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Entity Catalog Management API REST Specification

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INTRODUCTION

The following document is the template for the REST API documentation.

The catalog management API allows the management of the entire lifecycle of the catalog elements, the consultation of catalog elements during several processes such as ordering process, campaign management, sales management...

SAMPLE USE CASES

Entity Catalog Management Use Cases

The entity catalog management API allows the lookup of the catalog elements to support relevant business processes.

UC1: A wholesale SP organization wants to define a catalog of Price Condition specifications, so that the marketing department can assign Price Conditions to new product offerings in a consistent manner.

UC2: A fieldforce organization requires a catalog of Job Plan specifications, which they may use to define and allocate Job Plans to their internal and external subcontractors when they undertake infrastructure tasks.

UC3: A Catalog designer in charge of specifying the TOSCA Node Templates and the TOSCA Relationship Templates that will be available to build topology templates for the services in the SP organization. He requires defining a catalog of TOSCA Node Templates and TOSCA Relationship Templates.

More details about entity catalog management use cases can be found in catalog related guidebooks GB922 and GB978.

RESOURCE MODEL

Managed Entity and Task Resource Models

ENTITY CATALOG

The root entity for entity catalog management. An entity catalog can be defined as a collection of entity catalog items and arranging them in a particular manner based on the need.

In comparison to Product, Service and Resource catalogs, the entity catalog is intended for the purpose of providing any SID entity to consumers via a catalog, with its specification and policy providing governance over its content. Even Entity catalog may have an overlap with Product, Service or Resource catalog, it doesn't replace them. It is primarily intended to address those SID entities which may not be addressed by any of Product, Service or Resource catalog.

An entity catalog comprises of a list of RootEntities made available through EntityCatalogItems. This API addresses only RootEntity extended items as EntitySpecification. An entity catalog typically includes name, description and time period that it is valid for.

Below is a representation of the Entity Catalog resource in JSON format.

```
{
  "id": "10",
  "@type": "EntityCatalog",
  "href": "http://serverlocation:port/catalogManagement/catalog/10",
  "version": "2.0",
  "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/EntityCatalog.yml",
  "@baseType": "",
  "lastUpdate": "2016-07-22T16:42:23-04:00",
  "category": [
    {
      "id": "21",
      "href": "http://serverlocation:port/catalogManagement/category/21",
      "@type": "Category",
      "name": "Electrical Services Job Plans"
    }
  ],
  "name": "Fieldforce Electrician Subcontractor Catalog",
  "lifecycleStatus": "Active",
  "validFor": {
    "startDateTime": "2016-07-22T16:42:23-04:00",
    "endDateTime": "2017-07-22T00:00:00-04:00"
  },
  "relatedParty": [
    {
```

```

    "role": "Owner",
    "id": "1234",
    "href": "http://serverLocation:port/partyManagement/partyRole/1234"
  },
  {
    "role": "Reviser",
    "name": "Roger Collins"
  }
]
}

```

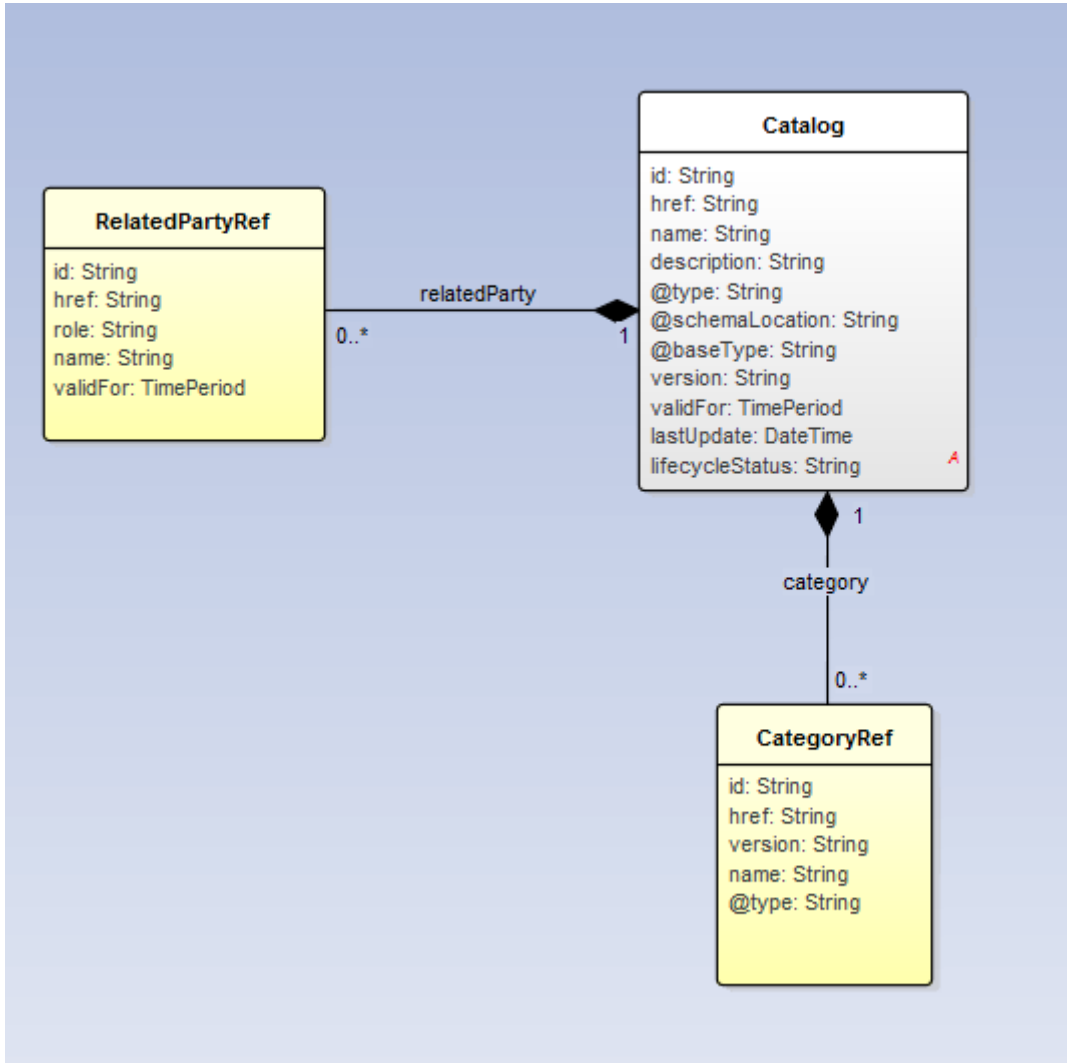
Field Descriptions:

Field	Description
category	Reference to the category
href	Hyperlink reference to the catalog
id	Unique identifier of the catalog
lastUpdate	Date and time of the last update
lifecycleStatus	Used to indicate the current lifecycle status
name	Name of the catalog
@type	Indicates the type of catalog. For entity catalogs, this will be 'EntityCatalog'.
@baseType	Indicates the base type of this catalog
validFor	The period for which the catalog is valid
version	Catalog version
@schemaLocation	This field provides a link to the schema describing this REST resource

relatedParty: Defines party or partyRole linked to a specific entity.

Field	Description
id	Unique identifier of related party
type	Indicates whether this is a Party or PartyRole
href	Hyperlink reference to the relatedParty, could be a party reference or a partyRole reference
name	Name of the related party
role	Role of the related party
validFor	The period for which the related party is linked to the entity

UML model:



CATEGORY

The (entity) category resource is used to group entity catalog items in logical containers. Categories can contain other categories.

Resource IDs for categories are strings and are defined by the catalog application.

Below is a representation of the Category resource in JSON format.

```

{
  "id": "21",
  "@type": "Category",
  "href": "http://serverlocation:port/catalogManagement/category/21",
  "lastUpdate": "2017-03-19T16:42:23-04:00",
  "version": "1.0",
}
    
```

```

"@schemaLocation": "http://serverlocation:port/catalogManagement/schema/Category.yml",
"@baseType": "",
"lifecycleStatus": "Active",
"validFor": {
  "startDateTime": "2017-03-19T16:42:23-04:00",
  "endDateTime": ""
},
"parentId": "23",
"isRoot": false,
"name": "Electrical Services Job Plans",
"description": "A category to hold all available electrical services job plans",
"categories": [],
"entityCatalogItems":
[
  {
    "id": "205",
    "href": "http://serverlocation:port/catalogManagement/entityCatalogItems/205",
    "@type": "EntityCatalogItem"
  },
  {
    "id": "206",
    "href": "http://serverlocation:port/catalogManagement/entityCatalogItem/206",
    "@type": "EntityCatalogItem"
  }
]

```

Or for a root category (e.g. no parent)

```

{
  "id": "23",
  "@type": "Category",
  "href": "http://serverlocation:port/catalogManagement/category/23",
  "lastUpdate": "2017-03-19T16:42:23-04:00",
  "version": "1.0",
  "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/Category.yml",
  "@baseType": "",
  "lifecycleStatus": "Active",
  "validFor": {
    "startDateTime": "2017-03-19T16:42:23-04:00",
    "endDateTime": ""
  },
  "parentId": "",
  "isRoot": true,
  "name": "Job Plans",
  "description": "A category to hold all available job plans",
  "categories":
[
  {

```

```

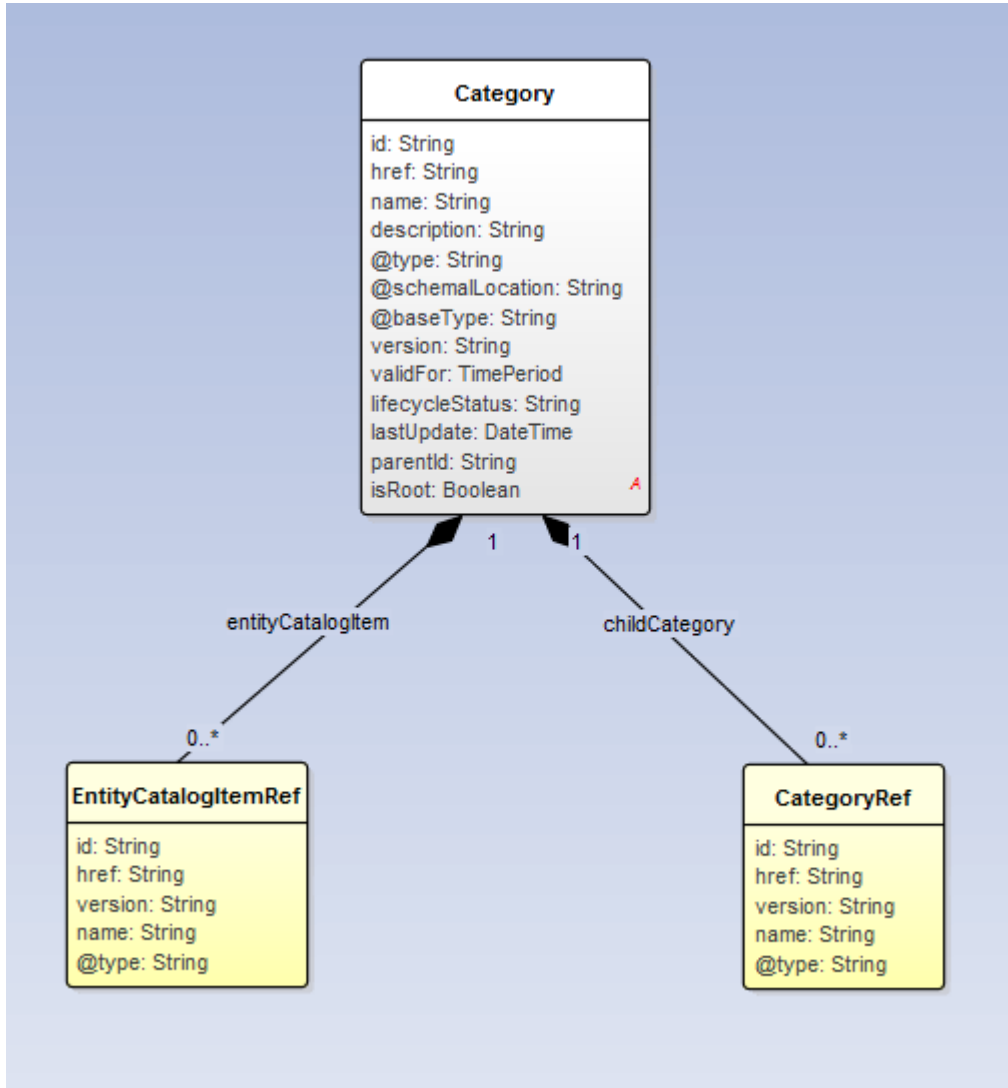
    "id": "21",
    "href": "http://serverlocation:port/catalogManagement/entitycategory/21",
    "@type": "Category",
    "name": "Electrical Services Job Plans"
  },
  {
    "id": "22",
    "href": "http://serverlocation:port/catalogManagement/category/22",
    "@type": "Category",
    "name": "Mechanical Services Job Plans"
  }
],
"entityCatalogItems": []
}

```

Field Descriptions:

Field	Description
id	Unique identifier of the category
href	Hyperlink reference to the category
@type	The class type of the Category
@baseType	Indicates the base type of this category
@schemaLocation	This field provides a link to the schema describing this REST resource
name	Name of the category
description	Description of the category
lastUpdate	Date and time of the last update of this REST resource
lifecycleStatus	Used to indicate the current lifecycle status
isRoot	If true, this Boolean indicates that the category is a root of categories
parentId	Unique identifier of the parent category
validFor	The period for which the category is valid
version	Category version

UML model:



ENTITY CATALOG ITEM

An EntityCatalogItem is an entity that allows any ProductOffering, ServiceCandidate, ResourceCandidate, or even any object inheriting from RootEntity, to be available to a catalog. The CatalogSpecification and Policy of the catalog governs the content of the EntityCatalogItem. This API addresses only EntitySpecification items extended from RootEntity as EntityCatalogItem.

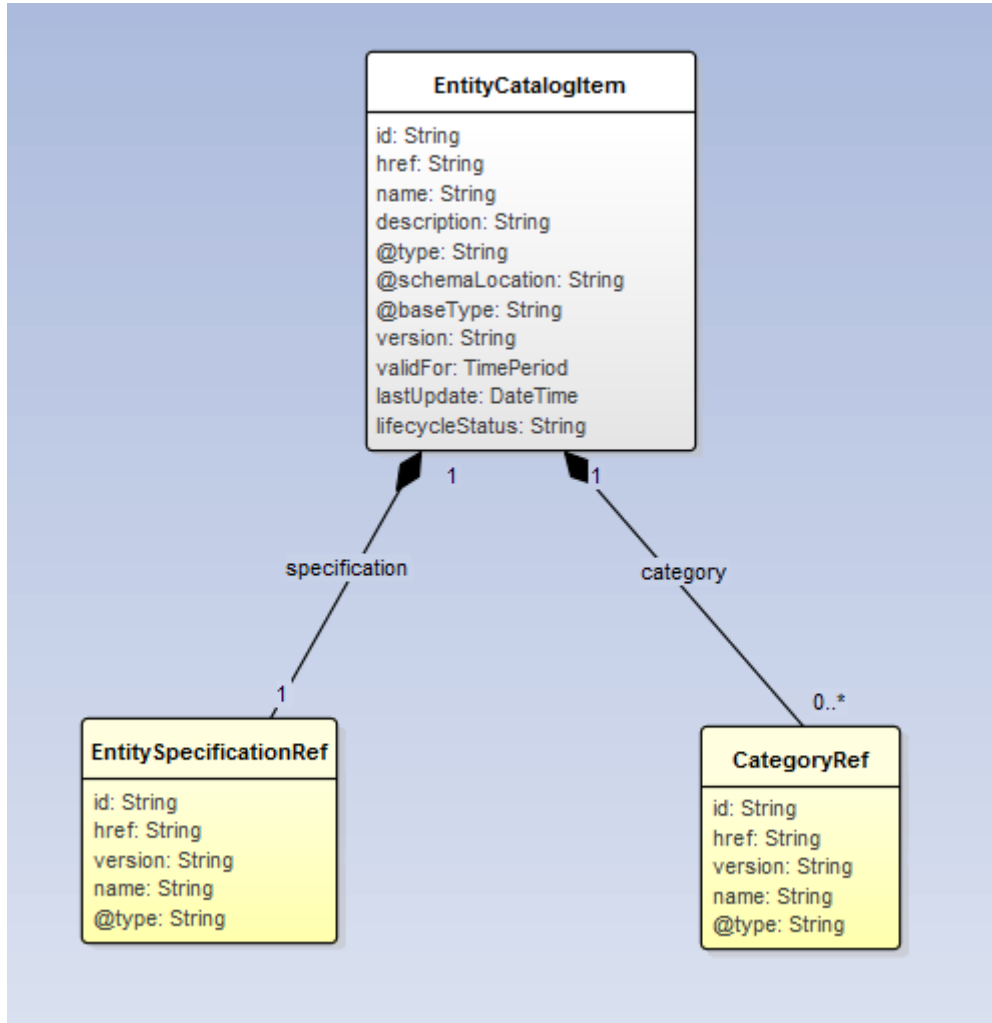
The EntityCatalogItem resource (JSON format) represents a set of characteristics that define the values given by the EntityCatalogItem.

Below is a representation of the EntityCatalogItem resource in JSON format.

```
{
  "id": "712",
```

```
"@type": "EntityCatalogItem",
"href": "http://serverlocation:port/catalogManagement/entityCatalogItem/712",
"name": "Fire Protection Electrical",
"version": "1.0",
"@schemaLocation": "http://serverlocation:port/catalogManagement/schema/EntityCatalogItem.yml",
"@baseType": "",
"description": "Fire Protection Electrical Services.",
"lastUpdate": "2017-03-19T16:42:23-04:00",
"lifecycleStatus": "Active",
"validFor": {
  "startDateTime": "2017-03-19T16:42:23-04:00",
  "endDateTime": "2017-06-19T00:00:00-04:00"
},
"category": [
  {
    "id": "21",
    "@type": "Category",
    "href": "http://serverlocation:port/catalogManagement/category/21",
    "name": "Electrical Services Job Plans"
  }
],
"specification": {
  "id": "52",
  "@type": "FireProtectionSpecification",
  "href": "http://serverlocation:port/catalogManagement/entitySpecification/52",
  "name": "Fire Protection Electrical"
}
}
```

UML model:



ENTITY SPECIFICATION

EntitySpecification is a class that offers characteristics to describe a type of entity. Entities are a generic construct that may be used to describe bespoke business entities that are not effectively covered by the existing SID model.

Functionally, the entity specification acts as a template by which entities may be instantiated and described. By sharing the same specification, these entities would therefore share the same set of characteristics.

Note: The 'configurable' attribute on the specCharacteristics determines if an entity instantiated from the entity specification can override the value of the attribute. When set to false, the entity instance may not define a value that differs from the value in the specification.

Below is a representation of the EntitySpecification resource in JSON format.

```
{
  "id": "52",
```



```
"@type": "FireProtectionSpecification",
"href": "http://serverlocation:port/catalogManagement/entitySpecification/52",
"name": "Fire Protection Electrical",
"version": "1.4",
"@schemaLocation":
"http://serverlocation:port/catalogManagement/schema/FireProtectionSpecification.yml",
"@baseType": "EntitySpecification",
"entitySchema": {
  "@type": "FireProtectionEntity",
  "@schemaLocation":
"http://serverlocation:port/catalogManagement/schema/FireProtectionEntity.yml"
},
"lastUpdate": "2017-03-19T16:42:23-04:00",
"lifecycleStatus": "Active",
"description": "Fire Protection Electrical Service.",
"validFor": {
  "startDateTime": "2017-03-19T16:42:23-04:00",
  "endDateTime": "2017-06-19T00:00:00-04:00"
},
"attachment": [
  {
    "id": "56",
    "href": "http://serverlocation:port/documentManagement/attachment/56",
    "@type": "Document",
    "@baseType": "Attachment",
    "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/
Document.yml",
    "name": "Vendor Info",
    "mimeType": ".pdf",
    "description": "A pdf document describing vendor specific information",
    "validFor": {
      "startDateTime": "2017-03-19T16:42:23-04:00",
      "endDateTime": ""
    }
  }
],
"relatedParty": [
  {
    "role": "Owner",
    "id": "1234",
    "type": "PartyRole",
    "href": "http://serverLocation:port/partyManagement/partyRole/1234"
```

```

    }
  ],
  "specCharacteristic": [
    {
      "name": "Agreement",
      "description": "Service Agreement",
      "valueType": "object",
      "@type": "Agreement",
      "@schemaLocation": "http://serverlocation:port/partyManagement/schema/Agreement",
      "configurable": true,
      "validFor": {
        "startDateTime": "2017-03-19T16:42:23-04:00",
        "endDateTime": ""
      },
      "specCharRelationship": [],
      "specCharacteristicValue": [
        {
          "valueType": "object",
          "isDefault": false,
          "value": {
            "@type": "ServiceAgreement",
            "@baseType": "Agreement"
          },
          "@schemaLocation": "http://serverlocation:port/partyManagement/schema/Agreement",
          "name": "Service Agreement",
          "date": "2017-03-19T16:42:23-04:00"
        },
        {
          "validFor": {
            "startDateTime": "2017-03-19T16:42:23-04:00",
            "endDateTime": ""
          }
        }
      ]
    }
  ],
  {
    "name": "Skill",
    "description": "Subcontractor Skill Code",
    "valueType": "string",
    "configurable": true,
    "validFor": {
      "startDateTime": "2017-03-19T16:42:23-04:00",
      "endDateTime": ""
    }
  },

```

```

    "specCharRelationship": [],
    "specCharacteristicValue": [
      {
        "valueType": "string",
        "isDefault": true,
        "value": "ELE-LOWVOL",
        "unitOfMeasure": "",
        "valueFrom": "",
        "valueTo": "",
        "regex": "",
        "validFor": {
          "startDateTime": "2017-03-19T16:42:23-04:00",
          "endDateTime": ""
        }
      },
      {
        "valueType": "string",
        "isDefault": false,
        "value": "ELE-HIVOL",
        "unitOfMeasure": "",
        "valueFrom": "",
        "valueTo": "",
        "regex": "",
        "validFor": {
          "startDateTime": "2017-03-19T16:42:23-04:00",
          "endDateTime": ""
        }
      }
    ]
  },
  {
    "name": "Unit of Maintenance",
    "description": "Unit of Maintenance",
    "valueType": "string",
    "configurable": true,
    "validFor": {
      "startDateTime": "2017-03-19T16:42:23-04:00",
      "endDateTime": ""
    },
    "specCharRelationship": [],
    "specCharacteristicValue": [

```

```
    {
      "valueType": "string",
      "isDefault": true,
      "value": "Per KM",
      "unitOfMeasure": "",
      "valueFrom": "",
      "valueTo": "",
      "regex": "",
      "validFor": {
        "startDateTime": "2017-03-19T16:42:23-04:00",
        "endDateTime": ""
      }
    },
    {
      "valueType": "string",
      "isDefault": false,
      "value": "Per Day",
      "unitOfMeasure": "",
      "valueFrom": "",
      "valueTo": "",
      "regex": "",
      "validFor": {
        "startDateTime": "2017-03-19T16:42:23-04:00",
        "endDateTime": ""
      }
    },
    {
      "valueType": "string",
      "isDefault": false,
      "value": "Mon-Fri 07:00-19:00",
      "unitOfMeasure": "",
      "valueFrom": "",
      "valueTo": "",
      "validFor": {
        "startDateTime": "2017-03-19T16:42:23-04:00",
        "endDateTime": ""
      }
    }
  ]
},
"entitySpecRelationship": [
```

```

    {
      "role": "a_ReliesOn",
      "type": "ReliesOn",
      "associationSpec": {
        "id": "19",
        "href":
          "http://serverlocation:port/catalogManagement/associationSpecification/19",
        "@type": "AssociationSpecification"
      },
      "id": "27",
      "href": "http://serverlocation:port/catalogManagement/entitySpecification/27",
      "name": "Fire Protection Mechanical",
      "validFor": {
        "startDateTime": "2017-01-19T17:41:23-04:00",
        "endDateTime": "2018-01-19T00:00:00-04:00"
      }
    }
  ]
}

```

Field Descriptions:

Field	Description
id	Unique identifier of this REST resource
href	Hyperlink reference to this REST resource
@type	Class type of this REST resource
@baseType	The (immediate) base class type of this REST resource
@schemaLocation	This field provides a link to the schema describing this REST resource
name	Name given to this REST resource
description	Description of this REST resource
lastUpdate	Date and time of the last update of this REST resource
lifecycleStatus	Used to indicate the current lifecycle status of this catalog item
validFor	The period for which this REST resource is valid
version	Entity specification version

attachment: describes a product through attachments like document, video, pictures...

Field	Description
id	Unique identifier of the attachment
href	Hyperlink reference to the attachment
@type	(Class) type of the Attachment.
@baseType	Immediate base (class) type of the attachment
@schemaLocation	A link to the schema describing this attachment entity

name	Name given to the attachment
description	Description of the attachment
contentType	Attachment mime type such as extension file for video, picture and document
validFor	The period for which this attachment is valid

entitySchema: The reference object to the schema and type of target entity which be described by this entity specification.

Field	Description
@type	(Class) type of the Attachment.
@schemaLocation	A link to the schema describing the target entity instance

specCharacteristic: A characteristic quality or distinctive feature of an EntitySpecification. The characteristic can be take on a discrete value, such as color, can take on a range of values, (for example, sensitivity of 100-240 mV), or can be derived from a formula (for example, usage time (hrs) = 30 – talk time *3). Certain characteristics, such as color, may be configured during the ordering or some other process.

Field	Description
@type	(Class) type of the characteristic
@schemaLocation	A link to the schema describing this characteristic
configurable	If true, the Boolean indicates that the specCharacteristic is configurable
description	A narrative that explains in detail what the specCharacteristic is
name	Name of the specCharacteristic, mandator
valueType	A kind of value that the characteristic can take on, such as numeric, text and so forth
validFor	The period for which the specCharacteristic is valid

specCharRelationship: An aggregation, migration, substitution, dependency or exclusivity relationship between/among specCharacteristics.

Field	Description
id	Unique identifier of the target entity specification
href	Hyperlink reference to the target entity specification
validFor	The period for which the relationship is valid
type	Type of relationship such as aggregation, migration, substitution, dependency, exclusivity
name	Name of the target specCharacteristic
@type	Class type of target entity specification

specCharacteristicValue: A number or text that can be assigned to a SpecCharacteristic.

Field	Description
isDefault	Indicates if the value is the default value for a characteristic

unitOfMeasure	Could be minutes, GB, etc
validFor	The period of time for which a value is applicable
value	A discrete value that the characteristic can take on
valueFrom	The low range value that a characteristic can take on
valueTo	The upper range value that a characteristic can take on
valueType	A kind of value that the characteristic can take on, such as numeric, text, and so forth
rangeInterval	An indicator that specifies the inclusion or exclusion of the valueFrom and valueTo attributes. If applicable, possible values are "open", "closed", "closedBottom" and "closedTop".
regex	Regular expression to define constraint on the allowed value

relatedParty: Defines party or partyRole reference which is linked to a specific entity specification.

Field	Description
id	Identifier for the related party or partyRole
type	Indicates whether this is a Party or PartyRole
href	Hyperlink reference to the relatedParty, could be a party reference or a partyRole reference
name	Name of the related party
role	Role of the related party
validFor	The period for which the related party is linked to the entity

entitySpecRelationship: This array represents relationships between this entity specification and other entity specification.

Field	Description
role	The association role for this entity specification.
type	Type of the relationship
associationSpec	The reference to the association specification that this entity specification instance plays a role in it.
id	reference id to the target entity specification.
href	Hyperlink reference to the target entity specification instance
name	The name given to the target entity specification instance
validFor	The period for which this relationship is valid

associationSpec: A reference to the association specification to which a given relationship is based on.

Field	Description
id	reference id to the corresponding association specification.
href	Hyperlink reference to the corresponding association specification
@type	Class type of corresponding association specification

UML model:

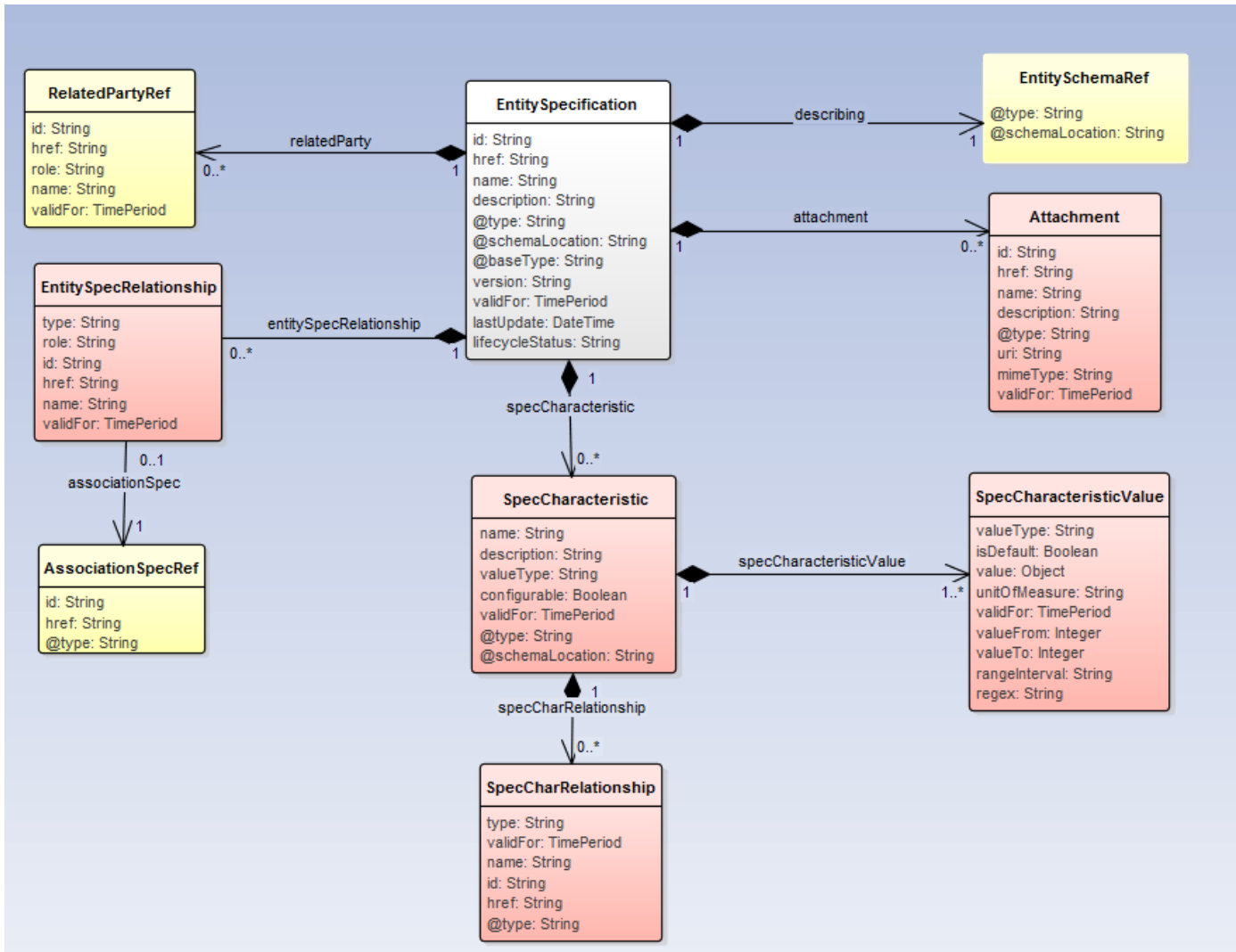


Figure 1- EntitySpecification resource model

ASSOCIATION SPECIFICATION

AssociationSpecification is an association class that describes a type of relationship between two entities. This is a generic construct that may be used to describe relationship types and roles. The role and type of each entity in the relationship is given by an association role specification. Two role specifications are embedded in the association specification.

Below is a representation of the AssociationSpecification resource in JSON format.

```

{
  "id": "19",
  "@type": "AssociationSpecification",
  "href": "http://serverlocation:port/catalogManagement/associationSpecification/19",

```



```

"name": "ReliesOn",
"version": "1.0",
"@baseType": "",
"@schemaLocation":
"http://serverlocation:port/catalogManagement/schema/AssociationSpecification.json",
"lastUpdate": "2017-01-19T17:41:23-04:00",
"lifecycleStatus": "Active",
"description": "An uni-directional association from EntitySpecification A to EntitySpecification B
indicating an instance of A relies on an instance of B.",
"validFor": {
  "startDateTime": "2017-01-19T17:41:23-04:00",
  "endDateTime": "2018-01-19T00:00:00-04:00"
},
"constraint": [
  {
    "@type": "EligibilityConstraint",
    "name": "Eligibility Constraint",
    "id": "23",
    "href": "http://serverlocation:port/catalogManagement/constraint/23"
  }
],
"associationRoleSpec": [
  {
    "role": "a_ReliesOn",
    "isSource": true,
    "aggregation": "None",
    "minQuantity": 1,
    "maxQuantity": 1,
    "defaultQuantity": 1,
    "isNavigable": true,
    "entityType": "ElecFireProtectionSpec"
  },
  {
    "role": "z_ReliesOn",
    "isSource": false,
    "aggregation": "None",
    "minQuantity": 0,
    "maxQuantity": 1,
    "defaultQuantity": 1,
    "isNavigable": false,
    "entityType": "MechFireProtectionSpec"
  }
]

```

```

    ]
  }

```

Field Descriptions:

Field	Description
id	Unique identifier of the association specification
href	Hyperlink reference to this specification
@type	The (class) type of this REST resource
@baseType	Immediate base class type of this REST resource
@schemaLocation	This field provides a link to the schema describing this REST resource
name	Name given to this association specification
description	Description of the specification
lastUpdate	The last modified date of this specification
lifecycleStatus	Indicates the current lifecycle status
validFor	The period for which this specification is valid
version	Version of this association
associationRoleSpec	This array describes participants in the association specification
constraint	An array of constraint references applied to this specification instances

associationRoleSpec: This array describes participants in the association specification. Each association role specification describes the target entity type, its role and cardinality in the association with another entity.

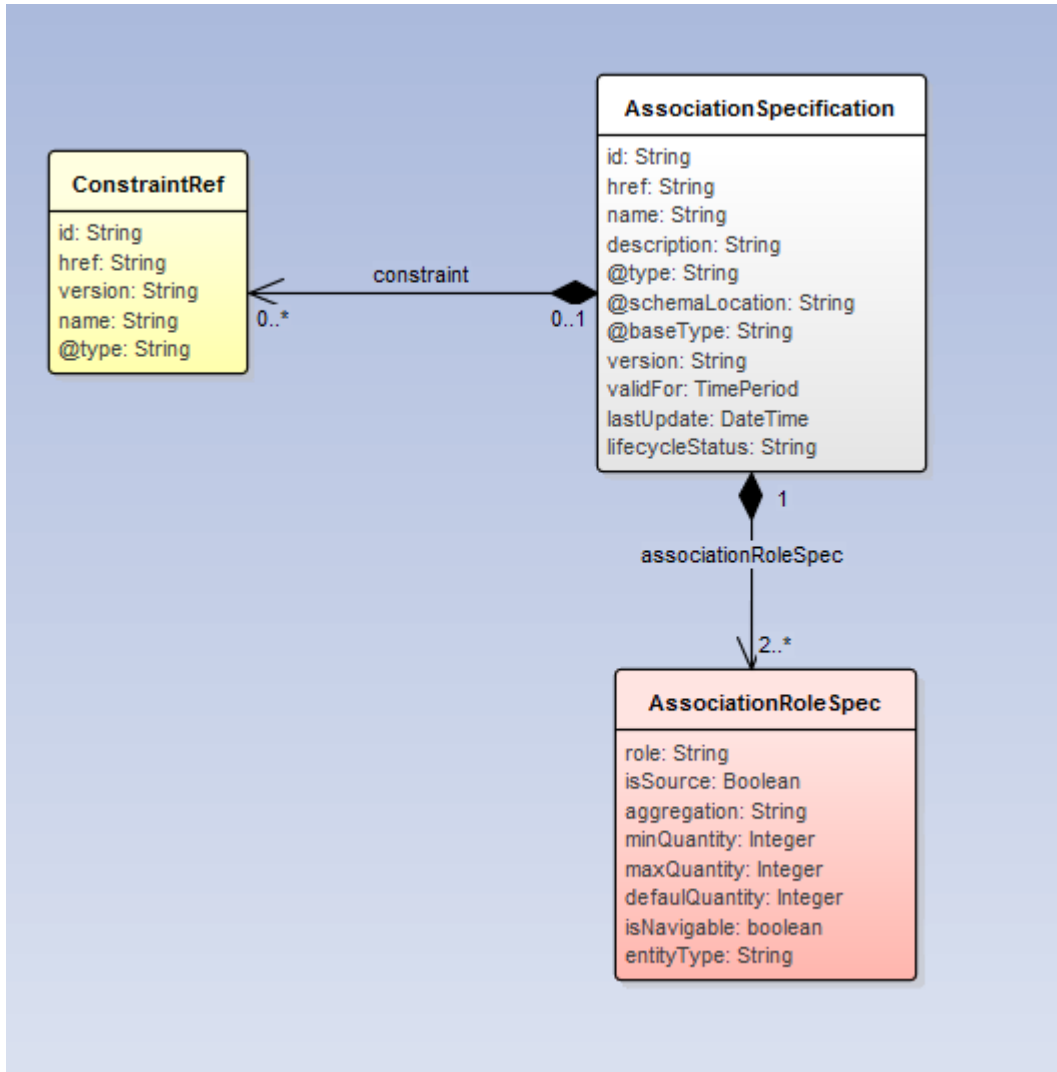
Field	Description
role	The association role of this relationship participant.
isSource	A flag indicating if the participant involved in a uni-directional relationship is the source or not. This flag is true If the association is bi-directional
aggregation	A flag indicates that if this role is an aggregation one or not
minQuantity	Minimum allowed quantity of the association role
maxQuantity	Maximum allowed quantity of the association role
defaultQuantity	Default quantity of the association role
isNavigable	A flag indicating if access from the other end of association is allowed or not.
entityType	The target (root) entity type associated with this role

constraint: An array of references to constraints specified for this association specification.

Field	Description
id	reference id to the target constraint.
href	Hyperlink reference to the target constraint
@type	The (class) type of the constraint

name	Name given to the constraint
------	------------------------------

UML model:



Association Specification REST resource model

ASSOCIATION

Association is the class that describe a relationship between two or more entity specifications based on a given association specification. The role and type of each endpoint in the relationship is given by an association role. The type of endpoints in the relationship should match the ones as defined in the corresponding association role specification. A relationship between entity specifications may be governed by conditions and rules which are addressed by constraint references in this resource. Constraints for a

relationship may include new rules and conditions in addition to those defined for the corresponding association specification.

Below is a representation of the Association resource in JSON format.

```
{
  "id": "91",
  "@type": "Association",
  "href": "http://serverlocation:port/catalogManagement/Association/91",
  "name": "ReliesOn",
  "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/Association.json",
  "lastUpdate": "2017-01-19T17:41:23-04:00",
  "lifecycleStatus": "Active",
  "description": "A ReliesOn association from Electrical Fire Protection Specification to Mechanical Fire Protection Specification",
  "associationSpec": {
    "id": "19",
    "@type": "AssociationSpecification",
    "href": "http://serverlocation:port/catalogManagement/associationSpecification/19"
  },
  "constraint": [
    {
      "@type": "EligibilityConstraint",
      "name": "Eligibility Constraint",
      "id": "23",
      "href": "http://serverlocation:port/catalogManagement/constraint/23"
    },
    {
      "@type": "AvailabilityConstraint",
      "name": "Availability Constraint ",
      "id": "27",
      "href": "http://serverlocation:port/catalogManagement/constraint/27",
    }
  ],
  "validFor": {
    "startDateTime": "2017-01-19T17:41:23-04:00",
    "endDateTime": ""
  },
  "associationRole": [
    {
      "role": "a_ReliesOn",
      "isSource": true,
      "id": "52",
      "@type": "FireProtectionSpecification",
      "href": "http://serverlocation:port/catalogManagement/entitySpecification/52",
      "name": "Fire Protection Electrical"
    },
    {
      "role": "z_ReliesOn",
```

```

    "isSource": false,
    "id": "27",
    "@type": "FireProtectionSpecification",
    "href": "http://serverlocation:port/catalogManagement/entitySpecification/27",
    "name": "Fire Protection Mechanical"
  }
]
}

```

Field Descriptions:

Field	Description
id	Unique identifier of this REST resource
href	Hyperlink reference to this REST resource
@type	Indicates the (class) type of this REST resource
@schemaLocation	This field provides a link to the schema describing this REST resource
@baseType	Immediate base class type of this REST resource
name	Name given to this association
description	Description of this REST resource
lastUpdate	The last modified date of this REST resource
lifecycleStatus	indicate the current lifecycle status of this REST resource
validFor	The period for which this REST resource is valid
version	Version of this REST resource
associationSpec	Reference to the association specification to which this relationship instance is based on
constraint	An array of constraint references applied to this relationship
associationRole	This array describes participants in the relationship

associationSpec: A reference to the association specification to which a given relationship is based on.

Field	Description
id	reference id to the corresponding association specification.
href	Hyperlink reference to the corresponding association specification
@type	Class type of corresponding association specification

associationRole: This array describes reference to participants in the association. Each association role refers to the instance which its type is given by the association role specification.

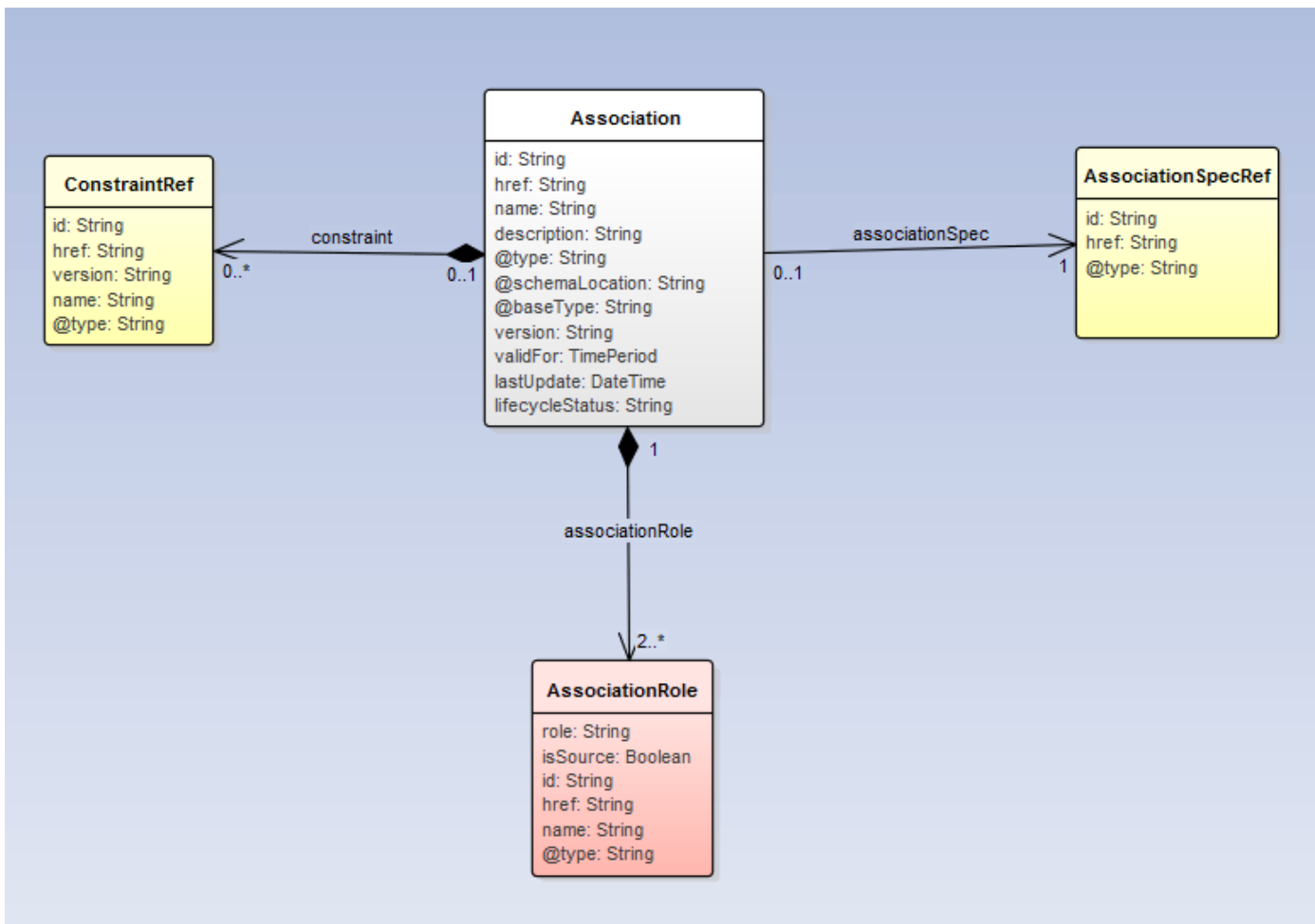
Field	Description
role	The association role of this relationship participant as defined in the associationRoleSpec

isSource	A flag indicating if the participant involved in a uni-directional relationship is the source or not. this flag is true If the association is bi-directional (both end points are navigable)
id	The identifier of the endpoint plays this role
href	Hyperlink reference to the endpoint plays this association role
name	Name of the endpoint which plays this association role
@type	(class) type of the endpoint which plays this association role

constraint: An array of references to constraints or rules specified for this relationship instance. In addition to constraints and rules specific to this relationship instance, this array includes those constraints defined in the corresponding association specification.

Field	Description
id	reference id to the target constraint.
href	Hyperlink reference to the target constraint
@type	The (class) type of the constraint
name	Name given to the constraint

UML model:



EntitySpecRelationship REST resource model

NOTIFICATION RESOURCE MODELS

13 notifications are defined for this API

Notifications related to Catalog:

- CatalogCreationNotification
- CatalogRemoveNotification
- CatalogBatchNotification

Notifications related to Category:

- CategoryCreationNotification
- CategoryRemoveNotification

Notifications related to EntityCatalogItem:

- EntityCatalogItemCreationNotification
- EntityCatalogItemRemoveNotification

Notifications related to EntitySpecification:

- EntitySpecificationCreationNotification
- EntitySpecificationRemoveNotification

Notifications related to AssociationSpecification:

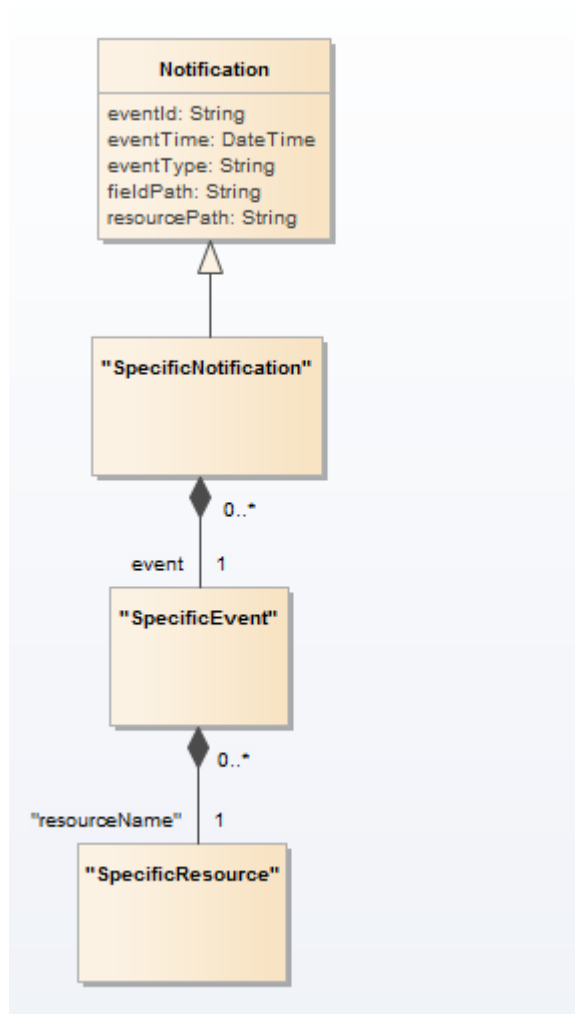
- AssociationSpecificationCreationNotification
- AssociationSpecificationRemoveNotification

Notifications related to Association:

- AssociationCreationNotification
- AssociationRemoveNotification

The notification structure for all notifications in this API follow the pattern depicted by the figure below. A notification resource (depicted by "SpecificNotification" placeholder) is a sub class of a generic Notification structure containing an id of the event occurrence (eventId), an event timestamp (eventTime), and the name of the notification resource (eventType).

This notification structure owns an event structure ("SpecificEvent" placeholder) linked to the resource concerned by the notification using the resource name as access field ("resourceName" placeholder).



CATALOG CREATION NOTIFICATION

Notification sent when a new Catalog resource is created.

Json representation sample

We provide below the json representation of an example of a 'CatalogCreationNotification' notification object

```

{
  "eventId": "00001",
  "eventTime": "2015-11-16T16:42:25-04:00",
  "eventType": "CatalogCreationNotification",
  "event": {
    "catalog":
      {-- SEE Catalog RESOURCE SAMPLE --}
  }
}

```

CATALOG REMOVE NOTIFICATION

Notification sent when removing a Catalog resource.

Json representation sample

We provide below the json representation of an example of a 'CatalogRemoveNotification' notification object.

```
{
  "eventId": "00001",
  "eventTime": "2015-11-16T16:42:25-04:00",
  "eventType": "CatalogRemoveNotification",
  "event": {
    "catalog": {
      "-- SEE Catalog RESOURCE SAMPLE --"
    }
  }
}
```

CATALOG BATCH NOTIFICATION

Notification sent when a batch job on resource Catalog changes

Json representation sample

We provide below the json representation of an example of a 'CatalogBatchNotification' notification object.

```
{
  "eventId": "00001",
  "eventTime": "2015-11-16T16:42:25-04:00",
  "eventType": "CatalogBatchNotification",
  "event": {
    "catalog": [
      "-- SEE Catalog RESOURCE SAMPLE --"
    ]
  }
}
```

CATEGORY CREATION NOTIFICATION

Notification sent when a new Category resource is created.

Json representation sample

We provide below the json representation of an example of a 'CategoryCreationNotification' notification object.

```
{
  "eventId": "00001",
  "eventTime": "2015-11-16T16:42:25-04:00",
  "eventType": "CategoryCreationNotification",
```

```
"event": {
  "category" :
    [-- SEE Category RESOURCE SAMPLE --]
}
```

CATEGORY REMOVE NOTIFICATION

Notification sent when removing a Category resource.

Json representation sample

We provide below the json representation of an example of a 'CategoryRemoveNotification' notification object.

```
{
  "eventId":"00001",
  "eventTime":"2015-11-16T16:42:25-04:00",
  "eventType":"CategoryRemoveNotification",
  "event": {
    "category" :
      [-- SEE Category RESOURCE SAMPLE --]
  }
}
```

ENTITY CATALOG ITEM CREATION NOTIFICATION

Notification sent when a new EntityCatalogItem resource is created.

Json representation sample

We provide below the json representation of an example of an 'EntityCatalogItemCreationNotification' notification object.

```
{
  "eventId":"00001",
  "eventTime":"2015-11-16T16:42:25-04:00",
  "eventType":"EntityCatalogItemCreationNotification",
  "event": {
    "entityCatalogItem" :
      [-- SEE EntityCatalogItem RESOURCE SAMPLE --]
  }
}
```

ENTITY CATALOG ITEM REMOVE NOTIFICATION

Notification sent when removing an EntityCatalogItem resource.

Json representation sample

We provide below the json representation of an example of a 'EntityCatalogItemRemoveNotification' notification object.

```
{
  "eventId": "00001",
  "eventTime": "2015-11-16T16:42:25-04:00",
  "eventType": "EntityCatalogItemRemoveNotification",
  "event": {
    "entityCatalogItem":
      {"-- SEE EntityCatalogItem RESOURCE SAMPLE --"}
  }
}
```

ENTITY SPECIFICATION CREATION NOTIFICATION

Notification sent when a new EntitySpecification resource is created.

Json representation sample

We provide below the json representation of an example of an 'EntitySpecificationCreationNotification' notification object.

```
{
  "eventId": "00001",
  "eventTime": "2015-11-16T16:42:25-04:00",
  "eventType": "EntitySpecificationCreationNotification",
  "event": {
    "entitySpecification":
      {"-- SEE EntitySpecification RESOURCE SAMPLE --"}
  }
}
```

ENTITY SPECIFICATION REMOVE NOTIFICATION

Notification sent when removing a EntitySpecification resource.

Json representation sample

We provide below the json representation of an example of an 'EntitySpecificationRemoveNotification' notification object.

```
{
  "eventId": "00001",
  "eventTime": "2015-11-16T16:42:25-04:00",
  "eventType": "EntitySpecificationRemoveNotification",
  "event": {
    "entitySpecification":
      {"-- SEE EntitySpecification RESOURCE SAMPLE --"}
  }
}
```

ASSOCIATION SPECIFICATION CREATION NOTIFICATION

Notification sent when a new AssociationSpecification resource is created.

Json representation sample

We provide below the json representation of an example of an 'AssociationSpecificationCreationNotification' notification object.

```
{
  "eventId":"00001",
  "eventTime":"2015-11-16T16:42:25-04:00",
  "eventType":"AssociationSpecificationCreationNotification",
  "event": {
    "associationSpecification" :
      {-- SEE AssociationSpecification RESOURCE SAMPLE --}
  }
}
```

ASSOCIATION SPECIFICATION REMOVE NOTIFICATION

Notification sent when removing a AssociationSpecification resource.

Json representation sample

We provide below the json representation of an example of an 'AssociationSpecificationRemoveNotification' notification object.

```
{
  "eventId":"00001",
  "eventTime":"2015-11-16T16:42:25-04:00",
  "eventType":"AssociationSpecificationRemoveNotification",
  "event": {
    "associationSpecification" :
      {-- SEE AssociationSpecification RESOURCE SAMPLE --}
  }
}
```

ASSOCIATION CREATION NOTIFICATION

Notification sent when a new Association resource is created.

Json representation sample

We provide below the json representation of an example of an 'AssociationCreationNotification' notification object.

```
{
  "eventId":"00001",
  "eventTime":"2015-11-16T16:42:25-04:00",
  "eventType":"AssociationCreationNotification",
```

```
"event": {
  "association" :
    [-- SEE Association RESOURCE SAMPLE --]
}
```

ASSOCIATION REMOVE NOTIFICATION

Notification sent when removing a Association resource.

Json representation sample

We provide below the json representation of an example of an 'AssociationRemoveNotification' notification object.

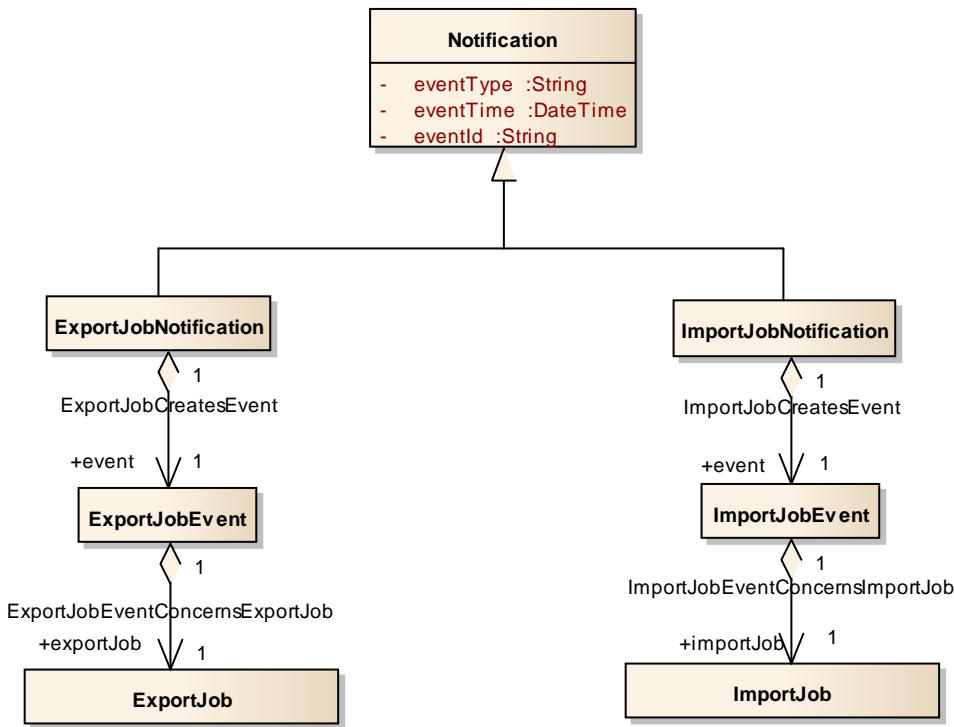
```
{
  "eventId":"00001",
  "eventTime":"2015-11-16T16:42:25-04:00",
  "eventType":"AssociationRemoveNotification",
  "event": {
    "association" :
      [-- SEE Association RESOURCE SAMPLE --]
  }
}
```

EXPORT AND IMPORT JOB NOTIFICATIONS

The Export Job and Import Job are Task resources as defined in TMF REST API design guideline and applicable to this API as well. The following notifications and the model applied to these tasks should be supported by an Entity Catalog management.

1. Export Job Completion Notification
2. Import Job Completion Notification

UML Model:



Event: ExportJobCompletionNotification

```

{
  "eventType": "ExportJobCompletionNotification",
  "eventTime": "2017-03-19T16:43:24.0Z",
  "eventId": "1154278",
  "event": { "exportJob": {
    "id": "54",
    "href": "http://api/catalogManagement/exportJob/54",
    "status": "succeeded",
    "path": "catalogManagement/",
    "content-type": "application/json",
    "errorLog": "",
    "creationDate": "2017-03-19T16:42:23-04:00",
    "completionDate": "2017-03-19T16:43:23-04:00",
    "url": "ftp://ftp.mycatalog.com/catalogManagement/54.json"
  }}
}

```

Event: ImportJobCompletionNotification

```
{
  "eventType": "ImportJobCompletionNotification",
  "eventTime": "2017-03-19T16:43:24.0Z",
  "eventId": "1154278",
  "event": { "importJob": {
    "id": "54",
    "href": "http://api/catalogManagement/importJob/54",
    "status": "succeeded",
    "path": "catalogManagement/",
    "content-type": "application/json",
    "errorLog": "",
    "creationDate": "2017-03-19T16:42:23-04:00",
    "completionDate": "2017-03-19T16:43:23-04:00",
    "url": "ftp://ftp.mycatalog.com/catalogManagement/54.json"
  }}
}
```

API OPERATIONS

For every single of operation on the entities use the following templates and provide sample REST requests and responses.

Remember that the following Uniform Contract rules must be used:

Operation on Entities	Uniform API Operation	Description
Query Entities	GET Resource	GET must be used to retrieve a representation of a resource.
Create Entity	POST Resource	POST must be used to create a new resource
Partial Update of an Entity	PATCH Resource	PATCH must be used to partially update a resource
Complete Update of an Entity	PUT Resource	PUT must be used to completely update a resource identified by its resource URI
Remove an Entity	DELETE Resource	DELETE must be used to remove a resource
Execute an Action on an Entity	POST on TASK Resource	POST must be used to execute Task Resources
Other Request Methods	POST on TASK Resource	GET and POST must not be used to tunnel other request methods.

Filtering and attribute selection rules are described in the TMF REST Design Guidelines.

Notifications are also described in a subsequent section.

OPERATIONS ON CATALOG

LIST CATALOGS

GET /catalog?fields=...&{filtering}

Description

This operation list catalog entities.

Attribute selection is enabled for all first level attributes.

Filtering may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving Catalog resources.

Request
GET /entityCatalogManagement/catalog Accept: application/json
Response
<pre> 200 [{ "id": "10", "@type": "EntityCatalog", "href": "http://serverlocation:port/catalogManagement/catalog/10", "version": "2.0", "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/EntityCatalog.yml", "@baseType": "", "lastUpdate": "2017-07-22T16:42:23-04:00", "category": [{ "id": "21", "href": "http://serverlocation:port/catalogManagement/category/21", "@type": "Category", "name": "Electrical Services Job Plans" }], "name": "Fieldforce Electrician Subcontractor Catalog", "lifecycleStatus": "Active", "validFor": { "startDateTime": "2017-07-22T16:42:23-04:00", "endDateTime": "2018-07-22T00:00:00-04:00" }, "relatedParty": [{ </pre>

```

    "role": "Owner",
    "id": "1234",
    "href": "http://serverLocation:port/partyManagement/partyRole/1234"
  },
  {
    "role": "Reviser",
    "name": "Roger Collins"
  }
]

```

RETRIEVE CATALOG

GET /catalog/{id}?fields=...&{filtering}

Description

This operation retrieves a catalog entity.

Attribute selection is enabled for all first level attributes.

Filtering on sub-resources may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving a Catalog resource.

Request
GET /entityCatalogManagement/catalog/10 Accept: application/json
Response
200 <pre> { "id": "10", "@type": "EntityCatalog", "href": "http://serverlocation:port/catalogManagement/catalog/10", "version": "2.0", "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/EntityCatalog.yml", "@baseType": "", "lastUpdate": "2017-07-22T16:42:23-04:00", "category": [{ "id": "21", "href": "http://serverlocation:port/catalogManagement/category/21", "@type": "Category", "name": "Electrical Services Job Plans" }], </pre>

```

    "name": "Fieldforce Electrician Subcontractor Catalog",
    "lifecycleStatus": "Active",
    "validFor": {
      "startDateTime": "2017-07-22T16:42:23-04:00",
      "endDateTime": "2018-07-22T00:00:00-04:00"
    },
    "relatedParty": [
      {
        "role": "Owner",
        "id": "1234",
        "href": "http://serverLocation:port/partyManagement/partyRole/1234"
      },
      {
        "role": "Reviser",
        "name": "Roger Collins"
      }
    ]
  }

```

CREATE CATALOG

POST /catalog

Note: this operation is available only to ADMIN API users

Description

This operation creates a catalog entity.

Mandatory and Non Mandatory Attributes

Please refer to Entity Catalog CTK for details.

Usage Samples

Here's an example of a request for creating a Catalog resource.

Request

POST /entityCatalogManagement/catalog
 Content-Type: application/json

```

{
  "id": "11",
  "@type": "EntityCatalog",
  "href": "http://serverlocation:port/catalogManagement/catalog/11",
  "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/EntityCatalog.yml",
  "name": "Fieldforce Electrician Subcontractor Catalog",
  "lifecycleStatus": "Inactive"
}

```

Response

```

201

{
  "id": "10",
  "@type": "EntityCatalog",
  "href": "http://serverlocation:port/catalogManagement/catalog/10",
  "version": "1.0",
  "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/EntityCatalog.yml",
  "@baseType": "",
  "lastUpdate": "2017-07-22T16:42:23-04:00",
  "name": "Fieldforce Electrician Subcontractor Catalog",
  "lifecycleStatus": "Inactive",
  "validFor": {
    "startDateTime": "2017-07-22T16:42:23-04:00",
    "endDateTime": ""
  }
}

```

PATCH CATALOG

PATCH /catalog/{id}

Note: this operation is available only to ADMIN API users

Description

This operation allows partial updates of a catalog entity. Support of json/merge (<https://tools.ietf.org/html/rfc7386>) is mandatory, support of json/patch (<http://tools.ietf.org/html/rfc5789>) is optional.

Note: If the update operation yields to the creation of sub-resources or relationships, the same rules concerning mandatory sub-resource attributes and default value settings in the POST operation applies to the PATCH operation. Hence these tables are not repeated here.

Patchable and Non-Patchable Attributes

The tables below provide the list of non-patchable attributes. Notice that patching is possible only for 'admin' API users.

Non Patchable Attributes
id
href
@type
@baseType
lastUpdate

Usage Samples

Here's an example of a request for patching a Catalog resource.

Request
PATCH /entityCatalogManagement/catalog/10 Content-Type: application/merge-patch+json <pre>{ "name": "New Name for Catalog", "lifecycleStatus": "Inactive" }</pre>
Response
201 <pre>{ "id": "10", "@type": "EntityCatalog", "href": "http://serverlocation:port/catalogManagement/catalog/10", "version": "1.0", "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/EntityCatalog.yml", "@baseType": "", "lastUpdate": "2017-08-22T16:42:23-04:00", "name": "New Name for Catalog", "lifecycleStatus": "Inactive", "validFor": { "startDateTime": "2017-07-22T16:42:23-04:00", "endDateTime": "" } }</pre>

DELETE CATALOG

DELETE /catalog/{id}

Note: this operation is available only to ADMIN API users

Description

This operation deletes a catalog entity.

Usage Samples

Here's an example of a request for deleting a Catalog resource.

Request

DELETE /entityCatalogManagement/catalog/10

Response

204

OPERATIONS ON CATEGORY

LIST CATEGORIES

GET /category?fields=...&{filtering}

Description

This operation list category entities.

Attribute selection is enabled for all first level attributes.

Filtering may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving Category resources.

Request
GET /entityCatalogManagement/category Accept: application/json
Response
200 <pre>[{ "id": "21", "@type": "Category", "href": "http://serverlocation:port/catalogManagement/category/21", "lastUpdate": "2017-03-19T16:42:23-04:00", "version": "1.0", "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/Category.yml", "@baseType": "", "lifecycleStatus": "Launched", "validFor": { "startDateTime": "2017-03-19T16:42:23-04:00", "endDateTime": "" }, "parentId": "23", "isRoot": false, "name": "Electrical Services Job Plans", "description": "A category to hold all available electrical services job plans", "categories": [], "entityCatalogItems": [{ "id": "205", "href": "http://serverlocation:port/catalogManagement/entityCatalogItems/205", "@type": "EntityCatalogItem"</pre>

```

    },
    {
      "id": "206",
      "href": "http://serverlocation:port/catalogManagement/entityCatalogItem/206",
      "@type": "EntityCatalogItem"
    }
  ]
},
{
  "id": "22",
  "@type": "Category",
  "href": "http://serverlocation:port/catalogManagement/category/22",
  "lastUpdate": "2017-03-19T16:42:23-04:00",
  "version": "1.0",
  "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/Category.yml",
  "@baseType": "",
  "lifecycleStatus": "Launched",
  "validFor": {
    "startDateTime": "2017-03-19T16:42:23-04:00",
    "endDateTime": ""
  },
  "parentId": "23",
  "isRoot": false,
  "name": "Mechanical Services Job Plans",
  "description": "A category to hold all available mechanical services job plans",
  "categories": [],
  "entityCatalogItems":
  [
    {
      "id": "205",
      "href": "http://serverlocation:port/catalogManagement/entityCatalogItems/205",
      "@type": "EntityCatalogItem"
    },
    {
      "id": "206",
      "href": "http://serverlocation:port/catalogManagement/entityCatalogItem/206",
      "@type": "EntityCatalogItem"
    }
  ]
},
{
  "id": "23",
  "@type": "Category",
  "href": "http://serverlocation:port/catalogManagement/category/23",
  "lastUpdate": "2017-03-19T16:42:23-04:00",
  "version": "1.0",
  "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/Category.yml",
  "@baseType": "",
  "lifecycleStatus": "Launched",
  "validFor": {
    "startDateTime": "2017-03-19T16:42:23-04:00",
    "endDateTime": ""
  },
  "parentId": "",
  "isRoot": true,
  "name": "Job Plans",
  "description": "A category to hold all available job plans",
  "categories":
  [

```



```

    {
      "id": "21",
      "href": "http://serverlocation:port/catalogManagement/entitycategory/21",
      "@type": "Category",
      "name": "Electrical Services Job Plans"
    },
    {
      "id": "22",
      "href": "http://serverlocation:port/catalogManagement/category/22",
      "@type": "Category",
      "name": "Mechanical Services Job Plans"
    }
  ],
  "entityCatalogItems": []
}
]

```

RETRIEVE CATEGORY

GET /category/{id}?fields=...&{filtering}

Description

This operation retrieves a category entity.

Attribute selection is enabled for all first level attributes.

Filtering on sub-resources may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving a Category resource.

Request
GET /entityCatalogManagement/category/21 Accept: application/json
Response
200 <pre> { "id": "21", "@type": "Category", "href": "http://serverlocation:port/catalogManagement/category/21", "lastUpdate": "2017-03-19T16:42:23-04:00", "version": "1.0", "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/Category.yml", "@baseType": "" </pre>

```

    "lifecycleStatus": "Launched",
    "validFor": {
      "startTime": "2017-03-19T16:42:23-04:00",
      "endTime": ""
    },
    "parentId": "23",
    "isRoot": false,
    "name": "Electrical Services Job Plans",
    "description": "A category to hold all available electrical services job plans",
    "categories": [],
    "entityCatalogItems":
    [
      {
        "id": "205",
        "href": "http://serverlocation:port/catalogManagement/entityCatalogItems/205",
        "@type": "EntityCatalogItem"
      },
      {
        "id": "206",
        "href": "http://serverlocation:port/catalogManagement/entityCatalogItem/206",
        "@type": "EntityCatalogItem"
      }
    ]
  }
}

```

CREATE CATEGORY

POST /category

Note: this operation is available only to ADMIN API users

Description

This operation creates a category entity.

Mandatory and Non Mandatory Attributes

Please refer to Entity Catalog CTK for details.

Usage Samples

Here's an example of a request for creating a Category resource. In this example the request only passes mandatory attributes.

Request

POST /entityCatalogManagement/category
 Content-Type: application/json

```

{
  "@type": "Category",
  "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/Category.yml",
  "lifecycleStatus": "Launched",
  "validFor": {
    "startTime": "2017-03-19T16:42:23-04:00",

```

```

    "endTime": ""
  },
  "parentId": "23",
  "name": "Electrical Services Job Plans",
  "description": "A category to hold all available electrical services job plans",
  "entityCatalogItems":
  [
    {
      "id": "205",
      "href": "http://serverlocation:port/catalogManagement/entityCatalogItems/205",
      "@type": "EntityCatalogItem"
    },
    {
      "id": "206",
      "href": "http://serverlocation:port/catalogManagement/entityCatalogItem/206",
      "@type": "EntityCatalogItem"
    }
  ]
}

```

Response

201

```

{
  "id": "21",
  "@type": "Category",
  "href": "http://serverlocation:port/catalogManagement/category/21",
  "lastUpdate": "2017-03-19T16:42:23-04:00",
  "version": "1.0",
  "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/Category.yml",
  "@baseType": "",
  "lifecycleStatus": "Launched",
  "validFor": {
    "startTime": "2017-03-19T16:42:23-04:00",
    "endTime": ""
  },
  "parentId": "23",
  "isRoot": false,
  "name": "Electrical Services Job Plans",
  "description": "A category to hold all available electrical services job plans",
  "categories": [],
  "entityCatalogItems":
  [
    {
      "id": "205",
      "href": "http://serverlocation:port/catalogManagement/entityCatalogItems/205",
      "@type": "EntityCatalogItem"
    },
    {
      "id": "206",
      "href": "http://serverlocation:port/catalogManagement/entityCatalogItem/206",
      "@type": "EntityCatalogItem"
    }
  ]
}

```

PATCH CATEGORY

PATCH /category/{id}

Note: this operation is available only to ADMIN API users

Description

This operation allows partial updates of a category entity. Support of json/merge (<https://tools.ietf.org/html/rfc7386>) is mandatory, support of json/patch (<http://tools.ietf.org/html/rfc5789>) is optional.

Note: If the update operation yields to the creation of sub-resources or relationships, the same rules concerning mandatory sub-resource attributes and default value settings in the POST operation applies to the PATCH operation. Hence these tables are not repeated here.

Patchable and Non-Patchable Attributes

The tables below provide the list of non-patchable attributes. Notice that patching is possible only for 'admin' API users.

Non Patchable Attributes
id
href
@type
@baseType

Usage Samples

Here's an example of a request for patching a Category resource.

Request
PATCH /entityCatalogManagement/category/21 Content-Type: application/merge-patch+json <pre>{ "description": "new description..." }</pre>
Response
201 <pre>{ "id": "21", "@type": "Category", "href": "http://serverlocation:port/catalogManagement/category/21", "lastUpdate": "2017-03-29T16:42:23-04:00", "version": "1.0", "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/Category.yml", }</pre>

```

"@baseType": "",
"lifecycleStatus": "Launched",
"validFor": {
  "startTime": "2017-03-19T16:42:23-04:00",
  "endTime": ""
},
"parentId": "23",
"isRoot": false,
"name": "Electrical Services Job Plans",
"description": " new description...",
"categories": [],
"entityCatalogItems":
[
  {
    "id": "205",
    "href": "http://serverlocation:port/catalogManagement/entityCatalogItems/205",
    "@type": "EntityCatalogItem"
  },
  {
    "id": "206",
    "href": "http://serverlocation:port/catalogManagement/entityCatalogItem/206",
    "@type": "EntityCatalogItem"
  }
]
}

```

DELETE CATEGORY

DELETE /category/{id}

Note: this operation is available only to ADMIN API users

Description

This operation deletes a category entity.

Usage Samples

Here's an example of a request for deleting a Category resource.

Request
DELETE /entityCatalogManagement/category/21
Response
204

OPERATIONS ON ENTITY CATALOG ITEM

LIST ENTITY CATALOG ITEMS

GET /entityCatalogItem?fields=...&{filtering}

Description

This operation list entity catalog item entities.

Attribute selection is enabled for all first level attributes.

Filtering may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving EntityCatalogItem resources.

Request
GET /entityCatalogManagement/entityCatalogItem Accept: application/json
Response
<pre> 200 [{ "id": "712", "@type": "EntityCatalogItem", "href": "http://serverlocation:port/catalogManagement/entityCatalogItem/712", "name": "Fire Protection Electrical", "version": "1.0", "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/EntityCatalogItem.yml", "@baseType": "", "description": "Fire Protection Electrical Services.", "lastUpdate": "2017-03-19T16:42:23-04:00", "lifecycleStatus": "Active", "validFor": { "startDateTime": "2017-03-19T16:42:23-04:00", "endDateTime": "2017-06-19T00:00:00-04:00" }, "category": [{ "id": "21", "@type": "Category", "href": "http://serverlocation:port/catalogManagement/category/21", "name": "Electrical Services Job Plans" }] },], </pre>

```

    "specification": {
      "id": "52",
      "@type": "FireProtectionSpecification",
      "href": "http://serverlocation:port/catalogManagement/entitySpecification/52",
      "name": "Fire Protection Electrical"
    }
  }
]

```

RETRIEVE ENTITY CATALOG ITEM

GET /entityCatalogItem/{id}?fields=...&{filtering}

Description

This operation retrieves an entity catalog item entity.

Attribute selection is enabled for all first level attributes.

Filtering on sub-resources may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving an EntityCatalogItem resource.

Request
GET /entityCatalogManagement/entityCatalogItem/712 Accept: application/json
Response
200 <pre> { "id": "712", "@type": "EntityCatalogItem", "href": "http://serverlocation:port/catalogManagement/entityCatalogItem/712", "name": "Fire Protection Electrical", "version": "1.0", "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/EntityCatalogItem.yml", "@baseType": "", "description": "Fire Protection Electrical Services.", "lastUpdate": "2017-03-19T16:42:23-04:00", "lifecycleStatus": "Active", "validFor": { "startDateTime": "2017-03-19T16:42:23-04:00", "endDateTime": "2017-06-19T00:00:00-04:00" }, "category": [</pre>

```

    {
      "id": "21",
      "@type": "Category",
      "href": "http://serverlocation:port/catalogManagement/category/21",
      "name": "Electrical Services Job Plans"
    },
    "specification": {
      "id": "52",
      "@type": "FireProtectionSpecification",
      "href": "http://serverlocation:port/catalogManagement/entitySpecification/52",
      "name": "Fire Protection Electrical"
    }
  }
}

```

CREATE ENTITY CATALOG ITEM

POST /entityCatalogItem

Note: this operation is available only to ADMIN API users

Description

This operation creates an entity catalog item entity.

Mandatory and Non Mandatory Attributes

Please refer to Entity Catalog CTK for details

Usage Samples

Here's an example of a request for creating a EntityCatalogItem resource.

Request
POST /entityCatalogManagement/entityCatalogItem Content-Type: application/json <pre> { "@type": "EntityCatalogItem", "name": "Fire Protection Electrical", "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/EntityCatalogItem.yml", "description": "Fire Protection Electrical Services.", "lifecycleStatus": "Active", "validFor": { "startDateTime": "2017-03-19T16:42:23-04:00", "endDateTime": "2017-06-19T00:00:00-04:00" }, "category": [{ "id": "21", "@type": "Category", "href": "http://serverlocation:port/catalogManagement/category/21", "name": "Electrical Services Job Plans" }] } </pre>


```

    ],
    "specification": {
      "id": "52",
      "@type": "FireProtectionSpecification",
      "href": "http://serverlocation:port/catalogManagement/entitySpecification/52",
      "name": "Fire Protection Electrical"
    }
  }
}

```

Response

```

201

{
  "id": "712",
  "@type": "EntityCatalogItem",
  "href": "http://serverlocation:port/catalogManagement/entityCatalogItem/712",
  "name": "Fire Protection Electrical",
  "version": "1.0",
  "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/EntityCatalogItem.yml",
  "@baseType": "",
  "description": "Fire Protection Electrical Services.",
  "lastUpdate": "2017-03-19T16:42:23-04:00",
  "lifecycleStatus": "Active",
  "validFor": {
    "startDateTime": "2017-03-19T16:42:23-04:00",
    "endDateTime": "2017-06-19T00:00:00-04:00"
  },
  "category": [
    {
      "id": "21",
      "@type": "Category",
      "href": "http://serverlocation:port/catalogManagement/category/21",
      "name": "Electrical Services Job Plans"
    }
  ],
  "specification": {
    "id": "52",
    "@type": "FireProtectionSpecification",
    "href": "http://serverlocation:port/catalogManagement/entitySpecification/52",
    "name": "Fire Protection Electrical"
  }
}

```

PATCH ENTITY CATALOG ITEM

PATCH /entityCatalogItem/{id}

Note: this operation is available only to ADMIN API users

Description

This operation allows partial updates of an entity catalog item entity. Support of json/merge (<https://tools.ietf.org/html/rfc7386>) is mandatory, support of json/patch (<http://tools.ietf.org/html/rfc5789>) is optional.

Note: If the update operation yields to the creation of sub-resources or relationships, the same rules concerning mandatory sub-resource attributes and default value settings in the POST operation applies to the PATCH operation. Hence these tables are not repeated here.

Patchable and Non-Patchable Attributes

The tables below provide the list of non-patchable attributes. Notice that patching is possible only for 'admin' API users.

Non Patchable Attributes
id
href
@type
@baseType
specification

Usage Samples

Here's an example of a request for patching an EntityCatalogItem resource.

Request
PATCH /entityCatalogManagement/entityCatalogItem/712 Content-Type: application/merge-patch+json <pre>{ "description": "New description..." }</pre>
Response
201 <pre>{ "id": "712", "@type": "EntityCatalogItem", "href": "http://serverlocation:port/catalogManagement/entityCatalogItem/712", "name": "Fire Protection Electrical", "version": "1.0", "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/EntityCatalogItem.yml", "@baseType": "", "description": "New description...", "lastUpdate": "2017-03-29T16:42:23-04:00", "lifecycleStatus": "Active", "validFor": { "startDateTime": "2017-03-19T16:42:23-04:00", "endDateTime": "2017-06-19T00:00:00-04:00" }, "category": [{ "id": "21",</pre>

```

        "@type": "Category",
        "href": "http://serverlocation:port/catalogManagement/category/21",
        "name": "Electrical Services Job Plans"
    },
    "specification": {
        "id": "52",
        "@type": "FireProtectionSpecification",
        "href": "http://serverlocation:port/catalogManagement/entitySpecification/52",
        "name": "Fire Protection Electrical"
    }
}

```

DELETE ENTITY CATALOG ITEM

DELETE /entityCatalogItem/{id}

Note: this operation is available only to ADMIN API users

Description

This operation deletes an entity catalog item entity.

Usage Samples

Here's an example of a request for deleting an EntityCatalogItem resource.

Request
DELETE /entityCatalogManagement/entityCatalogItem/42
Response
204

OPERATIONS ON ENTITY SPECIFICATION

LIST ENTITY SPECIFICATIONS

GET /entitySpecification?fields=...&{filtering}

Description

This operation list entity specification entities.
 Attribute selection is enabled for all first level attributes.
 Filtering may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving EntitySpecification resources.

Request
GET /entityCatalogManagement/entitySpecification Accept: application/json
Response
<pre> 200 [{ "id": "52", "@type": "FireProtectionSpecification", "href": "http://serverlocation:port/catalogManagement/entitySpecification/52", "name": "Fire Protection Electrical", "version": "1.4", "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/FireProtectionSpecification.yml", "@baseType": "EntitySpecification", "entitySchema": { "@type": "FireProtectionEntity", "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/FireProtectionEntity.yml" }, "lastUpdate": "2017-03-19T16:42:23-04:00", "lifecycleStatus": "Active", "description": "Fire Protection Electrical Service.", "validFor": { "startDateTime": "2017-03-19T16:42:23-04:00", "endDateTime": "2017-06-19T00:00:00-04:00" }, "attachment": [{ "id": "56", "href": "http://serverlocation:port/documentManagment/attachment/56", </pre>

```

    "@type": "Document",
    "@baseType": "Attachment",
    "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/ Document.yml",
    "name": "Vendor Info",
    "mimeType": ".pdf",
    "description": "A pdf document describing vendor specific information",
    "validFor": {
      "startDateTime": "2017-03-19T16:42:23-04:00",
      "endDateTime": ""
    }
  },
  "relatedParty": [
    {
      "role": "Owner",
      "id": "1234",
      "type": "PartyRole",
      "href": "http://serverLocation:port/partyManagement/partyRole/1234"
    }
  ],
  "specCharacteristic": [
    {
      "name": "Agreement",
      "description": "Service Agreement",
      "valueType": "object",
      "@type": "Agreement",
      "@schemaLocation": "http://serverlocation:port/partyManagement/schema/Agreement",
      "configurable": true,
      "validFor": {
        "startDateTime": "2017-03-19T16:42:23-04:00",
        "endDateTime": ""
      },
      "specCharRelationship": [],
      "specCharacteristicValue": [
        {
          "valueType": "object",
          "isDefault": false,
          "value": {
            "@type": "ServiceAgreement",
            "@baseType": "Agreement"
          },
          "@schemaLocation": "http://serverlocation:port/partyManagement/schema/Agreement",
          "name": "Service Agreement",
          "date": "2017-03-19T16:42:23-04:00"
        },
        {
          "validFor": {
            "startDateTime": "2017-03-19T16:42:23-04:00",
            "endDateTime": ""
          }
        }
      ]
    }
  ],
  {
    "name": "Skill",
    "description": "Subcontractor Skill Code",
    "valueType": "string",
    "configurable": true,
    "validFor": {
      "startDateTime": "2017-03-19T16:42:23-04:00",
      "endDateTime": ""
    }
  }

```

```

    },
    "specCharRelationship": [],
    "specCharacteristicValue": [
      {
        "valueType": "string",
        "isDefault": true,
        "value": "ELE-LOWVOL",
        "unitOfMeasure": "",
        "valueFrom": "",
        "valueTo": "",
        "validFor": {
          "startDateTime": "2017-03-19T16:42:23-04:00",
          "endDateTime": ""
        }
      },
      {
        "valueType": "string",
        "isDefault": false,
        "value": "ELE-HIVOL",
        "unitOfMeasure": "",
        "valueFrom": "",
        "valueTo": "",
        "regex": "",
        "validFor": {
          "startDateTime": "2017-03-19T16:42:23-04:00",
          "endDateTime": ""
        }
      }
    ]
  },
  {
    "name": "Unit of Maintenance",
    "description": "Unit of Maintenance",
    "valueType": "string",
    "configurable": true,
    "validFor": {
      "startDateTime": "2017-03-19T16:42:23-04:00",
      "endDateTime": ""
    },
    "specCharRelationship": [],
    "specCharacteristicValue": [
      {
        "valueType": "string",
        "isDefault": true,
        "value": "Per KM",
        "unitOfMeasure": "",
        "valueFrom": "",
        "valueTo": "",
        "regex": "",
        "validFor": {
          "startDateTime": "2017-03-19T16:42:23-04:00",
          "endDateTime": ""
        }
      },
      {
        "valueType": "string",
        "isDefault": false,
        "value": "Per Day",
        "unitOfMeasure": "",

```

```

    "valueFrom": "",
    "valueTo": "",
    "regex": "",
    "validFor": {
      "startDateTime": "2017-03-19T16:42:23-04:00",
      "endDateTime": ""
    }
  },
  {
    "valueType": "string",
    "isDefault": false,
    "value": "Mon-Fri 07:00-19:00",
    "unitOfMeasure": "",
    "valueFrom": "",
    "valueTo": "",
    "regex": "",
    "validFor": {
      "startDateTime": "2017-03-19T16:42:23-04:00",
      "endDateTime": ""
    }
  }
]
},
"entitySpecRelationship": [
  {
    "role": "a_ReliesOn",
    "type": "ReliesOn",
    "associationSpec": {
      "id": "19",
      "href": "http://serverlocation:port/catalogManagement/associationSpecification/19",
      "@type": "AssociationSpecification"
    },
    "id": "27",
    "href": "http://serverlocation:port/catalogManagement/entitySpecification/27",
    "name": "Fire Protection Mechanical",
    "validFor": {
      "startDateTime": "2017-01-19T17:41:23-04:00",
      "endDateTime": "2018-01-19T00:00:00-04:00"
    }
  }
]
}
]

```

RETRIEVE ENTITY SPECIFICATION

GET /entitySpecification/{id}?fields=...&{filtering}

Description

This operation retrieves an entity specification entity.

Attribute selection is enabled for all first level attributes.

Filtering on sub-resources may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving an EntitySpecification resource.

Request
GET /entityCatalogManagement/entitySpecification/52 Accept: application/json
Response
<pre> 200 { "id": "52", "@type": "FireProtectionSpecification", "href": "http://serverlocation:port/catalogManagement/entitySpecification/52", "name": "Fire Protection Electrical", "version": "1.4", "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/FireProtectionSpecification.yml", "@baseType": "EntitySpecification", "entitySchema": { "@type": "FireProtectionEntity", "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/FireProtectionEntity.yml" }, "lastUpdate": "2017-03-19T16:42:23-04:00", "lifecycleStatus": "Active", "description": "Fire Protection Electrical Service.", "validFor": { "startDateTime": "2017-03-19T16:42:23-04:00", "endDateTime": "2017-06-19T00:00:00-04:00" }, "attachment": [{ "id": "56", "href": "http://serverlocation:port/documentManagement/attachment/56", "@type": "Document", "@baseType": "Attachment", "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/Document.yml", "name": "Vendor Info", "mimeType": ".pdf", "description": "A pdf document describing vendor specific information", "validFor": { "startDateTime": "2017-03-19T16:42:23-04:00", "endDateTime": "" } }], "relatedParty": [{ "role": "Owner", "id": "1234", "type": "PartyRole", }] } </pre>


```

    "href": "http://serverLocation:port/partyManagement/partyRole/1234"
  }
],
"specCharacteristic": [
  {
    "name": "Agreement",
    "description": "Service Agreement",
    "valueType": "object",
    "@type": "Agreement",
    "@schemaLocation": "http://serverlocation:port/partyManagement/schema/Agreement",
    "configurable": true,
    "validFor": {
      "startDateTime": "2017-03-19T16:42:23-04:00",
      "endDateTime": ""
    },
    "specCharRelationship": [],
    "specCharacteristicValue": [
      {
        "valueType": "object",
        "isDefault": false,
        "value": {
          "@type": "ServiceAgreement",
          "@baseType": "Agreement"
        },
        "@schemaLocation": "http://serverlocation:port/partyManagement/schema/Agreement",
        "name": "Service Agreement",
        "date": "2017-03-19T16:42:23-04:00"
      },
      {
        "validFor": {
          "startDateTime": "2017-03-19T16:42:23-04:00",
          "endDateTime": ""
        }
      }
    ]
  },
  {
    "name": "Skill",
    "description": "Subcontractor Skill Code",
    "valueType": "string",
    "configurable": true,
    "validFor": {
      "startDateTime": "2017-03-19T16:42:23-04:00",
      "endDateTime": ""
    },
    "specCharRelationship": [],
    "specCharacteristicValue": [
      {
        "valueType": "string",
        "isDefault": true,
        "value": "ELE-LOWVOL",
        "unitOfMeasure": "",
        "valueFrom": "",
        "valueTo": "",
        "validFor": {
          "startDateTime": "2017-03-19T16:42:23-04:00",
          "endDateTime": ""
        }
      }
    ],
    {
      "valueType": "string",

```

```

        "isDefault": false,
        "value": "ELE-HIVOL",
        "unitOfMeasure": "",
        "valueFrom": "",
        "valueTo": "",
        "validFor": {
            "startDateTime": "2017-03-19T16:42:23-04:00",
            "endDateTime": ""
        }
    }
]
},
{
    "name": "Unit of Maintenance",
    "description": "Unit of Maintenance",
    "valueType": "string",
    "configurable": true,
    "validFor": {
        "startDateTime": "2017-03-19T16:42:23-04:00",
        "endDateTime": ""
    },
    "specCharRelationship": [],
    "specCharacteristicValue": [
        {
            "valueType": "string",
            "isDefault": true,
            "value": "Per KM",
            "unitOfMeasure": "",
            "valueFrom": "",
            "valueTo": "",
            "regex": "",
            "validFor": {
                "startDateTime": "2017-03-19T16:42:23-04:00",
                "endDateTime": ""
            }
        },
        {
            "valueType": "string",
            "isDefault": false,
            "value": "Per Day",
            "unitOfMeasure": "",
            "valueFrom": "",
            "valueTo": "",
            "regex": "",
            "validFor": {
                "startDateTime": "2017-03-19T16:42:23-04:00",
                "endDateTime": ""
            }
        },
        {
            "valueType": "string",
            "isDefault": false,
            "value": "Mon-Fri 07:00-19:00",
            "unitOfMeasure": "",
            "valueFrom": "",
            "valueTo": "",
            "regex": "",
            "validFor": {
                "startDateTime": "2017-03-19T16:42:23-04:00",

```

```

    "endDateTime": ""
  }
}
],
"entitySpecRelationship": [
  {
    "role": "a_ReliesOn",
    "type": "ReliesOn",
    "associationSpec": {
      "id": "19",
      "href": "http://serverlocation:port/catalogManagement/associationSpecification/19",
      "@type": "AssociationSpecification"
    },
    "id": "27",
    "href": "http://serverlocation:port/catalogManagement/entitySpecification/27",
    "name": "Fire Protection Mechanical",
    "validFor": {
      "startDateTime": "2017-01-19T17:41:23-04:00",
      "endDateTime": "2018-01-19T00:00:00-04:00"
    }
  }
]
}
}

```

CREATE ENTITY SPECIFICATION

POST /entitySpecification

Note: this operation is available only to ADMIN API users

Description

This operation creates an entity specification entity.

Mandatory and Non Mandatory Attributes

Please refer to Entity Catalog CTK for details

Usage Samples

Here's an example of a request for creating an EntitySpecification resource.

Request
POST /entityCatalogManagement/entitySpecification Content-Type: application/json <pre> { "@type": "FireProtectionSpecification", "name": "Fire Protection Electrical", "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/FireProtectionSpecification.yml", </pre>

```

"@baseType": "EntitySpecification",
"entitySchema": {
  "@type": "FireProtectionEntity",
  "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/FireProtectionEntity.yml"
},
"lifecycleStatus": "Active",
"description": "Fire Protection Electrical Service.",
"validFor": {
  "startDateTime": "2017-03-19T16:42:23-04:00",
  "endDateTime": "2017-06-19T00:00:00-04:00"
},
"attachment": [
  {
    "id": "56",
    "href": "http://serverlocation:port/documentManagement/attachment/56",
    "@type": "Document",
    "@baseType": "Attachment",
    "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/Document.yml",
    "name": "Vendor Info",
    "mimeType": ".pdf",
    "description": "A pdf document describing vendor specific information",
    "validFor": {
      "startDateTime": "2017-03-19T16:42:23-04:00",
      "endDateTime": ""
    }
  }
],
"relatedParty": [
  {
    "role": "Owner",
    "id": "1234",
    "type": "PartyRole",
    "href": "http://serverLocation:port/partyManagement/partyRole/1234"
  }
],
"specCharacteristic": [
  {
    "name": "Agreement",
    "description": "Service Agreement",
    "valueType": "object",
    "@type": "Agreement",
    "@schemaLocation": "http://serverlocation:port/partyManagement/schema/Agreement",
    "configurable": true,
    "validFor": {
      "startDateTime": "2017-03-19T16:42:23-04:00",
      "endDateTime": ""
    },
    "specCharRelationship": [],
    "specCharacteristicValue": [
      {
        "valueType": "object",
        "isDefault": false,
        "value": {
          "@type": "ServiceAgreement",
          "@baseType": "Agreement"
        }
      }
    ],
    "@schemaLocation": "http://serverlocation:port/partyManagement/schema/Agreement",
    "name": "Service Agreement",
    "date": "2017-03-19T16:42:23-04:00"
  }
],

```

```

        "validFor": {
            "startDateTime": "2017-03-19T16:42:23-04:00",
            "endDateTime": ""
        }
    ]
},
{
    "name": "Skill",
    "description": "Subcontractor Skill Code",
    "valueType": "string",
    "configurable": true,
    "validFor": {
        "startDateTime": "2017-03-19T16:42:23-04:00",
        "endDateTime": ""
    },
    "specCharRelationship": [],
    "specCharacteristicValue": [
        {
            "valueType": "string",
            "isDefault": true,
            "value": "ELE-LOWVOL",
            "unitOfMeasure": "",
            "valueFrom": "",
            "valueTo": "",
            "regex": "",
            "validFor": {
                "startDateTime": "2017-03-19T16:42:23-04:00",
                "endDateTime": ""
            }
        },
        {
            "valueType": "string",
            "isDefault": false,
            "value": "ELE-HIVOL",
            "unitOfMeasure": "",
            "valueFrom": "",
            "valueTo": "",
            "regex": "",
            "validFor": {
                "startDateTime": "2017-03-19T16:42:23-04:00",
                "endDateTime": ""
            }
        }
    ]
},
{
    "name": "Unit of Maintenance",
    "description": "Unit of Maintenance",
    "valueType": "string",
    "configurable": true,
    "validFor": {
        "startDateTime": "2017-03-19T16:42:23-04:00",
        "endDateTime": ""
    },
    "specCharRelationship": [],
    "specCharacteristicValue": [
        {
            "valueType": "string",

```

```

        "isDefault": true,
        "value": "Per KM",
        "unitOfMeasure": "",
        "valueFrom": "",
        "valueTo": "",
        "regex": "",
        "validFor": {
            "startDateTime": "2017-03-19T16:42:23-04:00",
            "endDateTime": ""
        }
    },
    {
        "valueType": "string",
        "isDefault": false,
        "value": "Per Day",
        "unitOfMeasure": "",
        "valueFrom": "",
        "valueTo": "",
        "regex": "",
        "validFor": {
            "startDateTime": "2017-03-19T16:42:23-04:00",
            "endDateTime": ""
        }
    },
    {
        "valueType": "string",
        "isDefault": false,
        "value": "Mon-Fri 07:00-19:00",
        "unitOfMeasure": "",
        "valueFrom": "",
        "valueTo": "",
        "regex": "",
        "validFor": {
            "startDateTime": "2017-03-19T16:42:23-04:00",
            "endDateTime": ""
        }
    }
]
},
"entitySpecRelationship": [
    {
        "role": "a_ReliesOn",
        "type": "ReliesOn",
        "associationSpec": {
            "id": "19",
            "href": "http://serverlocation:port/catalogManagement/associationSpecification/19",
            "@type": "AssociationSpecification"
        },
        "id": "27",
        "href": "http://serverlocation:port/catalogManagement/entitySpecification/27",
        "name": "Fire Protection Mechanical",
        "validFor": {
            "startDateTime": "2017-01-19T17:41:23-04:00",
            "endDateTime": "2018-01-19T00:00:00-04:00"
        }
    }
]
]

```

}

Response

201

```

{
  "id": "52",
  "@type": "FireProtectionSpecification",
  "href": "http://serverlocation:port/catalogManagement/entitySpecification/52",
  "name": "Fire Protection Electrical",
  "version": "1.0",
  "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/FireProtectionSpecification.yml",
  "@baseType": "EntitySpecification",
  "entitySchema": {
    "@type": "FireProtectionEntity",
    "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/FireProtectionEntity.yml"
  },
  "lastUpdate": "2017-03-19T16:42:23-04:00",
  "lifecycleStatus": "Active",
  "description": "Fire Protection Electrical Service.",
  "validFor": {
    "startDateTime": "2017-03-19T16:42:23-04:00",
    "endDateTime": "2017-06-19T00:00:00-04:00"
  },
  "attachment": [
    {
      "id": "56",
      "href": "http://serverlocation:port/documentManagement/attachment/56",
      "@type": "Document",
      "@baseType": "Attachment",
      "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/Document.yml",
      "name": "Vendor Info",
      "mimeType": ".pdf",
      "description": "A pdf document describing vendor specific information",
      "validFor": {
        "startDateTime": "2017-03-19T16:42:23-04:00",
        "endDateTime": ""
      }
    }
  ],
  "relatedParty": [
    {
      "role": "Owner",
      "id": "1234",
      "type": "PartyRole",
      "href": "http://serverLocation:port/partyManagement/partyRole/1234"
    }
  ],
  "specCharacteristic": [
    {
      "name": "Agreement",
      "description": "Service Agreement",
      "valueType": "object",
      "@type": "Agreement",
      "@schemaLocation": "http://serverlocation:port/partyManagement/schema/Agreement",

```

```

    "configurable": true,
    "validFor": {
      "startDateTime": "2017-03-19T16:42:23-04:00",
      "endDateTime": ""
    },
    "specCharRelationship": [],
    "specCharacteristicValue": [
      {
        "valueType": "object",
        "isDefault": false,
        "value": {
          "@type": "ServiceAgreement",
          "@baseType": "Agreement"
        },
        "@schemaLocation": "http://serverlocation:port/partyManagement/schema/Agreement",
        "name": "Service Agreement",
        "date": "2017-03-19T16:42:23-04:00"
      },
      {
        "validFor": {
          "startDateTime": "2017-03-19T16:42:23-04:00",
          "endDateTime": ""
        }
      }
    ]
  },
  {
    "name": "Skill",
    "description": "Subcontractor Skill Code",
    "valueType": "string",
    "configurable": true,
    "validFor": {
      "startDateTime": "2017-03-19T16:42:23-04:00",
      "endDateTime": ""
    },
    "specCharRelationship": [],
    "specCharacteristicValue": [
      {
        "valueType": "string",
        "isDefault": true,
        "value": "ELE-LOWVOL",
        "unitOfMeasure": "",
        "valueFrom": "",
        "valueTo": "",
        "regex": "",
        "validFor": {
          "startDateTime": "2017-03-19T16:42:23-04:00",
          "endDateTime": ""
        }
      },
      {
        "valueType": "string",
        "isDefault": false,
        "value": "ELE-HIVOL",
        "unitOfMeasure": "",
        "valueFrom": "",
        "valueTo": "",
        "regex": "",
        "validFor": {
          "startDateTime": "2017-03-19T16:42:23-04:00",
          "endDateTime": ""
        }
      }
    ]
  }

```



```

    }
  ]
},
{
  "name": "Unit of Maintenance",
  "description": "Unit of Maintenance",
  "valueType": "string",
  "configurable": true,
  "validFor": {
    "startDateTime": "2017-03-19T16:42:23-04:00",
    "endDateTime": ""
  },
  "specCharRelationship": [],
  "specCharacteristicValue": [
    {
      "valueType": "string",
      "isDefault": true,
      "value": "Per KM",
      "unitOfMeasure": "",
      "valueFrom": "",
      "valueTo": "",
      "validFor": {
        "startDateTime": "2017-03-19T16:42:23-04:00",
        "endDateTime": ""
      }
    },
    {
      "valueType": "string",
      "isDefault": false,
      "value": "Per Day",
      "unitOfMeasure": "",
      "valueFrom": "",
      "valueTo": "",
      "regex": "",
      "validFor": {
        "startDateTime": "2017-03-19T16:42:23-04:00",
        "endDateTime": ""
      }
    },
    {
      "valueType": "string",
      "isDefault": false,
      "value": "Mon-Fri 07:00-19:00",
      "unitOfMeasure": "",
      "valueFrom": "",
      "valueTo": "",
      "regex": "",
      "validFor": {
        "startDateTime": "2017-03-19T16:42:23-04:00",
        "endDateTime": ""
      }
    }
  ]
},
{
  "entitySpecRelationship": [
    {
      "role": "a_ReliesOn",

```

```

    "type": "ReliesOn",
    "associationSpec": {
      "id": "19",
      "href": "http://serverlocation:port/catalogManagement/associationSpecification/19",
      "@type": "AssociationSpecification"
    },
    "id": "27",
    "href": "http://serverlocation:port/catalogManagement/entitySpecification/27",
    "name": "Fire Protection Mechanical",
    "validFor": {
      "startDateTime": "2017-01-19T17:41:23-04:00",
      "endDateTime": "2018-01-19T00:00:00-04:00"
    }
  }
}

```

PATCH ENTITY SPECIFICATION

PATCH /entitySpecification/{id}

Note: this operation is available only to ADMIN API users

Description

This operation allows partial updates of an entity specification entity. Support of json/merge (<https://tools.ietf.org/html/rfc7386>) is mandatory, support of json/patch (<http://tools.ietf.org/html/rfc5789>) is optional.

Note: If the update operation yields to the creation of sub-resources or relationships, the same rules concerning mandatory sub-resource attributes and default value settings in the POST operation applies to the PATCH operation. Hence these tables are not repeated here.

Patchable and Non-Patchable Attributes

The tables below provide the list of non-patchable attributes. Notice that patching is possible only for 'admin' API users.

Non Patchable Attributes
id
href
@type
@baseType

Usage Samples

Here's an example of a request for patching an EntitySpecification resource.

Request

PATCH /entityCatalogManagement/entitySpecification/52
 Content-Type: application/merge-patch+json

```
{
  "description": "new description...."
}
```

Response

201

```
{
  "id": "52",
  "@type": "FireProtectionSpecification",
  "href": "http://serverlocation:port/catalogManagement/entitySpecification/52",
  "name": "Fire Protection Electrical",
  "version": "1.1",
  "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/FireProtectionSpecification.yml",
  "@baseType": "EntitySpecification",
  "entitySchema": {
    "@type": "FireProtectionEntity",
    "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/FireProtectionEntity.yml"
  },
  "lastUpdate": "2017-03-29T16:42:23-04:00",
  "lifecycleStatus": "Active",
  "description": "new description....",
  "validFor": {
    "startDateTime": "2017-03-19T16:42:23-04:00",
    "endDateTime": "2017-06-19T00:00:00-04:00"
  },
  "attachment": [
    {
      "id": "56",
      "href": "http://serverlocation:port/documentManagement/attachment/56",
      "@type": "Document",
      "@baseType": "Attachment",
      "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/Document.yml",
      "name": "Vendor Info",
      "mimeType": ".pdf",
      "description": "A pdf document describing vendor specific information",
      "validFor": {
        "startDateTime": "2017-03-19T16:42:23-04:00",
        "endDateTime": ""
      }
    }
  ],
  "relatedParty": [
    {
      "role": "Owner",
      "id": "1234",
      "type": "PartyRole",
      "href": "http://serverLocation:port/partyManagement/partyRole/1234"
    }
  ],
  "specCharacteristic": [
    {
      "name": "Agreement",

```

```

    "description": "Service Agreement",
    "valueType": "object",
    "@type": "Agreement",
    "@schemaLocation": "http://serverlocation:port/partyManagement/schema/Agreement",
    "configurable": true,
    "validFor": {
      "startDateTime": "2017-03-19T16:42:23-04:00",
      "endDateTime": ""
    },
    "specCharRelationship": [],
    "specCharacteristicValue": [
      {
        "valueType": "object",
        "isDefault": false,
        "value": {
          "@type": "ServiceAgreement",
          "@baseType": "Agreement"
        },
        "@schemaLocation": "http://serverlocation:port/partyManagement/schema/Agreement",
        "name": "Service Agreement",
        "date": "2017-03-19T16:42:23-04:00"
      },
      {
        "validFor": {
          "startDateTime": "2017-03-19T16:42:23-04:00",
          "endDateTime": ""
        }
      }
    ]
  },
  {
    "name": "Skill",
    "description": "Subcontractor Skill Code",
    "valueType": "string",
    "configurable": true,
    "validFor": {
      "startDateTime": "2017-03-19T16:42:23-04:00",
      "endDateTime": ""
    },
    "specCharRelationship": [],
    "specCharacteristicValue": [
      {
        "valueType": "string",
        "isDefault": true,
        "value": "ELE-LOWVOL",
        "unitOfMeasure": "",
        "valueFrom": "",
        "valueTo": "",
        "regex": "",
        "validFor": {
          "startDateTime": "2017-03-19T16:42:23-04:00",
          "endDateTime": ""
        }
      },
      {
        "valueType": "string",
        "isDefault": false,
        "value": "ELE-HIVOL",
        "unitOfMeasure": "",
        "valueFrom": "",
        "valueTo": ""
      }
    ]
  }
}

```

```

        "regex": "",
        "validFor": {
            "startDateTime": "2017-03-19T16:42:23-04:00",
            "endDateTime": ""
        }
    ]
},
{
    "name": "Unit of Maintenance",
    "description": "Unit of Maintenance",
    "valueType": "string",
    "configurable": true,
    "validFor": {
        "startDateTime": "2017-03-19T16:42:23-04:00",
        "endDateTime": ""
    },
    "specCharRelationship": [],
    "specCharacteristicValue": [
        {
            "valueType": "string",
            "isDefault": true,
            "value": "Per KM",
            "unitOfMeasure": "",
            "valueFrom": "",
            "valueTo": "",
            "regex": "",
            "validFor": {
                "startDateTime": "2017-03-19T16:42:23-04:00",
                "endDateTime": ""
            }
        },
        {
            "valueType": "string",
            "isDefault": false,
            "value": "Per Day",
            "unitOfMeasure": "",
            "valueFrom": "",
            "valueTo": "",
            "regex": "",
            "validFor": {
                "startDateTime": "2017-03-19T16:42:23-04:00",
                "endDateTime": ""
            }
        },
        {
            "valueType": "string",
            "isDefault": false,
            "value": "Mon-Fri 07:00-19:00",
            "unitOfMeasure": "",
            "valueFrom": "",
            "valueTo": "",
            "validFor": {
                "startDateTime": "2017-03-19T16:42:23-04:00",
                "endDateTime": ""
            }
        }
    ]
}
]

```

```

    ],
    "entitySpecRelationship": [
      {
        "role": "a_ReliesOn",
        "type": "ReliesOn",
        "associationSpec": {
          "id": "19",
          "href": "http://serverlocation:port/catalogManagement/associationSpecification/19",
          "@type": "AssociationSpecification"
        },
        "id": "27",
        "href": "http://serverlocation:port/catalogManagement/entitySpecification/27",
        "name": "Fire Protection Mechanical",
        "validFor": {
          "startDateTime": "2017-01-19T17:41:23-04:00",
          "endDateTime": "2018-01-19T00:00:00-04:00"
        }
      }
    ]
  ]
}

```

DELETE ENTITY SPECIFICATION

DELETE /entitySpecification/{id}

Note: this operation is available only to ADMIN API users

Description

This operation deletes an entity specification entity.

Usage Samples

Here's an example of a request for deleting an EntitySpecification resource.

Request
DELETE /entityCatalogManagement/entitySpecification/42
Response
204

OPERATIONS ON ASSOCIATION SPECIFICATION

LIST ASSOCIATION SPECIFICATIONS

GET /associationSpecification?fields=...&{filtering}

Description

This operation list association specification entities.

Attribute selection is enabled for all first level attributes.

Filtering may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving AssociationSpecification resources.

Request
GET /entityCatalogManagement/associationSpecification Accept: application/json
Response
<pre> 200 [{ "id": "19", "@type": "AssociationSpecification", "href": "http://serverlocation:port/catalogManagement/associationSpecification/19", "name": "ReliesOn", "version": "1.0", "@baseType": "", "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/AssociationSpecification.json", "lastUpdate": "2017-01-19T17:41:23-04:00", "lifecycleStatus": "Active", "description": "An uni-directional association from EntitySpecification A to EntitySpecification B indicating an instance of A relies on an instance of B.", "validFor": { "startDateTime": "2017-01-19T17:41:23-04:00", "endDateTime": "2018-01-19T00:00:00-04:00" }, "constraint": [{ "@type": "EligibilityConstraint", "name": "Eligibility Constraint", "id": "23", "href": "http://serverlocation:port/catalogManagement/constraint/23" }] },], </pre>

```

    "associationRoleSpec": [
      {
        "role": "a_ReliesOn",
        "isSource": true,
        "aggregation": "None",
        "minQuantity": 1,
        "maxQuantity": 1,
        "defaultQuantity": 1,
        "isNavigable": true,
        "entityType": "ElecFireProtectionSpec"
      },
      {
        "role": "z_ReliesOn",
        "isSource": false,
        "aggregation": "None",
        "minQuantity": 0,
        "maxQuantity": 1,
        "defaultQuantity": 1,
        "isNavigable": false,
        "entityType": "MechFireProtectionSpec"
      }
    ]
  }
]

```

RETRIEVE ASSOCIATION SPECIFICATION

GET /associationSpecification/{id}?fields=...&{filtering}

Description

This operation retrieves an association specification entity.

Attribute selection is enabled for all first level attributes.

Filtering on sub-resources may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving an AssociationSpecification resource.

Request
GET /entityCatalogManagement/associationSpecification/19 Accept: application/json
Response
200


```

{
  "id": "19",
  "@type": "AssociationSpecification",
  "href": "http://serverlocation:port/catalogManagement/associationSpecification/19",
  "name": "ReliesOn",
  "version": "1.0",
  "@baseType": "",
  "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/AssociationSpecification.json",
  "lastUpdate": "2017-01-19T17:41:23-04:00",
  "lifecycleStatus": "Active",
  "description": "An uni-directional association from EntitySpecification A to EntitySpecification B indicating an
instance of A relies on an instance of B.",
  "validFor": {
    "startDateTime": "2017-01-19T17:41:23-04:00",
    "endDateTime": "2018-01-19T00:00:00-04:00"
  },
  "constraint": [
    {
      "@type": "EligibilityConstraint",
      "name": "Eligibility Constraint",
      "id": "23",
      "href": "http://serverlocation:port/catalogManagement/constraint/23"
    }
  ],
  "associationRoleSpec": [
    {
      "role": "a_ReliesOn",
      "isSource": true,
      "aggregation": "None",
      "minQuantity": 1,
      "maxQuantity": 1,
      "defaultQuantity": 1,
      "isNavigable": true,
      "entityType": "ElecFireProtectionSpec"
    },
    {
      "role": "z_ReliesOn",
      "isSource": false,
      "aggregation": "None",
      "minQuantity": 0,
      "maxQuantity": 1,
      "defaultQuantity": 1,
      "isNavigable": false,
      "entityType": "MechFireProtectionSpec"
    }
  ]
}

```

CREATE ASSOCIATION SPECIFICATION

POST /associationSpecification

Note: this operation is available only to ADMIN API users

Description

This operation creates an association specification entity.

Mandatory and Non Mandatory Attributes

Please refer to Entity Catalog CTK for details

Usage Samples

Here's an example of a request for creating an AssociationSpecification resource.

Request

POST /entityCatalogManagement/associationSpecification

Content-Type: application/json

```
{
  "name": "ReliesOn",
  "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/AssociationSpecification.json",
  "lifecycleStatus": "Active",
  "description": "An uni-directional association from EntitySpecification A to EntitySpecification B indicating an
instance of A relies on an instace of B.",
  "validFor": {
    "startDateTime": "2017-01-19T17:41:23-04:00",
    "endDateTime": "2018-01-19T00:00:00-04:00"
  },
  "constraint": [
    {
      "@type": "EligibilityConstraint",
      "name": "Eligibility Constraint",
      "id": "23",
      "href": "http://serverlocation:port/catalogManagement/constraint/23"
    }
  ],
  "associationRoleSpec": [
    {
      "role": "a_ReliesOn",
      "isSource": true,
      "aggregation": "None",
      "minQuantity": 1,
      "maxQuantity": 1,
      "defaultQuantity": 1,
      "isNavigable": true,
      "entityType": "ElecFireProtectionSpec"
    },
    {
      "role": "z_ReliesOn",
      "isSource": false,
      "aggregation": "None",
      "minQuantity": 0,
      "maxQuantity": 1,
      "defaultQuantity": 1,
      "isNavigable": false,
      "entityType": "MechFireProtectionSpec"
    }
  ]
}
```

Response

201

```

{
  "id": "19",
  "@type": "AssociationSpecification",
  "href": "http://serverlocation:port/catalogManagement/associationSpecification/19",
  "name": "ReliesOn",
  "version": "1.0",
  "@baseType": "",
  "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/AssociationSpecification.json",
  "lastUpdate": "2017-01-19T17:41:23-04:00",
  "lifecycleStatus": "Active",
  "description": "An uni-directional association from EntitySpecification A to EntitySpecification B indicating an
instance of A relies on an instance of B.",
  "validFor": {
    "startDateTime": "2017-01-19T17:41:23-04:00",
    "endDateTime": "2018-01-19T00:00:00-04:00"
  },
  "constraint": [
    {
      "@type": "EligibilityConstraint",
      "name": "Eligibility Constraint",
      "id": "23",
      "href": "http://serverlocation:port/catalogManagement/constraint/23"
    }
  ],
  "associationRoleSpec": [
    {
      "role": "a_ReliesOn",
      "isSource": true,
      "aggregation": "None",
      "minQuantity": 1,
      "maxQuantity": 1,
      "defaultQuantity": 1,
      "isNavigable": true,
      "entityType": "ElecFireProtectionSpec"
    },
    {
      "role": "z_ReliesOn",
      "isSource": false,
      "aggregation": "None",
      "minQuantity": 0,
      "maxQuantity": 1,
      "defaultQuantity": 1,
      "isNavigable": false,
      "entityType": "MechFireProtectionSpec"
    }
  ]
}

```

PATCH ASSOCIATION SPECIFICATION**PATCH /associationSpecification/{id}***Note: this operation is available only to ADMIN API users*

Description

This operation allows partial updates of an association specification entity. Support of json/merge (<https://tools.ietf.org/html/rfc7386>) is mandatory, support of json/patch (<http://tools.ietf.org/html/rfc5789>) is optional.

Note: If the update operation yields to the creation of sub-resources or relationships, the same rules concerning mandatory sub-resource attributes and default value settings in the POST operation applies to the PATCH operation. Hence these tables are not repeated here.

Patchable and Non-Patchable Attributes

The tables below provide the list of non-patchable attributes. Notice that patching is possible only for 'admin' API users.

Non Patchable Attributes
id
href
@type
@baseType

Usage Samples

Here's an example of a request for patching an AssociationSpecification resource.

Request
PATCH /entityCatalogManagement/associationSpecification/19 Content-Type: application/merge-patch+json <pre>{ "description": "new description...." }</pre>
Response
201 <pre>{ "id": "19", "@type": "AssociationSpecification", "href": "http://serverlocation:port/catalogManagement/associationSpecification/19", "name": "ReliesOn", "version": "1.1", "@baseType": "", "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/AssociationSpecification.json", "lastUpdate": "2017-01-29T17:41:23-04:00", "lifecycleStatus": "Active", "description": "new description....", "validFor": { "startDateTime": "2017-01-29T17:41:23-04:00",</pre>

```

    "endTime": "2018-01-19T00:00:00-04:00"
  },
  "constraint": [
    {
      "@type": "EligibilityConstraint",
      "name": "Eligibility Constraint",
      "id": "23",
      "href": "http://serverlocation:port/catalogManagement/constraint/23"
    }
  ],
  "associationRoleSpec": [
    {
      "role": "a_ReliesOn",
      "isSource": true,
      "aggregation": "None",
      "minQuantity": 1,
      "maxQuantity": 1,
      "defaultQuantity": 1,
      "isNavigable": true,
      "entityType": "ElecFireProtectionSpec"
    },
    {
      "role": "z_ReliesOn",
      "isSource": false,
      "aggregation": "None",
      "minQuantity": 0,
      "maxQuantity": 1,
      "defaultQuantity": 1,
      "isNavigable": false,
      "entityType": "MechFireProtectionSpec"
    }
  ]
}

```

DELETE ASSOCIATION SPECIFICATION

DELETE /associationSpecification/{id}

Note: this operation is available only to ADMIN API users

Description

This operation deletes an association specification entity.

Usage Samples

Here's an example of a request for deleting an AssociationSpecification resource.

Request
DELETE /entityCatalogManagement/associationSpecification/42

Response

204

OPERATIONS ON ASSOCIATION

LIST ASSOCIATIONS

GET /association?fields=...&{filtering}

Description

This operation list association entities.

Attribute selection is enabled for all first level attributes.

Filtering may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving Association resources.

Request
GET /entityCatalogManagement/association Accept: application/json
Response
<pre> 200 [{ "id": "91", "@type": "Association", "href": "http://serverlocation:port/catalogManagement/Association/91", "name": "ReliesOn", "version": "1.0", "@baseType": "", "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/Association.json", "lastUpdate": "2017-01-19T17:41:23-04:00", "lifecycleStatus": "Active", "description": "A ReliesOn association from Electrical Fire Protection Specification to Mechanical Fire Protection Specification", "associationSpec": { "id": "19", "@type": "AssociationSpecification", "href": "http://serverlocation:port/catalogManagement/associationSpecification/19" }, "constraint": [{ "@type": "EligibilityConstraint", "name": "Eligibility Constraint", "id": "23", "href": "http://serverlocation:port/catalogManagement/constraint/23" }] }] </pre>

```

        "@type": "AvailabilityConstraint",
        "name": "Availability Constraint ",
        "id": "27",
        "href": "http://serverlocation:port/catalogManagement/constraint/27",
      },
    ],
    "validFor": {
      "startDateTime": "2017-01-19T17:41:23-04:00",
      "endDateTime": ""
    },
  },
  "associationRole": [
    {
      "role": "a_ReliesOn",
      "isSource": true,
      "id": "52",
      "@type": "FireProtectionSpecification",
      "href": "http://serverlocation:port/catalogManagement/entitySpecification/52",
      "name": "Fire Protection Electrical"
    },
    {
      "role": "z_ReliesOn",
      "isSource": false,
      "id": "27",
      "@type": "FireProtectionSpecification",
      "href": "http://serverlocation:port/catalogManagement/entitySpecification/27",
      "name": "Fire Protection Mechanical"
    }
  ]
}
]

```

RETRIEVE ASSOCIATION

GET /association/{id}?fields=...&{filtering}

Description

This operation retrieves an association entity.

Attribute selection is enabled for all first level attributes.

Filtering on sub-resources may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving an Association resource.

Request

```

GET /entityCatalogManagement/association/91
Accept: application/json

```


Response

200

```

{
  "id": "91",
  "@type": "Association",
  "href": "http://serverlocation:port/catalogManagement/Association/91",
  "name": "ReliesOn",
  "version": "1.0",
  "@baseType": "",
  "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/Association.json",
  "lastUpdate": "2017-01-19T17:41:23-04:00",
  "lifecycleStatus": "Active",
  "description": "A ReliesOn association from Electrical Fire Protection Specification to Mechanical Fire Protection Specification",
  "associationSpec": {
    "id": "19",
    "@type": "AssociationSpecification",
    "href": "http://serverlocation:port/catalogManagement/associationSpecification/19"
  },
  "constraint": [
    {
      "@type": "EligibilityConstraint",
      "name": "Eligibility Constraint",
      "id": "23",
      "href": "http://serverlocation:port/catalogManagement/constraint/23"
    },
    {
      "@type": "AvailabilityConstraint",
      "name": "Availability Constraint ",
      "id": "27",
      "href": "http://serverlocation:port/catalogManagement/constraint/27",
    }
  ],
  "validFor": {
    "startDateTime": "2017-01-19T17:41:23-04:00",
    "endDateTime": ""
  },
  "associationRole": [
    {
      "role": "a_ReliesOn",
      "isSource": true,
      "id": "52",
      "@type": "FireProtectionSpecfication",
      "href": "http://serverlocation:port/catalogManagement/entitySpecification/52",
      "name": "Fire Protection Electrical"
    },
    {
      "role": "z_ReliesOn",
      "isSource": false,
      "id": "27",
      "@type": "FireProtectionSpecification",
      "href": "http://serverlocation:port/catalogManagement/entitySpecification/27",
      "name": "Fire Protection Mechanical"
    }
  ]
}

```

```

    }
  ]
}

```

CREATE ASSOCIATION

POST /association

Note: this operation is available only to ADMIN API users

Description

This operation creates an association entity.

Mandatory and Non Mandatory Attributes

Please refer to Entity Catalog CTK for details

Usage Samples

Here's an example of a request for creating an Association resource.

Request
POST /entityCatalogManagement/association Content-Type: application/json <pre> { "name": "ReliesOn", "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/Association.json", "lifecycleStatus": "Active", "description": "A ReliesOn association from Electrical Fire Protection Specification to Mechanical Fire Protection Specification", "associationSpec": { "id": "19", "@type": "AssociationSpecification", "href": "http://serverlocation:port/catalogManagement/associationSpecification/19" }, "constraint": [{ "@type": "EligibilityConstraint", "name": "Eligibility Constraint", "id": "23", "href": "http://serverlocation:port/catalogManagement/constraint/23" }, { "@type": "AvailabilityConstraint", "name": "Availability Constraint", "id": "27", "href": "http://serverlocation:port/catalogManagement/constraint/27", }], "validFor": { "startDateTime": "2017-01-19T17:41:23-04:00", "endDateTime": "" } }, </pre>

```

"associationRole": [
  {
    "role": "a_ReliesOn",
    "isSource": true,
    "id": "52",
    "@type": "FireProtectionSpecification",
    "href": "http://serverlocation:port/catalogManagement/entitySpecification/52",
    "name": "Fire Protection Electrical"
  },
  {
    "role": "z_ReliesOn",
    "isSource": false,
    "id": "27",
    "@type": "FireProtectionSpecification",
    "href": "http://serverlocation:port/catalogManagement/entitySpecification/27",
    "name": "Fire Protection Mechanical"
  }
]
}

```

Response

```

201
{
  "id": "91",
  "@type": "Association",
  "href": "http://serverlocation:port/catalogManagement/Association/91",
  "name": "ReliesOn",
  "version": "1.0",
  "@baseType": "",
  "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/Association.json",
  "lastUpdate": "2017-01-19T17:41:23-04:00",
  "lifecycleStatus": "Active",
  "description": "A ReliesOn association from Electrical Fire Protection Specification to Mechanical Fire Protection Specification",
  "associationSpec": {
    "id": "19",
    "@type": "AssociationSpecification",
    "href": "http://serverlocation:port/catalogManagement/associationSpecification/19"
  },
  "constraint": [
    {
      "@type": "EligibilityConstraint",
      "name": "Eligibility Constraint",
      "id": "23",
      "href": "http://serverlocation:port/catalogManagement/constraint/23"
    },
    {
      "@type": "AvailabilityConstraint",
      "name": "Availability Constraint",
      "id": "27",
      "href": "http://serverlocation:port/catalogManagement/constraint/27",
    }
  ],
  "validFor": {
    "startDateTime": "2017-01-19T17:41:23-04:00",

```

```

    "endDateTime": ""
  },
  "associationRole": [
    {
      "role": "a_ReliesOn",
      "isSource": true,
      "id": "52",
      "@type": "FireProtectionSpecification",
      "href": "http://serverlocation:port/catalogManagement/entitySpecification/52",
      "name": "Fire Protection Electrical"
    },
    {
      "role": "z_ReliesOn",
      "isSource": false,
      "id": "27",
      "@type": "FireProtectionSpecification",
      "href": "http://serverlocation:port/catalogManagement/entitySpecification/27",
      "name": "Fire Protection Mechanical"
    }
  ]
}

```

PATCH ASSOCIATION

PATCH /association/{id}

Note: this operation is available only to ADMIN API users

Description

This operation allows partial updates of an association entity. Support of json/merge (<https://tools.ietf.org/html/rfc7386>) is mandatory, support of json/patch (<http://tools.ietf.org/html/rfc5789>) is optional.

Note: If the update operation yields to the creation of sub-resources or relationships, the same rules concerning mandatory sub-resource attributes and default value settings in the POST operation applies to the PATCH operation. Hence these tables are not repeated here.

Patchable and Non-Patchable Attributes

The tables below provide the list of non-patchable attributes. Notice that patching is possible only for 'admin' API users.

Non Patchable Attributes
id
href
@type
associationSpec

Usage Samples

Here's an example of a request for patching an Association resource.

Request

PATCH /entityCatalogManagement/association/91
 Content-Type: application/merge-patch+json

```
{
  "description": "new description..."
}
```

Response

201

```
{
  "id": "91",
  "@type": "Association",
  "href": "http://serverlocation:port/catalogManagement/Association/91",
  "name": "ReliesOn",
  "version": "1.1",
  "@baseType": "",
  "@schemaLocation": "http://serverlocation:port/catalogManagement/schema/Association.json",
  "lastUpdate": "2017-01-29T17:41:23-04:00",
  "lifecycleStatus": "Active",
  "description": "new description...",
  "associationSpec": {
    "id": "19",
    "@type": "AssociationSpecification",
    "href": "http://serverlocation:port/catalogManagement/associationSpecification/19"
  },
  "constraint": [
    {
      "@type": "EligibilityConstraint",
      "name": "Eligibility Constraint",
      "id": "23",
      "href": "http://serverlocation:port/catalogManagement/constraint/23"
    },
    {
      "@type": "AvailabilityConstraint",
      "name": "Availability Constraint",
      "id": "27",
      "href": "http://serverlocation:port/catalogManagement/constraint/27",
    }
  ],
  "validFor": {
    "startDateTime": "2017-01-29T17:41:23-04:00",
    "endDateTime": ""
  },
  "associationRole": [
    {
      "role": "a_ReliesOn",
      "isSource": true,
      "id": "52",
      "@type": "FireProtectionSpecification",
      "href": "http://serverlocation:port/catalogManagement/entitySpecification/52",
      "name": "Fire Protection Electrical"
    }
  ]
}
```

```

    },
    {
      "role": "z_ReliesOn",
      "isSource": false,
      "id": "27",
      "@type": "FireProtectionSpecification",
      "href": "http://serverlocation:port/catalogManagement/entitySpecification/27",
      "name": "Fire Protection Mechanical"
    }
  ]
}

```

DELETE ASSOCIATION

DELETE /association/{id}

Note: this operation is available only to ADMIN API users

Description

This operation deletes an association entity.

Usage Samples

Here's an example of a request for deleting an Association resource.

Request
DELETE /entityCatalogManagement/association/42
Response
204

API NOTIFICATIONS

For every single of operation on the entities use the following templates and provide sample REST notification POST calls.

It is assumed that the Pub/Sub uses the Register and UnRegister mechanisms described in the REST Guidelines reproduced below.

REGISTER LISTENER

POST /hub

Description

Sets the communication endpoint address the service instance must use to deliver information about its health state, execution state, failures and metrics. Subsequent POST calls will be rejected by the service if it does not support multiple listeners. In this case DELETE /api/hub/{id} must be called before an endpoint can be created again.

Behavior

Returns HTTP/1.1 status code 204 if the request was successful.

Returns HTTP/1.1 status code 409 if request is not successful.

Usage Samples

Here's an example of a request for registering a listener.

Request
POST /api/hub Accept: application/json {"callback": "http://in.listener.com"}
Response
201 Content-Type: application/json Location: /api/hub/42 {"id": "42", "callback": "http://in.listener.com", "query": null}

UNREGISTER LISTENER

DELETE /hub/{id}

Description

Clears the communication endpoint address that was set by creating the Hub..

Behavior

Returns HTTP/1.1 status code 204 if the request was successful.

Returns HTTP/1.1 status code 404 if the resource is not found.

Usage Samples

Here's an example of a request for un-registering a listener.

Request
DELETE /api/hub/42 Accept: application/json
Response
204

PUBLISH EVENT TO LISTENER

POST /client/listener

Description

Clears the communication endpoint address that was set by creating the Hub.

Provides to a registered listener the description of the event that was raised. The /client/listener url is the callback url passed when registering the listener.

Behavior

Returns HTTP/1.1 status code 201 if the service is able to set the configuration.

Usage Samples

Here's an example of a notification received by the listener. In this example "EVENT TYPE" should be replaced by one of the notification types supported by this API (see Notification resources Models section) and EVENT BODY refers to the data structure of the given notification type.

Request
POST /client/listener Accept: application/json


```
{  
  "event": {  
    EVENT BODY  
  },  
  "eventType": "EVENT_TYPE"  
}
```

Response

201

For detailed examples on the general TM Forum notification mechanism, see the TMF REST Design Guidelines.

API DATA MODEL TO SID MAPPING

The following table shows the API entity mapping from REST API resource model to SID model:

Entity Mapping				
Entity	Mapping Pattern	SID Entities	Comment	Recommended Action
(Entity)Catalog	Flattening inheritance hierarchy (polymorphism)	EntityCatalog	EntityCatalog is a catalog resource with type "EntityCatalog"	
Category	rename	EntitySpecificationType		
EntityCatalogItem	same	EntityCatalogItem		
EntitySpecification	same	EntitySpecification		
AssociationSpecification	same	AssociationSpecification		TBD in SID 17.0
EntitySpecRelationship		Association		TBD in SID 17.0

Attribute Mapping:

The following tables show the attribute mapping for each entity as listed in above table.

Attribute Mapping				
EntityCatalog	SID Entities	Comment	Recommended Action	
id	EntityCatalog:ID			
href		API specific		
@type	EntityCatalog	Class type of Entity Catalog		
@baseType	Base class	Base class type of Entity catalog		
@schemaLocation		API specific		
name	EntityCatalog:name			
version	EntityCatalog:version			
lastUpdate		API specific		
lifecycleStatus	EntityCatalog:lifecycleStatus			
validFor	EntityCatalog:validFor			
relatedParty	EntityCatalog:partyRole			
	role	PartyRole:name		
	id	PartyRole:partyRoleId or Party:partyId		
	href	API specific		

Attribute Mapping			
EntityCatalog	SID Entities	Comment	Recommended Action
	name	PartyRole:name	
	validFor	PartyRole:validFor or Party:validFor	
	type		API specific
category	EntitySpecificationType		
	id		EntitySpecificationType:ID TBD in SID
	href		API specific
	name	EntitySpecificationType:name	
	version		TBD in SID

Attribute Mapping			
Category	SID Entities	Comment	Recommended Action
id		EntitySpecificationType:ID	TBD in SID
href		API specific	
@type		API specific	
@baseType		API specific	
@schemaLocation		API specific	
version			TBD in SID
lastUpdate		API specific	
name	EntitySpecificationType: name		
description	EntitySpecificationType: description		
lifecycleStatus		EntitySpecificationType: lifecycleStatus	TBD in SID
validFor		EntitySpecificationType: validFor	TBD in SID
parentId		Can be addressed thru EntitySpecificationTypeRelationship	
isRoot		Can be addressed thru EntitySpecificationTypeRelationship	

Attribute Mapping			
EntityCatalogItem	SID Entities	Comment	Recommended Action
id		EntityCatalogItem: ID	TBD in SID
href		API specific	
@type		API specific – JSON-LD	
@baseType		API specific– JSON-LD	
@schemaLocation		API specific– JSON-LD	
name		EntityCatalogItem: name	TBD in SID
description		EntityCatalogItem: description	TBD in SID
version		EntityCatalogItem: version	TBD in SID
lastUpdate		API specific	
lifecycleStatus		EntityCatalogItem: lifecycleStatus	TBD in SID
validFor		EntityCatalogItem: validFor	TBD in SID
category	EntitySpecificationType		
	id		
	href	API specific	
	name		
	version		
specification	EntitySpecification		
	id		
	href	API specific	
	name		
	version		
	@type	API specific	

Attribute Mapping			
EntitySpecification	SID Entities	Comment	Recommended Action
id	EntitySpecification:ID		
href		API specific	
@type	EntitySpecification:type		
@baseType	EntitySpecification:type	The parent class type of the EntitySpecification	
@schemaLocation		TBD	
name	EntitySpecification:name		
description	EntitySpecification:description		
lastUpdate		API specific	

Attribute Mapping			
EntitySpecification	SID Entities	Comment	Recommended Action
lifecycleStatus	EntitySpecification:		TBD in SID
validFor	EntitySpecification:		
version	EntitySpecification:		
entitySchema		TBD	
@type			
@schemaLocation		API specific	
attachment	EntitySpecificationAttachment		
id		EntitySpecificationAttachment:ID	
href		API specific	
name	EntitySpecificationAttachment: name		
description	EntitySpecificationAttachment: description		
validFor	EntitySpecificationAttachment: validFor		
contentType		EntitySpecificationAttachment:mimeType	TBD in SID
@type		API specific	
@baseType		API specific	
@schemaLocation		API specific	
relatedParty		Not in the SID	TBD in SID
role			
id			
href			
name			
validFor			
type			
specCharacteristic	CharacteristicsSpecification	Collapsing EntitySpecification: entitySpec CarUse to CharacteristicsSpecification	
entitySpecRelationship		TBD in SID	
role	AssociationRoleSpec:roleName		
type		API specific (class type of the association)	
associationSpec			
id	AssociationSpecification:ID		
href			
name			
id	RootEntity:ID		

Attribute Mapping			
EntitySpecification	SID Entities	Comment	Recommended Action
href		API specific	
name	RootEntity: name		

Attribute Mapping			
AssociationSpecification	SID Entities	Comment	Recommended Action
id	AssociationSpecification:ID		
href		API specific	
@type		API specific- resource class type	
@baseType		API specific	
@schemaLocation		API specific	
name	AssociationSpecification:name		
description	AssociationSpecification:description		
lastUpdate		API specific	
lifecycleStatus			TBD in SID
validFor	AssociationSpecification: validFor		
version	AssociationSpecification: version		TBD in SID
associationRoleSpec	AssociationRoleSpecification		
role	roleName		
isSource		API specific: map to navigable	
aggregation	aggregation		
minQuantity		Map to multiplicity	
maxQuantity		Map to multiplicity	
defaultQuantity		API specific	
isNavigable	navigable		
entityType	RootEntityType		
constraint		Relationship to constraint needs to be added in SID	TBD in SID
id			TBD in SID
href		API specific	
@type		API specific	
name			TBD in SID

Attribute Mapping			
EntitySpecRelationship	SID Entities	Comment	Recommended Action
id	Association:ID		
href		API specific	
@type		API specific	
@schemaLocation		API specific	
name	Association: name		
description	Association: description		
lastUpdate		API specific	
lifecycleStatus			TBD in SID
validFor			TBD in SID
version			TBD in SID
associationRole	AssociationRole		
role	roleName		
isSource	navigable		
id	RootEntity:ID	ID of RootEntity Involved in the role	
href		API specific	
name	RootEntity:name	name of RootEntity Involved in the role	
@type	RootEntityType	type of RootEntity Involved in the role	
constraint		reference to constraint needs to be added in SID	TBD in SID
id			
href		API specific	
@type		API specific	
name			
associationSpec	AssociationSpecification	Reference to the SID entity Association Specification	
id			
href			
@type			

ADMINISTRATIVE APPENDIX

RELEASE HISTORY

Release Number	Date	Release led by:	Description
Release 0.1	20/01/2017	Frank Wong DGIT fwong@dgitsystems.com	Initial work-in-progress iteration of draft.
R17.0 V1.0.1	31/3/2017	Kamal Maghsoudlou Ericsson	<ul style="list-style-type: none"> • Incorporated comments from TAW and internal meetings including: • Added JSON-LD keys: @type, @schemaLocation and @baseType to REST resources • Added SID mapping • Added Association Specification and EntitySpecRelationship REST resources • Added constraint on association spec and relationships • Miscellaneous corrections • tag TOSCA scenario example to move from this spec to the catalog guidebook
R17.0 V1.0.4	27/5/2017	Kamal Maghsoudlou Ericsson	<ul style="list-style-type: none"> • Incorporated comments from internal meetings including: • Updated API data model UML • Updated API operations • Updated API notifications
R17.0.1 V1.0.5	20/11/2017	Adrienne Walcott TM Forum	Updated to reflect TM Forum Approved Status

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