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Revision History

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| --- | --- | --- | --- |
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# Scope

<<Scope>>

# 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.

IEC 60169-24, Radio-frequency connectors – Part 24: Radio-frequency coaxial connectors with screw coupling, typically for use in 75 ohm cable distribution systems (Type F)

# Terms, definitions, symbols and abbreviations

## Terms and definitions

TBD

To Be Determined

## Symbols and abbreviations

TBD

To Be Determined

<<Description>>

## Conventions

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

# Document conventions and organization

TBD

# Operational Scenarios

# Sensor Resource Model

# Actuator Resource Model

<<Summary Table of All Defined Actuator Resources>>

## <<Resource Name>>

### introduction

URI

### RAML Definition

#%RAML 0.8

title: APILight

version: baseversion

/device

description: Root node for the OIC device

get

responses:

200:

application/json

schema: |

{ "$schema": "http://json-schema.org/schema",  
  
 "name": { "type": "string", title:"mytitle", description:"the description"},  
  
 "deviceType": { "type": "string" },  
  
 "id": { "type": "string" },  
  
 "location": { "type": "string" },  
  
 "resourceList": {  
  
 "link": { "type": "string" }  
  
 }  
  
 }

example: |

{

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://openconnectivityfoundation.org/core/schemas/oic.rule-schema.json#",  
 "title" : "Rule",  
 "definitions": {  
 "oic.rule": {  
 "type": "object",  
 "properties": {  
 "condition": {  
 "type": "string",  
 "description": "condition of the rule",  
 "format": "UTF8"  
 },  
 "currentStatus": {  
 "type": "string",  
 "description": "ReadOnly, the current state, can be one of: enabled, disabled, error"  
 },  
 "n": {  
 "type": "string",  
 "description": "Used to name the Rule collection",  
 "format": "UTF8"  
 },  
 "test": {  
 "type": "boolean",  
 "description": "Inidcates initiation of test mode for the rule"  
 },  
 "id": {  
 "type": "string",  
 "description": "Can be an value that is unique to the use context or a UUIDv4"  
 },  
 "rts": {  
 "type": "string",  
 "description": "ReadOnly, Defines the list of allowable resource types in links included in the collection; new links being created can only be from this list"  
 },  
 "links": {

### Attribute/Property Definition

Unit, type

### CRUDN Behaviour

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Resource | Create | Read | Update | Delete | Notify |
| /{link} |  | get | put |  |  |

### Example Representation

## OCF Collection

### Introduction

OCF Collection Resource Type contains properties and links. The oic.if.baseline interface exposes a representation of the links and the properties of the collection resource itself

### Example URI

/CollectionBaselineInterfaceURI

### Resource Type

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

### RAML Definition

#%RAML 0.8

title: *Collections*

version: *1.0*

traits:

- interface-ll :

queryParameters:

if:

enum: ["oic.if.ll"]

- interface-b :

queryParameters:

if:

enum: ["oic.if.b"]

- interface-baseline :

queryParameters:

if:

enum: ["oic.if.baseline"]

- interface-all :

queryParameters:

if:

enum: ["oic.if.ll", "oic.if.baseline", "oic.if.b"]

/CollectionBaselineInterfaceURI:

description: |

OCF Collection Resource Type contains properties and links.  
 The oic.if.baseline interface exposes a representation of  
 the links and the properties of the collection resource itself

is : ['interface-baseline']

get:

description: |

Retrieve on Baseline Interface

responses :

200:

body:

application/json:

schema: |

{  
 "$schema": "http://json-schema.org/draft-04/schema#",  
 "description": "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights reserved.",  
 "properties": {  
 "id": {  
 "description": "Instance ID of this specific resource",  
 "maxLength": 64,  
 "readOnly": true,  
 "type": "string"  
 },  
 "if": {  
 "description": "The interface set supported by this resource",  
 "items": {  
 "enum": [  
 "oic.if.baseline",  
 "oic.if.ll",  
 "oic.if.b",  
 "oic.if.lb",  
 "oic.if.rw",  
 "oic.if.r",  
 "oic.if.a",  
 "oic.if.s"  
 ],  
 "type": "string"  
 },  
 "minItems": 1,  
 "readOnly": true,  
 "type": "array"  
 },  
 "links": {  
 "description": "All forms of links in a collection.",  
 "oneOf": [  
 {  
 "description": "A set of simple or individual OIC Links.",  
 "items": {  
 "properties": {  
 "anchor": {  
 "description": "This is used to override the context URI e.g. override the URI of the containing collection.",  
 "format": "uri",  
 "maxLength": 256,  
 "type": "string"  
 },  
 "di": {  
 "allOf": [  
 {  
 "description": "Format pattern according to IETF RFC 4122.",  
 "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{12}$",  
 "type": "string"  
 },  
 {  
 "description": "The device ID"  
 }  
 ]  
 },  
 "eps": {  
 "description": "the Endpoint information of the target Resource",  
 "items": {  
 "properties": {  
 "ep": {  
 "description": "Transport Protocol Suite + Endpoint Locator",  
 "format": "uri",  
 "type": "string"  
 },  
 "pri": {  
 "description": "The priority among multiple Endpoints",  
 "minimum": 1,  
 "type": "integer"  
 }  
 },  
 "type": "object"  
 },  
 "type": "array"  
 },  
 "href": {  
 "description": "This is the target URI, it can be specified as a Relative Reference or fully-qualified URI.",  
 "format": "uri",  
 "maxLength": 256,  
 "type": "string"  
 },  
 "if": {  
 "description": "The interface set supported by this resource",  
 "items": {  
 "enum": [  
 "oic.if.baseline",  
 "oic.if.ll",  
 "oic.if.b",  
 "oic.if.rw",  
 "oic.if.r",  
 "oic.if.a",  
 "oic.if.s"  
 ],  
 "type": "string"  
 },  
 "minItems": 1,  
 "type": "array"  
 },  
 "ins": {  
 "description": "The instance identifier for this web link in an array of web links - used in collections",  
 "type": "integer"  
 },  
 "p": {  
 "description": "Specifies the framework policies on the Resource referenced by the target URI",  
 "properties": {  
 "bm": {  
 "description": "Specifies the framework policies on the Resource referenced by the target URI for e.g. observable and discoverable",  
 "type": "integer"  
 }  
 },  
 "required": [  
 "bm"  
 ],  
 "type": "object"  
 },  
 "rel": {  
 "description": "The relation of the target URI referenced by the link to the context URI",  
 "oneOf": [  
 {  
 "default": [  
 "hosts"  
 ],  
 "items": {  
 "maxLength": 64,  
 "type": "string"  
 },  
 "minItems": 1,  
 "type": "array"  
 },  
 {  
 "default": "hosts",  
 "maxLength": 64,  
 "type": "string"  
 }  
 ]  
 },  
 "rt": {  
 "description": "Resource Type of the Resource",  
 "items": {  
 "maxLength": 64,  
 "type": "string"  
 },  
 "minItems": 1,  
 "type": "array"  
 },  
 "title": {  
 "description": "A title for the link relation. Can be used by the UI to provide a context.",  
 "maxLength": 64,  
 "type": "string"  
 },  
 "type": {  
 "default": "application/cbor",  
 "description": "A hint at the representation of the resource referenced by the target URI. This represents the media types that are used for both accepting and emitting.",  
 "items": {  
 "maxLength": 64,  
 "type": "string"  
 },  
 "minItems": 1,  
 "type": "array"  
 }  
 },  
 "required": [  
 "href",  
 "rt",  
 "if"  
 ],  
 "type": "object"  
 },  
 "type": "array"  
 }  
 ]  
 },  
 "n": {  
 "description": "Friendly name of the resource",  
 "maxLength": 64,  
 "readOnly": true,  
 "type": "string"  
 },  
 "rt": {  
 "description": "Resource Type of the Resource",  
 "items": {  
 "maxLength": 64,  
 "type": "string"  
 },  
 "minItems": 1,  
 "readOnly": true,  
 "type": "array"  
 },  
 "rts": {  
 "allOf": [  
 {  
 "description": "Resource Type of the Resource",  
 "items": {  
 "maxLength": 64,  
 "type": "string"  
 },  
 "minItems": 1,  
 "readOnly": true,  
 "type": "array"  
 },  
 {  
 "description": "The list of allowable resource types (for Target and anchors) in links included in the collection"  
 }  
 ]  
 }  
 },  
 "title": "Collection (auto merged)"  
 }

example: |

{  
 "rt": ["oic.wk.col"],  
 "id": "unique\_example\_id",  
 "rts": [ "oic.r.switch.binary", "oic.r.airflow" ],  
 "links": [  
 {  
 "href": "switch",  
 "rt": ["oic.r.switch.binary"],  
 "if": ["oic.if.a", "oic.if.baseline"],  
 "eps": [  
 {"ep": "coap://[fe80::b1d6]:1111", "pri": 2},  
 {"ep": "coaps://[fe80::b1d6]:1122"},  
 {"ep": "coap+tcp://[2001:db8:a::123]:2222", "pri": 3}  
 ]  
 },  
 {  
 "href": "airFlow",  
 "rt": ["oic.r.airflow"],  
 "if": ["oic.if.a", "oic.if.baseline"],  
 "eps": [  
 {"ep": "coap://[fe80::b1d6]:1111", "pri": 2},  
 {"ep": "coaps://[fe80::b1d6]:1122"},  
 {"ep": "coap+tcp://[2001:db8:a::123]:2222", "pri": 3}  
 ]  
 }  
 ]  
 }

post:

description: |

Update on Baseline Interface

body:

application/json:

schema: |

{  
 "$schema": "http://json-schema.org/draft-04/schema#",  
 "description": "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights reserved.",  
 "properties": {  
 "id": {  
 "description": "Instance ID of this specific resource",  
 "maxLength": 64,  
 "readOnly": true,  
 "type": "string"  
 },  
 "if": {  
 "description": "The interface set supported by this resource",  
 "items": {  
 "enum": [  
 "oic.if.baseline",  
 "oic.if.ll",  
 "oic.if.b",  
 "oic.if.lb",  
 "oic.if.rw",  
 "oic.if.r",  
 "oic.if.a",  
 "oic.if.s"  
 ],  
 "type": "string"  
 },  
 "minItems": 1,  
 "readOnly": true,  
 "type": "array"  
 },  
 "links": {  
 "description": "All forms of links in a collection.",  
 "oneOf": [  
 {  
 "description": "A set of simple or individual OIC Links.",  
 "items": {  
 "properties": {  
 "anchor": {  
 "description": "This is used to override the context URI e.g. override the URI of the containing collection.",  
 "format": "uri",  
 "maxLength": 256,  
 "type": "string"  
 },  
 "di": {  
 "allOf": [  
 {  
 "description": "Format pattern according to IETF RFC 4122.",  
 "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{12}$",  
 "type": "string"  
 },  
 {  
 "description": "The device ID"  
 }  
 ]  
 },  
 "eps": {  
 "description": "the Endpoint information of the target Resource",  
 "items": {  
 "properties": {  
 "ep": {  
 "description": "Transport Protocol Suite + Endpoint Locator",  
 "format": "uri",  
 "type": "string"  
 },  
 "pri": {  
 "description": "The priority among multiple Endpoints",  
 "minimum": 1,  
 "type": "integer"  
 }  
 },  
 "type": "object"  
 },  
 "type": "array"  
 },  
 "href": {  
 "description": "This is the target URI, it can be specified as a Relative Reference or fully-qualified URI.",  
 "format": "uri",  
 "maxLength": 256,  
 "type": "string"  
 },  
 "if": {  
 "description": "The interface set supported by this resource",  
 "items": {  
 "enum": [  
 "oic.if.baseline",  
 "oic.if.ll",  
 "oic.if.b",  
 "oic.if.rw",  
 "oic.if.r",  
 "oic.if.a",  
 "oic.if.s"  
 ],  
 "type": "string"  
 },  
 "minItems": 1,  
 "type": "array"  
 },  
 "ins": {  
 "description": "The instance identifier for this web link in an array of web links - used in collections",  
 "type": "integer"  
 },  
 "p": {  
 "description": "Specifies the framework policies on the Resource referenced by the target URI",  
 "properties": {  
 "bm": {  
 "description": "Specifies the framework policies on the Resource referenced by the target URI for e.g. observable and discoverable",  
 "type": "integer"  
 }  
 },  
 "required": [  
 "bm"  
 ],  
 "type": "object"  
 },  
 "rel": {  
 "description": "The relation of the target URI referenced by the link to the context URI",  
 "oneOf": [  
 {  
 "default": [  
 "hosts"  
 ],  
 "items": {  
 "maxLength": 64,  
 "type": "string"  
 },  
 "minItems": 1,  
 "type": "array"  
 },  
 {  
 "default": "hosts",  
 "maxLength": 64,  
 "type": "string"  
 }  
 ]  
 },  
 "rt": {  
 "description": "Resource Type of the Resource",  
 "items": {  
 "maxLength": 64,  
 "type": "string"  
 },  
 "minItems": 1,  
 "type": "array"  
 },  
 "title": {  
 "description": "A title for the link relation. Can be used by the UI to provide a context.",  
 "maxLength": 64,  
 "type": "string"  
 },  
 "type": {  
 "default": "application/cbor",  
 "description": "A hint at the representation of the resource referenced by the target URI. This represents the media types that are used for both accepting and emitting.",  
 "items": {  
 "maxLength": 64,  
 "type": "string"  
 },  
 "minItems": 1,  
 "type": "array"  
 }  
 },  
 "required": [  
 "href",  
 "rt",  
 "if"  
 ],  
 "type": "object"  
 },  
 "type": "array"  
 }  
 ]  
 },  
 "n": {  
 "description": "Friendly name of the resource",  
 "maxLength": 64,  
 "readOnly": true,  
 "type": "string"  
 },  
 "rt": {  
 "description": "Resource Type of the Resource",  
 "items": {  
 "maxLength": 64,  
 "type": "string"  
 },  
 "minItems": 1,  
 "readOnly": true,  
 "type": "array"  
 },  
 "rts": {  
 "allOf": [  
 {  
 "description": "Resource Type of the Resource",  
 "items": {  
 "maxLength": 64,  
 "type": "string"  
 },  
 "minItems": 1,  
 "readOnly": true,  
 "type": "array"  
 },  
 {  
 "description": "The list of allowable resource types (for Target and anchors) in links included in the collection"  
 }  
 ]  
 }  
 },  
 "title": "Collection (auto merged)"  
 }

responses :

200:

body:

application/json:

schema: |

{  
 "$schema": "http://json-schema.org/draft-04/schema#",  
 "description": "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights reserved.",  
 "properties": {  
 "id": {  
 "description": "Instance ID of this specific resource",  
 "maxLength": 64,  
 "readOnly": true,  
 "type": "string"  
 },  
 "if": {  
 "description": "The interface set supported by this resource",  
 "items": {  
 "enum": [  
 "oic.if.baseline",  
 "oic.if.ll",  
 "oic.if.b",  
 "oic.if.lb",  
 "oic.if.rw",  
 "oic.if.r",  
 "oic.if.a",  
 "oic.if.s"  
 ],  
 "type": "string"  
 },  
 "minItems": 1,  
 "readOnly": true,  
 "type": "array"  
 },  
 "links": {  
 "description": "All forms of links in a collection.",  
 "oneOf": [  
 {  
 "description": "A set of simple or individual OIC Links.",  
 "items": {  
 "properties": {  
 "anchor": {  
 "description": "This is used to override the context URI e.g. override the URI of the containing collection.",  
 "format": "uri",  
 "maxLength": 256,  
 "type": "string"  
 },  
 "di": {  
 "allOf": [  
 {  
 "description": "Format pattern according to IETF RFC 4122.",  
 "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{12}$",  
 "type": "string"  
 },  
 {  
 "description": "The device ID"  
 }  
 ]  
 },  
 "eps": {  
 "description": "the Endpoint information of the target Resource",  
 "items": {  
 "properties": {  
 "ep": {  
 "description": "Transport Protocol Suite + Endpoint Locator",  
 "format": "uri",  
 "type": "string"  
 },  
 "pri": {  
 "description": "The priority among multiple Endpoints",  
 "minimum": 1,  
 "type": "integer"  
 }  
 },  
 "type": "object"  
 },  
 "type": "array"  
 },  
 "href": {  
 "description": "This is the target URI, it can be specified as a Relative Reference or fully-qualified URI.",  
 "format": "uri",  
 "maxLength": 256,  
 "type": "string"  
 },  
 "if": {  
 "description": "The interface set supported by this resource",  
 "items": {  
 "enum": [  
 "oic.if.baseline",  
 "oic.if.ll",  
 "oic.if.b",  
 "oic.if.rw",  
 "oic.if.r",  
 "oic.if.a",  
 "oic.if.s"  
 ],  
 "type": "string"  
 },  
 "minItems": 1,  
 "type": "array"  
 },  
 "ins": {  
 "description": "The instance identifier for this web link in an array of web links - used in collections",  
 "type": "integer"  
 },  
 "p": {  
 "description": "Specifies the framework policies on the Resource referenced by the target URI",  
 "properties": {  
 "bm": {  
 "description": "Specifies the framework policies on the Resource referenced by the target URI for e.g. observable and discoverable",  
 "type": "integer"  
 }  
 },  
 "required": [  
 "bm"  
 ],  
 "type": "object"  
 },  
 "rel": {  
 "description": "The relation of the target URI referenced by the link to the context URI",  
 "oneOf": [  
 {  
 "default": [  
 "hosts"  
 ],  
 "items": {  
 "maxLength": 64,  
 "type": "string"  
 },  
 "minItems": 1,  
 "type": "array"  
 },  
 {  
 "default": "hosts",  
 "maxLength": 64,  
 "type": "string"  
 }  
 ]  
 },  
 "rt": {  
 "description": "Resource Type of the Resource",  
 "items": {  
 "maxLength": 64,  
 "type": "string"  
 },  
 "minItems": 1,  
 "type": "array"  
 },  
 "title": {  
 "description": "A title for the link relation. Can be used by the UI to provide a context.",  
 "maxLength": 64,  
 "type": "string"  
 },  
 "type": {  
 "default": "application/cbor",  
 "description": "A hint at the representation of the resource referenced by the target URI. This represents the media types that are used for both accepting and emitting.",  
 "items": {  
 "maxLength": 64,  
 "type": "string"  
 },  
 "minItems": 1,  
 "type": "array"  
 }  
 },  
 "required": [  
 "href",  
 "rt",  
 "if"  
 ],  
 "type": "object"  
 },  
 "type": "array"  
 }  
 ]  
 },  
 "n": {  
 "description": "Friendly name of the resource",  
 "maxLength": 64,  
 "readOnly": true,  
 "type": "string"  
 },  
 "rt": {  
 "description": "Resource Type of the Resource",  
 "items": {  
 "maxLength": 64,  
 "type": "string"  
 },  
 "minItems": 1,  
 "readOnly": true,  
 "type": "array"  
 },  
 "rts": {  
 "allOf": [  
 {  
 "description": "Resource Type of the Resource",  
 "items": {  
 "maxLength": 64,  
 "type": "string"  
 },  
 "minItems": 1,  
 "readOnly": true,  
 "type": "array"  
 },  
 {  
 "description": "The list of allowable resource types (for Target and anchors) in links included in the collection"  
 }  
 ]  
 }  
 },  
 "title": "Collection (auto merged)"  
 }

### Property Definition

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Property name | Value type | Mandatory | Access mode | Description |
| rt | array: see schema |  | Read Only | Resource Type of the Resource |
| links | multiple types: see schema |  |  | All forms of links in a collection. |
| n | string |  | Read Only | Friendly name of the resource |
| rts | multiple types: see schema |  |  |  |
| id | string |  | Read Only | Instance ID of this specific resource |
| if | array: see schema |  | Read Only | The interface set supported by this resource |

### CRUDN behaviour

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Resource | Create | Read | Update | Delete | Notify |
| /CollectionBaselineInterfaceURI |  | get | post |  |  |