TM Forum Specification

Service Quality Management API Conformance Profile

TMF657B

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Notice

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INTRODUCTION - API DESCRIPTION

The following document is the Service Quality Management API Conformance Profile.

Through this API, any Enterprise is able to access a Service Quality Management application and extract Service Level Specifications and associated Service Level Objectives (SLO) and their thresholds. They are able to monitor violation of these thresholds and generate trending reports over a period of time and send threshold crossing alarms so that when service quality degrades and a contracted Service Level Agreement (or one of its constituents) is at risk, appropriate actions can be performed.

This document identifies the parameters that must be included in a request related to the operations above as well as the parameters expected in the response.

The test scenarios in this document are intended to create a set of resources and then retrieve the information stored in the server to confirm the resources created are stored with the values originally set. Additionally, some test scenarios are included to verify that the server replies with the corresponding error response in situations where a mandatory attribute is not included in the request.

RESOURCE MODEL CONFORMANCE

API MANDATORY RESOURCES

The following table indicates the mandatory resources for this API.

Resource Name	Comment
ServiceLevelObjective	
ServiceLevelSpecification	

General Notes on Resource Attribute Conformance

There are three situations that could occur for an attribute:

- o   Mandatory attribute,
- o   Mandatory attribute if the optional parent attribute is present,
- o   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. POST, 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. GET, POST), 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., GET /../{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.

ServiceLevelObjective Resource Mandatory Attributes

Mandatory attribute when parent is present		Rule
conformanceComparator		M
conformanceTarget		M
href		M (in response messages)
id		M (in response messages)
serviceLevelObjectiveParameter		M
serviceLevelObjectiveParameter.relatedEntity (if present)		Array of RelatedEntity
	@referredType	M
	id	M
	role	M

ServiceLevelSpecification Resource Mandatory Attributes

Mandatory attribute when parent is present		Rule
href		M (in response messages)
id		M (in response messages)
name		M
relatedServiceLevelObjective		M Array of ServiceLevelObjectiveRef
	id	M

API OPERATIONS CONFORMANCE

For every single resource the following tables includes mandatory operations.

ServiceLevelObjective Mandatory Operations

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

Uniform API Operation
GET
POST
DELETE

ServiceLevelSpecification Mandatory Operations

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

Uniform API Operation
GET
POST
DELETE

API GET OPERATION CONFORMANCE

All the GET operations in this API share the same status code pattern.

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

Definitions for Filter

The following definitions apply to all the GET operations:

- 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 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.: ?severity=<value>&status=<value>).
- Attribute selection (Limiting Response Data): In order to limit which attributes are included in the response, the GET request can include the ?fields= query 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 sub properties. The tables below show which attributes need to be supported in top-level or contained resources.

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

This operation list or find ServiceLevelObjective entities

Attribute selection is mandatory for all first level attributes except for the href attribute.

Filtering on sub-resources is optional for all compliance levels

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

This operation retrieves a ServiceLevelObjective entity. Attribute selection is enabled for all first level attributes.

Attribute selection is mandatory for all first level attributes except for the href attribute.

Filtering on sub-resources is optional for all compliance levels.

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

This operation list or find ServiceLevelSpecification entities

Attribute selection is mandatory for all first level attributes except for the href attribute.

Filtering on sub-resources is optional for all compliance levels

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

This operation retrieves a ServiceLevelSpecification entity. Attribute selection is enabled for all first level attributes.

Attribute selection is mandatory for all first level attributes except for the href attribute.

Filtering on sub-resources is optional for all compliance levels

API POST OPERATION CONFORMANCE

All the POST operations in this API share the same status code pattern.

POST	Mandatory/Optional
Status Code 201 if resource created	M

POST /serviceLevelObjective

This operation creates a ServiceLevelObjective entity.

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

Mandatory Attributes	Rule
conformanceComparator	
conformanceTarget	
serviceLevelObjectiveParameter	

POST /serviceLevelSpecification

This operation creates a ServiceLevelSpecification entity.

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

Mandatory Attributes	Rule
name	
relatedServiceLevelObjective	
relatedServiceLevelObjective.id	

API DELETE OPERATION CONFORMANCE

All the DELETE operations in this API share the same status code pattern.

DELETE	Mandatory/Optional
Status Code 204 if resource deleted	M

DELETE /serviceLevelObjective/{id}

This operation deletes a ServiceLevelObjective entity.

DELETE /serviceLevelSpecification/{id}

This operation deletes a ServiceLevelSpecification entity.

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Release History

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Pre-production	27-Jan-2021	Knut Johannessen, Telenor	Updated to v4.0.0

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