

Resource Inventory Management Conformance Profile

NOTICE

Copyright © TM Forum 2023. All Rights Reserved.

This document and translations of it may be copied and furnished to others, and derivative works that comment on or otherwise explain it or assist in its implementation may be prepared, copied, published, and distributed, in whole or in part, without restriction of any kind, provided that the above copyright notice and this section are included on all such copies and derivative works. However, this document itself may not be modified in any way, including by removing the copyright notice or references to TM FORUM, except as needed for the purpose of developing any document or deliverable produced by a TM FORUM Collaboration Project Team (in which case the rules applicable to copyrights, as set forth in the [TM FORUM IPR Policy](#), must be followed) or as required to translate it into languages other than English.

The limited permissions granted above are perpetual and will not be revoked by TM FORUM or its successors or assigns.

This document and the information contained herein is provided on an "AS IS" basis and TM FORUM DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY THAT THE USE OF THE INFORMATION HEREIN WILL NOT INFRINGE ANY OWNERSHIP RIGHTS OR ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Direct inquiries to the TM Forum office:

181 New Road, Suite 304

Parsippany, NJ 07054, USA

Tel No. +1 862 227 1648

TM Forum Web Page: www.tmforum.org

Table of Contents

NOTICE	1
Introduction - API description	4
Resource Model Conformance	5
API Mandatory Resources	5
General Notes on Resource Attribute Conformance	5
Resource Resource Mandatory Attributes	6
Notification Model Conformance	9
API Operations Conformance	10
Operation	10
Prefix	10
Resource Mandatory Operations	10
RETRIEVE Operation Conformance	11
Resource	11
Channels	11
Request Message Schema	11
Response Message Schema	11
Definitions for Filter	12
LIST Operation Conformance	13
Resource	13
Channels	13
Request Message Schema	13
Response Message Schema	13
Definitions for Filter	14
CREATE Operation Conformance	15
Resource	15
Channels	15
Request Message Schema	15
Response Message Schema	15
Expected Status Codes:	16
PATCH Operation Conformance	17
Resource	17
Channels	17
Request Message Schema	17
Response Message Schema	17
Expected Status Codes:	18
Patchable and Non Patchable Attributes:	18
DELETE Operation Conformance	19
Resource	19

Channels	19
Request Message Schema	19
Response Message Schema	19
Expected Status Codes:.....	20
Acknowledgements	21
Release History.....	21
Version History.....	21

Introduction - API description

The following document is the conformance specification of the Async API for Any management.

Resource Model Conformance

API Mandatory Resources

The following table indicates the mandatory resources for this API.

Resource Name	Comment
Resource	

General Notes on Resource Attribute Conformance

There are three situations that could occur for an attribute:

- Mandatory attribute,
- Mandatory attribute if the optional parent attribute is present,
- Non-mandatory/Optional attribute. Those are all the other attributes not mentioned in the following subsections. Please refer to the corresponding API REST Specification for more details.
- The tables in the subsections below indicate which attributes are mandatory including mandatory when an optional parent is present.
- Where a resource is an input into an API (e.g. CREATE, PATCH), Mandatory means that the attribute value must be supplied by the API consumer in the input (and must not be blank or null).
- Where a resource is an output from an API (e.g. RETRIEVE, LIST, CREATE), Mandatory means that the attribute value must be supplied by the API provider in the output (and must not be blank or null).
- For a sub-resource that is not an array, Mandatory (cardinality 1..1) means that the sub-resource must be present, while Optional (cardinality 0..1) means that the sub-resource may be absent. Mandatory and Optional on the sub-resource attributes apply to the sub-resource if present.
- For a sub-resource that is an array, Mandatory (cardinality 1..) **means that at least one sub-resource must be present in the array, while Optional (cardinality 0..)** means that the array may be absent. Mandatory and Optional on the sub-resource attributes apply to each of the sub-resources if present.

In this table are listed all mandatory attributes. A mandatory attribute **MUST** be retrieved in resource representation when no attribute selection is used (e.g. retrieveTroubleTicket.commandRequest {id}) without any attribute selection

When an attribute is listed with an indentation (in second column) it means this attribute is mandatory if root (parent) attribute is present.

Resource Resource Mandatory Attributes

Mandatory attribute when parent is present	Rule
id	M
topicRef	M
activationFeature (if present)	
name	M
activationFeature.constraint (if present)	
topicRef	M
activationFeature.featureCharacteristic (if present)	
name	M
activationFeature.featureCharacteristic.characteristicRelationship (if present)	
id	M
relationshipType	M
activationFeature.featureRelationship (if present)	
name	M
relationshipType	M
intent (if present)	
topicRef	M
intent.characteristic (if present)	
name	M
intent.characteristic.characteristicRelationship (if present)	
id	M
relationshipType	M
intent.intentRelationship (if present)	
@referredType	M
@type	M
id	M
relationshipType	M
topicRef	M
intent.intentRelationship.associationSpec (if present)	
id	M
topicRef	M
intent.intentSpecification (if present)	

Mandatory attribute when parent is present		Rule
	id	M
	topicRef	M
intent.relatedExpectation (if present)		
	role	M
	topicRef	M
intent.relatedExpectation.characteristic (if present)		
	name	M
intent.relatedExpectation.characteristic.characteristicRelationship (if present)		
	id	M
	relationshipType	M
intent.relatedExpectation.constraint (if present)		
	topicRef	M
intent.relatedExpectation.target.characteristic (if present)		
	name	M
intent.relatedExpectation.target.characteristic.characteristicRelationship (if present)		
	id	M
	relationshipType	M
intent.relatedExpectation.target.constraint (if present)		
	topicRef	M
intent.relatedExpectation.target.entity (if present)		
	id	M
	topicRef	M
intent.relatedParty (if present)		
	role	M
place (if present)		
	place	M
	role	M
relatedParty (if present)		
	role	M
resourceCharacteristic (if present)		
	name	M

Mandatory attribute when parent is present		Rule
resourceCharacteristic.characteristicRelationship (if present)		
	id	M
	relationshipType	M
resourceRelationship (if present)		
	relationshipType	M
	resource	M
resourceSpecification (if present)		
	topicRef	M

Notification Model Conformance

There are no mandatory notifications for this API.

API Operations Conformance

For every single resource, the following tables include mandatory operations.

Operation

Every operation consists of two parts:

- REQUEST: Publish a message on a 'commandRequest' channel.
- RESPONSE: Subscribe to the corresponding 'commandReply' channel to receive the response.

Prefix

All channel names are defined with a "{prefix}" parameter.

Let's take the example of {prefix}.tmfapi.Resource.v5.retrieveResource.commandRequest.

This topic name consists of two pieces:

1. a optional prefix **{prefix}**
2. a constant: **tmfapi.Resource.v5.retrieveResource.commandRequest**

Your application may support this channel both with and without a prefix, but the constant must always be present.

Without the prefix, the channel name is:

tmfapi.Resource.v5.retrieveResource.commandRequest

However, some organisations may prefix the channel name for administrative purposes, say to denote the name of a company, department, etc. When using a prefix, say 'acme' for a company named 'Acme Telecom', the channel name is:

acme.tmfapi.Resource.v5.retrieveResource.commandRequest

Resource Mandatory Operations

The following table indicates which ones are mandatory for the Resource resource:

Uniform API Operation	Comment
RETRIEVE	Retrieve a Resource given it's id
LIST	Retrieve a list of Resources
CREATE	Create a Resource
DELETE	Delete a Resource

RETRIEVE Operation Conformance

Resource

This operation retrieves a Resource entity.

Channels

REQUEST CHANNEL	{prefix}.resourceInventoryManagement.v5.retrieveResource.commandRequest
REPLY CHANNEL	{prefix}.resourceInventoryManagement.v5.retrieveResource.commandReply

Note: See the API Operations Conformance section above for more details on the request and reply channels.

Request Message Schema

Payload

The parameters for this operation are to be sent as headers.

Headers

Property		Mandatory/Optional
X-Correlation-Id		M
Reply-Channel		M
Parameters		M
	id	M
	fields	
Query-Filters		

Response Message Schema

Payload

The Payload is is a Resource resource entity.

Headers

Property	Mandatory/Optional
X-Correlation-Id	M
Status-Code	M

Property	Mandatory/Optional
X-Request-Channel	M

Expected Status Codes:

Status Code	Mandatory/Optional
200 if successful	M
404 if not found	M

Definitions for Filter

- **Filtered Search:** A filtered search can be applied using query parameters to obtain only the resources that meet the criteria defined by the filtering parameters included in the request. Several elements can be applied to the filtered search as part of the 'filters' parameter. In that case logic, a logical AND is applied to combine the criteria (e.g.severity=<value>&status=<value>).
- **Attribute selection (Limiting Response Data):** In order to limit which attributes are included in the response, the RETRIEVE request payload can include the fields parameter. Only those attributes whose names are supplied in this parameter will be returned. Attribute selection capabilities are the same for collections retrieval and individual resource queries.
- **Level:** The filtering and attribute selection can apply to the top level properties (attributes) and subproperties. The tables below show which attributes need to be supported in top-level or contained resources.

LIST Operation Conformance

Resource

This operation retrieves an array of Resource entities. Attribute selection is enabled for all first level attributes.

Channels

REQUEST CHANNEL	{prefix}.resourceInventoryManagement.v5.listResource.commandRequest
REPLY CHANNEL	{prefix}.resourceInventoryManagement.v5.listResource.commandReply

Note: See the API Operations Conformance section above for more details on the request and reply channels.

Request Message Schema

Payload

The parameters for this operation are to be sent as headers.

Headers

Property		Mandatory/Optional
X-Correlation-Id		M
Reply-Channel		M
Parameters		M
	fields	
	offset	
	limit	
Query-Filters		

Response Message Schema

Payload

The Payload is is an array of Resource resource entities.

Headers

Property	Mandatory/Optional
X-Correlation-Id	M
Status-Code	M
X-Total-Count	
X-Result-Count	
X-Request-Channel	M

Expected Status Codes:

Status Code	Mandatory/Optional
200 if successful	M
404 if not found	M

Definitions for Filter

- **Filtered Search:** A filtered search can be applied using query parameters to obtain only the resources that meet the criteria defined by the filtering parameters included in the request. Several elements can be applied to the filtered search as part of the 'filters' parameter. In that case logic, a logical AND is applied to combine the criteria (e.g.severity=<value>&status=<value>).
- **Attribute selection (Limiting Response Data):** In order to limit which attributes are included in the response, the RETRIEVE request payload can include the fields parameter. Only those attributes whose names are supplied in this parameter will be returned. Attribute selection capabilities are the same for collections retrieval and individual resource queries.
- **Level:** The filtering and attribute selection can apply to the top level properties (attributes) and subproperties. The tables below show which attributes need to be supported in top-level or contained resources.

CREATE Operation Conformance

Resource

This operation creates a Resource entity.

Channels

REQUEST CHANNEL	{prefix}.resourceInventoryManagement.v5.createResource.commandRequest
REPLY CHANNEL	{prefix}.resourceInventoryManagement.v5.createResource.commandReply

Note: See the API Operations Conformance section above for more details on the request and reply channels.

Request Message Schema

Payload

The Payload is is a Resource FVO resource entity.

The following table provides the list of mandatory attributes when creating an instance of the Resource resource, including any possible rule, conditions and applicable default values.

Mandatory Attribute	Rule
id	

Headers

Property		Mandatory/Optional
X-Correlation-Id		M
Reply-Channel		M
Parameters		M
	fields	

Response Message Schema

Payload

The Payload is is a Resource resource entity.

Headers

Property	Mandatory/Optional
X-Correlation-Id	M
Status-Code	M
X-Request-Channel	M

Expected Status Codes:

Status Code	Mandatory/Optional
201 if successful	M

PATCH Operation Conformance

Resource

This operation updates partially a Resource entity.

Channels

REQUEST CHANNEL	{prefix}.resourceInventoryManagement.v5.patchResource.commandRequest
REPLY CHANNEL	{prefix}.resourceInventoryManagement.v5.patchResource.commandReply

Note: See the API Operations Conformance section above for more details on the request and reply channels.

Request Message Schema

Payload

The Payload is is a Resource MVO resource entity.

Headers

Property		Mandatory/Optional
X-Correlation-Id		M
Reply-Channel		M
Parameters		M
	id	M
	fields	

Response Message Schema

Payload

The Payload is is a Resource resource entity.

Headers

Property		Mandatory/Optional
X-Correlation-Id		M
Status-Code		M
X-Request-Channel		M

Expected Status Codes:

Status Code	Mandatory/Optional
200 if successful	M

Patchable and Non Patchable Attributes:

Non Patchable Attribute	Rule
href	
id	

Patchable Attribute	Rule
activationFeature	
administrativeState	
attachment	
category	
description	
endOperatingDate	
intent	
note	
operationalState	
place	
relatedParty	
resourceCharacteristic	
resourceRelationship	
resourceSpecification	
resourceStatus	
resourceVersion	
startOperatingDate	
usageState	

DELETE Operation Conformance

Resource

This operation deletes a Resource entity.

Channels

REQUEST CHANNEL	{prefix}.resourceInventoryManagement.v5.deleteResource.commandRequest
REPLY CHANNEL	{prefix}.resourceInventoryManagement.v5.deleteResource.commandReply

Note: See the API Operations Conformance section above for more details on the request and reply channels.

Request Message Schema

Payload

The parameters for this operation are to be sent as headers.

Headers

Property		Mandatory/Optional
X-Correlation-Id		M
Reply-Channel		M
Parameters		M
	id	M

Response Message Schema

Payload

There is no Payload defined for this channel

Headers

Property		Mandatory/Optional
X-Correlation-Id		M
Status-Code		M
X-Request-Channel		M

Expected Status Codes:

Status Code	Mandatory/Optional
204 if successful	M

Acknowledgements

Release History

Release Number	Date	Release led by:	Description

Version History

Version Number	Date	Modified by	Description