**Resource Inventory Management API
Conformance Profile**

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# Table of Contents

[NOTICE 2](#_Toc497297384)

[Table of Contents 3](#_Toc497297385)

[List of Tables 4](#_Toc497297386)

[Introduction 5](#_Toc497297387)

[API DESCRIPTION 6](#_Toc497297388)

[RESOURCE MODEL CONFORMANCE 7](#_Toc497297389)

[Resource Inventory Management API MANDATORY AND OPTIONAL RESOURCES 7](#_Toc497297390)

[Resource resource MANDATORY AND OPTIONAL ATTRIBUTES 7](#_Toc497297391)

[LogicalResource resource MANDATORY AND OPTIONAL ATTRIBUTES 10](#_Toc497297392)

[PhysicalResource resource MANDATORY AND OPTIONAL ATTRIBUTES 10](#_Toc497297393)

[API OPERATIONS CONFORMANCE 11](#_Toc497297394)

[Resource MANDATORY AND OPTIONAL OPERATIONS 11](#_Toc497297395)

[API GET FILTERING OPERATION CONFORMANCE 12](#_Toc497297396)

[Filtering in Resource resource 12](#_Toc497297397)

[GET /resourceInventoryManagement/resource 13](#_Toc497297398)

[API POST OPERATION CONFORMANCE 14](#_Toc497297399)

[POST to /resourceInventoryManagement /resource/ 14](#_Toc497297400)

[API PATCH OPERATION CONFORMANCE 17](#_Toc497297401)

[API DELETE OPERATION CONFORMANCE 18](#_Toc497297402)

[API CONFORMANCE TEST SCENARIOS 19](#_Toc497297403)

[Resource resource TEST CASES 19](#_Toc497297404)

# List of Tables

N/A

# Introduction

The following document is the REST API Conformance for the Resource Inventory Management API.

# API DESCRIPTION

The intent of this API is to provide a consistent/standardized mechanism to query and manipulate the Resource inventory.

The Resource Inventory API can be used to query the resource instances for a customer via Self Service Portal or the Call Centre operator can query the resource instances on behalf of the customer while a customer may have a complaint or a query.

The Resource Inventory API can be called by the Resource Order Management to create a new resource instance/ update an existing resource instance in the Resource Inventory.

# RESOURCE MODEL CONFORMANCE

## Resource Inventory Management API MANDATORY AND OPTIONAL RESOURCES

|  |  |  |
| --- | --- | --- |
| Resource Name | Mandatory or Optional | Comments |
| Resource | M |  |
| LogicalResource | O |  |
| PhysicalResource | O |  |

## Resource resource MANDATORY AND OPTIONAL ATTRIBUTES

|  |  |  |
| --- | --- | --- |
| Attribute Name | Mandatory or Optional | Comments |
| Id | M (in response messages)O (otherwise) | Generated by the server and provided in the response |
| Href | M (in response messages)O (otherwise) |  |
| Name | O |  |
| description | O |  |
| version | M (in response messages)O (otherwise) |  |
| @Type | O |  |
| @baseType | O |  |
| @schemaLocation | O |  |
| lifecycleState | M/O | Required in response messages from the server (responses to read-GET the entity) |
| category | O |  |
| startDate | M (in response messages)O (otherwise) |  |
| endDate | O |  |
| resourceRelationship | O |  |
|  | type | O |  |
|  | ResourceRef | O |  |
| resourceCharacteristic | O |  |
|  | name | M (if resourceCharacteristic is included) |  |
|  | value | M (if resourceCharacteristic is included) |  |
| resourceSpecificationRef | O |  |
|  | Id | M (if documentSpecification is included) |  |
|  | href | O |  |
|  | name | O  |  |
|  | version | O |  |
|  | @type | O |  |
| relatedPartyRef | O |  |
|  | id | M (if relatedParty is included) |  |
|  | href | O |  |
|  | name | O |  |
|  | role | M( if relatedParty is included) |  |
|  | validFor | O |  |
| note | O |  |
|  | author | O |  |
|  | date | O |  |
|  | text | M( if note is included) |  |
| place | O |  |
|  | id | M( if place is included) |  |
|  | href | O |  |
|  | role | M(if place is included) |  |

## LogicalResource resource MANDATORY AND OPTIONAL ATTRIBUTES

This resource is optional and not included in the basic CONNECT certification.

## PhysicalResource resource MANDATORY AND OPTIONAL ATTRIBUTES

This resource is optional and not included in the basic CONNECT certification.

# API OPERATIONS CONFORMANCE

For every single resource use the following templates and define what operations are optional and what operations are mandatory.

## Resource MANDATORY AND OPTIONAL OPERATIONS

|  |  |  |
| --- | --- | --- |
| Uniform API Operation | Mandatory/Optional | Comments |
| GET  | M | GET must be used to retrieve a representation of a resource |
| POST | M | POST bust be used to create a new resource |
| DELETE | O | DELETE must be used to delete an existing resource |
| PATCH (JSON-MERGE) | O | PATCH must be used to partially update a resource |

# API GET FILTERING OPERATION CONFORMANCE

**Definitions**

**Filtered Search:** A filtered search can be applied using query parameters in order to obtain only the resource entities that meet the criteria defined by the filtering parameters included in the query request. Several elements can be applied to the filtered search. In that case logic, a logical AND is applied to combine the criteria (e.g.:?type=<value> &lifecycleState=<value>)

**Filtered Data (Attribute selection):** In order to apply a filter and limit the number of attributes included in the response, the GET request can include the “?fields=” query parameter. Several elements can be applied to the filter. In that case, a logical AND is applied to combine the values (e.g.:?fields=category,lifecycleStatus) will provide in the response only the values assigned to attributes category and status. Attribute selection capabilities are the same for collections retrieval and individual resource queries

## Filtering in Resource resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Attribute name** | **Filtered search** **First Level**  | **Filtered search****N Level**  | **Attribute Selection First Level** | **Attribute Selection N Level** |
| Id | M | NA | M | NA |
| href | NA | NA | M | NA |
| name | M | NA | M | NA |
| description | M | NA | M | NA |
| @type | O | NA | M | NA |
| @baseType | O | NA | M | NA |
| @schemaLocation | NA | NA | NA | NA |
| category | O | NA | M | NA |
| lifecycleState | M | NA | M | NA |
| startDate | O | NA | M | NA |
| endDate | O | NA | M | NA |
| version | O | NA | M | NA |

## GET /resourceInventoryManagement/resource

**Filtered Search:** A filtered search can be applied using the following filtering criteria

* resource.id : to obtain the details of a given resource id
* relatedParty.id and relatedPartyRole : to obtain the resources of a given related party playing a given role
* other optional attributes as defined in the table above

**Filtered Data:** A filtered response can be requested for the following attributes using the “?fields=” query parameter

* Any of the attributes in the first level of Resource resource definition

# API POST OPERATION CONFORMANCE

## POST to /resourceInventoryManagement /resource/

This Uniform Contract operation is used to create a Resource resource in the server.

The response to this operation must include a Location header set to /resourceInventoryManagement/ /resource /{ID} where {ID} indicates the identifier assigned by the server to the new Resource created

|  |  |  |
| --- | --- | --- |
| POST | M |  |
| Response Status Code 201 | M  |  |
| Other Status Codes | NA |  |

The following table indicates attributes that are required to be sent when creating a new Resource resource as well as attributes with special considerations. All other attributes defining the resource are not required to be sent as part of the BODY of the POST request message:

|  |  |  |  |
| --- | --- | --- | --- |
| Attribute name | Mandatory | Default | Rule |
| id | N |  | Accepted in entity-creation requests if the server supports the incoming identifier as the reference to create new resources |
| name | Y |  |  |
| description | N |  |  |
| @type | Y |  |  |
| @baseType | N |  |  |
| @schemaLocation | N |  |  |
| category | N |  |  |
| startDate | N |  |  |
| endDate | N |  |  |
| Version | N |  |  |
| relatedParty.href | N |  | Mandatory if relatedParty includedThe consumer must indicate the identifier for every relatedParty assigned to the resources |
| resourceRelationship | N |  | Mandatory if resourceRelationship included |
| resourceSpecification | N |  | Mandatory if resourceSpecification included |
| resourceCharacteristic | N |  |  |
| place | N |  |  |
| note | N |  |  |

The response from the server must include a BODY with the contents of the new resource created, filled with at least the same information elements that were included in the request and are supported by the server.

If the POST request includes optional parameters (as per the model resource definition) that are not supported by the server, then the server must reject the request (replying with a 4xx error response) indicating the parameter not supported.

The following parameters must be supported by the server when included in the request to create a new resource

* name
* description
* @type
* @baseType
* lifecycleStatus
* version
* startDate
* endDate
* relatedParty.id
* relatedParty.role

The BODY of the response from the server must include attribute “href” set to the same value as the one in the Location header.

The server must include in the BODY of the response, even if they are not included in the request, the following attributes that are mandatory in the definition of a Resource as per the resource model defined

* id
* href
* @type
* name
* description
* lifecycleStatus
* category

The BODY of the response from the server must include attribute “href” (or “reference”) under each one of the entities within the Resource model that can be addressed individually and were included in the response. This applies to any of the following entities

* relatedParty
* resourceSpecification
* place

# API PATCH OPERATION CONFORMANCE

This section defines which attributes are patchable.

Since PATCH operation is optional and not included in the basic CONNECT certification this is not applicable in this conformance document.

# API DELETE OPERATION CONFORMANCE

This section defines what operations can be used to delete a Resource resource.

Since DELETE operation is optional and not included in the basic CONNECT certification this is not applicable in this conformance document

# API CONFORMANCE TEST SCENARIOS

This section describes the test scenarios required for the basic CONNECT certification of Resource Inventory Management API.

Test Cases must be executed in the order defined for each resource because the result from one of the scenarios will be input for the next one.

Requests must be addressed to the endpoint provided for certification, specifically they must be addressed to the URI defined by the concatenation of the {apiRoot} and the specific resource, where the {apiRoot} is defined as **{serverRoot}/resourceInventoryManagement/v1**, being {serverRoot} defines the certification endpoint.

## Resource resource TEST CASES

**Nominal Scenarios**

**TC\_ResInvMng\_N1 – Search for resources with specific characteristics**

**TC\_ ResInvMng \_N2 – Filtered retrieval of resources**

**TC\_ ResInvMng \_N3 – Filtered Search and Filtered data response**

**Error Scenarios**

**TC\_ ResInvMng \_E1 – Unknown Resource identifier**

**TC\_ ResInvMng \_E2 – Invalid Request – Missing mandatory parameter**

**TC\_ ResInvMng \_E3 – Invalid Request – Missing parameter mandatory in context**