         }
3155                                     }
3156                                 }
3157                             },
3158                             "type": "object",
3159                             "allof": [
3160                                 {"$ref": "oic.core.json#/definitions/oic.core"},

```

```

3161         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3162         {"$ref": "#/definitions/oic.r.lock.status"}
3163     ],
3164     "required": ["lockState"]
3165 }
3166
3167 example: |
3168     {
3169         "id":         "unique_example_id",
3170         "lockState":  "Unlocked"
3171     }
3172
3173 403:
3174     description: |
3175         This response is generated by the OIC Server when the client sends:
3176         An update with an invalid property value for lockState.
3177         The server responds with the current resource representation.
3178
3179     body:
3180         application/json:
3181             schema: |
3182                 {
3183                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.status.json#",
3184                     "$schema": "http://json-schema.org/draft-04/schema#",
3185                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
3186 reserved.",
3187                     "title": "Lock",
3188                     "definitions": {
3189                         "oic.r.lock.status": {
3190                             "type": "object",
3191                             "properties": {
3192                                 "lockState" : {
3193                                     "type": "string",
3194                                     "enum": ["Locked", "Unlocked"],
3195                                     "description": "State of the lock."
3196                                 }
3197                             }
3198                         }
3199                     },
3200                     "type": "object",
3201                     "allof": [
3202                         {"$ref": "oic.core.json#/definitions/oic.core"},
3203                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3204                         {"$ref": "#/definitions/oic.r.lock.status"}
3205                     ],
3206                     "required": ["lockState"]
3207                 }
3208
3209             example: |
3210                 {
3211                     "lockState": "Unlocked"
3212                 }
3213

```

6.14.5 Property Definition

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

6.14.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/LockStatusResURI		get	post		get

3216 6.15 Lock Code

3217 6.15.1 Introduction

3218 Resource describing a lock code. The lockCodeList is an array of possible codes that may be
3219 associated with a lock. These are all presented as strings.

3220 6.15.2 Example URI

3221 /LockCodeResURI

3222 6.15.3 Resource Type

3223 The resource type (rt) is defined as: oic.r.lock.code.

3224 6.15.4 RAML Definition

```
3225 #%RAML 0.8
3226 title: OICLockCode
3227 version: v1.1.0-20160519
3228 traits:
3229   - interface :
3230     queryParameters:
3231       if:
3232         enum: ["oic.if.a", "oic.if.baseline"]
3233
3234 /LockCodeResURI:
3235   description: |
3236     Resource describing a lock code.
3237     The lockCodeList is an array of possible codes that may be associated with a lock.
3238     These are all presented as strings.
3239
3240   is : ['interface']
3241   get:
3242     description: |
3243       Retrieves the current lock code values.
3244
3245   responses :
3246     200:
3247       body:
3248         application/json:
3249           schema: |
3250             {
3251               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.code.json#",
3252               "$schema": "http://json-schema.org/draft-04/schema#",
3253               "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
3254 reserved.",
3255               "title": "Lock Code",
3256               "definitions": {
3257                 "oic.r.lock.code": {
3258                   "type": "object",
3259                   "properties": {
3260                     "lockCodeList" : {
3261                       "type": "array",
3262                       "items": {
3263                         "type": "string",
3264                         "description": "Value for the lock code"
3265                       }
3266                     }
3267                   }
3268                 },
3269               },
3270               "type": "object",
3271               "allof": [
```

```

3272         {"$ref": "oic.core.json#/definitions/oic.core"},
3273         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3274         {"$ref": "#/definitions/oic.r.lock.code"}
3275     ],
3276     "required": ["lockCodeList"]
3277 }
3278
3279 example: |
3280     {
3281         "rt":          ["oic.r.lock.code"],
3282         "id":          "unique_example_id",
3283         "lockCodeList": ["012345", "112233"]
3284     }
3285
3286 post:
3287     description: |
3288         Updates the current lock code values.
3289
3290     body:
3291         application/json:
3292             schema: |
3293                 {
3294                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.code.json#",
3295                     "$schema": "http://json-schema.org/draft-04/schema#",
3296                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
3297 reserved.",
3298                     "title": "Lock Code",
3299                     "definitions": {
3300                         "oic.r.lock.code": {
3301                             "type": "object",
3302                             "properties": {
3303                                 "lockCodeList" : {
3304                                     "type": "array",
3305                                     "items": {
3306                                         "type": "string",
3307                                         "description": "Value for the lock code"
3308                                     }
3309                                 }
3310                             }
3311                         }
3312                     },
3313                     "type": "object",
3314                     "allOf": [
3315                         {"$ref": "oic.core.json#/definitions/oic.core"},
3316                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3317                         {"$ref": "#/definitions/oic.r.lock.code"}
3318                     ],
3319                     "required": ["lockCodeList"]
3320                 }
3321
3322             example: |
3323                 {
3324                     "id":          "unique_example_id",
3325                     "lockCodeList": ["543210", "332211"]
3326                 }
3327
3328 responses :
3329     200:
3330         body:
3331             application/json:
3332                 schema: |
3333                     {
3334                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.code.json#",

```

```

3335         "$schema": "http://json-schema.org/draft-04/schema#",
3336         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
3337 reserved.",
3338         "title": "Lock Code",
3339         "definitions": {
3340             "oic.r.lock.code": {
3341                 "type": "object",
3342                 "properties": {
3343                     "lockCodeList" : {
3344                         "type": "array",
3345                         "items": {
3346                             "type": "string",
3347                             "description": "Value for the lock code"
3348                         }
3349                     }
3350                 }
3351             },
3352             "type": "object",
3353             "allof": [
3354                 {"$ref": "oic.core.json#/definitions/oic.core"},
3355                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3356                 {"$ref": "#/definitions/oic.r.lock.code"}
3357             ],
3358             "required": ["lockCodeList"]
3359         }
3360     }
3361
3362     example: |
3363     {
3364         "id": "unique_example_id",
3365         "lockCodeList": ["543210", "332211"]
3366     }
3367

```

3368 6.15.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
lockCodeList	array	yes	Read Write	

3369 6.15.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/LockCodeResURI		get	post		get

3370 6.16 Mode

3371 6.16.1 Introduction

3372 This resource describes the modes of operation that a device can provide. The mode can be read
3373 or set. The supportedModes is an array of possible modes the device supports. The modes are an
3374 array of the currently active mode(s).

3375 6.16.2 Example URI

3376 /ModeResURI

3377 6.16.3 Resource Type

3378 The resource type (rt) is defined as: oic.r.mode.

3379 6.16.4 RAML Definition

```

3380 #%RAML 0.8
3381 title: OICMode
3382 version: v1.1.0-20160519
3383 traits:
3384   - interface :
3385       queryParameters:
3386         if:

```

```

3387         enum: ["oic.if.a", "oic.if.baseline"]
3388
3389 /ModeResURI:
3390     description: |
3391         This resource describes the modes of operation that a device can provide.
3392         The mode can be read or set.
3393         The supportedModes is an array of possible modes the device supports.
3394         The modes are an array of the currently active mode(s).
3395
3396     is : ['interface']
3397     get:
3398         description: |
3399             Retrieves the current mode.
3400
3401     responses :
3402         200:
3403             body:
3404                 application/json:
3405                     schema: |
3406                         {
3407                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mode.json#",
3408                             "$schema": "http://json-schema.org/draft-04/schema#",
3409                             "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
3410 reserved.",
3411                             "title": "Mode",
3412                             "definitions": {
3413                                 "oic.r.mode": {
3414                                     "type": "object",
3415                                     "properties": {
3416                                         "supportedModes": {
3417                                             "type": "array",
3418                                             "readOnly": true,
3419                                             "description": "Array of possible modes the device supports.",
3420                                             "items": {
3421                                                 "type": "string"
3422                                             }
3423                                         },
3424                                         "modes": {
3425                                             "type": "array",
3426                                             "description": "Array of the currently active mode(s)",
3427                                             "items": {
3428                                                 "type": "string"
3429                                             }
3430                                         }
3431                                     }
3432                                 }
3433                             },
3434                             "type": "object",
3435                             "allOf": [
3436                                 {"$ref": "oic.core.json#/definitions/oic.core"},
3437                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3438                                 {"$ref": "#/definitions/oic.r.mode"}
3439                             ],
3440                             "required": ["supportedModes", "modes"]
3441                         }
3442
3443     example: |
3444         {
3445             "rt": ["oic.r.mode"],
3446             "id": "unique_example_id",
3447             "supportedModes": ["active", "armedAway", "armedStay", "armedInstant"],
3448             "modes": ["active"]
3449         }
3450

```

```

3451 post:
3452     description: |
3453         Sets the desired mode.
3454
3455     body:
3456         application/json:
3457             schema: |
3458                 {
3459                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mode-Update.json#",
3460                     "$schema": "http://json-schema.org/draft-04/schema#",
3461                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
3462 reserved.",
3463                     "title": "Mode",
3464                     "definitions": {
3465                         "oic.r.mode": {
3466                             "type": "object",
3467                             "properties": {
3468                                 "modes": {
3469                                     "type": "array",
3470                                     "description": "Desired mode",
3471                                     "items": {
3472                                         "type": "string"
3473                                     }
3474                                 }
3475                             }
3476                         }
3477                     },
3478                     "type": "object",
3479                     "allOf": [
3480                         {"$ref": "oic.core.json#/definitions/oic.core"},
3481                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3482                         {"$ref": "#/definitions/oic.r.mode"}
3483                     ],
3484                     "required": ["modes"]
3485                 }
3486
3487             example: |
3488                 {
3489                     "id": "unique_example_id",
3490                     "modes": ["armedAway"]
3491                 }
3492
3493     responses :
3494         200:
3495             body:
3496                 application/json:
3497                     schema: |
3498                         {
3499                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mode-Update.json#",
3500                             "$schema": "http://json-schema.org/draft-04/schema#",
3501                             "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
3502 reserved.",
3503                             "title": "Mode",
3504                             "definitions": {
3505                                 "oic.r.mode": {
3506                                     "type": "object",
3507                                     "properties": {
3508                                         "modes": {
3509                                             "type": "array",
3510                                             "description": "Desired mode",
3511                                             "items": {
3512                                                 "type": "string"
3513                                             }
3514                                         }
3515                                     }
3516                                 }
3517                             }
3518                         }

```

```

3516     }
3517   },
3518   "type": "object",
3519   "allof": [
3520     {"$ref": "oic.core.json#/definitions/oic.core"},
3521     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3522     {"$ref": "#/definitions/oic.r.mode"}
3523   ],
3524   "required": ["modes"]
3525 }
3526
3527 example: |
3528 {
3529   "id": "unique_example_id",
3530   "modes": ["armedAway"]
3531 }
3532
3533 403:
3534 description: |
3535   This response is generated by the OIC Server when the client sends:
3536   An update with an value for mode that is not found in supportedModes.
3537   The server responds with the current resource representation.
3538
3539 body:
3540   application/json:
3541     schema: |
3542       {
3543         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mode.json#",
3544         "$schema": "http://json-schema.org/draft-04/schema#",
3545         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
3546 reserved.",
3547         "title": "Mode",
3548         "definitions": {
3549           "oic.r.mode": {
3550             "type": "object",
3551             "properties": {
3552               "supportedModes": {
3553                 "type": "array",
3554                 "readOnly": true,
3555                 "description": "Array of possible modes the device supports.",
3556                 "items": {
3557                   "type": "string"
3558                 }
3559             },
3560             "modes": {
3561               "type": "array",
3562               "description": "Array of the currently active mode(s)",
3563               "items": {
3564                 "type": "string"
3565               }
3566             }
3567           }
3568         },
3569         "type": "object",
3570         "allof": [
3571           {"$ref": "oic.core.json#/definitions/oic.core"},
3572           {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3573           {"$ref": "#/definitions/oic.r.mode"}
3574         ],
3575         "required": ["supportedModes", "modes"]
3576       }
3577     }
3578
3579 example: |
3580 {
3581   "id": "unique_example_id",

```

```

3582         "supportedModes": ["active", "armedAway", "armedStay", "armedInstant"],
3583         "modes":           ["active"]
3584     }
3585

```

3586 6.16.5 Property Definition

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

3587 6.16.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/ModeResURI		get	post		get

3588 6.17 Open Level

3589 6.17.1 Introduction

3590 This resource describes how open or ajar an entity such as a window, door, blind or shutter is. The
3591 openLevel can be read (acting as a sensor). The openLevel can also be set (acting as an actuator).
3592 The openLevel is device dependent across the range provided. If no range is provided then 0 to
3593 100 is assumed. 0 means closed, 100 means fully open. If a range is provided the lower
3594 bound=closed, upper bound=open. The increment is the step between possible values; if not
3595 provide 1 is assumed.

3596 6.17.2 Example URI

3597 /OpenLevelResURI

3598 6.17.3 Resource Type

3599 The resource type (rt) is defined as: oic.r.openlevel.

3600 6.17.4 RAML Definition

```

3601 #%RAML 0.8
3602 title: OICOpenLevel
3603 version: v1.1.0-20160519
3604 traits:
3605   - interface :
3606       queryParameters:
3607         if:
3608             enum: ["oic.if.a", "oic.if.baseline"]
3609
3610 /OpenLevelResURI:
3611     description: |
3612         This resource describes how open or ajar an entity such as a window, door, blind or shutter is.
3613         The openLevel can be read (acting as a sensor).
3614         The openLevel can also be set (acting as an actuator).
3615         The openLevel is device dependent across the range provided.
3616         If no range is provided then 0 to 100 is assumed.
3617         0 means closed, 100 means fully open.
3618         If a range is provided the lower bound=closed, upper bound=open.
3619         The increment is the step between possible values; if not provide 1 is assumed.
3620
3621     is : ['interface']
3622     get:
3623         description: |

```

```

3624         Retrieves the current openLevel.
3625
3626     responses :
3627         200:
3628             body:
3629                 application/json:
3630                     schema: |
3631                         {
3632                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.openLevel.json#",
3633                             "$schema": "http://json-schema.org/draft-04/schema#",
3634                             "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
3635 reserved.",
3636                             "title": "Open Level",
3637                             "definitions": {
3638                                 "oic.r.openlevel": {
3639                                     "type": "object",
3640                                     "properties": {
3641                                         "openLevel": {
3642                                             "type": "integer",
3643                                             "description": "How open or ajar the entity is"
3644                                         },
3645                                         "increment": {
3646                                             "type": "integer",
3647                                             "readOnly": true,
3648                                             "description": "The step between possible values"
3649                                         },
3650                                         "range": {
3651                                             "type": "array",
3652                                             "readOnly": true,
3653                                             "description": "Lower bound=closed, Upper bound=open",
3654                                             "items": {
3655                                                 "type": "integer"
3656                                             }
3657                                         }
3658                                     }
3659                                 }
3660                             },
3661                             "type": "object",
3662                             "allof": [
3663                                 {"$ref": "oic.core.json#/definitions/oic.core"},
3664                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3665                                 {"$ref": "#/definitions/oic.r.openlevel"}
3666                             ],
3667                             "required": ["openLevel"]
3668                         }
3669
3670                     example: |
3671                         {
3672                             "rt": ["oic.r.openlevel"],
3673                             "id": "unique_example_id",
3674                             "openLevel": 50,
3675                             "increment": 2,
3676                             "range": [0,100]
3677                         }
3678
3679     post:
3680         description: |
3681             Sets the desired openLevel.
3682
3683         body:
3684             application/json:
3685                 schema: |
3686                     {
3687                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.openLevel.json#",

```



```

3688         "$schema": "http://json-schema.org/draft-04/schema#",
3689         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
reserved.",
3691         "title": "Open Level",
3692         "definitions": {
3693             "oic.r.openlevel": {
3694                 "type": "object",
3695                 "properties": {
3696                     "openLevel": {
3697                         "type": "integer",
3698                         "description": "How open or ajar the entity is"
3699                     },
3700                     "increment": {
3701                         "type": "integer",
3702                         "readOnly": true,
3703                         "description": "The step between possible values"
3704                     },
3705                     "range": {
3706                         "type": "array",
3707                         "readOnly": true,
3708                         "description": "Lower bound=closed, Upper bound=open",
3709                         "items": {
3710                             "type": "integer"
3711                         }
3712                     }
3713                 }
3714             }
3715         },
3716         "type": "object",
3717         "allOf": [
3718             {"$ref": "oic.core.json#/definitions/oic.core"},
3719             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3720             {"$ref": "#/definitions/oic.r.openlevel"}
3721         ],
3722         "required": ["openLevel"]
3723     }
3724
3725     example: |
3726     {
3727         "id":         "unique_example_id",
3728         "openLevel":  0
3729     }
3730
3731     responses :
3732     200:
3733         body:
3734             application/json:
3735                 schema: |
3736                 {
3737                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.openLevel.json#",
3738                     "$schema": "http://json-schema.org/draft-04/schema#",
3739                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
reserved.",
3741                     "title": "Open Level",
3742                     "definitions": {
3743                         "oic.r.openlevel": {
3744                             "type": "object",
3745                             "properties": {
3746                                 "openLevel": {
3747                                     "type": "integer",
3748                                     "description": "How open or ajar the entity is"
3749                                 },
3750                                 "increment": {
3751                                     "type": "integer",
3752                                     "readOnly": true,
3753                                     "description": "The step between possible values"
3754                                 }
3755                             }
3756                         }
3757                     }
3758                 }

```

```

3755         "range": {
3756             "type": "array",
3757             "readOnly": true,
3758             "description": "Lower bound=closed, Upper bound=open",
3759             "items": {
3760                 "type": "integer"
3761             }
3762         }
3763     }
3764 }
3765 },
3766 "type": "object",
3767 "allof": [
3768     {"$ref": "oic.core.json#/definitions/oic.core"},
3769     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3770     {"$ref": "#/definitions/oic.r.openlevel"}
3771 ],
3772 "required": ["openLevel"]
3773 }
3774
3775 example: |
3776 {
3777     "id": "unique_example_id",
3778     "openLevel": 0
3779 }
3780
3781 403:
3782 description: |
3783     This response is generated by the OIC Server when the client sends:
3784     An update with an out of range property value for openLevel.
3785     The server responds with the current resource representation.
3786
3787 body:
3788     application/json:
3789         schema: |
3790             {
3791                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.openLevel.json#",
3792                 "$schema": "http://json-schema.org/draft-04/schema#",
3793                 "description": "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
3794 reserved.",
3795                 "title": "Open Level",
3796                 "definitions": {
3797                     "oic.r.openlevel": {
3798                         "type": "object",
3799                         "properties": {
3800                             "openLevel": {
3801                                 "type": "integer",
3802                                 "description": "How open or ajar the entity is"
3803                             },
3804                             "increment": {
3805                                 "type": "integer",
3806                                 "readOnly": true,
3807                                 "description": "The step between possible values"
3808                             },
3809                             "range": {
3810                                 "type": "array",
3811                                 "readOnly": true,
3812                                 "description": "Lower bound=closed, Upper bound=open",
3813                                 "items": {
3814                                     "type": "integer"
3815                                 }
3816                             }
3817                         }
3818                     },
3819                 },
3820                 "type": "object",
3821                 "allof": [

```

```

3822         {"$ref": "oic.core.json#/definitions/oic.core"},
3823         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3824         {"$ref": "#/definitions/oic.r.openlevel"}
3825     ],
3826     "required": ["openLevel"]
3827 }
3828
3829 example: |
3830 {
3831     "id":          "unique_example_id",
3832     "openLevel":   50,
3833     "increment":   2,
3834     "range":       [0,100]
3835 }
3836

```

6.17.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
openLevel	integer	yes	Read Write	How open or ajar the entity is
increment	integer		Read Only	The step between possible values
range	array		Read Only	Lower bound=closed, Upper bound=open

6.17.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/OpenLevelResURI		get	post		get

6.18 Operational State

6.18.1 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 machineStates is an array of the possible operational states. The currentMachineState is the current state of operation of the device. The jobStates is an array of the possible job states. The currentJobState is the currently active jobState. The runningTime is the ISO8601 encoded elapsed time in the current operational state. The remainingTime is the ISO8601 encoded time till completion of the current operational state. The progressPercentage is the percentage completeness of the current jobState.

6.18.2 Example URI

/OperationalStateResURI

6.18.3 Resource Type

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

6.18.4 RAML Definition

```

3854 #%RAML 0.8
3855 title: OICOperation
3856 version: v1.1.0-20160519
3857 traits:
3858   - interface :
3859       queryParameters:
3860         if:
3861             enum: ["oic.if.a", "oic.if.baseline"]

```

```

3862
3863 /OperationalStateResURI:
3864     description: |
3865         This resource describes the operational and job states on a device.
3866         The states can be read or set, setting indicates a desired state.
3867         A device may reject an attempt to set a state that would result
3868         in adverse operational characteristics.
3869         The machineStates is an array of the possible operational states.
3870         The currentMachineState is the current state of operation of the device.
3871         The jobStates is an array of the possible job states.
3872         The currentJobState is the currently active jobState.
3873         The runningTime is the ISO8601 encoded elapsed time in the current operational state.
3874         The remainingTime is the ISO8601 encoded time till completion of the current operational state.
3875         The progressPercentage is the percentage completeness of the current jobState.
3876
3877     is : ['interface']
3878     get:
3879         description: |
3880             Retrieves the current operational and job states.
3881
3882     responses :
3883         200:
3884             body:
3885                 application/json:
3886                     schema: |
3887                         {
3888                             "id":
3889 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.operational.state.json#",
3890                             "$schema": "http://json-schema.org/draft-04/schema#",
3891                             "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
3892 reserved.",
3893                             "title": "Operational State",
3894                             "definitions": {
3895                                 "oic.r.operational.state": {
3896                                     "type": "object",
3897                                     "properties": {
3898                                         "machineStates": {
3899                                             "type": "array",
3900                                             "readOnly": true,
3901                                             "description": "array of the possible operational states.",
3902                                             "items": {
3903                                                 "type": "string"
3904                                             }
3905                                         },
3906                                         "currentMachineState": {
3907                                             "type": "string",
3908                                             "description": "Current state of operation of the device."
3909                                         },
3910                                         "jobStates": {
3911                                             "type": "array",
3912                                             "readOnly": true,
3913                                             "description": "array of the possible job states.",
3914                                             "items": {
3915                                                 "type": "string"
3916                                             }
3917                                         },
3918                                         "currentJobState": {
3919                                             "type": "string",
3920                                             "description": "Currently active jobState"
3921                                         },
3922                                         "runningTime": {
3923                                             "type": "string",
3924                                             "readOnly": true,
3925                                             "description": "Elapsed time in the current operational state"
3926                                         }
3927                                     }
3928                                 }
3929                             }

```

```

3927         "remainingTime": {
3928             "type": "string",
3929             "readOnly": true,
3930             "description": "Time till completion of the current operational state"
3931         },
3932         "progressPercentage": {
3933             "type": "integer",
3934             "readOnly": true,
3935             "description": "Percentage completeness of the current jobState"
3936         }
3937     }
3938 }
3939 },
3940 "type": "object",
3941 "allof": [
3942     {"$ref": "oic.core.json#/definitions/oic.core"},
3943     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3944     {"$ref": "#/definitions/oic.r.operational.state"}
3945 ],
3946 "required": ["machineStates", "currentMachineState"]
3947 }
3948
3949 example: |
3950 {
3951     "rt": ["oic.r.operational.state"],
3952     "id": "unique_example_id",
3953     "machineStates": ["pause", "stopped", "idle", "active"],
3954     "currentMachineState": "active",
3955     "jobStates": ["preWash", "wash", "rinse", "spin", "dry", "airDry",
3956 "wrinklePrevent"],
3957     "currentJobState": "rinse",
3958     "runningTime": "PT15M20S",
3959     "remainingTime": "PT10M40S",
3960     "progressPercentage": 75
3961 }
3962
3963 post:
3964     description: |
3965         Sets the desired operational or job state.
3966
3967     body:
3968         application/json:
3969             schema: |
3970                 {
3971                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.operational.state-
3972 Update.json#",
3973                     "$schema": "http://json-schema.org/draft-04/schema#",
3974                     "description": "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
3975 reserved.",
3976                     "title": "Operational State",
3977                     "definitions": {
3978                         "oic.r.operational.state": {
3979                             "type": "object",
3980                             "properties": {
3981                                 "currentMachineState": {
3982                                     "type": "string",
3983                                     "description": "Current state of operation of the device."
3984                                 },
3985                                 "currentJobState": {
3986                                     "type": "string",
3987                                     "description": "Currently active jobState"
3988                                 }
3989                             }
3990                         }
3991                     },
3992                     "type": "object",
3993                     "allof": [

```

```

3994         {"$ref": "oic.core.json#/definitions/oic.core"},
3995         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3996         {"$ref": "#/definitions/oic.r.operational.state"}
3997     ]
3998 }
3999
4000 example: |
4001     {
4002         "id":                "unique_example_id",
4003         "currentMachineState": "pause",
4004         "currentJobState":    "wash"
4005     }
4006
4007 responses :
4008     200:
4009         body:
4010             application/json:
4011                 schema: |
4012                     {
4013                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.operational.state-
4014 Update.json#",
4015                         "$schema": "http://json-schema.org/draft-04/schema#",
4016                         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
4017 reserved.",
4018                         "title": "Operational State",
4019                         "definitions": {
4020                             "oic.r.operational.state": {
4021                                 "type": "object",
4022                                 "properties": {
4023                                     "currentMachineState": {
4024                                         "type": "string",
4025                                         "description": "Current state of operation of the device."
4026                                     },
4027                                     "currentJobState": {
4028                                         "type": "string",
4029                                         "description": "Currently active jobState"
4030                                     }
4031                                 }
4032                             }
4033                         },
4034                         "type": "object",
4035                         "allof": [
4036                             {"$ref": "oic.core.json#/definitions/oic.core"},
4037                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4038                             {"$ref": "#/definitions/oic.r.operational.state"}
4039                         ]
4040                     }
4041
4042 example: |
4043     {
4044         "id":                "unique_example_id",
4045         "currentMachineState": "pause",
4046         "currentJobState":    "wash"
4047     }
4048
4049 403:
4050     description: |
4051         This response is generated by the OIC Server when the client sends:
4052         An update with an value for currentMachineState that is not found in machineStates.
4053         An update with an value for currentJobState that is not found in jobStates.
4054         The server responds with the current resource representation.
4055
4056     body:
4057         application/json:

```

```

4058         schema: |
4059             {
4060                 "id":
4061 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.operational.state.json#",
4062                 "$schema": "http://json-schema.org/draft-04/schema#",
4063                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
4064 reserved.",
4065                 "title": "Operational State",
4066                 "definitions": {
4067                     "oic.r.operational.state": {
4068                         "type": "object",
4069                         "properties": {
4070                             "machineStates": {
4071                                 "type": "array",
4072                                 "readOnly": true,
4073                                 "description": "array of the possible operational states.",
4074                                 "items": {
4075                                     "type": "string"
4076                                 }
4077                             },
4078                             "currentMachineState": {
4079                                 "type": "string",
4080                                 "description": "Current state of operation of the device."
4081                             },
4082                             "jobStates": {
4083                                 "type": "array",
4084                                 "readOnly": true,
4085                                 "description": "array of the possible job states.",
4086                                 "items": {
4087                                     "type": "string"
4088                                 }
4089                             },
4090                             "currentJobState": {
4091                                 "type": "string",
4092                                 "description": "Currently active jobState"
4093                             },
4094                             "runningTime": {
4095                                 "type": "string",
4096                                 "readOnly": true,
4097                                 "description": "Elapsed time in the current operational state"
4098                             },
4099                             "remainingTime": {
4100                                 "type": "string",
4101                                 "readOnly": true,
4102                                 "description": "Time till completion of the current operational state"
4103                             },
4104                             "progressPercentage": {
4105                                 "type": "integer",
4106                                 "readOnly": true,
4107                                 "description": "Percentage completeness of the current jobState"
4108                             }
4109                         }
4110                     }
4111                 },
4112                 "type": "object",
4113                 "allOf": [
4114                     {"$ref": "oic.core.json#/definitions/oic.core"},
4115                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4116                     {"$ref": "#/definitions/oic.r.operational.state"}
4117                 ],
4118                 "required": ["machineStates", "currentMachineState"]
4119             }
4120
4121         example: |
4122             {
4123                 "id": "unique_example_id",
4124                 "machineStates": ["pause", "stopped", "idle", "active"],
4125                 "currentMachineState": "active",
4126                 "jobStates": ["preWash", "wash", "rinse", "spin", "dry", "airDry",

```

```

4127 "wrinklePrevent"],
4128     "currentJobState":      "rinse",
4129     "runningTime":         "PT15M20S",
4130     "remainingTime":       "PT10M40S",
4131     "progressPercentage":  75
4132   }
4133

```

6.18.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
machineStates	array	yes	Read Only	Array Of The Possible Operational States.
currentMachineState	string	yes	Read Write	Current state of operation of the device.
jobStates	array		Read Only	Array Of The Possible Job States.
currentJobState	string		Read Write	Currently active jobState
runningTime	string		Read Only	Elapsed time in the current operational state
remainingTime	string		Read Only	Time till completion of the current operational state
progressPercentage	integer		Read Only	Percentage completeness of the current jobState

6.18.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/OperationalStateResURI		get	post		get

6.19 Ramp Time

6.19.1 Introduction

This resource that describes the Ramp Time of a dimming function. This specifies the actual speed of changing between 2 dimming values. Time is specified in milliseconds [ms]. If the range value is not specified then the maximum value is 100 ms. The RampTime of 0ms indicates the minimal delay possible by the implementation.

6.19.2 Example URI

/RampTimeResURI

6.19.3 Resource Type

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

6.19.4 RAML Definition

```

4147 #%RAML 0.8
4148 title: OICRampTime
4149 version: v1.1.0-20160519
4150 traits:
4151   - interface :
4152     queryParameters:

```



```

4153         if:
4154             enum: ["oic.if.a", "oic.if.baseline"]
4155
4156 /RampTimeResURI:
4157     description: |
4158         This resource that describes the Ramp Time of a dimming function.
4159         This specifies the actual speed of changing between 2 dimming values.
4160         Time is specified in milliseconds [ms].
4161         If the range value is not specified then the maximum value is 100 ms.
4162         The RampTime of 0ms indicates the minimal delay possible by the implementation.
4163
4164     is : ['interface']
4165     get:
4166         description: |
4167             Retrieves the current RampTime.
4168
4169     responses :
4170         200:
4171             body:
4172                 application/json:
4173                     schema: |
4174                         {
4175                             "id":
4176 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.rampTime.json#",
4177                             "$schema": "http://json-schema.org/draft-04/schema#",
4178                             "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
4179 reserved.",
4180                             "title": "Ramp Time",
4181                             "definitions": {
4182                                 "oic.r.light.ramptime": {
4183                                     "type": "object",
4184                                     "properties": {
4185                                         "rampTime": {
4186                                             "type": "integer",
4187                                             "description": "Actual speed of changing between 2 dimming values"
4188                                         },
4189                                         "range": {
4190                                             "type": "array",
4191                                             "readOnly": true,
4192                                             "description": "Min and Max of possible values",
4193                                             "items": {
4194                                                 "type": "integer"
4195                                             }
4196                                         }
4197                                     }
4198                                 },
4199                                 "type": "object",
4200                                 "allOf": [
4201                                     {"$ref": "oic.core.json#/definitions/oic.core"},
4202                                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4203                                     {"$ref": "#/definitions/oic.r.light.ramptime"}
4204                                 ],
4205                                 "required": ["rampTime"]
4206                             }
4207
4208
4209     example: |
4210         {
4211             "rt":         ["oic.r.light.ramptime"],
4212             "id":         "unique_example_id",
4213             "rampTime": 0,
4214             "range":      [0,100]
4215         }
4216

```

```

4217 post:
4218     description: |
4219         Sets the current RampTime.
4220
4221     body:
4222         application/json:
4223             schema: |
4224                 {
4225                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.rampTime.json#",
4226                     "$schema": "http://json-schema.org/draft-04/schema#",
4227                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
4228 reserved.",
4229                     "title": "Ramp Time",
4230                     "definitions": {
4231                         "oic.r.light.ramptime": {
4232                             "type": "object",
4233                             "properties": {
4234                                 "rampTime": {
4235                                     "type": "integer",
4236                                     "description": "Actual speed of changing between 2 dimming values"
4237                                 },
4238                                 "range": {
4239                                     "type": "array",
4240                                     "readOnly": true,
4241                                     "description": "Min and Max of possible values",
4242                                     "items": {
4243                                         "type": "integer"
4244                                     }
4245                                 }
4246                             }
4247                         }
4248                     },
4249                     "type": "object",
4250                     "allOf": [
4251                         {"$ref": "oic.core.json#/definitions/oic.core"},
4252                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4253                         {"$ref": "#/definitions/oic.r.light.ramptime"}
4254                     ],
4255                     "required": ["rampTime"]
4256                 }
4257
4258     example: |
4259         {
4260             "id": "unique_example_id",
4261             "rampTime": 50
4262         }
4263
4264     responses :
4265         200:
4266             body:
4267                 application/json:
4268                     schema: |
4269                         {
4270                             "id":
4271 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.rampTime.json#",
4272                             "$schema": "http://json-schema.org/draft-04/schema#",
4273                             "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
4274 reserved.",
4275                             "title": "Ramp Time",
4276                             "definitions": {
4277                                 "oic.r.light.ramptime": {
4278                                     "type": "object",
4279                                     "properties": {
4280                                         "rampTime": {
4281                                             "type": "integer",

```

```

4282         "description": "Actual speed of changing between 2 dimming values"
4283     },
4284     "range": {
4285         "type": "array",
4286         "readOnly": true,
4287         "description": "Min and Max of possible values",
4288         "items": {
4289             "type": "integer"
4290         }
4291     }
4292 }
4293 }
4294 },
4295 "type": "object",
4296 "allof": [
4297     {"$ref": "oic.core.json#/definitions/oic.core"},
4298     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4299     {"$ref": "#/definitions/oic.r.light.ramptime"}
4300 ],
4301 "required": ["rampTime"]
4302 }
4303
4304 example: |
4305 {
4306     "id": "unique_example_id",
4307     "rampTime": 50
4308 }
4309
4310 403:
4311 description: |
4312     This response is generated by the OIC Server when the client sends:
4313     An update with an out of range property value for rampTime.
4314     The server responds with the current resource representation.
4315
4316 body:
4317     application/json:
4318         schema: |
4319             {
4320                 "id":
4321 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.rampTime.json#",
4322                 "$schema": "http://json-schema.org/draft-04/schema#",
4323                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
4324 reserved.",
4325                 "title": "Ramp Time",
4326                 "definitions": {
4327                     "oic.r.light.ramptime": {
4328                         "type": "object",
4329                         "properties": {
4330                             "rampTime": {
4331                                 "type": "integer",
4332                                 "description": "Actual speed of changing between 2 dimming values"
4333                             },
4334                             "range": {
4335                                 "type": "array",
4336                                 "readOnly": true,
4337                                 "description": "Min and Max of possible values",
4338                                 "items": {
4339                                     "type": "integer"
4340                                 }
4341                             }
4342                         }
4343                     }
4344                 },
4345                 "type": "object",
4346                 "allof": [
4347                     {"$ref": "oic.core.json#/definitions/oic.core"},
4348                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},

```

```

4349         {"$ref": "#/definitions/oic.r.light.ramptime"}
4350     },
4351     "required": ["rampTime"]
4352 }
4353
4354 example: |
4355     {
4356         "id": "unique_example_id",
4357         "rampTime": 40
4358     }
4359

```

6.19.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
rampTime	integer	yes	Read Write	Actual speed of changing between 2 dimming values
range	array		Read Only	Min and Max of possible values

6.19.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/RampTimeResURI		get	post		get

6.20 Refrigeration

6.20.1 Introduction

This resource describes a refrigeration function. This is not a Refrigerator device. The filter state is a read-only value providing the percentage life time remaining for the water filter. RapidFreeze is a boolean that controls the rapid freeze capability if present. RapidCool is a boolean that controls the rapid cool capability if present. Defrost is a boolean that controls the defrost cycle if present.

6.20.2 Example URI

/RefrigerationResURI

6.20.3 Resource Type

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

6.20.4 RAML Definition

```

4373 #%RAML 0.8
4374 title: OICRefrigeration
4375 version: v1.1.0-20160519
4376 traits:
4377   - interface :
4378       queryParameters:
4379         if:
4380           enum: ["oic.if.a", "oic.if.baseline"]
4381   - supportedOps :
4382       queryParameters:
4383         supportedValues:
4384           description: Queries the resource for supported properties and their current state
4385
4386 /RefrigerationResURI:
4387   description: |
4388     This resource describes a refrigeration function.
4389     This is not a Refrigerator device.
4390     The filter state is a read-only value providing the percentage life time remaining for the
4391     water filter.

```

```

4392     RapidFreeze is a boolean that controls the rapid freeze capability if present.
4393     RapidCool is a boolean that controls the rapid cool capability if present.
4394     Defrost is a boolean that controls the defrost cycle if present.
4395
4396 is : ['interface','supportedOps']
4397 get:
4398     description: |
4399         Retrieves the current Refrigeration function status.
4400         If the 'supportedValues' query parameter is included then all values are provided that the
4401         device supports, not just those which are active.
4402         If the 'supportedValues' query parameter is not included then only those values that are
4403         active are returned.
4404
4405 responses :
4406     200:
4407         body:
4408             application/json:
4409                 schema: |
4410                     {
4411                         "id":
4412 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.refrigeration.json#",
4413                         "$schema": "http://json-schema.org/draft-04/schema#",
4414                         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
4415 reserved.",
4416                         "title": "Refrigeration",
4417                         "definitions": {
4418                             "oic.r.refrigeration": {
4419                                 "type": "object",
4420                                 "properties": {
4421                                     "filter": {
4422                                         "type": "integer",
4423                                         "readOnly": true,
4424                                         "description": "Percentage life time remaining for the water filter"
4425                                     },
4426                                     "rapidFreeze": {
4427                                         "type": "boolean",
4428                                         "description": "Indicates whether the unit has a rapid freeze capability
4429 active."
4430                                     },
4431                                     "rapidCool": {
4432                                         "type": "boolean",
4433                                         "description": "Indicates whether the unit has a rapid cool capability
4434 active"
4435                                     },
4436                                     "defrost": {
4437                                         "type": "boolean",
4438                                         "description": "Indicates whether a defrost cycle is currently active"
4439                                     }
4440                                 }
4441                             }
4442                         },
4443                         "type": "object",
4444                         "allOf": [
4445                             {"$ref": "oic.core.json#/definitions/oic.core"},
4446                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4447                             {"$ref": "#/definitions/oic.r.refrigeration"}
4448                         ]
4449                     }
4450
4451 example: |
4452     {
4453         "rt":          ["oic.r.refrigeration"],
4454         "id":          "unique_example_id",
4455         "filter":      75,
4456         "rapidFreeze": false,

```

```

4457         "rapidCool":    false,
4458         "defrost":      true
4459     }
4460
4461     post:
4462         description: |
4463             Activates the desired Refrigeration functions.
4464             Suported values are rapidFreeze, rapidCool and defrost.
4465
4466         body:
4467             application/json:
4468                 schema: |
4469                     {
4470                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.refrigeration-
4471 Update.json#",
4472                         "$schema": "http://json-schema.org/draft-04/schema#",
4473                         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
4474 reserved.",
4475                         "title": "Refrigeration",
4476                         "definitions": {
4477                             "oic.r.refrigeration": {
4478                                 "type": "object",
4479                                 "properties": {
4480                                     "rapidFreeze": {
4481                                         "type": "boolean",
4482                                         "description": "Indicates whether the unit has a rapid freeze capability
4483 active."
4484                                     },
4485                                     "rapidCool": {
4486                                         "type": "boolean",
4487                                         "description": "Indicates whether the unit has a rapid cool capability active"
4488                                     },
4489                                     "defrost": {
4490                                         "type": "boolean",
4491                                         "description": "Indicates whether a defrost cycle is currently active"
4492                                     }
4493                                 }
4494                             }
4495                         },
4496                         "type": "object",
4497                         "allOf": [
4498                             {"$ref": "oic.core.json#/definitions/oic.core"},
4499                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4500                             {"$ref": "#/definitions/oic.r.refrigeration"}
4501                         ]
4502                     }
4503
4504         example: |
4505             {
4506                 "id":      "unique_example_id",
4507                 "defrost": false
4508             }
4509
4510     responses :
4511         200:
4512             description: |
4513                 Indicates that the Refrigeration function was changed.
4514                 The new status is provided in the response.
4515
4516             body:
4517                 application/json:
4518                     schema: |
4519                         {
4520                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.refrigeration-

```

```

4521 Update.json#",
4522     "$schema": "http://json-schema.org/draft-04/schema#",
4523     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
4524 reserved.",
4525     "title": "Refrigeration",
4526     "definitions": {
4527         "oic.r.refrigeration": {
4528             "type": "object",
4529             "properties": {
4530                 "rapidFreeze": {
4531                     "type": "boolean",
4532                     "description": "Indicates whether the unit has a rapid freeze capability
4533 active."
4534                 },
4535                 "rapidCool": {
4536                     "type": "boolean",
4537                     "description": "Indicates whether the unit has a rapid cool capability
4538 active"
4539                 },
4540                 "defrost": {
4541                     "type": "boolean",
4542                     "description": "Indicates whether a defrost cycle is currently active"
4543                 }
4544             }
4545         },
4546         "type": "object",
4547         "allof": [
4548             {"$ref": "oic.core.json#/definitions/oic.core"},
4549             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4550             {"$ref": "#/definitions/oic.r.refrigeration"}
4551         ]
4552     }
4553 }
4554
4555 example: |
4556 {
4557     "id": "unique_example_id",
4558     "defrost": false
4559 }
4560

```

4561 6.20.5 Property Definition

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

4562 6.20.6 CRUDN Behaviour

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

/RefrigerationResURI		get	post		get
----------------------	--	-----	------	--	-----

6.21 Temperature

6.21.1 Introduction

This resource describes a sensed or actuated Temperature value. The temperature describes the current value measured. The 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]. The range is an array with min,max values for this temperature on this device. If no range is provided the default is +/- MAXINT.

6.21.2 Example URI

/TemperatureResURI

6.21.3 Resource Type

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

6.21.4 RAML Definition

```

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

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

/temperatureResURI:
    description: |
        This resource describes a sensed or actuated Temperature value.
        The temperature describes the current value measured.
        The 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].
        The range is an array with min,max values for this temperature on this device.
        If no range is provided the default is +/- MAXINT.

    is : ['interface']
    get:
        description: |
            Retrieves the current temperature value.
            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.

        queryParameters:
            units:
                enum: CFK

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

```



```

4615         "title": "Temperature",
4616         "definitions": {
4617             "oic.r.temperature": {
4618                 "type": "object",
4619                 "properties": {
4620                     "temperature": {
4621                         "type": "number",
4622                         "description": "Current temperature setting or measurement"
4623                     },
4624                     "units": {
4625                         "oneOf": [
4626                             {
4627                                 "enum": ["C", "F", "K"],
4628                                 "readOnly": true,
4629                                 "description": "Units for the temperature value"
4630                             },
4631                             {
4632                                 "type": "array",
4633                                 "items": {
4634                                     "enum": ["C", "F", "K"]
4635                                 }
4636                             }
4637                         ]
4638                     },
4639                     "range": {
4640                         "type": "array",
4641                         "readOnly": true,
4642                         "description": "Array defining min,max values for this temperature on this
4643 device",
4644                         "items": {
4645                             "type": "number"
4646                         }
4647                     }
4648                 }
4649             },
4650             "type": "object",
4651             "allOf": [
4652                 {"$ref": "oic.core.json#/definitions/oic.core"},
4653                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4654                 {"$ref": "#/definitions/oic.r.temperature"}
4655             ],
4656             "required": ["temperature"]
4657         }
4658     }
4659
4660     example: |
4661     {
4662         "rt":          ["oic.r.temperature"],
4663         "id":          "unique_example_id",
4664         "temperature": 20.0,
4665         "units":       "C",
4666         "range":       [0.0,100.0]
4667     }
4668

```

403:

```

4670     description: |
4671         This response is generated by the OIC Server when the client sends:
4672         A retrieve with q queryParameter indicating a unit that the server does not support.
4673         The server responds with the current resource representation including the
4674         units property illustrating the supported units and the error.
4675

```

body:

application/json:

schema: |

```

4679     {
4680         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.temperature.json#",
4681         "$schema": "http://json-schema.org/draft-04/schema#",

```

```

4682         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
4683 reserved.",
4684         "title": "Temperature",
4685         "definitions": {
4686             "oic.r.temperature": {
4687                 "type": "object",
4688                 "properties": {
4689                     "temperature": {
4690                         "type": "number",
4691                         "description": "Current temperature setting or measurement"
4692                     },
4693                     "units": {
4694                         "oneOf": [
4695                             {
4696                                 "enum": ["C", "F", "K"],
4697                                 "readOnly": true,
4698                                 "description": "Units for the temperature value"
4699                             },
4700                             {
4701                                 "type": "array",
4702                                 "items": {
4703                                     "enum": ["C", "F", "K"]
4704                                 }
4705                             }
4706                         ]
4707                     },
4708                     "range": {
4709                         "type": "array",
4710                         "readOnly": true,
4711                         "description": "Array defining min,max values for this
4712 device",
4713                         "items": {
4714                             "type": "number"
4715                         }
4716                     }
4717                 }
4718             },
4719             "type": "object",
4720             "allof": [
4721                 {"$ref": "oic.core.json#/definitions/oic.core"},
4722                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4723                 {"$ref": "#/definitions/oic.r.temperature"}
4724             ],
4725             "required": ["temperature"]
4726         }
4727     }
4728
4729     example: |
4730     {
4731         "id":          "unique_example_id",
4732         "temperature": 20.0,
4733         "units":       "C"
4734     }
4735
4736     post:
4737         description: |
4738             Sets the desired temperature value.
4739             If a unit is included and the server does not support the unit indictaed the request will
4740 fail.
4741             If the units are omitted value is taken to be in C.
4742
4743     body:
4744         application/json:
4745             schema: |
4746             {
4747                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.temperature.json#",
4748                 "$schema": "http://json-schema.org/draft-04/schema#",

```

```

4749     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
4750 reserved.",
4751     "title": "Temperature",
4752     "definitions": {
4753         "oic.r.temperature": {
4754             "type": "object",
4755             "properties": {
4756                 "temperature": {
4757                     "type": "number",
4758                     "description": "Current temperature setting or measurement"
4759                 },
4760                 "units": {
4761                     "oneOf": [
4762                         {
4763                             "enum": ["C", "F", "K"],
4764                             "readOnly": true,
4765                             "description": "Units for the temperature value"
4766                         },
4767                         {
4768                             "type": "array",
4769                             "items": {
4770                                 "enum": ["C", "F", "K"]
4771                             }
4772                         }
4773                     ]
4774                 },
4775                 "range": {
4776                     "type": "array",
4777                     "readOnly": true,
4778                     "description": "Array defining min,max values for this temperature on this
4779 device",
4780                     "items": {
4781                         "type": "number"
4782                     }
4783                 }
4784             }
4785         },
4786     },
4787     "type": "object",
4788     "allOf": [
4789         {"$ref": "oic.core.json#/definitions/oic.core"},
4790         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4791         {"$ref": "#/definitions/oic.r.temperature"}
4792     ],
4793     "required": ["temperature"]
4794 }
4795
4796 example: |
4797 {
4798     "id":          "unique_example_id",
4799     "temperature": 18.0
4800 }
4801
4802 responses :
4803 200:
4804     body:
4805         application/json:
4806             schema: |
4807                 {
4808                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.temperature.json#",
4809                     "$schema": "http://json-schema.org/draft-04/schema#",
4810                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
4811 reserved.",
4812                     "title": "Temperature",
4813                     "definitions": {
4814                         "oic.r.temperature": {
4815                             "type": "object",

```

```

4816         "properties": {
4817             "temperature": {
4818                 "type": "number",
4819                 "description": "Current temperature setting or measurement"
4820             },
4821             "units": {
4822                 "oneOf": [
4823                     {
4824                         "enum": ["C", "F", "K"],
4825                         "readOnly": true,
4826                         "description": "Units for the temperature value"
4827                     },
4828                     {
4829                         "type": "array",
4830                         "items": {
4831                             "enum": ["C", "F", "K"]
4832                         }
4833                     }
4834                 ]
4835             },
4836             "range": {
4837                 "type": "array",
4838                 "readOnly": true,
4839                 "description": "Array defining min,max values for this temperature on this
4840 device",
4841                 "items": {
4842                     "type": "number"
4843                 }
4844             }
4845         }
4846     },
4847     "type": "object",
4848     "allOf": [
4849         {"$ref": "oic.core.json#/definitions/oic.core"},
4850         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4851         {"$ref": "#/definitions/oic.r.temperature"}
4852     ],
4853     "required": ["temperature"]
4854 }
4855
4856
4857 example: |
4858 {
4859     "id": "unique_example_id",
4860     "temperature": 18.0
4861 }
4862
4863 403:
4864 description: |
4865     This response is generated by the OIC Server when the client sends:
4866     An update with an out of range property value for temperature.
4867     An update with an unsupported unit for this server.
4868     The server responds with the current resource representation including
4869     the range property illustrating the supported range and the error.
4870
4871 body:
4872 application/json:
4873 schema: |
4874 {
4875     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.temperature.json#",
4876     "$schema": "http://json-schema.org/draft-04/schema#",
4877     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
4878 reserved.",
4879     "title": "Temperature",
4880     "definitions": {
4881         "oic.r.temperature": {
4882             "type": "object",

```

```

4883         "properties": {
4884             "temperature": {
4885                 "type": "number",
4886                 "description": "Current temperature setting or measurement"
4887             },
4888             "units": {
4889                 "oneOf": [
4890                     {
4891                         "enum": ["C", "F", "K"],
4892                         "readOnly": true,
4893                         "description": "Units for the temperature value"
4894                     },
4895                     {
4896                         "type": "array",
4897                         "items": {
4898                             "enum": ["C", "F", "K"]
4899                         }
4900                     }
4901                 ]
4902             },
4903             "range": {
4904                 "type": "array",
4905                 "readOnly": true,
4906                 "description": "Array defining min,max values for this temperature on this
4907 device",
4908                 "items": {
4909                     "type": "number"
4910                 }
4911             }
4912         }
4913     },
4914     "type": "object",
4915     "allof": [
4916         {"$ref": "oic.core.json#/definitions/oic.core"},
4917         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4918         {"$ref": "#/definitions/oic.r.temperature"}
4919     ],
4920     "required": ["temperature"]
4921 }
4922
4923
4924 example: |
4925 {
4926     "id":          "unique_example_id",
4927     "temperature": 20.0,
4928     "units":       "C",
4929     "range":       [0.0,100.0]
4930 }
4931

```

6.21.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
temperature	number	yes	Read Write	Current temperature setting or measurement
units	object		Read Write	
range	array		Read Only	Array defining min,max values for this temperature on this device

6.21.6 CRUDN Behaviour

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

/TemperatureResURI		get	post		get
--------------------	--	-----	------	--	-----

6.22 Time Period

6.22.1 Introduction

This resource describes the time period over which any additionally provided information is derived or bounded. The start and stop times are ISO8601 encoded strings.

6.22.2 Example URI

/TimePeriodResURI

6.22.3 Resource Type

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

6.22.4 RAML Definition

##RAML 0.8

title: OICTimePeriod

version: v1.1.0-20160519

traits:

- interface :

queryParameters:

if:

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

/TimePeriodResURI:

description: |

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

The start and stop times are ISO8601 encoded strings.

is : ['interface']

get:

description: |

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

responses :

200:

body:

application/json:

schema: |

{

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

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

"description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights

reserved.",

"title": "Time Period",

"definitions": {

"oic.r.time.period": {

"type": "object",

"properties": {

"startTime":{

"type": "string",

"format": "date-time",

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

},

"stopTime": {

"type": "string",

"format": "date-time",

"description": "Stop time for the time period"

}

```

4988         }
4989     },
4990 },
4991 "type": "object",
4992 "allOf": [
4993     {"$ref": "oic.core.json#/definitions/oic.core"},
4994     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4995     {"$ref": "#/definitions/oic.r.time.period"}
4996 ],
4997 "required": ["startTime"]
4998 }
4999
5000 example: |
5001     {
5002         "rt": ["oic.r.time.period"],
5003         "id": "unique_example_id",
5004         "startTime": "2015-01-09T14:30Z",
5005         "stopTime": "2015-01-09T14:45Z"
5006     }
5007
5008 post:
5009     description: |
5010         Sets or updates a time period for information retrieval, action or other behavior.
5011
5012     body:
5013         application/json:
5014             schema: |
5015                 {
5016                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.time.period.json#",
5017                     "$schema": "http://json-schema.org/draft-04/schema#",
5018                     "description": "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
5019 reserved.",
5020                     "title": "Time Period",
5021                     "definitions": {
5022                         "oic.r.time.period": {
5023                             "type": "object",
5024                             "properties": {
5025                                 "startTime": {
5026                                     "type": "string",
5027                                     "format": "date-time",
5028                                     "description": "Start time for the time period"
5029                                 },
5030                                 "stopTime": {
5031                                     "type": "string",
5032                                     "format": "date-time",
5033                                     "description": "Stop time for the time period"
5034                                 }
5035                             }
5036                         }
5037                     },
5038                     "type": "object",
5039                     "allOf": [
5040                         {"$ref": "oic.core.json#/definitions/oic.core"},
5041                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5042                         {"$ref": "#/definitions/oic.r.time.period"}
5043                     ],
5044                     "required": ["startTime"]
5045                 }
5046
5047     example: |
5048         {
5049             "id": "unique_example_id",
5050             "startTime": "2015-01-09T14:30Z",
5051             "stopTime": "2015-01-09T14:45Z"
5052         }
5053

```

```

5054     responses :
5055         200:
5056             body:
5057                 application/json:
5058                 schema: |
5059                     {
5060                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.time.period.json#",
5061                         "$schema": "http://json-schema.org/draft-04/schema#",
5062                         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
5063 reserved.",
5064                         "title": "Time Period",
5065                         "definitions": {
5066                             "oic.r.time.period": {
5067                                 "type": "object",
5068                                 "properties": {
5069                                     "startTime":{
5070                                         "type": "string",
5071                                         "format": "date-time",
5072                                         "description": "Start time for the time period"
5073                                     },
5074                                     "stopTime": {
5075                                         "type": "string",
5076                                         "format": "date-time",
5077                                         "description": "Stop time for the time period"
5078                                     }
5079                                 }
5080                             }
5081                         },
5082                         "type": "object",
5083                         "allOf": [
5084                             {"$ref": "oic.core.json#/definitions/oic.core"},
5085                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5086                             {"$ref": "#/definitions/oic.r.time.period"}
5087                         ],
5088                         "required": ["startTime"]
5089                     }
5090
5091                 example: |
5092                     {
5093                         "id": "unique_example_id",
5094                         "startTime": "2015-01-09T14:30Z",
5095                         "stopTime": "2015-01-09T14:45Z"
5096                     }
5097

```

5098 6.22.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
startTime	string	yes	Read Write	Start time for the time period
stopTime	string		Read Write	Stop time for the time period

5099 6.22.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/TimePeriodResURI		get	post		get

5100 6.23 Activity Count

5101 6.23.1 Introduction

5102 This resource specifies an activity count. The resource can be readonly (oic.if.s interface) in which
5103 instance it represents a count. The resource can be readwrite (oic.if.a interface) in which instance
5104 it represents a goal or target for a count. The count property is an integer representing either the
5105 current count or goal value.

6.23.2 Example URI

/ActivityCountResURI

6.23.3 Resource Type

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

6.23.4 RAML Definition

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

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

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

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

  responses :
    200:
      body:
        application/json:
          schema: |
            {
              "id":
                "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.activity.count.json#",
              "$schema": "http://json-schema.org/draft-04/schema#",
              "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
reserved.",
              "title": "Activity Count Sensor",
              "definitions": {
                "oic.r.sensor.activity.count": {
                  "properties": {
                    "count": {
                      "type": "integer",
                      "description": "Current or Target count."
                    }
                  }
                }
              },
              "type": "object",
              "allof": [
                {"$ref": "oic.core.json#/definitions/oic.core"},
                {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
                {"$ref": "#/definitions/oic.r.sensor.activity.count"}
              ],
              "required": ["count"]
            }
          }
```

```

5164         example: |
5165             {
5166                 "rt":      ["oic.r.sensor.activity.count"],
5167                 "id":      "unique_example_id",
5168                 "count":   2500
5169             }
5170
5171     post:
5172         description: |
5173             Sets the count target
5174
5175     body:
5176         application/json:
5177         schema: |
5178             {
5179                 "id":
5180 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.activity.count.json#",
5181                 "$schema": "http://json-schema.org/draft-04/schema#",
5182                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
5183 reserved.",
5184                 "title": "Activity Count Sensor",
5185                 "definitions": {
5186                     "oic.r.sensor.activity.count": {
5187                         "properties": {
5188                             "count": {
5189                                 "type": "integer",
5190                                 "description": "Current or Target count."
5191                             }
5192                         }
5193                     }
5194                 },
5195                 "type": "object",
5196                 "allOf": [
5197                     {"$ref": "oic.core.json#/definitions/oic.core"},
5198                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5199                     {"$ref": "#/definitions/oic.r.sensor.activity.count"}
5200                 ],
5201                 "required": ["count"]
5202             }
5203
5204     example: |
5205         {
5206             "id":      "unique_example_id",
5207             "count":   5000
5208         }
5209
5210     responses :
5211         200:
5212             body:
5213                 application/json:
5214                 schema: |
5215                     {
5216                         "id":
5217 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.activity.count.json#",
5218                         "$schema": "http://json-schema.org/draft-04/schema#",
5219                         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
5220 reserved.",
5221                         "title": "Activity Count Sensor",
5222                         "definitions": {
5223                             "oic.r.sensor.activity.count": {
5224                                 "properties": {
5225                                     "count": {
5226                                         "type": "integer",
5227                                         "description": "Current or Target count."

```

```

5228         }
5229     }
5230 }
5231 },
5232 "type": "object",
5233 "allof": [
5234     {"$ref": "oic.core.json#/definitions/oic.core"},
5235     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5236     {"$ref": "#/definitions/oic.r.sensor.activity.count"}
5237 ],
5238 "required": ["count"]
5239 }
5240
5241 example: |
5242 {
5243     "id":      "unique_example_id",
5244     "count":   5000
5245 }
5246

```

6.23.5 Property Definition

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

6.23.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/ActivityCountResURI		get	post		get

6.24 Atmospheric Pressure Sensor

6.24.1 Introduction

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

6.24.2 Example URI

/AtmosphericPressureResURI

6.24.3 Resource Type

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

6.24.4 RAML Definition

```

5260 #%RAML 0.8
5261 title: OICAtmosphericPressureSensor
5262 version: v1.1.0-20160519
5263 traits:
5264   - interface :
5265       queryParameters:
5266         if:
5267           enum: ["oic.if.s", "oic.if.baseline"]
5268
5269 /AtmosphericPressureResURI:
5270   description: |
5271     This resource provides a measurement of Mean Sea Level Pressure experienced at the measuring
5272     point expressed in millibars.
5273     The value is float which describes the atmospheric pressure in hPa (hectoPascals).
5274     Note that hPa and the also commonly used unit of millibars (mbar) are numerically equivalent.
5275

```

```

5276     is : ['interface']
5277     get:
5278         responses :
5279             200:
5280                 body:
5281                     application/json:
5282                         schema: |
5283
5284                             {
5285                                 "id":
5286 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.atmosphericPressure.json#",
5287                                 "$schema": "http://json-schema.org/draft-04/schema#",
5288                                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
5289 reserved.",
5290                                 "title": "Atmospheric Pressure Sensor",
5291                                 "definitions": {
5292                                     "oic.r.sensor.atmosphericpressure": {
5293                                         "properties": {
5294                                             "atmosphericPressure": {
5295                                                 "type": "number",
5296                                                 "readOnly": true,
5297                                                 "description": "Current atmospheric pressure in hPa."
5298                                             }
5299                                         }
5300                                     }
5301                                 },
5302                                 "type": "object",
5303                                 "allof": [
5304                                     {"$ref": "oic.core.json#/definitions/oic.core"},
5305                                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5306                                     {"$ref": "#/definitions/oic.r.sensor.atmosphericpressure"}
5307                                 ],
5308                                 "required": ["atmosphericPressure"]
5309                             }
5310
5311                         example: |
5312
5313                             {
5314                                 "rt":                ["oic.r.sensor.atmosphericpressure"],
5315                                 "id":                "unique_example_id",
5316                                 "atmosphericPressure": 1000.4
5317                             }

```

6.24.5 Property Definition

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

6.24.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/AtmosphericPressureResURI		get			get

6.25 Audio Controls

6.25.1 Introduction

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

6.25.2 Example URI

/AudioResURI

6.25.3 Resource Type

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

6.25.4 RAML Definition

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

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

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

  is : ['interface']

  get:
    responses :
      200:
        body:
          application/json:
            schema: |
              {
                "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.audio.json#",
                "$schema": "http://json-schema.org/draft-04/schema#",
                "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
reserved.",
                "definitions": {
                  "oic.r.audio": {
                    "type": "object",
                    "properties": {
                      "volume": {
                        "type": "integer",
                        "description": "Volume setting of an audio rendering device.",
                        "minimum": 0,
                        "maximum": 100
                      },
                      "mute": {
                        "type": "boolean",
                        "description": "Mute setting of an audio rendering device"
                      }
                    }
                  }
                },
                "type": "object",
                "allOf": [
                  {"$ref": "oic.core.json#/definitions/oic.core"},
                  {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
                  {"$ref": "#/definitions/oic.r.audio"}
                ],
                "required": ["volume","mute"]
              }
            
```

```

5386         }
5387
5388     example: |
5389         {
5390             "rt":      ["oic.r.audio"],
5391             "id":      "unique_example_id",
5392             "volume":  50,
5393             "mute":    false
5394         }
5395
5396     post:
5397         body:
5398             application/json:
5399                 schema: |
5400                     {
5401                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.audio.json#",
5402                         "$schema": "http://json-schema.org/draft-04/schema#",
5403                         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
5404 reserved.",
5405                         "definitions": {
5406                             "oic.r.audio": {
5407                                 "type": "object",
5408                                 "properties": {
5409                                     "volume": {
5410                                         "type": "integer",
5411                                         "description": "Volume setting of an audio rendering device.",
5412                                         "minimum": 0,
5413                                         "maximum": 100
5414                                     },
5415                                     "mute": {
5416                                         "type": "boolean",
5417                                         "description": "Mute setting of an audio rendering device"
5418                                     }
5419                                 }
5420                             }
5421                         },
5422                         "type": "object",
5423                         "allOf": [
5424                             {"$ref": "oic.core.json#/definitions/oic.core"},
5425                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5426                             {"$ref": "#/definitions/oic.r.audio"}
5427                         ],
5428                         "required": ["volume", "mute"]
5429                     }
5430
5431     example: |
5432         {
5433             "id":      "unique_example_id",
5434             "volume":  75,
5435             "mute":    false
5436         }
5437
5438     responses :
5439         200:
5440             body:
5441                 application/json:
5442                     schema: |
5443                         {
5444                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.audio.json#",
5445                             "$schema": "http://json-schema.org/draft-04/schema#",
5446                             "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
5447 reserved.",
5448                             "definitions": {
5449                                 "oic.r.audio": {

```

```

5450         "type": "object",
5451         "properties": {
5452             "volume": {
5453                 "type": "integer",
5454                 "description": "Volume setting of an audio rendering device.",
5455                 "minimum": 0,
5456                 "maximum": 100
5457             },
5458             "mute": {
5459                 "type": "boolean",
5460                 "description": "Mute setting of an audio rendering device"
5461             }
5462         }
5463     },
5464     "type": "object",
5465     "allOf": [
5466         {"$ref": "oic.core.json#/definitions/oic.core"},
5467         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5468         {"$ref": "#/definitions/oic.r.audio"}
5469     ],
5470     "required": ["volume", "mute"]
5471 }
5472
5473
5474 example: |
5475 {
5476     "id":      "unique_example_id",
5477     "volume":  75,
5478     "mute":    false
5479 }
5480

```

6.25.5 Property Definition

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

6.25.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/AudioResURI		get	post		get

6.26 Auto Focus

6.26.1 Introduction

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

6.26.2 Example URI

/AutoFocusResURI

6.26.3 Resource Type

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

6.26.4 RAML Definition

```

5494 #%RAML 0.8
5495 title: OICAutoFocus
5496 version: v1.1.0-20160519

```

```

5497 traits:
5498   - interface :
5499     queryParameters:
5500       if:
5501         enum: ["oic.if.a", "oic.if.baseline"]
5502
5503 /AutoFocusResURI:
5504   description: |
5505     This resource describes an auto focus on/off feature (on/off).
5506     The value is a boolean.
5507     An AutoFocus value of 'true' means that the switch is on.
5508     An AutoFocus value of 'false' means that the switch is off.
5509     Note that when Pan Tilt Zoom (see 'Pan Tilt Zoom' Resource definition) is used the autofocus
5510     works only in the selected area.
5511
5512   is : ['interface']
5513   get:
5514     responses :
5515       200:
5516         body:
5517           application/json:
5518             schema: |
5519               {
5520                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.autofocus.json#",
5521                 "$schema": "http://json-schema.org/draft-04/schema#",
5522                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
5523 reserved.",
5524                 "title": "Auto Focus",
5525                 "definitions": {
5526                   "oic.r.autofocus": {
5527                     "type": "object",
5528                     "properties": {
5529                       "autoFocus": {
5530                         "type": "boolean",
5531                         "description": "Status of the Auto Focus"
5532                       }
5533                     }
5534                   }
5535                 },
5536                 "type": "object",
5537                 "allOf": [
5538                   {"$ref": "oic.core.json#/definitions/oic.core"},
5539                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5540                   {"$ref": "#/definitions/oic.r.autofocus"}
5541                 ],
5542                 "required": [ "autoFocus" ]
5543               }
5544
5545           example: |
5546             {
5547               "rt":          ["oic.r.autofocus"],
5548               "id":          "unique_example_id",
5549               "autoFocus":   false
5550             }
5551
5552   post:
5553     body:
5554       application/json:
5555         schema: |
5556           {
5557             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.autofocus.json#",
5558             "$schema": "http://json-schema.org/draft-04/schema#",

```



```

5559         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
5560 reserved.",
5561         "title": "Auto Focus",
5562         "definitions": {
5563             "oic.r.autofocus": {
5564                 "type": "object",
5565                 "properties": {
5566                     "autoFocus": {
5567                         "type": "boolean",
5568                         "description": "Status of the Auto Focus"
5569                     }
5570                 }
5571             }
5572         },
5573         "type": "object",
5574         "allOf": [
5575             {"$ref": "oic.core.json#/definitions/oic.core"},
5576             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5577             {"$ref": "#/definitions/oic.r.autofocus"}
5578         ],
5579         "required": [ "autoFocus" ]
5580     }
5581
5582     example: |
5583     {
5584         "id":          "unique_example_id",
5585         "autoFocus":   true
5586     }
5587
5588     responses :
5589     200:
5590         body:
5591             application/json:
5592                 schema: |
5593                 {
5594                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.autofocus.json#",
5595                     "$schema": "http://json-schema.org/draft-04/schema#",
5596                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
5597 reserved.",
5598                     "title": "Auto Focus",
5599                     "definitions": {
5600                         "oic.r.autofocus": {
5601                             "type": "object",
5602                             "properties": {
5603                                 "autoFocus": {
5604                                     "type": "boolean",
5605                                     "description": "Status of the Auto Focus"
5606                                 }
5607                             }
5608                         }
5609                     },
5610                     "type": "object",
5611                     "allOf": [
5612                         {"$ref": "oic.core.json#/definitions/oic.core"},
5613                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5614                         {"$ref": "#/definitions/oic.r.autofocus"}
5615                     ],
5616                     "required": [ "autoFocus" ]
5617                 }
5618
5619                 example: |
5620                 {
5621                     "id":          "unique_example_id",
5622                     "autoFocus":   true
5623                 }
5624

```

6.26.5 Property Definition

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

6.26.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/AutoFocusResURI		get	post		get

6.27 Automatic Document Feeder

6.27.1 Introduction

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

6.27.2 Example URI

/AutomaticDocumentFeederResURI

6.27.3 Resource Type

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

6.27.4 RAML Definition

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

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

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

  is : ['interface']
  get:
    description: |
      Retrieves the current automatic document feeder state.

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

```

5671 reserved.",
5672     "title": "Automatic Document Feeder",
5673     "definitions": {
5674         "oic.r.automaticdocumentfeeder": {
5675             "type": "object",
5676             "properties": {
5677                 "adfStates": {
5678                     "type": "array",
5679                     "readOnly": true,
5680                     "description": "array of the possible adf states.",
5681                     "items": {
5682                         "type": "string"
5683                     }
5684                 },
5685                 "currentAdfState": {
5686                     "type": "string",
5687                     "readOnly": true,
5688                     "description": "Current adf state."
5689                 }
5690             }
5691         },
5692         "type": "object",
5693         "allof": [
5694             {"$ref": "oic.core.json#/definitions/oic.core"},
5695             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5696             {"$ref": "#/definitions/oic.r.automaticdocumentfeeder"}
5697         ],
5698         "required": ["adfStates", "currentAdfState"]
5699     }
5700 }
5701
5702 example: |
5703 {
5704     "rt": ["oic.r.automaticdocumentfeeder"],
5705     "id": "unique_example_id",
5706     "adfStates": ["adfProcessing", "adfEmpty", "adfJam", "adfLoaded",
5707 "adfMispick", "adfHatchOpen", "adfDuplexPageTooShort", "adfDuplexPageTooLong",
5708 "adfMultipickDetected", "adfInputTrayFailed", "adfInputTrayOverloaded"],
5709     "currentAdfState": "adfProcessing"
5710 }
5711

```

5712 6.27.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
adfStates	array	yes	Read Only	Array Of The Possible Adf States.
currentAdfState	string	yes	Read Only	Current adf state.

5713 6.27.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/AutomaticDocumentFeederResURI		get			get

5714 6.28 Button Switch

5715 6.28.1 Introduction

5716 This resource describes the operation of a button style switch. The value is a boolean. A value of
5717 'true' means that the button is being pushed/pressed. A value of 'false' means that the button is
5718 not being pushed/pressed.

5719 6.28.2 Example URI

5720 /ButtonResURI

6.28.3 Resource Type

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

6.28.4 RAML Definition

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

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

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

    is : ['interface']
    get:
        responses :
            200:
                body:
                    application/json:
                        schema: |
                            {
                                "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.button.json#",
                                "$schema": "http://json-schema.org/draft-04/schema#",
                                "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
reserved.",
                                "title": "Button Switch",
                                "definitions": {
                                    "oic.r.button": {
                                        "properties": {
                                            "value": {
                                                "type": "boolean",
                                                "readOnly": true,
                                                "description": "Status of the button"
                                            }
                                        }
                                    }
                                },
                                "type": "object",
                                "allof": [
                                    {"$ref": "oic.core.json#/definitions/oic.core"},
                                    {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
                                    {"$ref": "#/definitions/oic.r.button"}
                                ],
                                "required": ["value"]
                            }

                        example: |
                            {
                                "rt": ["oic.r.button"],
                                "id": "unique_example_id",
                                "value": true
                            }
```

6.28.5 Property Definition

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

6.28.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/ButtonResURI		get			get

6.29 Carbon Dioxide Sensor

6.29.1 Introduction

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

6.29.2 Example URI

/CarbonDioxideResURI

6.29.3 Resource Type

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

6.29.4 RAML Definition

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

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

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

    is : ['interface']
    get:
        responses :
            200:
                body:
                    application/json:
                        schema: |
                            {
                                "id":
"http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.carbonDioxide.json#",
                                "$schema": "http://json-schema.org/draft-04/schema#",
                                "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
reserved.",
                                "title": "Carbon Dioxide Sensor",
                                "definitions": {
                                    "oic.r.sensor.carbondioxide": {
                                        "allOf": [
                                            { "$ref": "oic.r.sensor.json#/definitions/oic.r.sensor" }
                                        ]
                                    }
                                }
                            }
```

```

5828         },
5829         "type": "object",
5830         "allof": [
5831             {"$ref": "oic.core.json#/definitions/oic.core"},
5832             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5833             {"$ref": "#/definitions/oic.r.sensor.carbondioxide"}
5834         ],
5835         "required": ["value"]
5836     }
5837
5838     example: |
5839         {
5840             "rt":      ["oic.r.sensor.carbondioxide"],
5841             "id":      "unique_example_id",
5842             "value":   true
5843         }
5844

```

6.29.5 Property Definition

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

6.29.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/CarbonDioxideResURI		get			get

6.30 Carbon Monoxide Sensor

6.30.1 Introduction

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

6.30.2 Example URI

/CarbonMonoxideResURI

6.30.3 Resource Type

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

6.30.4 RAML Definition

```

5857 #%RAML 0.8
5858 title: OICCarbonMonoxideSensor
5859 version: v1.1.0-20160519
5860 traits:
5861   - interface :
5862       queryParameters:
5863         if:
5864           enum: ["oic.if.s", "oic.if.baseline"]
5865
5866 /CarbonMonoxideResURI:
5867   description: |
5868     This resource describes whether carbon monoxide has been sensed or not.
5869     The value is a boolean.
5870     A value of 'true' means that carbon monoxide has been detected.
5871     A value of 'false' means that carbon monoxide has not been detected.
5872
5873   is : ['interface']
5874   get:

```

```

5875     responses :
5876     200:
5877         body:
5878             application/json:
5879                 schema: |
5880                     {
5881                         "id":
5882 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.carbonMonoxide.json#",
5883                         "$schema": "http://json-schema.org/draft-04/schema#",
5884                         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
5885 reserved.",
5886                         "title": "Carbon Monoxide Sensor",
5887                         "definitions": {
5888                             "oic.r.sensor.carbonmonoxide": {
5889                                 "allof": [
5890                                     {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
5891                                 ]
5892                             }
5893                         },
5894                         "type": "object",
5895                         "allof": [
5896                             {"$ref": "oic.core.json#/definitions/oic.core"},
5897                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5898                             {"$ref": "#/definitions/oic.r.sensor.carbonmonoxide"}
5899                         ],
5900                         "required": ["value"]
5901                     }
5902
5903                 example: |
5904                     {
5905                         "rt":      ["oic.r.sensor.carbonmonoxide"],
5906                         "id":      "unique_example_id",
5907                         "value":   true
5908                     }
5909

```

5910 6.30.5 Property Definition

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

5911 6.30.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/CarbonMonoxideResURI		get			get

5912 6.31 Auto White Balance

5913 6.31.1 Introduction

5914 This resource describes an auto balance on/off feature (on/off). The value is a boolean. An
5915 AutoWhiteBalance value of 'true' means that the switch is on. An AutoWhiteBalance value of 'false'
5916 means that the switch is off.

5917 6.31.2 Example URI

5918 /AutoWhiteBalanceResURI

5919 6.31.3 Resource Type

5920 The resource type (rt) is defined as: oic.r.colour.autowhitebalance.

5921 6.31.4 RAML Definition

5922 *##RAML 0.8*

5923 *title: OICAutoWhiteBalance*

```

5924 version: v1.1.0-20160519
5925 traits:
5926   - interface :
5927     queryParameters:
5928       if:
5929         enum: ["oic.if.a", "oic.if.baseline"]
5930
5931 /AutoWhiteBalanceResURI:
5932   description: |
5933     This resource describes an auto balance on/off feature (on/off).
5934     The value is a boolean.
5935     An AutoWhiteBalance value of 'true' means that the switch is on.
5936     An AutoWhiteBalance value of 'false' means that the switch is off.
5937
5938   is : ['interface']
5939   get:
5940     responses :
5941       200:
5942         body:
5943           application/json:
5944             schema: |
5945               {
5946                 "id":
5947 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.autowhitebalance.json#",
5948                 "$schema": "http://json-schema.org/draft-04/schema#",
5949                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
5950 reserved.",
5951                 "title": "Auto White Balance",
5952                 "definitions": {
5953                   "oic.r.colour.autowhitebalance": {
5954                     "type": "object",
5955                     "properties": {
5956                       "autoWhiteBalance": {
5957                         "type": "boolean",
5958                         "description": "Status of the Auto White balance"
5959                       }
5960                     }
5961                   }
5962                 },
5963                 "type": "object",
5964                 "allOf": [
5965                   {"$ref": "oic.core.json#/definitions/oic.core"},
5966                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5967                   {"$ref": "#/definitions/oic.r.colour.autowhitebalance"}
5968                 ],
5969                 "required": [ "autoWhiteBalance" ]
5970               }
5971
5972   example: |
5973     {
5974       "rt": ["oic.r.colour.autowhitebalance"],
5975       "id": "unique_example_id",
5976       "autoWhiteBalance": false
5977     }
5978
5979   post:
5980     body:
5981       application/json:
5982         schema: |
5983           {
5984             "id":
5985 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.autowhitebalance.json#",

```



```

5986         "$schema": "http://json-schema.org/draft-04/schema#",
5987         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
5988 reserved.",
5989         "title": "Auto White Balance",
5990         "definitions": {
5991             "oic.r.colour.autowhitebalance": {
5992                 "type": "object",
5993                 "properties": {
5994                     "autoWhiteBalance": {
5995                         "type": "boolean",
5996                         "description": "Status of the Auto White balance"
5997                     }
5998                 }
5999             }
6000         },
6001         "type": "object",
6002         "allOf": [
6003             {"$ref": "oic.core.json#/definitions/oic.core"},
6004             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6005             {"$ref": "#/definitions/oic.r.colour.autowhitebalance"}
6006         ],
6007         "required": [ "autoWhiteBalance" ]
6008     }
6009
6010     example: |
6011     {
6012         "id": "unique_example_id",
6013         "autoWhiteBalance": true
6014     }
6015
6016     responses :
6017         200:
6018             body:
6019                 application/json:
6020                     schema: |
6021                     {
6022                         "id":
6023 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.autowhitebalance.json#",
6024                         "$schema": "http://json-schema.org/draft-04/schema#",
6025                         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
6026 reserved.",
6027                         "title": "Auto White Balance",
6028                         "definitions": {
6029                             "oic.r.colour.autowhitebalance": {
6030                                 "type": "object",
6031                                 "properties": {
6032                                     "autoWhiteBalance": {
6033                                         "type": "boolean",
6034                                         "description": "Status of the Auto White balance"
6035                                     }
6036                                 }
6037                             }
6038                         },
6039                         "type": "object",
6040                         "allOf": [
6041                             {"$ref": "oic.core.json#/definitions/oic.core"},
6042                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6043                             {"$ref": "#/definitions/oic.r.colour.autowhitebalance"}
6044                         ],
6045                         "required": [ "autoWhiteBalance" ]
6046                     }
6047
6048     example: |
6049     {
6050         "id": "unique_example_id",
6051         "autoWhiteBalance": true

```

6052 }
6053

6054 **6.31.5 Property Definition**

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

6055 **6.31.6 CRUDN Behaviour**

Resource	Create	Read	Update	Delete	Notify
/AutoWhiteBalanceResURI		get	post		get

6056 **6.32 Colour Saturation**

6057 **6.32.1 Introduction**

6058 This resource describes a Colour saturation value. The value is an integer. A coloursaturation has
6059 a range of [0,100]. A coloursaturation value of 0 means producing black and white images. A
6060 coloursaturation value of 50 means producing device specific normal colour images. A
6061 coloursaturation value of 100 means producing device very full colour images.

6062 **6.32.2 Example URI**

6063 /ColourSaturationResURI

6064 **6.32.3 Resource Type**

6065 The resource type (rt) is defined as: oic.r.colour.saturation.

6066 **6.32.4 RAML Definition**

```
6067 #%RAML 0.8
6068 title: OICColourSaturation
6069 version: v1.1.0-20160519
6070 traits:
6071   - interface :
6072     queryParameters:
6073       if:
6074         enum: ["oic.if.a", "oic.if.baseline"]
6075
6076 /ColourSaturationResURI:
6077   description: |
6078     This resource describes a Colour saturation value.
6079     The value is an integer.
6080     A coloursaturation has a range of [0,100].
6081     A coloursaturation value of 0 means producing black and white images.
6082     A coloursaturation value of 50 means producing device specific normal colour images.
6083     A coloursaturation value of 100 means producing device very full colour images.
6084
6085   is : ['interface']
6086   get:
6087     responses :
6088       200:
6089         body:
6090           application/json:
6091             schema: |
6092               {
6093                 "id":
6094                   "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.saturation.json#",
6095                 "$schema": "http://json-schema.org/draft-04/schema#",
6096                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
6097 reserved.",
```

```

6098         "title": "Colour Saturation",
6099         "definitions": {
6100             "oic.r.colour.saturation": {
6101                 "type": "object",
6102                 "properties": {
6103                     "colourSaturation": {
6104                         "type": "integer",
6105                         "description": "The colour saturation value",
6106                         "minimum": 0,
6107                         "maximum": 100
6108                     }
6109                 }
6110             }
6111         },
6112         "type": "object",
6113         "allof": [
6114             {"$ref": "oic.core.json#/definitions/oic.core"},
6115             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6116             {"$ref": "#/definitions/oic.r.colour.saturation"}
6117         ],
6118         "required": [ "colourSaturation" ]
6119     }
6120
6121     example: |
6122         {
6123             "rt":          ["oic.r.colour.saturation"],
6124             "id":          "unique_example_id",
6125             "colourSaturation": 50
6126         }
6127
6128     post:
6129         body:
6130             application/json:
6131
6132             schema: |
6133                 {
6134                     "id":
6135                     "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.saturation.json#",
6136                     "$schema": "http://json-schema.org/draft-04/schema#",
6137                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
6138 reserved.",
6139                     "title": "Colour Saturation",
6140                     "definitions": {
6141                         "oic.r.colour.saturation": {
6142                             "type": "object",
6143                             "properties": {
6144                                 "colourSaturation": {
6145                                     "type": "integer",
6146                                     "description": "The colour saturation value",
6147                                     "minimum": 0,
6148                                     "maximum": 100
6149                                 }
6150                             }
6151                         }
6152                     },
6153                     "type": "object",
6154                     "allof": [
6155                         {"$ref": "oic.core.json#/definitions/oic.core"},
6156                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6157                         {"$ref": "#/definitions/oic.r.colour.saturation"}
6158                     ],
6159                     "required": [ "colourSaturation" ]
6160                 }
6161
6162             example: |
6163                 {
6164                     "id":          "unique_example_id",
6165                     "colourSaturation": 60

```

```

6165         }
6166
6167     responses :
6168         200:
6169             body:
6170                 application/json:
6171                     schema: |
6172                         {
6173                             "id":
6174 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.saturation.json#",
6175                             "$schema": "http://json-schema.org/draft-04/schema#",
6176                             "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
6177 reserved.",
6178                             "title": "Colour Saturation",
6179                             "definitions": {
6180                                 "oic.r.colour.saturation": {
6181                                     "type": "object",
6182                                     "properties": {
6183                                         "colourSaturation": {
6184                                             "type": "integer",
6185                                             "description": "The colour saturation value",
6186                                             "minimum": 0,
6187                                             "maximum": 100
6188                                         }
6189                                     }
6190                                 }
6191                             },
6192                             "type": "object",
6193                             "allof": [
6194                                 {"$ref": "oic.core.json#/definitions/oic.core"},
6195                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6196                                 {"$ref": "#/definitions/oic.r.colour.saturation"}
6197                             ],
6198                             "required": [ "colourSaturation" ]
6199                         }
6200
6201                     example: |
6202                         {
6203                             "id": "unique_example_id",
6204                             "colourSaturation": 60
6205                         }
6206

```

6207 6.32.5 Property Definition

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

6208 6.32.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/ColourSaturationResURI		get	post		get

6209 6.33 Contact Sensor

6210 6.33.1 Introduction

6211 This resource describes whether a contact sensor has been tripped or not. Typical use case is in
6212 Security Systems detecting window or door open. The value is a boolean. A value of 'true' means
6213 that contact has been broken (open). A value of 'false' means that contact is in place (closed).

6214 6.33.2 Example URI

6215 /ContactResURI

6.33.3 Resource Type

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

6.33.4 RAML Definition

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

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

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

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

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

6.33.5 Property Definition

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

value	boolean	yes	Read Only	true = Sensed, false = Not Sensed.
-------	---------	-----	-----------	--

6.33.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/ContactResURI		get			get

6.34 Demand Response Load Control (DRLC).

6.34.1 Introduction

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

6.34.2 Example URI

/DRLCResURI

6.34.3 Resource Type

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

6.34.4 RAML Definition

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

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

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

    is : ['interface']
    get:
        description: |
            Provides the current DRLC action that is being applied.

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

```

6321         "properties": {
6322             "DRType": {
6323                 "type": "integer",
6324                 "description": "The to be applied demand-response type"
6325             },
6326             "start": {
6327                 "type": "string",
6328                 "description": "The start time for the application of DR"
6329             },
6330             "duration": {
6331                 "type": "integer",
6332                 "description": "The duration of the to be applied DR type"
6333             },
6334             "override": {
6335                 "type": "boolean",
6336                 "description": "Whether the consumer has overridden the application of DR"
6337             }
6338         }
6339     },
6340     "type": "object",
6341     "allOf": [
6342         {"$ref": "oic.core.json#/definitions/oic.core"},
6343         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6344         {"$ref": "#/definitions/oic.r.energy.drlc"}
6345     ],
6346     "required": ["DRType"]
6347 }
6348
6349
6350 example: |
6351 {
6352     "rt": ["oic.r.energy.drlc"],
6353     "id": "unique_example_id",
6354     "DRType": 1,
6355     "start": "2015-01-09T16:45Z",
6356     "duration": 10,
6357     "override": false
6358 }
6359
6360 put:
6361     description: |
6362         Provides the DRLC action to be applied to the device or updates an existing action.
6363
6364     body:
6365         application/json:
6366             schema: |
6367                 {
6368                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.drlc.json#",
6369                     "$schema": "http://json-schema.org/draft-04/schema#",
6370                     "description": "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
6371 reserved.",
6372                     "definitions": {
6373                         "oic.r.energy.drlc": {
6374                             "type": "object",
6375                             "properties": {
6376                                 "DRType": {
6377                                     "type": "integer",
6378                                     "description": "The to be applied demand-response type"
6379                                 },
6380                                 "start": {
6381                                     "type": "string",
6382                                     "description": "The start time for the application of DR"
6383                                 },
6384                                 "duration": {
6385                                     "type": "integer",
6386                                     "description": "The duration of the to be applied DR type"
6387                                 }
6388                             }
6389                         }
6390                     }

```

```

6388         "override": {
6389             "type": "boolean",
6390             "description": "Whether the consumer has overridden the application of DR"
6391         }
6392     }
6393 }
6394 },
6395 "type": "object",
6396 "allOf": [
6397     {"$ref": "oic.core.json#/definitions/oic.core"},
6398     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6399     {"$ref": "#/definitions/oic.r.energy.drlc"}
6400 ],
6401 "required": ["DRTYPE"]
6402 }
6403
6404 example: |
6405 {
6406     "rt":         ["oic.r.energy.drlc"],
6407     "id":         "unique_example_id",
6408     "DRTYPE":     1,
6409     "start":      "2015-01-09T16:45Z",
6410     "duration":   10
6411 }
6412
6413 responses :
6414 200:
6415     description: |
6416         Indicates that the target DRLC resource was changed.
6417         The new resource attributes are provided in the response.
6418
6419     body:
6420         application/json:
6421             schema: |
6422                 {
6423                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.drlc.json#",
6424                     "$schema": "http://json-schema.org/draft-04/schema#",
6425                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
6426 reserved.",
6427                     "definitions": {
6428                         "oic.r.energy.drlc": {
6429                             "type": "object",
6430                             "properties": {
6431                                 "DRTYPE": {
6432                                     "type": "integer",
6433                                     "description": "The to be applied demand-response type"
6434                                 },
6435                                 "start": {
6436                                     "type": "string",
6437                                     "description": "The start time for the application of DR"
6438                                 },
6439                                 "duration": {
6440                                     "type": "integer",
6441                                     "description": "The duration of the to be applied DR type"
6442                                 },
6443                                 "override": {
6444                                     "type": "boolean",
6445                                     "description": "Whether the consumer has overridden the application of DR"
6446                                 }
6447                             }
6448                         }
6449                     },
6450                     "type": "object",
6451                     "allOf": [
6452                         {"$ref": "oic.core.json#/definitions/oic.core"},
6453                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6454                         {"$ref": "#/definitions/oic.r.energy.drlc"}

```



```

6455         },
6456         "required": ["DRType"]
6457     }
6458
6459     example: |
6460         {
6461             "DRType": 1,
6462             "id": "unique_example_id",
6463             "start": "2015-01-09T17:00Z",
6464             "duration": 15,
6465             "override": false
6466         }
6467
6468     201:
6469         description: |
6470             Indicates successful creation of the DRLC resource with the attributes provided.
6471             The response includes the URI of the created resource.
6472
6473         body:
6474             application/json:
6475                 schema: |
6476                     {
6477                         "id": "http://openinterconnect.org/iotdatamodels/chemas/oic.create.json#",
6478                         "$schema": "http://json-schema.org/draft-04/schema#",
6479                         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
6480 reserved.",
6481                         "definitions": {
6482                             "oic.create": {
6483                                 "type": "object",
6484                                 "properties": {
6485                                     "ResURI": { "type": "string"}
6486                                 }
6487                             }
6488                         },
6489                         "type": "object",
6490                         "$ref": "#/definitions/oic.create"
6491                     }
6492
6493                 example: |
6494                     {
6495                         "ResURI": "/MyDevice/MyDRLCURI"
6496                     }
6497

```

6.34.5 Property Definition

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

6499 **6.34.6 CRUDN Behaviour**

Resource	Create	Read	Update	Delete	Notify
/DRLCResURI	put	get			get

6500 **6.35 Energy Overload/Circuit Breaker**6501 **6.35.1 Introduction**

6502 This resource describes whether an energy overload detector/circuit breaker is currently tripped.
 6503 The value is a boolean. A value of 'true' means that energy overload has been tripped. A value of
 6504 'false' means that energy overload has not been tripped.

6505 **6.35.2 Example URI**

6506 /EnergyOverloadResURI

6507 **6.35.3 Resource Type**

6508 The resource type (rt) is defined as: oic.r.energy.overload.

6509 **6.35.4 RAML Definition**

```

6510 #%RAML 0.8
6511 title: OICEnergyOverload
6512 version: v1.1.0-20160519
6513 traits:
6514   - interface :
6515       queryParameters:
6516         if:
6517           enum: ["oic.if.s", "oic.if.baseline"]
6518
6519 /EnergyOverloadResURI:
6520   description: |
6521     This resource describes whether an energy overload detector/circuit breaker
6522     is currently tripped.
6523     The value is a boolean.
6524     A value of 'true' means that energy overload has been tripped.
6525     A value of 'false' means that energy overload has not been tripped.
6526
6527   is : ['interface']
6528   get:
6529     responses :
6530       200:
6531         body:
6532           application/json:
6533             schema: |
6534               {
6535                 "id":
6536 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.overload.json#",
6537                 "$schema": "http://json-schema.org/draft-04/schema#",
6538                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
6539 reserved.",
6540                 "title": "Energy Overload Sensor",
6541                 "definitions": {
6542                   "oic.r.energy.overload": {
6543                     "allOf": [
6544                       {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
6545                     ]
6546                   },
6547                 },
6548                 "type": "object",
6549                 "allOf": [
6550                   {"$ref": "oic.core.json#/definitions/oic.core"},
6551                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"}],

```

```

6552         {"$ref": "#/definitions/oic.r.energy.overload"}
6553     },
6554     "required": ["value"]
6555 }
6556
6557 example: |
6558     {
6559         "rt": ["oic.r.energy.overload"],
6560         "id": "unique_example_id",
6561         "value": true
6562     }
6563

```

6.35.5 Property Definition

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

6.35.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/EnergyOverloadResURI		get			get

6.36 Generic Sensor

6.36.1 Introduction

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

6.36.2 Example URI

/GenericSensorResURI

6.36.3 Resource Type

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

6.36.4 RAML Definition

```

6576 #%RAML 0.8
6577 title: OICGenericSensor
6578 version: v1.1.0-20160519
6579 traits:
6580   - interface :
6581       queryParameters:
6582         if:
6583             enum: ["oic.if.s", "oic.if.baseline"]
6584
6585 /GenericSensorResURI:
6586     description: |
6587         This resource describes whether some value or property or entity has been sensed or not.
6588         The value is a boolean.
6589         A value of 'true' means that the target has been sensed.
6590         A value of 'false' means that the target has not been sensed.
6591
6592     is : ['interface']
6593     get:
6594         responses :
6595             200:
6596                 body:
6597                     application/json:

```

```

6598         schema: |
6599             {
6600                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.json#",
6601                 "$schema": "http://json-schema.org/draft-04/schema#",
6602                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
6603 reserved.",
6604                 "title": "Generic Sensor",
6605                 "definitions": {
6606                     "oic.r.sensor": {
6607                         "type": "object",
6608                         "properties": {
6609                             "value": {
6610                                 "type": "boolean",
6611                                 "readOnly": true,
6612                                 "description": "true = sensed, false = not sensed."
6613                             }
6614                         }
6615                     }
6616                 },
6617                 "type": "object",
6618                 "allOf": [
6619                     {"$ref": "oic.core.json#/definitions/oic.core"},
6620                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6621                     {"$ref": "#/definitions/oic.r.sensor"}
6622                 ]
6623             }
6624
6625         example: |
6626             {
6627                 "rt": ["oic.r.sensor"],
6628                 "id": "unique_example_id",
6629                 "value": true
6630             }
6631

```

6.36.5 Property Definition

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

6.36.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/GenericSensorResURI		get			get

6.37 Glass Break Sensor

6.37.1 Introduction

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

6.37.2 Example URI

/GlassBreakResURI

6.37.3 Resource Type

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

6.37.4 RAML Definition

```

6643 #%RAML 0.8
6644 title: OICGlassBreakSensor
6645 version: v1.1.0-20160519
6646 traits:
6647     - interface :

```

```

6648     queryParameters:
6649         if:
6650             enum: ["oic.if.s", "oic.if.baseline"]
6651
6652 /GlassBreakResURI:
6653     description: |
6654         This resource describes a glass break sensor.
6655         The value is a boolean.
6656         A value of 'true' means that glass break has been sensed.
6657         A value of 'false' means that glass break not been sensed.
6658
6659     is : ['interface']
6660     get:
6661         responses :
6662             200:
6663                 body:
6664                     application/json:
6665                         schema: |
6666                             {
6667                                 "id":
6668 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.glassBreak.json#",
6669                                 "$schema": "http://json-schema.org/draft-04/schema#",
6670                                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
6671 reserved.",
6672                                 "title": "Glass Break Sensor",
6673                                 "definitions": {
6674                                     "oic.r.sensor.glassbreak": {
6675                                         "allof": [
6676                                             {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
6677                                         ]
6678                                     }
6679                                 },
6680                                 "type": "object",
6681                                 "allof": [
6682                                     {"$ref": "oic.core.json#/definitions/oic.core"},
6683                                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6684                                     {"$ref": "#/definitions/oic.r.sensor.glassbreak"}
6685                                 ],
6686                                 "required": ["value"]
6687                             }
6688
6689                 example: |
6690                     {
6691                         "rt":      ["oic.r.sensor.glassbreak"],
6692                         "id":      "unique_example_id",
6693                         "value":   true
6694                     }
6695

```

6.37.5 Property Definition

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

6.37.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/GlassBreakResURI		get			get

6.38 Heart Rate Zone

6.38.1 Introduction

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

6.38.2 Example URI

/HeartRateZoneResURI

6.38.3 Resource Type

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

6.38.4 RAML Definition

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

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

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

  is : ['interface']
  get:
    responses :
      200:
        body:
          application/json:
            schema: |
              {
                "id":
                  "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.heart.zone.json#",
                "$schema": "http://json-schema.org/draft-04/schema#",
                "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
                  reserved.",
                "title": "Heart Rate Zone",
                "definitions": {
                  "oic.r.sensor.heart.zone": {
                    "properties": {
                      "heartRateZone": {
                        "enum": ["Zone1", "Zone2", "Zone3", "Zone4", "Zone5"],
                        "readOnly": true,
                        "description": "Current heart rate zone based on the Zoladz system."
                      }
                    }
                  }
                },
                "type": "object",
                "allOf": [
                  {"$ref": "oic.core.json#/definitions/oic.core"},
                  {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"}],

```

```

6755         {"$ref": "#/definitions/oic.r.sensor.heart.zone"}
6756     ],
6757     "required": ["heartRateZone"]
6758 }
6759
6760     example: |
6761         {
6762             "rt":          ["oic.r.sensor.heart.zone"],
6763             "id":          "unique_example_id",
6764             "heartRateZone": "Zone3"
6765         }
6766

```

6767 6.38.5 Property Definition

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

6768 6.38.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/HeartRateZoneResURI		get			get

6769 6.39 Illuminance Sensor

6770 6.39.1 Introduction

6771 This resource describes an illuminance sensor. Illuminance is a float and represents the sensed
6772 luminous flux per unit area in lux.

6773 6.39.2 Example URI

6774 /IlluminanceSensorResURI

6775 6.39.3 Resource Type

6776 The resource type (rt) is defined as: oic.r.sensor.illuminance.

6777 6.39.4 RAML Definition

```

6778 #%RAML 0.8
6779 title: OIC_IlluminanceSensor
6780 version: v1.1.0-20160519
6781 traits:
6782   - interface :
6783       queryParameters:
6784         if:
6785           enum: ["oic.if.s", "oic.if.baseline"]
6786
6787 /IlluminanceSensorResURI:
6788   description: |
6789     This resource describes an illuminance sensor.
6790     Illuminance is a float and represents the sensed luminous flux per unit area in lux.
6791
6792   is : ['interface']
6793   get:
6794     responses :
6795       200:
6796         body:
6797           application/json:
6798             schema: |

```

```

6799         {
6800             "id":
6801             "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.illuminance.json#",
6802             "$schema": "http://json-schema.org/draft-04/schema#",
6803             "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
6804 reserved.",
6805             "title": "Illuminance Sensor",
6806             "definitions": {
6807                 "oic.r.sensor.illuminance": {
6808                     "properties": {
6809                         "illuminance": {
6810                             "type": "number",
6811                             "readOnly": true,
6812                             "description": "Sensed luminous flux per unit area in lux."
6813                         }
6814                     }
6815                 }
6816             },
6817             "type": "object",
6818             "allOf": [
6819                 {"$ref": "oic.core.json#/definitions/oic.core"},
6820                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6821                 {"$ref": "#/definitions/oic.r.sensor.illuminance"}
6822             ],
6823             "required": ["illuminance"]
6824         }
6825
6826     example: |
6827         {
6828             "rt":          ["oic.r.sensor.illuminance"],
6829             "id":          "unique_example_id",
6830             "illuminance": 450.0
6831         }
6832

```

6.39.5 Property Definition

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

6.39.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/IlluminanceSensorResURI		get			get

6.40 Magnetic Field Direction Sensor

6.40.1 Introduction

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

6.40.2 Example URI

/MagneticFieldDirectionResURI

6.40.3 Resource Type

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

6.40.4 RAML Definition

```

6846 #%RAML 0.8
6847 title: OICMagneticFieldDirection
6848 version: v1.1.0-20160519

```



```

6849 traits:
6850   - interface :
6851     queryParameters:
6852       if:
6853         enum: ["oic.if.s", "oic.if.baseline"]
6854
6855 /MagneticFieldDirectionResURI:
6856   description: |
6857     This resource describes the direction of the Earth's magnetic field at the observer's current
6858     point in space.
6859     Typical use case includes measurement of compass readings on a personal device.
6860     The value is an array containing Hx, Hy, Hz (in that order) each of which are floats.
6861     Each of Hx, Hy and Hz are expressed in A/m (Amperes per metre)
6862
6863   is : ['interface']
6864   get:
6865     responses :
6866       200:
6867         body:
6868           application/json:
6869             schema: |
6870               {
6871                 "id":
6872 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.magneticFieldDirection.json#",
6873                 "$schema": "http://json-schema.org/draft-04/schema#",
6874                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
6875 reserved.",
6876                 "title": "Magnetic Field Direction Sensor",
6877                 "definitions": {
6878                   "oic.r.sensor.magneticfielddirection": {
6879                     "properties": {
6880                       "value": {
6881                         "type": "array",
6882                         "readOnly": true,
6883                         "description": "Array containing Hx, Hy, Hz.",
6884                         "minItems": 3,
6885                         "maxItems": 3,
6886                         "items": {
6887                           "type": "number"
6888                         }
6889                       }
6890                     }
6891                   },
6892                 },
6893                 "type": "object",
6894                 "allof": [
6895                   {"$ref": "oic.core.json#/definitions/oic.core"},
6896                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6897                   {"$ref": "#/definitions/oic.r.sensor.magneticfielddirection"}
6898                 ],
6899                 "required": ["value"]
6900               }
6901
6902   example: |
6903     {
6904       "rt":      ["oic.r.sensor.magneticfielddirection"],
6905       "id":      "unique_example_id",
6906       "value":   [100.0,15.0,90.0]
6907     }
6908

```

6.40.5 Property Definition

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

value	array	yes	Read Only	Array containing Hx, Hy, Hz.
-------	-------	-----	-----------	------------------------------

6.40.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/MagneticFieldDirectionResURI		get			get

6.41 Media

6.41.1 Introduction

This resource specifies the media that an OIC Server (Camera) 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>. The mime subtype video/H264 indicates video resource and the mime subtype video/jpeg indicates still image resource.

6.41.2 Example URI

/MediaResURI

6.41.3 Resource Type

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

6.41.4 RAML Definition

```

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

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

/MediaResURI:
    description: |
        This resource specifies the media that an OIC Server (Camera) 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.
            The mime subtype video/H264 indicates video resource and the mime subtype video/jpeg indicates
            still image resource.

    is : ['interface']
    get:
        description: |
            Retrieves the current media resource.

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

```

```

6957 {
6958   "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.media.json#",
6959   "$schema": "http://json-schema.org/draft-04/schema#",
6960   "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
6961 reserved.",
6962   "title": "Media",
6963   "definitions": {
6964     "oic.r.media": {
6965       "media": {
6966         "type": "array",
6967         "items": {
6968           "type": "object",
6969           "properties": {
6970             "url": {
6971               "type": "string",
6972               "description": "url for the media instance"
6973             },
6974             "sdp": {
6975               "type": "array",
6976               "description": "Array of strings, one per SDP line",
6977               "items": {
6978                 "type": "string",
6979                 "description": "SDP media or attribute line"
6980               }
6981             }
6982           }
6983         }
6984       }
6985     },
6986     "type": "object",
6987     "allof": [
6988       {"$ref": "oic.core.json#/definitions/oic.core"},
6989       {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6990       {"$ref": "#/definitions/oic.r.media"}
6991     ],
6992     "required": ["media"]
6993   }
6994 }
6995
6996 example: |
6997 {
6998   "rt": ["oic.r.media"],
6999   "id": "unique_example_id",
7000   "media": [
7001     {
7002       "url": "some example url",
7003       "sdp": [
7004         "m=video 1 RTP/AVP 96",
7005         "a=rtpmap:96 H264/9000",
7006         "a=fmtp:96 profile-level-id=42A028;packetization-mode=1"
7007       ]
7008     },
7009     {
7010       "url": "some other example1 url",
7011       "sdp": [
7012         "m=audio 2 RTP/AVP 97",
7013         "a=rtpmap:97 MP4A-LATM/90000"
7014       ]
7015     },
7016     {
7017       "url": "some other example2 url",
7018       "sdp": [
7019         "m=video 3 RTP/AVP 98",
7020         "a=rtpmap:98 jpeg/90000",
7021         "a=fmtp:98 sampling=YCbCr-4:2:0;width=256;height=256"
7022       ]
7023     }
7024   ]
7025 }
7026

```

6.41.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
media	array	yes	Read Write	
url	string		Read Write	Url For The Media Instance
sdp	array		Read Write	Array of strings, one per SDP line

6.41.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/MediaResURI		get			get

6.42 Media Source Input

6.42.1 Introduction

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

6.42.2 Example URI

/mediaSourceInputResURI

6.42.3 Resource Type

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

6.42.4 RAML Definition

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

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

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

  is : ['interface']

  get:
    responses :
      200:
        body:
          application/json:
            schema: |
              {
                "$schema": "http://json-schema.org/draft-04/schema#",
                "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
reserved.",
                "id":
"http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
                "title": "Media Source List",
                "definitions": {
                  "oic.r.mediasourcelist": {
                    "properties": {
                      "sources": {
                        "type": "array",
```

```

7071         "items": {
7072             "oneOf": [
7073                 { "$ref": "oic.r.mediaSource.json#" }
7074             ]
7075         }
7076     }
7077 }
7078 }
7079 },
7080 "type": "object",
7081 "allof": [
7082     { "$ref": "oic.core.json#/definitions/oic.core"},
7083     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7084     { "$ref": "#/definitions/oic.r.mediasourcelist"}
7085 ],
7086 "required": ["sources"]
7087 }
7088
7089 example: |
7090 {
7091     "rt": ["oic.r.media.input"],
7092     "id": "unique_example_id",
7093     "sources": [
7094         {
7095             "sourceName": "HDMI-CEC",
7096             "sourceNumber": "1",
7097             "sourceType": "audioPlusVideo",
7098             "status": true
7099         },
7100         {
7101             "sourceName": "dualRCA",
7102             "sourceNumber": "1",
7103             "sourceType": "audioOnly",
7104             "status": false
7105         }
7106     ]
7107 }
7108
7109 post:
7110     description: |
7111         Changes the status of the source(s).
7112         Allows changes of the sourceName and the status.
7113
7114     body:
7115         application/json:
7116             schema: |
7117                 {
7118                     "$schema": "http://json-schema.org/draft-04/schema#",
7119                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
7120 reserved.",
7121                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
7122                     "title": "Media Source List",
7123                     "definitions": {
7124                         "oic.r.mediasourcelist": {
7125                             "properties": {
7126                                 "sources": {
7127                                     "type": "array",
7128                                     "items": {
7129                                         "oneOf": [
7130                                             { "$ref": "oic.r.mediaSource.json#" }
7131                                         ]
7132                                     }
7133                                 }
7134                             }
7135                         }
7136                     },
7137                     "type": "object",

```

```

7138         "allOf": [
7139             { "$ref": "oic.core.json#/definitions/oic.core"},
7140             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7141             { "$ref": "#/definitions/oic.r.mediasourcelist"}
7142         ],
7143         "required": ["sources"]
7144     }
7145
7146     example: |
7147         {
7148             "id": "unique_example_id",
7149             "sources": [
7150                 {
7151                     "sourceName": "my new name",
7152                     "sourceNumber": "1",
7153                     "status": true
7154                 }
7155             ]
7156         }
7157
7158     responses :
7159         200:
7160             body:
7161                 application/json:
7162                     schema: |
7163                         {
7164                             "$schema": "http://json-schema.org/draft-04/schema#",
7165                             "description": "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
7166 reserved.",
7167                             "id":
7168 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
7169                             "title": "Media Source List",
7170                             "definitions": {
7171                                 "oic.r.mediasourcelist": {
7172                                     "properties": {
7173                                         "sources": {
7174                                             "type": "array",
7175                                             "items": {
7176                                                 "oneOf": [
7177                                                     { "$ref": "oic.r.mediaSource.json#" }
7178                                                 ]
7179                                             }
7180                                         }
7181                                     }
7182                                 },
7183                             },
7184                             "type": "object",
7185                             "allOf": [
7186                                 { "$ref": "oic.core.json#/definitions/oic.core"},
7187                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7188                                 { "$ref": "#/definitions/oic.r.mediasourcelist"}
7189                             ],
7190                             "required": ["sources"]
7191                         }
7192
7193     example: |
7194         {
7195             "id": "unique_example_id",
7196             "sources": [
7197                 {
7198                     "sourceName": "my new name",
7199                     "sourceNumber": "1",
7200                     "status": true
7201                 }
7202             ]

```

7203 }
7204

7205 **6.42.5 Property Definition**

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

7206 **6.42.6 CRUDN Behaviour**

Resource	Create	Read	Update	Delete	Notify
/mediaSourceInputResURI		get	post		get

7207 **6.42.7 Referenced JSON schemas**

7208 **6.42.7.1 oic.r.mediaSource.json**

```
7209 {  
7210   "$schema": "http://json-schema.org/draft-04/schema#",  
7211   "description": "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights reserved.",  
7212   "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSource.json#",  
7213   "title": "Media Source",  
7214   "definitions": {  
7215     "oic.r.mediasource": {  
7216       "properties": {  
7217         "sourceName": {  
7218           "type": "string",  
7219           "description": "Specifies a pre-defined media input or output"  
7220         },  
7221         "sourceNumber": {  
7222           "type": [ "integer", "string" ],  
7223           "readOnly": true,  
7224           "description": "Numeric identifier to specify the instance"  
7225         },  
7226         "sourceType": {  
7227           "enum": [ "audioOnly", "videoOnly", "audioPlusVideo" ],  
7228           "readOnly": true,  
7229           "description": "Specifies the type of the source"  
7230         },  
7231         "status": {  
7232           "type": "boolean",  
7233           "description": "Specifies if the specific source instance is selected or not"  
7234         }  
7235       }  
7236     }  
7237   },  
7238   "type": "object",  
7239   "allOf": [  
7240     { "$ref": "oic.core.json#/definitions/oic.core" },  
7241     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },  
7242     { "$ref": "#/definitions/oic.r.mediasource" }  
7243   ],  
7244   "required": [ "sourceName", "status" ]  
}
```

```

7245 }
7246
7247 6.43 Media Source Output
7248 6.43.1 Introduction
7249 This resource provides the list of output media sources available on the device. The sources are
7250 an array of mediaSource(s) as separately defined.
7251 6.43.2 Example URI
7252 /mediaSourceOutputResURI
7253 6.43.3 Resource Type
7254 The resource type (rt) is defined as: oic.r.media.output.
7255 6.43.4 RAML Definition
7256 #%RAML 0.8
7257 title: OICMediaSourceOutput
7258 version: v1.1.0-20160519
7259 traits:
7260   - interface :
7261       queryParameters:
7262         if:
7263           enum: ["oic.if.a", "oic.if.baseline"]
7264
7265 /mediaSourceOutputResURI:
7266   description: |
7267     This resource provides the list of output media sources available on the device.
7268     The sources are an array of mediaSource(s) as separately defined.
7269
7270   is : ['interface']
7271   get:
7272     responses :
7273       200:
7274         body:
7275           application/json:
7276             schema: |
7277               {
7278                 "$schema": "http://json-schema.org/draft-04/schema#",
7279                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
7280 reserved.",
7281                 "id":
7282 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
7283                 "title": "Media Source List",
7284                 "definitions": {
7285                   "oic.r.mediasourcelist": {
7286                     "properties": {
7287                       "sources": {
7288                         "type": "array",
7289                         "items": {
7290                           "oneOf": [
7291                             { "$ref": "oic.r.mediaSource.json#" }
7292                           ]
7293                         }
7294                     }
7295                   }
7296                 },
7297               },
7298               "type": "object",
7299               "allOf": [
7300                 { "$ref": "oic.core.json#/definitions/oic.core"},
7301                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},

```



```

7302         { "$ref": "#/definitions/oic.r.mediasourcelist"}
7303     ],
7304     "required": ["sources"]
7305 }
7306
7307 example: |
7308 {
7309     "rt": ["oic.r.media.output"],
7310     "id": "unique_example_id",
7311     "sources": [
7312         {
7313             "sourceName": "HDMI-CEC",
7314             "sourceNumber": "1",
7315             "sourceType": "audioPlusVideo",
7316             "status": true
7317         },
7318         {
7319             "sourceName": "dualRCA",
7320             "sourceNumber": "1",
7321             "sourceType": "audioOnly",
7322             "status": false
7323         }
7324     ]
7325 }
7326
7327 post:
7328     description: |
7329         Changes the status of the source(s).
7330         Allows changes of the sourceName and the status.
7331
7332     body:
7333         application/json:
7334             schema: |
7335                 {
7336                     "$schema": "http://json-schema.org/draft-04/schema#",
7337                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
7338 reserved.",
7339                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
7340                     "title": "Media Source List",
7341                     "definitions": {
7342                         "oic.r.mediasourcelist": {
7343                             "properties": {
7344                                 "sources": {
7345                                     "type": "array",
7346                                     "items": {
7347                                         "oneOf": [
7348                                             { "$ref": "oic.r.mediaSource.json#" }
7349                                         ]
7350                                     }
7351                                 }
7352                             }
7353                         }
7354                     },
7355                     "type": "object",
7356                     "allof": [
7357                         { "$ref": "oic.core.json#/definitions/oic.core"},
7358                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7359                         { "$ref": "#/definitions/oic.r.mediasourcelist"}
7360                     ],
7361                     "required": ["sources"]
7362                 }
7363
7364             example: |
7365                 {
7366                     "id": "unique_example_id",
7367                     "sources": [

```

```

7368         {
7369             "sourceName": "my new name",
7370             "sourceNumber": "1",
7371             "status": true
7372         }
7373     ]
7374 }
7375
7376 responses :
7377 200:
7378     body:
7379         application/json:
7380             schema: |
7381                 {
7382                     "$schema": "http://json-schema.org/draft-04/schema#",
7383                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
7384 reserved.",
7385                     "id":
7386 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
7387                     "title": "Media Source List",
7388                     "definitions": {
7389                         "oic.r.mediasourcelist": {
7390                             "properties": {
7391                                 "sources": {
7392                                     "type": "array",
7393                                     "items": {
7394                                         "oneOf": [
7395                                             { "$ref": "oic.r.mediaSource.json#" }
7396                                         ]
7397                                     }
7398                                 }
7399                             }
7400                         }
7401                     },
7402                     "type": "object",
7403                     "allOf": [
7404                         { "$ref": "oic.core.json#/definitions/oic.core"},
7405                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7406                         { "$ref": "#/definitions/oic.r.mediasourcelist"}
7407                     ],
7408                     "required": ["sources"]
7409                 }
7410
7411             example: |
7412                 {
7413                     "id": "unique_example_id",
7414                     "sources": [
7415                         {
7416                             "sourceName": "my new name",
7417                             "sourceNumber": "1",
7418                             "status": true
7419                         }
7420                     ]
7421                 }
7422

```

6.43.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
sources	array	yes	Read Write	
sourceName	string	yes	Read Write	Specifies a pre-defined media input or output
sourceNumber	integer		Read Only	Numeric identifier to

				specify the instance
sourceType	enum		Read Only	Specifies the type of the source
status	boolean	yes	Read Write	Specifies if the specific source instance is selected or not

6.43.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/mediaSourceOutputResURI		get	post		get

6.43.7 Referenced JSON schemas

6.43.7.1 oic.r.mediaSource.json

```

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

```

6.44 Motion Sensor

6.44.1 Introduction

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

6.44.2 Example URI

/MotionResURI

6.44.3 Resource Type

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

6.44.4 RAML Definition

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

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

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

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

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

6.44.5 Property Definition

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

value	boolean	yes	Read Only	true = Sensed, false = Not Sensed.
-------	---------	-----	-----------	--

6.44.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/MotionResURI		get			get

6.45 Night Mode

6.45.1 Introduction

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

6.45.2 Example URI

/NightModeResURI

6.45.3 Resource Type

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

6.45.4 RAML Definition

```

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

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

/NightModeResURI:
    description: |
        This resource describes a night mode on/off feature (on/off).
        A nightMode value of 'true' means that the feature is on.
        A nightMode value of 'false' means that the feature is off.

    is : ['interface']
    get:
        responses :
            200:
                body:
                    application/json:
                        schema: |
                            {
                                "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.nightMode.json#",
                                "$schema": "http://json-schema.org/draft-04/schema#",
                                "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
reserved.",
                                "title": "Night Mode",
                                "definitions": {
                                    "oic.r.nightmode": {
                                        "type": "object",
                                        "properties": {
                                            "nightMode": {
                                                "type": "boolean",
                                                "description": "Status of the Night Mode"
                                            }
                                        }
                                    }
                                }
                            }

```

```

7577         "type": "object",
7578         "allof": [
7579             {"$ref": "oic.core.json#/definitions/oic.core"},
7580             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7581             {"$ref": "#/definitions/oic.r.nightmode"}
7582         ],
7583         "required": [ "nightMode" ]
7584     }
7585
7586     example: |
7587         {
7588             "rt":          ["oic.r.nightmode"],
7589             "id":          "unique_example_id",
7590             "nightMode":   false
7591         }
7592
7593     post:
7594         body:
7595             application/json:
7596                 schema: |
7597                     {
7598                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.nightMode.json#",
7599                         "$schema": "http://json-schema.org/draft-04/schema#",
7600                         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
7601 reserved.",
7602                         "title": "Night Mode",
7603                         "definitions": {
7604                             "oic.r.nightmode": {
7605                                 "type": "object",
7606                                 "properties": {
7607                                     "nightMode": {
7608                                         "type": "boolean",
7609                                         "description": "Status of the Night Mode"
7610                                     }
7611                                 }
7612                             }
7613                         },
7614                         "type": "object",
7615                         "allof": [
7616                             {"$ref": "oic.core.json#/definitions/oic.core"},
7617                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7618                             {"$ref": "#/definitions/oic.r.nightmode"}
7619                         ],
7620                         "required": [ "nightMode" ]
7621                     }
7622
7623     example: |
7624         {
7625             "id":          "unique_example_id",
7626             "nightMode":   true
7627         }
7628
7629     responses :
7630         200:
7631             body:
7632                 application/json:
7633                     schema: |
7634                         {
7635                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.nightMode.json#",
7636                             "$schema": "http://json-schema.org/draft-04/schema#",
7637                             "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
7638 reserved.",
7639                             "title": "Night Mode",
7640                             "definitions": {

```

```

7641         "oic.r.nightmode": {
7642             "type": "object",
7643             "properties": {
7644                 "nightMode": {
7645                     "type": "boolean",
7646                     "description": "Status of the Night Mode"
7647                 }
7648             }
7649         },
7650         "type": "object",
7651         "allof": [
7652             {"$ref": "oic.core.json#/definitions/oic.core"},
7653             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7654             {"$ref": "#/definitions/oic.r.nightmode"}
7655         ],
7656         "required": [ "nightMode" ]
7657     }
7658 }
7659
7660     example: |
7661     {
7662         "id":          "unique_example_id",
7663         "nightMode":   true
7664     }
7665

```

6.45.5 Property Definition

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

6.45.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/NightModeResURI		get	post		get

6.46 Presence Sensor

6.46.1 Introduction

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

6.46.2 Example URI

/PresenceResURI

6.46.3 Resource Type

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

6.46.4 RAML Definition

```

7678 #%RAML 0.8
7679 title: OICPresenceSensor
7680 version: v1.1.0-20160519
7681 traits:
7682   - interface :
7683       queryParameters:
7684           if:
7685               enum: ["oic.if.s", "oic.if.baseline"]
7686
7687 /PresenceResURI:
7688     description: |

```

```

7689     This resource describes whether presence has been sensed or not.
7690     The value is a boolean.
7691     A value of 'true' means that presence has been sensed.
7692     A value of 'false' means that presence not been sensed.
7693
7694     is : ['interface']
7695     get:
7696         responses :
7697             200:
7698                 body:
7699                     application/json:
7700                         schema: |
7701                             {
7702                                 "id":
7703 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.presence.json#",
7704                                 "$schema": "http://json-schema.org/draft-04/schema#",
7705                                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
7706 reserved.",
7707                                 "title": "Presence Sensor",
7708                                 "definitions": {
7709                                     "oic.r.sensor.presence": {
7710                                         "allOf": [
7711                                             {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
7712                                         ]
7713                                     }
7714                                 },
7715                                 "type": "object",
7716                                 "allOf": [
7717                                     {"$ref": "oic.core.json#/definitions/oic.core"},
7718                                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7719                                     {"$ref": "#/definitions/oic.r.sensor.presence"}
7720                                 ],
7721                                 "required": ["value"]
7722                             }
7723
7724                         example: |
7725                             {
7726                                 "rt":      ["oic.r.sensor.presence"],
7727                                 "id":      "unique_example_id",
7728                                 "value": true
7729                             }
7730
7731

```

6.46.5 Property Definition

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

6.46.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/PresenceResURI		get			get

6.47 Pan Tilt Zoom Movement

6.47.1 Introduction

This resource specifies the pan tilt and zoom capabilities of a device. The resource rt 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 rt is 'oic.r.movement.ptz'. For digital/virtual image enhancements the rt is 'oic.r.image.ptz'. The Pan and Tilt are specified in degrees. The Zoom Factor is a value in the range 1-100 for linear (optical) zoom. The Zoom Factor is a value in the range [1x, 2x, 4x, 8x, 16x, 32x] for digital zoom. If there is no zoom value to set

7741 the Zoom Factor shall be '1x'. The value 0 degrees means neutral, this is the vendor defined setting.
7742 Note that this resource also can be used to create an offset for physical movement. When that is
7743 the case, the rt value is: oic.r.movement.offset.ptz Note that this resource also can be used to
7744 create an offset for image movement. When that is the case, the rt value is: oic.r.image.offset.ptz
7745 When the pan_range value is omitted, then the range is [-180.0,180.0]. If pan is not supported
7746 then the range shall be [0.0,0.0] When the tilt_range value is omitted, then the range is [-
7747 180.0,180.0]. If tilt is not supported then the range shall be [0.0,0.0]

7748 **6.47.2 Example URI**

7749 /PanTiltZoomResURI

7750 **6.47.3 Resource Type**

7751 The resource type (rt) is defined as: oic.r.ptz.

7752 **6.47.4 RAML Definition**

7753 *##RAML 0.8*

7754 *title: OICPanTiltZoom*

7755 *version: v1.1.0-20160519*

7756 *traits:*

7757 *- interface :*

7758 *queryParameters:*

7759 *if:*

7760 *enum: ["oic.if.a", "oic.if.baseline"]*

7761

7762 */PanTiltZoomResURI:*

7763 *description: |*

7764 *This resource specifies the pan tilt and zoom capabilities of a device.*

7765 *The resource rt is dynamic and reflects whether the values apply to*

7766 *physical movement of the device or digital/virtual enhancements to the image.*

7767 *For physical movement the rt is 'oic.r.movement.ptz'.*

7768 *For digital/virtual image enhancements the rt is 'oic.r.image.ptz'.*

7769 *The Pan and Tilt are specified in degrees.*

7770 *The Zoom Factor is a value in the range 1-100 for linear (optical) zoom.*

7771 *The Zoom Factor is a value in the range [1x, 2x, 4x, 8x, 16x, 32x] for digital zoom.*

7772 *If there is no zoom value to set the Zoom Factor shall be '1x'.*

7773 *The value 0 degrees means neutral, this is the vendor defined setting.*

7774 *Note that this resource also can be used to create an offset for physical movement.*

7775 *When that is the case, the rt value is: oic.r.movement.offset.ptz*

7776 *Note that this resource also can be used to create an offset for image movement.*

7777 *When that is the case, the rt value is: oic.r.image.offset.ptz*

7778 *When the pan_range value is omitted, then the range is [-180.0,180.0].*

7779 *If pan is not supported then the range shall be [0.0,0.0]*

7780 *When the tilt_range value is omitted, then the range is [-180.0,180.0].*

7781 *If tilt is not supported then the range shall be [0.0,0.0]*

7782

7783 *is : ['interface']*

7784 *get:*

7785 *description: |*

7786 *Retrieves the current pan, tilt and zoom setting.*

7787

7788 *responses :*

7789 *200:*

7790 *body:*

7791 *application/json:*

7792 *schema: |*

7793 *{*
7794 *"id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.ptz.json#",*
7795 *"\$schema": "http://json-schema.org/draft-04/schema#",*
7796 *"description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights*

```

7797 reserved.",
7798 "title": "Pan Tilt Zoom",
7799 "definitions": {
7800   "oic.r.ptz": {
7801     "type": "object",
7802     "properties": {
7803       "pan": {
7804         "type": "number",
7805         "description": "horizontal pan in degrees"
7806       },
7807       "tilt": {
7808         "type": "number",
7809         "description": "vertical tilt in degrees"
7810       },
7811       "pan_range": {
7812         "type": "array",
7813         "readOnly": true,
7814         "description": "Min and Max values for the pan setting",
7815         "minItems": 2,
7816         "maxItems": 2,
7817         "items": {
7818           "type": "number"
7819         }
7820       },
7821       "tilt_range": {
7822         "type": "array",
7823         "readOnly": true,
7824         "description": "Min and Max values for the tilt setting",
7825         "minItems": 2,
7826         "maxItems": 2,
7827         "items": {
7828           "type": "number"
7829         }
7830       },
7831       "zoomFactor": {
7832         "type": "string",
7833         "description": "The Zoomfactor value"
7834       },
7835       "zoomFactorRange": {
7836         "enum": ["linear", "1x", "2x", "4x", "8x", "16x", "32x"],
7837         "readOnly": true,
7838         "description": "allowed Zoom Factor values. Linear equates to a 1-100
7839 min/max."
7840       }
7841     }
7842   },
7843   "type": "object",
7844   "allof": [
7845     {"$ref": "oic.core.json#/definitions/oic.core"},
7846     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7847     {"$ref": "#/definitions/oic.r.ptz"}
7848   ],
7849   "required": ["pan", "tilt", "zoomFactor"]
7850 }
7851 }
7852
7853 example: |
7854 {
7855   "rt": ["oic.r.ptz"],
7856   "id": "unique_example_id",
7857   "pan": 0.0,
7858   "tilt": 0.0,
7859   "zoomFactor": "2x"
7860 }
7861
7862 post:
7863   description: |
7864     Sets the current pan, tilt and zoom value
7865

```

```

7866     body:
7867         application/json:
7868             schema: |
7869                 {
7870                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.ptz.json#",
7871                     "$schema": "http://json-schema.org/draft-04/schema#",
7872                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
7873 reserved.",
7874                     "title": "Pan Tilt Zoom",
7875                     "definitions": {
7876                         "oic.r.ptz": {
7877                             "type": "object",
7878                             "properties": {
7879                                 "pan": {
7880                                     "type": "number",
7881                                     "description": "horizontal pan in degrees"
7882                                 },
7883                                 "tilt": {
7884                                     "type": "number",
7885                                     "description": "vertical tilt in degrees"
7886                                 },
7887                                 "pan_range": {
7888                                     "type": "array",
7889                                     "readOnly": true,
7890                                     "description": "Min and Max values for the pan setting",
7891                                     "minItems": 2,
7892                                     "maxItems": 2,
7893                                     "items": {
7894                                         "type": "number"
7895                                     }
7896                                 },
7897                                 "tilt_range": {
7898                                     "type": "array",
7899                                     "readOnly": true,
7900                                     "description": "Min and Max values for the tilt setting",
7901                                     "minItems": 2,
7902                                     "maxItems": 2,
7903                                     "items": {
7904                                         "type": "number"
7905                                     }
7906                                 },
7907                                 "zoomFactor": {
7908                                     "type": "string",
7909                                     "description": "The Zoomfactor value"
7910                                 },
7911                                 "zoomFactorRange": {
7912                                     "enum": ["linear", "1x", "2x", "4x", "8x", "16x", "32x"],
7913                                     "readOnly": true,
7914                                     "description": "allowed Zoom Factor values. Linear equates to a 1-100 min/max."
7915                                 }
7916                             }
7917                         },
7918                         "type": "object",
7919                         "allOf": [
7920                             { "$ref": "oic.core.json#/definitions/oic.core" },
7921                             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
7922                             { "$ref": "#/definitions/oic.r.ptz" }
7923                         ],
7924                         "required": ["pan", "tilt", "zoomFactor"]
7925                     }
7926             }
7927
7928     example: |
7929         {
7930             "id": "unique_example_id",
7931             "pan": 10.0,
7932             "tilt": -10.0,
7933             "zoomFactor": "4x"

```

```

7934         }
7935
7936     responses :
7937         200:
7938             body:
7939                 application/json:
7940                     schema: |
7941                         {
7942                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.ptz.json#",
7943                             "$schema": "http://json-schema.org/draft-04/schema#",
7944                             "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
7945 reserved.",
7946                             "title": "Pan Tilt Zoom",
7947                             "definitions": {
7948                                 "oic.r.ptz": {
7949                                     "type": "object",
7950                                     "properties": {
7951                                         "pan": {
7952                                             "type": "number",
7953                                             "description": "horizontal pan in degrees"
7954                                         },
7955                                         "tilt": {
7956                                             "type": "number",
7957                                             "description": "vertical tilt in degrees"
7958                                         },
7959                                         "pan_range": {
7960                                             "type": "array",
7961                                             "readOnly": true,
7962                                             "description": "Min and Max values for the pan setting",
7963                                             "minItems": 2,
7964                                             "maxItems": 2,
7965                                             "items": {
7966                                                 "type": "number"
7967                                             }
7968                                         },
7969                                         "tilt_range": {
7970                                             "type": "array",
7971                                             "readOnly": true,
7972                                             "description": "Min and Max values for the tilt setting",
7973                                             "minItems": 2,
7974                                             "maxItems": 2,
7975                                             "items": {
7976                                                 "type": "number"
7977                                             }
7978                                         },
7979                                         "zoomFactor": {
7980                                             "type": "string",
7981                                             "description": "The Zoomfactor value"
7982                                         },
7983                                         "zoomFactorRange": {
7984                                             "enum": ["linear", "1x", "2x", "4x", "8x", "16x", "32x"],
7985                                             "readOnly": true,
7986                                             "description": "allowed Zoom Factor values. Linear equates to a 1-100
7987 min/max."
7988                                         }
7989                                     }
7990                                 },
7991                                 "type": "object",
7992                                 "allof": [
7993                                     {"$ref": "oic.core.json#/definitions/oic.core"},
7994                                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7995                                     {"$ref": "#/definitions/oic.r.ptz"}
7996                                 ],
7997                                 "required": ["pan", "tilt", "zoomFactor"]
7998                             }
7999
8000
8001     example: |

```

```

8002     {
8003         "id":         "unique_example_id",
8004         "pan":         10.0,
8005         "tilt":        -10.0,
8006         "zoomFactor": "4x"
8007     }
8008

```

8009 6.47.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
pan	number	yes	Read Write	Horizontal Pan In Degrees
tilt	number	yes	Read Write	Vertical Tilt In Degrees
pan_range	array		Read Only	Min and Max values for the pan setting
tilt_range	array		Read Only	Min and Max values for the tilt setting
zoomFactor	string	yes	Read Write	The Zoomfactor value
zoomFactorRange	enum		Read Only	Allowed Zoom Factor Values. Linear Equates To A 1-100 Min/Max.

8010 6.47.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/PanTiltZoomResURI		get	post		get

8011 6.48 Signal Strength

8012 6.48.1 Introduction

8013 This resource describes the strength of a signal by means of lqi and rssi. The lqi is a floating point
8014 number that represents Link Quality Indicator. The rssi is a floating point number that represents
8015 the received signal strength indicator.

8016 6.48.2 Example URI

8017 /SignalStrengthResURI

8018 6.48.3 Resource Type

8019 The resource type (rt) is defined as: oic.r.signalstrength.

8020 6.48.4 RAML Definition

```

8021 #%RAML 0.8
8022 title: OICSignalStrength
8023 version: v1.1.0-20160519
8024 traits:
8025   - interface :
8026       queryParameters:
8027         if:
8028           enum: ["oic.if.s", "oic.if.baseline"]
8029
8030 /SignalStrengthResURI:
8031   description: |

```

```

8032     This resource describes the strength of a signal by means of lqi and rssi.
8033     The lqi is a floating point number that represents Link Quality Indicator.
8034     The rssi is a floating point number that represents the received signal strength indicator.
8035
8036     is : ['interface']
8037
8038     get:
8039         responses :
8040             200:
8041                 body:
8042                     application/json:
8043                         schema: |
8044                             {
8045                                 "id":
8046                                 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.signalStrength.json#",
8047                                 "$schema": "http://json-schema.org/draft-04/schema#",
8048                                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
8049 reserved.",
8050                                 "title": "Signal Strength",
8051                                 "definitions": {
8052                                     "oic.r.signalstrength": {
8053                                         "type": "object",
8054                                         "properties": {
8055                                             "lqi": {
8056                                                 "type": "number",
8057                                                 "readOnly": true,
8058                                                 "description": "current value of Link Quality Indicator"
8059                                             },
8060                                             "rssi": {
8061                                                 "type": "number",
8062                                                 "readOnly": true,
8063                                                 "description": "current value of Received Signal Strength Indicator"
8064                                             }
8065                                         }
8066                                     }
8067                                 },
8068                                 "type": "object",
8069                                 "allof": [
8070                                     {"$ref": "oic.core.json#/definitions/oic.core"},
8071                                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8072                                     {"$ref": "#/definitions/oic.r.signalstrength"}
8073                                 ],
8074                                 "required": ["lqi", "rssi"]
8075                             }
8076
8077         example: |
8078             {
8079                 "rt": ["oic.r.signalstrength"],
8080                 "id": "unique_example_id",
8081                 "lqi": 10.0,
8082                 "rssi": 55.0
8083             }

```

6.48.5 Property Definition

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

8085 6.48.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/SignalStrengthResURI		get			get

8086 6.49 Speech Synthesis-TTS

8087 6.49.1 Introduction

8088 This resource may be created on the OIC Server that is capable of rendering speech by an OIC
 8089 Client or may be created on the OIC Server by some resident application. The audio rendered is
 8090 at this stage local to the Server (i.e. not streamed). The utterance is an SSML document. The
 8091 supportedLanguages is an array of the RFC 5646 defined language tags that are supported. The
 8092 supportedVoices is an SSML document fragment indicating the voices that are supported.

8093 6.49.2 Example URI

8094 /SpeechTTSResURI

8095 6.49.3 Resource Type

8096 The resource type (rt) is defined as: oic.r.speech.tts.

8097 6.49.4 RAML Definition

```

8098 #%RAML 0.8
8099 title: OICSpeechTTS
8100 version: v1.1.0-20160519
8101 traits:
8102   - interface :
8103       queryParameters:
8104           if:
8105               enum: ["oic.if.a", "oic.if.baseline"]
8106
8107 /SpeechTTSResURI:
8108     description: |
8109       This resource may be created on the OIC Server that is capable of rendering speech by an OIC
8110 Client
8111       or may be created on the OIC Server by some resident application.
8112       The audio rendered is at this stage local to the Server (i.e
8113 not streamed).
8114       The utterance is an SSML document.
8115       The supportedLanguages is an array of the RFC 5646 defined language tags that are supported.
8116       The supportedVoices is an SSML document fragment indicating the voices that are supported.
8117
8118 is : ['interface']
8119 get:
8120     description: |
8121       Utterance in the example shall be a properly escaped (JSON rules) SSML document
8122       An example is given below:
8123       "<?xml version=\"1.0\" encoding=\"ISO-8859-1\"?>\n\r
8124       < speak version=\"1.1\" xmlns=\"http://www.w3.org/2001/10/synthesis\" \n\r
8125       \txmlns:xsi=\"http://www.w3.org/2001/XMLSchema-instance\" \n\r
8126       \txsi:schemaLocation=\"http://www.w3.org/2001/10/synthesis \n\r
8127       \thttp://www.w3.org/TR/speech-synthesis11/synthesis.xsd\" \n\r
8128       \txml:lang=\"en-US\">\n\r
8129       \n\r
8130       \tThe title of the movie is:\n\r
8131       \t\"Monty Pythons The Meaning of Life\" \n\r
8132       \twhich is directed by Terry Jones.\n\r
8133       </speak\"
8134
8135     responses :
8136         200:
```

```

8137     body:
8138         application/json:
8139             schema: |
8140                 {
8141                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.speech.tts.json#",
8142                     "$schema": "http://json-schema.org/draft-04/schema#",
8143                     "description": "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
8144 reserved.",
8145                     "title": "Speech Synthesis-TTS",
8146                     "definitions": {
8147                         "oic.r.speech.tts": {
8148                             "type": "object",
8149                             "properties": {
8150                                 "utterance": {
8151                                     "type": "string",
8152                                     "description": "SSML document including the speech body"
8153                                 },
8154                                 "supportedLanguages": {
8155                                     "type": "array",
8156                                     "readOnly": true,
8157                                     "description": "array of supported language tags",
8158                                     "items": {
8159                                         "type": "string"
8160                                     }
8161                                 },
8162                                 "supportedVoices": {
8163                                     "type": "string",
8164                                     "readOnly": true,
8165                                     "description": "SSML document fragment indicating supported voices"
8166                                 }
8167                             }
8168                         }
8169                     },
8170                     "type": "object",
8171                     "allOf": [
8172                         {"$ref": "oic.core.json#/definitions/oic.core"},
8173                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8174                         {"$ref": "#/definitions/oic.r.speech.tts"}
8175                     ],
8176                     "required": ["utterance"]
8177                 }
8178
8179             example: |
8180                 {
8181                     "rt": ["oic.r.speech.tts"],
8182                     "id": "unique_example_id",
8183                     "utterance": "SSML Document",
8184                     "supportedLanguages": ["en-US", "en-GB", "fr-CA"],
8185                     "supportedVoices": "<voice gender=\"female\" variant=\"2\"></voice>\n\r<voice
8186 name=\"Mike\"></voice>"
8187                 }
8188
8189     post:
8190         description: |
8191             Changes the utterance being rendered.
8192             Example shows a change in language selected.
8193
8194     body:
8195         application/json:
8196             schema: |
8197                 {
8198                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.speech.tts.json#",
8199                     "$schema": "http://json-schema.org/draft-04/schema#",
8200                     "description": "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
8201 reserved.",
8202                     "title": "Speech Synthesis-TTS",

```



```

8203     "definitions": {
8204         "oic.r.speech.tts": {
8205             "type": "object",
8206             "properties": {
8207                 "utterance": {
8208                     "type": "string",
8209                     "description": "SSML document including the speech body"
8210                 },
8211                 "supportedLanguages": {
8212                     "type": "array",
8213                     "readOnly": true,
8214                     "description": "array of supported language tags",
8215                     "items": {
8216                         "type": "string"
8217                     }
8218                 },
8219                 "supportedVoices": {
8220                     "type": "string",
8221                     "readOnly": true,
8222                     "description": "SSML document fragment indicating supported voices"
8223                 }
8224             }
8225         },
8226         "type": "object",
8227         "allOf": [
8228             {"$ref": "oic.core.json#/definitions/oic.core"},
8229             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8230             {"$ref": "#/definitions/oic.r.speech.tts"}
8231         ],
8232         "required": ["utterance"]
8233     }
8234 }
8235
8236 example: |
8237 {
8238     "rt":         ["oic.r.speech.tts"],
8239     "id":         "unique_example_id",
8240     "utterance":  "SSML Document"
8241 }
8242
8243 responses :
8244 200:
8245     body:
8246     application/json:
8247         schema: |
8248             {
8249                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.speech.tts.json#",
8250                 "$schema": "http://json-schema.org/draft-04/schema#",
8251                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
8252 reserved.",
8253                 "title": "Speech Synthesis-TTS",
8254                 "definitions": {
8255                     "oic.r.speech.tts": {
8256                         "type": "object",
8257                         "properties": {
8258                             "utterance": {
8259                                 "type": "string",
8260                                 "description": "SSML document including the speech body"
8261                             },
8262                             "supportedLanguages": {
8263                                 "type": "array",
8264                                 "readOnly": true,
8265                                 "description": "array of supported language tags",
8266                                 "items": {
8267                                     "type": "string"
8268                                 }
8269                             }
8270                         }
8271                     },

```

```

8270         "supportedVoices": {
8271             "type": "string",
8272             "readOnly": true,
8273             "description": "SSML document fragment indicating supported voices"
8274         }
8275     }
8276 }
8277 },
8278 "type": "object",
8279 "allof": [
8280     {"$ref": "oic.core.json#/definitions/oic.core"},
8281     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8282     {"$ref": "#/definitions/oic.r.speech.tts"}
8283 ],
8284 "required": ["utterance"]
8285 }
8286
8287 example: |
8288 {
8289     "rt":          ["oic.r.speech.tts"],
8290     "id":          "unique_example_id",
8291     "utterance":   "SSML Document"
8292 }
8293

```

8294 6.49.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
utterance	string	yes	Read Write	SSML document including the speech body
supportedLanguages	array		Read Only	Array Of Supported Language Tags
supportedVoices	string		Read Only	SSML document fragment indicating supported voices

8295 6.49.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/SpeechTTSResURI		get	post		get

8296 6.50 Touch Sensor

8297 6.50.1 Introduction

8298 This resource describes whether touch has been sensed or not. The value is a boolean. A value
8299 of 'true' means that touch has been sensed. A value of 'false' means that touch not been sensed.

8300 6.50.2 Example URI

8301 /TouchResURI

8302 6.50.3 Resource Type

8303 The resource type (rt) is defined as: oic.r.sensor.touch.

8304 6.50.4 RAML Definition

```

8305 #%RAML 0.8
8306 title: OICTouchSensor
8307 version: v1.1.0-20160519
8308 traits:
8309   - interface :

```

```

8310     queryParameters:
8311         if:
8312             enum: ["oic.if.s", "oic.if.baseline"]
8313
8314 /TouchResURI:
8315     description: |
8316         This resource describes whether touch has been sensed or not.
8317         The value is a boolean.
8318         A value of 'true' means that touch has been sensed.
8319         A value of 'false' means that touch not been sensed.
8320
8321     is : ['interface']
8322     get:
8323         responses :
8324             200:
8325                 body:
8326                     application/json:
8327                         schema: |
8328                             {
8329                                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.touch.json#",
8330                                 "$schema": "http://json-schema.org/draft-04/schema#",
8331                                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
8332 reserved.",
8333                                 "title": "Touch Sensor",
8334                                 "definitions": {
8335                                     "oic.r.sensor.touch": {
8336                                         "allOf": [
8337                                             {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
8338                                         ]
8339                                     }
8340                                 },
8341                                 "type": "object",
8342                                 "allOf": [
8343                                     {"$ref": "oic.core.json#/definitions/oic.core"},
8344                                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8345                                     {"$ref": "#/definitions/oic.r.sensor.touch"}
8346                                 ],
8347                                 "required": ["value"]
8348                             }
8349
8350         example: |
8351             {
8352                 "rt": ["oic.r.sensor.touch"],
8353                 "id": "unique_example_id",
8354                 "value": true
8355             }
8356

```

6.50.5 Property Definition

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

6.50.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/TouchResURI		get			get

8359 **6.51 UV Radiation**

8360 **6.51.1 Introduction**

8361 This resource specifies UV radiation measurement. The measurement is the current measured UV
8362 Index

8363 **6.51.2 Example URI**

8364 /UVRadiationResURI

8365 **6.51.3 Resource Type**

8366 The resource type (rt) is defined as: oic.r.sensor.radiation.uv.

8367 **6.51.4 RAML Definition**

8368 *##RAML 0.8*

8369 *title: OICUVRadiation*
8370 *version: v1.1.0-20160519*

8371 *traits:*
8372 *- interface :*
8373 *queryParameters:*

8374 *if:*
8375 *enum: ["oic.if.s", "oic.if.baseline"]*

8376

8377 */UVRadiationResURI:*

8378 *description: |*
8379 *This resource specifies UV radiation measurement.*
8380 *The measurement is the current measured UV Index*
8381

8382 *is : ['interface']*

8383 *get:*

8384 *description: |*
8385 *Retrieves the current UV Radiation value*
8386

8387 *responses :*

8388 *200:*

8389 *body:*
8390 *application/json:*

8391 *schema: |*

8392 *{*
8393 *"id":*
8394 *"http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.radiation.uv.json#",*
8395 *"\$schema": "http://json-schema.org/draft-04/schema#",*
8396 *"description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights*
8397 *reserved.",*
8398 *"title": "UV Radiation",*
8399 *"definitions": {*
8400 *"oic.r.sensor.radiation.uv": {*
8401 *"type": "object",*
8402 *"properties": {*
8403 *"measurement": {*
8404 *"type": "number",*
8405 *"readOnly": true,*
8406 *"description": "The measured UV Index"*
8407 *}*
8408 *}*
8409 *}*
8410 *},*
8411 *"type": "object",*
8412 *"allof": [*
8413 *{"\$ref": "oic.core.json#/definitions/oic.core"},*
8414 *{"\$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},*

```

8415         {"$ref": "#/definitions/oic.r.sensor.radiation.uv"}
8416     },
8417     "required": ["measurement"]
8418 }
8419
8420 example: |
8421     {
8422         "rt":          ["oic.r.sensor.radiation.uv"],
8423         "id":          "unique_example_id",
8424         "measurement": 3.5
8425     }
8426

```

8427 6.51.5 Property Definition

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

8428 6.51.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/UVRadiationResURI		get			get

8429 6.52 Water Sensor

8430 6.52.1 Introduction

8431 This resource describes whether water has been sensed or not. The value is a boolean. A value
8432 of 'true' means that water has been sensed. A value of 'false' means that water not been sensed.

8433 6.52.2 Example URI

8434 /WaterResURI

8435 6.52.3 Resource Type

8436 The resource type (rt) is defined as: oic.r.sensor.water.

8437 6.52.4 RAML Definition

```

8438 #%RAML 0.8
8439 title: OICWaterSensor
8440 version: v1.1.0-20160519
8441 traits:
8442   - interface :
8443       queryParameters:
8444         if:
8445             enum: ["oic.if.s", "oic.if.baseline"]
8446
8447 /WaterResURI:
8448     description: |
8449         This resource describes whether water has been sensed or not.
8450         The value is a boolean.
8451         A value of 'true' means that water has been sensed.
8452         A value of 'false' means that water not been sensed.
8453
8454     is : ['interface']
8455     get:
8456         responses :
8457             200:
8458                 body:
8459                     application/json:
8460                         schema: |

```

```

8461     {
8462         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.water.json#",
8463         "$schema": "http://json-schema.org/draft-04/schema#",
8464         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
8465 reserved.",
8466         "title": "Water Sensor",
8467         "definitions": {
8468             "oic.r.sensor.water": {
8469                 "allOf": [
8470                     {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
8471                 ]
8472             }
8473         },
8474         "type": "object",
8475         "allOf": [
8476             {"$ref": "oic.core.json#/definitions/oic.core"},
8477             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8478             {"$ref": "#/definitions/oic.r.sensor.water"}
8479         ],
8480         "required": ["value"]
8481     }
8482
8483     example: |
8484     {
8485         "rt": ["oic.r.sensor.water"],
8486         "id": "unique_example_id",
8487         "value": true
8488     }
8489

```

8490 6.52.5 Property Definition

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

8491 6.52.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/WaterResURI		get			get

8492 6.53 Acceleration Sensor

8493 6.53.1 Introduction

8494 This resource provides a measure of proper acceleration (g force) as opposed to co-ordinate
8495 acceleration (which is dependent on the co-ordinate system and the observer). The value is a float
8496 which describes the acceleration experienced by the object in "g".

8497 6.53.2 Example URI

8498 /AccelerationResURI

8499 6.53.3 Resource Type

8500 The resource type (rt) is defined as: oic.r.sensor.acceleration.

8501 6.53.4 RAML Definition

```

8502 #%RAML 0.8
8503 title: OICAcceleration
8504 version: v1.1.0-20160519
8505 traits:
8506   - interface :
8507       queryParameters:
8508           if:
8509               enum: ["oic.if.s", "oic.if.baseline"]

```

```

8510
8511 /AccelerationResURI:
8512     description: |
8513         This resource provides a measure of proper acceleration (g force) as opposed to co-ordinate
8514 acceleration
8515         (which is dependent on the co-ordinate system and the observer).
8516         The value is a float which describes the acceleration experienced by the object in "g".
8517
8518     is : ['interface']
8519     get:
8520         responses :
8521             200:
8522                 body:
8523                     application/json:
8524                         schema: |
8525                             {
8526                                 "id":
8527 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.acceleration.json#",
8528                                 "$schema": "http://json-schema.org/draft-04/schema#",
8529                                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
8530 reserved.",
8531                                 "title": "Acceleration Sensor",
8532                                 "definitions": {
8533                                     "oic.r.sensor.acceleration": {
8534                                         "properties": {
8535                                             "acceleration": {
8536                                                 "type": "number",
8537                                                 "readOnly": true,
8538                                                 "description": "sensed acceleration experienced in 'g'."
8539                                             }
8540                                         }
8541                                     }
8542                                 },
8543                                 "type": "object",
8544                                 "allof": [
8545                                     {"$ref": "oic.core.json#/definitions/oic.core"},
8546                                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8547                                     {"$ref": "#/definitions/oic.r.sensor.acceleration"}
8548                                 ],
8549                                 "required": ["acceleration"]
8550                             }
8551
8552                 example: |
8553                     {
8554                         "rt":          ["oic.r.sensor.acceleration"],
8555                         "id":          "unique_example_id",
8556                         "acceleration": 0.5
8557                     }
8558

```

6.53.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
acceleration	number	yes	Read Only	Sensed Acceleration Experienced In 'G'.

6.53.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/AccelerationResURI		get			get

8561 6.54 Movement

8562 6.54.1 Introduction

8563 This resource specifies linear movement. The movementSettings is an array of strings containing
8564 possible movement values (e.g. spin, stop, left, right). The movement is the currently selected
8565 movement value. The movementModifier is a modifier to the movement value (e.g. "spin", "90")

8566 6.54.2 Example URI

8567 /MovementResURI

8568 6.54.3 Resource Type

8569 The resource type (rt) is defined as: oic.r.movement.linear.

8570 6.54.4 RAML Definition

8571 *##RAML 0.8*

8572 *title: OICAcceleration*

8573 *version: v1.1.0-20160519*

8574 *traits:*

8575 *- interface :*

8576 *queryParameters:*

8577 *if:*

8578 *enum: ["oic.if.s", "oic.if.baseline"]*

8579

8580 */MovementResURI:*

8581 *description: |*

8582 *This resource specifies linear movement.*

8583 *The movementSettings is an array of strings containing possible movement values (e.g.*

8584 *spin, stop, left, right).*

8585 *The movement is the currently selected movement value.*

8586 *The movementModifier is a modifier to the movement value (e.g.*

8587 *"spin", "90")*

8588

8589 *is : ['interface']*

8590 *get:*

8591 *responses :*

8592 *200:*

8593 *body:*

8594 *application/json:*

8595 *schema: |*

8596 *{*

8597 *"id":*

8598 *"http://openinterconnect.org/iotdatamodels/schemas/oic.r.movement.linear.json#",*

8599 *"\$schema": "http://json-schema.org/draft-04/schema#",*

8600 *"description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights*

8601 *reserved.",*

8602 *"title": "Linear Movement",*

8603 *"definitions": {*

8604 *"oic.r.movement.linear": {*

8605 *"type": "object",*

8606 *"properties": {*

8607 *"movementSettings": {*

8608 *"type": "array",*

8609 *"readOnly": true,*

8610 *"description": "array of possible movement values",*

8611 *"items": {*

8612 *"type": "string"*

8613 *}*

8614 *},*

8615 *"movement": {*

8616 *"type": "string",*

8617 *"description": "Current movement value"*


```

8618         },
8619         "movementModifier": {
8620             "type": "string",
8621             "description": "Modifier to the movement value (e.g. spin-90, left-20),
units are device dependent"
8622         }
8623     }
8624 }
8625 }
8626 },
8627 "type": "object",
8628 "allOf": [
8629     {"$ref": "oic.core.json#/definitions/oic.core"},
8630     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8631     {"$ref": "#/definitions/oic.r.movement.linear"}
8632 ],
8633 "required": ["movementSettings", "movement"]
8634 }
8635
8636 example: |
8637 {
8638     "rt":             ["oic.r.movement.linear"],
8639     "id":             "unique_example_id",
8640     "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
8641     "movement":       "rotate",
8642     "movementModifier": "90"
8643 }
8644
8645 post:
8646     description: |
8647         Sets the current device movement
8648
8649     body:
8650         application/json:
8651             schema: |
8652                 {
8653                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.movement.linear.json#",
8654                     "$schema": "http://json-schema.org/draft-04/schema#",
8655                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
reserved.",
8656                     "title": "Linear Movement",
8657                     "definitions": {
8658                         "oic.r.movement.linear": {
8659                             "type": "object",
8660                             "properties": {
8661                                 "movementSettings": {
8662                                     "type": "array",
8663                                     "readOnly": true,
8664                                     "description": "array of possible movement values",
8665                                     "items": {
8666                                         "type": "string"
8667                                     }
8668                                 },
8669                                 "movement": {
8670                                     "type": "string",
8671                                     "description": "Current movement value"
8672                                 },
8673                                 "movementModifier": {
8674                                     "type": "string",
8675                                     "description": "Modifier to the movement value (e.g. spin-90, left-20), units
are device dependent"
8676                                 }
8677                             }
8678                         }
8679                     },
8680                 },
8681             },
8682             "type": "object",
8683             "allOf": [
8684                 {"$ref": "oic.core.json#/definitions/oic.core"},

```

```

8685         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8686         {"$ref": "#/definitions/oic.r.movement.linear"}
8687     ],
8688     "required": ["movementSettings", "movement"]
8689 }
8690
8691 example: |
8692     {
8693         "id": "unique_example_id",
8694         "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
8695         "movement": "stop"
8696     }
8697
8698 responses :
8699     200:
8700         body:
8701             application/json:
8702                 schema: |
8703                     {
8704                         "id":
8705 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.movement.linear.json#",
8706                         "$schema": "http://json-schema.org/draft-04/schema#",
8707                         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
8708 reserved.",
8709                         "title": "Linear Movement",
8710                         "definitions": {
8711                             "oic.r.movement.linear": {
8712                                 "type": "object",
8713                                 "properties": {
8714                                     "movementSettings": {
8715                                         "type": "array",
8716                                         "readOnly": true,
8717                                         "description": "array of possible movement values",
8718                                         "items": {
8719                                             "type": "string"
8720                                         }
8721                                     },
8722                                     "movement": {
8723                                         "type": "string",
8724                                         "description": "Current movement value"
8725                                     },
8726                                     "movementModifier": {
8727                                         "type": "string",
8728                                         "description": "Modifier to the movement value (e.g. spin-90, left-20),
8729 units are device dependent"
8730                                     }
8731                                 }
8732                             }
8733                         },
8734                         "type": "object",
8735                         "allof": [
8736                             {"$ref": "oic.core.json#/definitions/oic.core"},
8737                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8738                             {"$ref": "#/definitions/oic.r.movement.linear"}
8739                         ],
8740                         "required": ["movementSettings", "movement"]
8741                     }
8742
8743 example: |
8744     {
8745         "id": "unique_example_id",
8746         "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
8747         "movement": "stop"
8748     }
8749

```

6.54.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
movementSettings	array	yes	Read Only	Array Of Possible Movement Values
movement	string	yes	Read Write	Current movement value
movementModifier	string		Read Write	Modifier to the movement value (e.g. spin-90, left-20), units are device dependent

6.54.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/MovementResURI		get	post		get

6.55 Sleep Sensor

6.55.1 Introduction

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

6.55.2 Example URI

/SleepSensorResURI

6.55.3 Resource Type

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

6.55.4 RAML Definition

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

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

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

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

```

8784      {
8785        "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.sleep.json#",
8786        "$schema": "http://json-schema.org/draft-04/schema#",
8787        "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
8788 reserved.",
8789        "title": "Sleep Sensor",
8790        "definitions": {
8791          "oic.r.sensor.sleep": {
8792            "allOf": [
8793              {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
8794            ]
8795          }
8796        },
8797        "type": "object",
8798        "allOf": [
8799          {"$ref": "oic.core.json#/definitions/oic.core"},
8800          {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8801          {"$ref": "#/definitions/oic.r.sensor.sleep"}
8802        ],
8803        "required": ["value"]
8804      }
8805
8806      example: |
8807      {
8808        "rt":      ["oic.r.sensor.sleep"],
8809        "id":      "unique_example_id",
8810        "value":   true
8811      }
8812

```

8813 6.55.5 Property Definition

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

8814 6.55.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/SleepSensorResURI		get			get

8815 6.56 Smoke Sensor

8816 6.56.1 Introduction

8817 This resource describes whether smoke has been sensed or not. The value is a boolean. A value
8818 of 'true' means that smoke has been sensed. A value of 'false' means that smoke not been sensed.

8819 6.56.2 Example URI

8820 /SmokeSensorResURI

8821 6.56.3 Resource Type

8822 The resource type (rt) is defined as: oic.r.sensor.smoke.

8823 6.56.4 RAML Definition

```

8824 #%RAML 0.8
8825 title: OICSmokeSensor
8826 version: v1.1.0-20160519
8827 traits:
8828   - interface :
8829       queryParameters:
8830         if:
8831           enum: ["oic.if.s", "oic.if.baseline"]
8832

```

```

8833 /SmokeSensorResURI:
8834     description: |
8835         This resource describes whether smoke has been sensed or not.
8836         The value is a boolean.
8837         A value of 'true' means that smoke has been sensed.
8838         A value of 'false' means that smoke not been sensed.
8839
8840     is : ['interface']
8841     get:
8842         responses :
8843             200:
8844                 body:
8845                     application/json:
8846                         schema: |
8847                             {
8848                                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.smoke.json#",
8849                                 "$schema": "http://json-schema.org/draft-04/schema#",
8850                                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
8851 reserved.",
8852                                 "title": "Smoke Sensor",
8853                                 "definitions": {
8854                                     "oic.r.sensor.smoke": {
8855                                         "allOf": [
8856                                             {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
8857                                         ]
8858                                     }
8859                                 },
8860                                 "type": "object",
8861                                 "allOf": [
8862                                     {"$ref": "oic.core.json#/definitions/oic.core"},
8863                                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8864                                     {"$ref": "#/definitions/oic.r.sensor.smoke"}
8865                                 ],
8866                                 "required": ["value"]
8867                             }
8868
8869                         example: |
8870                             {
8871                                 "rt":      ["oic.r.sensor.smoke"],
8872                                 "id":      "unique_example_id",
8873                                 "value":   true
8874                             }
8875

```

6.56.5 Property Definition

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

6.56.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/SmokeSensorResURI		get			get

6.57 Three Axis Sensor

6.57.1 Introduction

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

```

8883 6.57.2 Example URI
8884 /ThreeAxisResURI
8885 6.57.3 Resource Type
8886 The resource type (rt) is defined as: oic.r.sensor.threeaxis.
8887 6.57.4 RAML Definition
8888 #%RAML 0.8
8889 title: OICThreeAxis
8890 version: v1.1.0-20160519
8891 traits:
8892   - interface :
8893       queryParameters:
8894         if:
8895           enum: ["oic.if.s", "oic.if.baseline"]
8896
8897 /ThreeAxisResURI:
8898   description: |
8899     This resource provides a representation of the measurement from a three-axis sensor.
8900     The orientation is an array of numbers representing x-plane, y-plane and z-plane values.
8901     The unit of measurement for each pane is 'g'.
8902
8903   is : ['interface']
8904   get:
8905     responses :
8906       200:
8907         body:
8908           application/json:
8909             schema: |
8910               {
8911                 "id":
8912 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.threeaxis.json#",
8913                 "$schema": "http://json-schema.org/draft-04/schema#",
8914                 "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
8915 reserved.",
8916                 "title": "Three Axis Sensor",
8917                 "definitions": {
8918                   "oic.r.sensor.threeaxis": {
8919                     "properties": {
8920                       "orientation": {
8921                         "type": "array",
8922                         "readOnly": true,
8923                         "description": "Array containing x-plane, y-plane and z-plane orientation
8924 in 'g'.",
8925                         "minItems": 3,
8926                         "maxItems": 3,
8927                         "items": {
8928                           "type": "number"
8929                         }
8930                       }
8931                     }
8932                   }
8933                 },
8934                 "type": "object",
8935                 "allOf": [
8936                   {"$ref": "oic.core.json#/definitions/oic.core"},
8937                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8938                   {"$ref": "#/definitions/oic.r.sensor.threeaxis"}
8939                 ],
8940                 "required": ["orientation"]
8941               }
8942

```

```

8943         example: |
8944             {
8945                 "rt":          ["oic.r.sensor.threeaxis"],
8946                 "id":          "unique_example_id",
8947                 "orientation": [0.7, 1.1, -0.2]
8948             }
8949

```

8950 6.57.5 Property Definition

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

8951 6.57.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/ThreeAxisResURI		get			get

8952 6.58 Altimeter

8953 6.58.1 Introduction

8954 This resource describes the properties associated with altimeter. Altimeter is a height of the
8955 position (metres).

8956 6.58.2 Example URI

8957 /AltimeterResURI

8958 6.58.3 Resource Type

8959 The resource type (rt) is defined as: oic.r.altimeter.

8960 6.58.4 RAML Definition

```

8961 #%RAML 0.8
8962 title: OICAltimeter
8963 version: v1.1.0-20160519
8964 traits:
8965   - interface :
8966       queryParameters:
8967         if:
8968             enum: ["oic.if.s", "oic.if.baseline"]
8969
8970 /AltimeterResURI:
8971     description: |
8972         This resource describes the properties associated with altimeter.
8973         Altimeter is a height of the position (metres).
8974
8975     is : ['interface']
8976     get:
8977         description: |
8978             Retrieves the current the height of the position (metres).
8979
8980     responses :
8981         200:
8982             body:
8983                 application/json:
8984                     schema: |

```

```

8985     {
8986       "id": "http://openinterconnect.org/schemas/oic.r.altimeter#",
8987       "$schema": "http://json-schema.org/draft-04/schema#",
8988       "description": "Copyright (c) 2016 Open Interconnect Consortium, Inc. All rights
8989 reserved.",
8990       "title": "Altimeter",
8991       "definitions": {
8992         "oic.r.altimeter": {
8993           "type": "object",
8994           "properties": {
8995             "alt": {
8996               "type": "number",
8997               "minimum": 0,
8998               "readOnly": true,
8999               "description": "The current height of the position (metres)"
9000             }
9001           }
9002         }
9003       },
9004       "type": "object",
9005       "allOf": [
9006         {"$ref": "oic.core.json#/definitions/oic.core"},
9007         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9008         {"$ref": "#/definitions/oic.r.altimeter"}
9009       ],
9010       "required": ["alt"]
9011     }
9012
9013   example: |
9014     {
9015       "rt": ["oic.r.altimeter"],
9016       "id": "unique_example_id",
9017       "alt": 1500.0
9018     }
9019

```

6.58.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
alt	number	yes	Read Only	

6.58.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/AltimeterResURI		get			get

6.59 Clock

6.59.1 Introduction

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

6.59.2 Example URI

/ClockResURI

6.59.3 Resource Type

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

6.59.4 RAML Definition

```

9032 #%RAML 0.8
9033 title: OICClock
9034 version: v1.1.0-20160519
9035 traits:
9036   - interface :
9037     queryParameters:

```



```

9038         if:
9039             enum: ["oic.if.a", "oic.if.baseline"]
9040
9041     /ClockResURI:
9042         description: |
9043             This resource describes the properties associated with clock and time.
9044             Clock is a time information.
9045             Datetime is using ISO 8601 datetime format (e.g: "2007-04-05T14:30Z") (Time+Date+Timezone)
9046             Countdown is the desired total seconds for countdown.
9047
9048     is : ['interface']
9049     get:
9050         description: |
9051             Retrieves the current datetime data.
9052
9053     responses :
9054         200:
9055             body:
9056                 application/json:
9057                     schema: |
9058                         {
9059                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.clock.json#",
9060                             "$schema": "http://json-schema.org/draft-04/schema#",
9061                             "description": "(c) 2016 Open Connectivity Foundation, Inc. All rights reserved.",
9062                             "title": "Clock",
9063                             "definitions": {
9064                                 "oic.r.clock": {
9065                                     "type": "object",
9066                                     "properties": {
9067                                         "datetime": {
9068                                             "type": "string",
9069                                             "description": "Using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z,
9070 2007-04-05T14:30+09:00)"
9071                                         },
9072                                         "countdown": {
9073                                             "type": "number",
9074                                             "minimum": 0,
9075                                             "description": "Desired total seconds for countdown"
9076                                         }
9077                                     }
9078                                 }
9079                             },
9080                             "type": "object",
9081                             "allof": [
9082                                 {"$ref": "oic.core.json#/definitions/oic.core"},
9083                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9084                                 {"$ref": "#/definitions/oic.r.clock"}
9085                             ],
9086                             "required": ["datetime"]
9087                         }
9088
9089         example: |
9090             {
9091                 "rt": ["oic.r.clock"],
9092                 "id": "unique_example_id",
9093                 "datetime": "2015-11-05T14:30Z",
9094                 "countdown": 0.0
9095             }
9096
9097     post:
9098         description: |

```

```

9099         Sets the desired datetime.
9100
9101     body:
9102     application/json:
9103         schema: |
9104             {
9105                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.clock.json#",
9106                 "$schema": "http://json-schema.org/draft-04/schema#",
9107                 "description": "(c) 2016 Open Connectivity Foundation, Inc. All rights reserved.",
9108                 "title": "Clock",
9109                 "definitions": {
9110                     "oic.r.clock": {
9111                         "type": "object",
9112                         "properties": {
9113                             "datetime": {
9114                                 "type": "string",
9115                                 "description": "Using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z, 2007-
9116 04-05T14:30+09:00)"
9117                             },
9118                             "countdown": {
9119                                 "type": "number",
9120                                 "minimum": 0,
9121                                 "description": "Desired total seconds for countdown"
9122                             }
9123                         }
9124                     }
9125                 },
9126                 "type": "object",
9127                 "allOf": [
9128                     {"$ref": "oic.core.json#/definitions/oic.core"},
9129                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9130                     {"$ref": "#/definitions/oic.r.clock"}
9131                 ],
9132                 "required": ["datetime"]
9133             }
9134
9135         example: |
9136             {
9137                 "id": "unique_example_id",
9138                 "datetime": "2015-11-05T14:30Z",
9139                 "countdown": 0.0
9140             }
9141
9142     responses :
9143     200:
9144         description: |
9145             Indicates that the datetime value was successfully changed.
9146             The new datetime value is provided in the response.
9147
9148         body:
9149         application/json:
9150             schema: |
9151                 {
9152                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.clock.json#",
9153                     "$schema": "http://json-schema.org/draft-04/schema#",
9154                     "description": "(c) 2016 Open Connectivity Foundation, Inc. All rights reserved.",
9155                     "title": "Clock",
9156                     "definitions": {
9157                         "oic.r.clock": {
9158                             "type": "object",
9159                             "properties": {
9160                                 "datetime": {
9161                                     "type": "string",
9162                                     "description": "Using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z,
9163 2007-04-05T14:30+09:00)"

```

```

9164         },
9165         "countdown": {
9166             "type": "number",
9167             "minimum": 0,
9168             "description": "Desired total seconds for countdown"
9169         }
9170     }
9171 }
9172 },
9173 "type": "object",
9174 "allof": [
9175     {"$ref": "oic.core.json#/definitions/oic.core"},
9176     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9177     {"$ref": "#/definitions/oic.r.clock"}
9178 ],
9179 "required": ["datetime"]
9180 }
9181
9182 example: |
9183 {
9184     "id": "unique_example_id",
9185     "datetime": "2015-11-05T14:30Z",
9186     "countdown": 0.0
9187 }
9188
9189 403:
9190 description: |
9191     Indicates that OIC client sent an invalid property value to the server.
9192     The server responds with the required input representation.
9193
9194 body:
9195     application/json:
9196         schema: |
9197             {
9198                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.clock.json#",
9199                 "$schema": "http://json-schema.org/draft-04/schema#",
9200                 "description": "(c) 2016 Open Connectivity Foundation, Inc. All rights reserved.",
9201                 "title": "Clock",
9202                 "definitions": {
9203                     "oic.r.clock": {
9204                         "type": "object",
9205                         "properties": {
9206                             "datetime": {
9207                                 "type": "string",
9208                                 "description": "Using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z,
9209 2007-04-05T14:30+09:00)"
9210                             },
9211                             "countdown": {
9212                                 "type": "number",
9213                                 "minimum": 0,
9214                                 "description": "Desired total seconds for countdown"
9215                             }
9216                         }
9217                     }
9218                 },
9219                 "type": "object",
9220                 "allof": [
9221                     {"$ref": "oic.core.json#/definitions/oic.core"},
9222                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9223                     {"$ref": "#/definitions/oic.r.clock"}
9224                 ],
9225                 "required": ["datetime"]
9226             }
9227
9228 example: |

```

```

9229     {
9230         "id": "unique_example_id",
9231         "datetime": "2015-11-05T14:30Z",
9232         "countdown": 0.0
9233     }
9234

```

9235 6.59.5 Property Definition

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

9236 6.59.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/ClockResURI		get	post		get

9237 6.60 Geolocation

9238 6.60.1 Introduction

9239 This resource describes the properties associated with the current geolocation coordinate.
 9240 Geolocation is a geolocation coordinate data. Latitude is a device's current Latitude coordinate
 9241 (degrees). Longitude is a device's current Longitude coordinate (degrees). Altitude is a device's
 9242 current Altitude position (metres). Accuracy is the accuracy level of the latitude and longitude
 9243 coordinates (metres). altitudeAccuracy is the accuracy level of the altitude coordinates (metres).
 9244 heading is a direction of travel of device (degree). speed is a device's current velocity (metres per
 9245 second).

9246 6.60.2 Example URI

9247 /GeolocationResURI

9248 6.60.3 Resource Type

9249 The resource type (rt) is defined as: oic.r.sensor.geolocation.

9250 6.60.4 RAML Definition

```

9251 #%RAML 0.8
9252 title: OICGeolocation
9253 version: v1.1.0-20160519
9254 traits:
9255   - interface :
9256       queryParameters:
9257         if:
9258           enum: ["oic.if.s", "oic.if.baseline"]
9259
9260 /GeolocationResURI:
9261   description: |
9262     This resource describes the properties associated with the current geolocation coordinate.
9263     Geolocation is a geolocation coordinate data.
9264     Latitude is a device's current Latitude coordinate (degrees).
9265     Longitude is a device's current Longitude coordinate (degrees).
9266     Altitude is a device's current Altitude position (metres).
9267     Accuracy is the accuracy level of the latitude and longitude coordinates (metres).
9268     altitudeAccuracy is the accuracy level of the altitude coordinates (metres).

```

```

9269     heading is a direction of travel of device (degree).
9270     speed is a device's current velocity (metres per second).
9271
9272     is : ['interface']
9273     get:
9274         description: |
9275             Retrieves the current geolocation coordinates.
9276
9277     responses :
9278         200:
9279             body:
9280                 application/json:
9281                     schema: |
9282                         {
9283                             "id": "http://openinterconnect.org/schemas/oic.r.sensor.geolocation#",
9284                             "$schema": "http://json-schema.org/draft-04/schema#",
9285                             "description": "Copyright (c) 2016 Open Interconnect Consortium, Inc. All rights
9286 reserved.",
9287                             "title": "Geolocation",
9288                             "definitions": {
9289                                 "oic.r.sensor.geolocation": {
9290                                     "type": "object",
9291                                     "allof": [
9292                                         {"$ref": "oic.r.altimeter.json#/definitions/oic.r.altimeter"},
9293                                         {"properties": {
9294                                             "latitude": {
9295                                                 "type": "number",
9296                                                 "readOnly": true,
9297                                                 "description": "Device's Current Latitude coordinate (degrees)"
9298                                             },
9299                                             "longitude": {
9300                                                 "type": "number",
9301                                                 "readOnly": true,
9302                                                 "description": "Device's Current Longitude coordinate (degrees)"
9303                                             },
9304                                             "accuracy": {
9305                                                 "type": "number",
9306                                                 "minimum": 0,
9307                                                 "readOnly": true,
9308                                                 "description": "The accuracy level of the latitude and longitude
9309 coordinates (metres)"
9310                                             },
9311                                             "altitudeAccuracy": {
9312                                                 "type": "number",
9313                                                 "minimum": 0,
9314                                                 "readOnly": true,
9315                                                 "description": "The accuracy level of the altitude coordinates (metres)"
9316                                             },
9317                                             "heading": {
9318                                                 "type": "number",
9319                                                 "minimum": 0,
9320                                                 "maximum": 360,
9321                                                 "readOnly": true,
9322                                                 "description": "Direction of travel of device (degree)"
9323                                             },
9324                                             "speed": {
9325                                                 "type": "number",
9326                                                 "minimum": 0,
9327                                                 "readOnly": true,
9328                                                 "description": "Device's current velocity (metres per second)"
9329                                             }
9330                                         }
9331                                     }
9332                                 }
9333                             },
9334                             "type": "object",

```

```

9336      "allOf": [
9337        {"$ref": "oic.core.json#/definitions/oic.core"},
9338        {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9339        {"$ref": "#/definitions/oic.r.sensor.geolocation"}
9340      ],
9341      "required": ["latitude", "longitude", "alt"]
9342    }
9343
9344    example: |
9345      {
9346        "rt":      ["oic.r.sensor.geolocation"],
9347        "id":      "unique_example_id",
9348        "latitude": 55.070859,
9349        "longitude": -3.60512,
9350        "alt": 12.07,
9351        "accuracy": 65.0,
9352        "altitudeAccuracy": 0.0,
9353        "heading": 90.0,
9354        "speed": 0.0
9355      }
9356

```

9357 6.60.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
latitude	number	yes	Read Only	Device's Current Latitude coordinate (degrees)
longitude	number	yes	Read Only	Device's Current Longitude coordinate (degrees)
accuracy	number		Read Only	
altitudeAccuracy	number		Read Only	
heading	number		Read Write	
speed	number		Read Only	

9358 6.60.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/GeolocationResURI		get			get

9359 6.61 Height

9360 6.61.1 Introduction

9361 This resource describes the properties associated with height of an object. Height (height) is height
 9362 of an object.

9363 6.61.2 Example URI

9364 /HeightResURI

9365 6.61.3 Resource Type

9366 The resource type (rt) is defined as: oic.r.height.

9367 6.61.4 RAML Definition

```

9368 #%RAML 0.8
9369 title: OICHeight
9370 version: v1.1.0-20160519
9371
9372 traits:
9373   - interface :
9374     queryParameters:

```

```

9374         if:
9375             enum: ["oic.if.a", "oic.if.baseline"]
9376
9377 /HeightResURI:
9378     description: |
9379         This resource describes the properties associated with height of an object.
9380         Height (height) is height of an object.
9381
9382     is : ['interface']
9383     get:
9384         description: |
9385             Retrieves height of an object.
9386
9387     responses :
9388         200:
9389             body:
9390                 application/json:
9391                     schema: |
9392                         {
9393                             "id": "http://openinterconnect.org/schemas/oic.r.height.json#",
9394                             "$schema": "http://json-schema.org/draft-04/schema#",
9395                             "description": "Copyright (c) 2016 Open Interconnect Consortium, Inc. All rights
9396 reserved.",
9397                             "title": "Height",
9398                             "definitions": {
9399                                 "oic.r.height": {
9400                                     "type": "object",
9401                                     "properties": {
9402                                         "height": {
9403                                             "type": "number",
9404                                             "minimum": 0,
9405                                             "description": "Height of an object"
9406                                         }
9407                                     }
9408                                 }
9409                             },
9410                             "type": "object",
9411                             "allof": [
9412                                 {"$ref": "oic.core.json#/definitions/oic.core"},
9413                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9414                                 {"$ref": "#/definitions/oic.r.height"}
9415                             ],
9416                             "required": ["height"]
9417                         }
9418
9419     example: |
9420         {
9421             "rt": ["oic.r.height"],
9422             "id": "unique_example_id",
9423             "height": 100.0
9424         }
9425
9426     post:
9427         description: |
9428             Sets the Height.
9429
9430         body:
9431             application/json:
9432                 schema: |
9433                     {
9434                         "id": "http://openinterconnect.org/schemas/oic.r.height.json#",

```

```

9435         "$schema": "http://json-schema.org/draft-04/schema#",
9436         "description": "Copyright (c) 2016 Open Interconnect Consortium, Inc. All rights
reserved.",
9437         "title": "Height",
9438         "definitions": {
9439             "oic.r.height": {
9440                 "type": "object",
9441                 "properties": {
9442                     "height": {
9443                         "type": "number",
9444                         "minimum": 0,
9445                         "description": "Height of an object"
9446                     }
9447                 }
9448             }
9449         },
9450         "type": "object",
9451         "allOf": [
9452             {"$ref": "oic.core.json#/definitions/oic.core"},
9453             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9454             {"$ref": "#/definitions/oic.r.height"}
9455         ],
9456         "required": ["height"]
9457     }
9458 }
9459
9460     example: |
9461     {
9462         "id": "unique_example_id",
9463         "height": 200.0
9464     }
9465
9466     responses :
9467     200:
9468         description: |
9469             Indicates that the height was successfully changed.
9470             The new height is provided in the response.
9471
9472         body:
9473             application/json:
9474                 schema: |
9475                 {
9476                     "id": "http://openinterconnect.org/schemas/oic.r.height.json#",
9477                     "$schema": "http://json-schema.org/draft-04/schema#",
9478                     "description": "Copyright (c) 2016 Open Interconnect Consortium, Inc. All rights
reserved.",
9479                     "title": "Height",
9480                     "definitions": {
9481                         "oic.r.height": {
9482                             "type": "object",
9483                             "properties": {
9484                                 "height": {
9485                                     "type": "number",
9486                                     "minimum": 0,
9487                                     "description": "Height of an object"
9488                                 }
9489                             }
9490                         }
9491                     },
9492                     "type": "object",
9493                     "allOf": [
9494                         {"$ref": "oic.core.json#/definitions/oic.core"},
9495                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9496                         {"$ref": "#/definitions/oic.r.height"}
9497                     ],
9498                     "required": ["height"]
9499                 }
9500     }
9501

```



```

9502         example: |
9503             {
9504                 "id": "unique_example_id",
9505                 "height": 200.0
9506             }
9507
9508     403:
9509         description: |
9510             Indicates that OIC client sent an invalid property value to the server.
9511             The server responds with the current resource representation.
9512
9513         body:
9514             application/json:
9515                 schema: |
9516                     {
9517                         "id": "http://openinterconnect.org/schemas/oic.r.height.json#",
9518                         "$schema": "http://json-schema.org/draft-04/schema#",
9519                         "description": "Copyright (c) 2016 Open Interconnect Consortium, Inc. All rights
9520 reserved.",
9521                         "title": "Height",
9522                         "definitions": {
9523                             "oic.r.height": {
9524                                 "type": "object",
9525                                 "properties": {
9526                                     "height": {
9527                                         "type": "number",
9528                                         "minimum": 0,
9529                                         "description": "Height of an object"
9530                                     }
9531                                 }
9532                             },
9533                             "type": "object",
9534                             "allof": [
9535                                 {"$ref": "oic.core.json#/definitions/oic.core"},
9536                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9537                                 {"$ref": "#/definitions/oic.r.height"}
9538                             ],
9539                             "required": ["height"]
9540                         }
9541
9542         example: |
9543             {
9544                 "id": "unique_example_id",
9545                 "height": 200.0
9546             }
9547
9548

```

9549 6.61.5 Property Definition

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

9550 6.61.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/HeightResURI		get	post		get

9551 6.62 Weight

9552 6.62.1 Introduction

9553 This resource describes the properties associated with weight of an object. Weight (weight) is
 9554 weight of an object.

```

9555 6.62.2 Example URI
9556 /WeightResURI
9557 6.62.3 Resource Type
9558 The resource type (rt) is defined as: oic.r.weight.
9559 6.62.4 RAML Definition
9560 ##RAML 0.8
9561 title: OICWeight
9562 version: v1.1.0-20160519
9563 traits:
9564 - interface :
9565   queryParameters:
9566     if:
9567       enum: ["oic.if.s", "oic.if.baseline"]
9568
9569 /WeightResURI:
9570   description: |
9571     This resource describes the properties associated with weight of an object.
9572     Weight (weight) is weight of an object.
9573
9574   is : ['interface']
9575   get:
9576     description: |
9577       Retrieves weight of an object.
9578
9579   responses :
9580     200:
9581       body:
9582         application/json:
9583           schema: |
9584             {
9585               "id": "http://openinterconnect.org/schemas/oic.r.weight.json#",
9586               "$schema": "http://json-schema.org/draft-04/schema#",
9587               "description": "Copyright (c) 2016 Open Interconnect Consortium, Inc. All rights
9588 reserved.",
9589               "title": "Weight",
9590               "definitions": {
9591                 "oic.r.weight": {
9592                   "type": "object",
9593                   "properties": {
9594                     "weight": {
9595                       "type": "number",
9596                       "minimum": 0,
9597                       "readOnly": true,
9598                       "description": "Weight of an object"
9599                     }
9600                   }
9601                 }
9602               },
9603               "type": "object",
9604               "allof": [
9605                 {"$ref": "oic.core.json#/definitions/oic.core"},
9606                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9607                 {"$ref": "#/definitions/oic.r.weight"}
9608               ],
9609               "required": ["weight"]
9610             }
9611
9612   example: |

```

```

9613     {
9614         "rt":      ["oic.r.weight"],
9615         "id":      "unique_example_id",
9616         "weight":  200.0
9617     }
9618 
```

9619 6.62.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
weight	number	yes	Read Only	

9620 6.62.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/WeightResURI		get			get

9621 A.1 Base Resource Schema

9622 A.1.1 Introduction

9623 This is the base resource schema in which all other resources defined in this specification build

9624 A.1.2 Fixed URI

9625 /BaseResourceSchemaResURI

9626 A.1.3 Resource Type

9627 The resource type (rt) is defined as: oic.baseresource.

9628 A.1.4 RAML Definition

```

9629 #%RAML 0.8
9630 title: OICBaseResourceSchema
9631 version: v1.1.0-20160519
9632 traits:
9633   - interface-a :
9634     queryParameters:
9635       if:
9636         enum: ["oic.if.a"]
9637   - interface-baseline :
9638     queryParameters:
9639       if:
9640         enum: ["oic.if.baseline"]
9641
9642 /BaseResourceSchemaResURI:
9643   description: |
9644     This is the base resource schema in which all other resources defined in this specification
9645     build
9646
9647   get:
9648     description: |
9649       retrieves the state of the resource.
9650
9651   responses :
9652     200:
9653       body:
9654         application/json:
9655           schema: |
9656             {
9657               "id":
9658 "http://openinterconnect.org/iotdatamodels/schemas/oic.basecorecomposite.json#",

```

```

9659     "$schema": "http://json-schema.org/draft-04/schema#",
9660     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
9661 reserved.",
9662     "title": "Base and Core Composite Resource",
9663     "definitions": {
9664         "oic.core": {
9665             "properties": {
9666                 "rt": {
9667                     "type": "array",
9668                     "items" : [
9669                         {
9670                             "type" : "string",
9671                             "maxLength": 64
9672                         }
9673                     ],
9674                     "minItems" : 1,
9675                     "readOnly": true,
9676                     "description": "Resource Type"
9677                 },
9678                 "if": {
9679                     "type" : "array",
9680                     "readOnly": true,
9681                     "description": "The interface set supported by this resource",
9682                     "items": {
9683                         "type": "string",
9684                         "enum" : ["oic.if.baseline", "oic.if.ll", "oic.if.b", "oic.if.lb",
9685 "oic.if.rw", "oic.if.r", "oic.if.a", "oic.if.s" ]
9686                     }
9687                 },
9688                 "n": {
9689                     "type": "string",
9690                     "readOnly": true,
9691                     "description": "Friendly name of the resource"
9692                 },
9693                 "id": {
9694                     "type": "string",
9695                     "readOnly": true,
9696                     "description": "Instance ID of this specific resource"
9697                 }
9698             }
9699         },
9700         "oic.r.baseresource": {
9701             "properties": {
9702                 "value": {
9703                     "anyOf": [
9704                         {"type": "array"},
9705                         {"type": "string"},
9706                         {"type": "boolean"},
9707                         {"type": "integer"},
9708                         {"type": "number"},
9709                         {"type": "object"}
9710                     ],
9711                     "description": "The value sensed or actuated by this Resource"
9712                 },
9713                 "range": {
9714                     "type": "array",
9715                     "description": "The valid range for the value Property",
9716                     "minItems": 2,
9717                     "maxItems": 2,
9718                     "items": {
9719                         "anyOf": [
9720                             {"type": "number"},
9721                             {"type": "integer"}
9722                         ]
9723                     }
9724                 }
9725             }
9726         }
9727     },
9728     "type": "object",
9729     "allof": [

```

```

9730         {"$ref": "#definitions/oic.core"},
9731         {"$ref": "#definitions/oic.r.baseresource"}
9732     ]
9733 }
9734
9735 example: |
9736     {
9737         "rt" :           ["oic.baseresource"],
9738         "if":           ["oic.if.baseline"],
9739         "id":           "unique_example_id",
9740         "value":        "someValue",
9741         "range":        [0,100]
9742     }
9743
9744 post:
9745     description: |
9746         sets the read-write resource properties
9747
9748     body:
9749         application/json:
9750             schema: |
9751                 {
9752                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.baseResource.json#",
9753                     "$schema": "http://json-schema.org/draft-04/schema#",
9754                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
9755 reserved.",
9756                     "title": "Base Resource",
9757                     "definitions": {
9758                         "oic.r.baseresource": {
9759                             "type": "object",
9760                             "properties": {
9761                                 "value": {
9762                                     "anyOf": [
9763                                         {"type": "array"},
9764                                         {"type": "string"},
9765                                         {"type": "boolean"},
9766                                         {"type": "integer"},
9767                                         {"type": "number"},
9768                                         {"type": "object"}
9769                                     ],
9770                                     "description": "The value sensed or actuated by this Resource"
9771                                 },
9772                                 "range": {
9773                                     "type": "array",
9774                                     "description": "The valid range for the value Property",
9775                                     "minItems": 2,
9776                                     "maxItems": 2,
9777                                     "items": {
9778                                         "anyOf": [
9779                                             {"type": "number"},
9780                                             {"type": "integer"}
9781                                         ]
9782                                     }
9783                                 }
9784                             }
9785                         }
9786                     },
9787                     "type": "object",
9788                     "allOf": [
9789                         {"$ref": "oic.core.json#/definitions/oic.core"},
9790                         {"$ref": "#definitions/oic.r.baseresource"}
9791                     ]
9792                 }
9793
9794 example: |

```

```

9795         {
9796             "value": "newValue"
9797         }
9798
9799     responses :
9800         200:
9801             body:
9802                 application/json:
9803                     schema: |
9804                         {
9805                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.baseResource.json#",
9806                             "$schema": "http://json-schema.org/draft-04/schema#",
9807                             "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
9808 reserved.",
9809                             "title": "Base Resource",
9810                             "definitions": {
9811                                 "oic.r.baseresource": {
9812                                     "type": "object",
9813                                     "properties": {
9814                                         "value": {
9815                                             "anyOf": [
9816                                                 {"type": "array"},
9817                                                 {"type": "string"},
9818                                                 {"type": "boolean"},
9819                                                 {"type": "integer"},
9820                                                 {"type": "number"},
9821                                                 {"type": "object"}
9822                                             ],
9823                                             "description": "The value sensed or actuated by this Resource"
9824                                         },
9825                                         "range": {
9826                                             "type": "array",
9827                                             "description": "The valid range for the value Property",
9828                                             "minItems": 2,
9829                                             "maxItems": 2,
9830                                             "items": {
9831                                                 "anyOf": [
9832                                                     {"type": "number"},
9833                                                     {"type": "integer"}
9834                                                 ]
9835                                             }
9836                                         }
9837                                     }
9838                                 }
9839                             },
9840                             "type": "object",
9841                             "allOf": [
9842                                 {"$ref": "oic.core.json#/definitions/oic.core"},
9843                                 {"$ref": "#/definitions/oic.r.baseresource"}
9844                             ]
9845                         }
9846
9847                     example: |
9848                         {
9849                             "value": "newValue"
9850                         }
9851

```

A.1.5 Property Definition

Property name	Value type	Mandatory	Access mode	Description
rt	array		Read Write	
if	array		Read Only	The interface set supported by this resource

n	string		Read Only	Friendly name of the resource
id	string		Read Only	Instance ID of this specific resource
value			Read Write	
range	array		Read Write	The valid range for the value Property

A.1.6 CRUDN Behaviour

Resource	Create	Read	Update	Delete	Notify
/BaseResourceSchemaResURI		get	post		