TM Forum Specification

Service Problem Management API Conformance Profile

TMF656B

Team Approved Date: 26-May-2021

Release Status: Pre-production	Approval Status: Team Approved
Version 4.0.0	IPR Mode: RAND

Notice

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INTRODUCTION - API DESCRIPTION

This API is used for the service providers to manage the service problems in their service area.

RESOURCE MODEL CONFORMANCE

API MANDATORY RESOURCES

The following table indicates the mandatory resources for this API.

Resource Name	Comment
ServiceProblem	Only GET & POST operations are mandatory.

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.

ServiceProblem Resource Mandatory Attributes

Mandatory attribute when parent is present	Rule
category	M
creationDate	M (in response messages)
description	M
href	M (in response messages) Generated by the server and provided in the response upon resource creation. Value in response must be the same as the one set in Location header provided upon entity creation.
id	M (in response messages) Generated by the server and provided in the response upon resource creation
lastUpdate	M (in response messages)
priority	M
reason	M
status	M (in response messages) Only required in response messages from the server when providing the ServiceProblem entity contents
originatorParty	M
@referredType	M
id	M
affectedLocation (if present)	Array of RelatedPlace. At least one of affectedResource, affectedService or affectedLocation should be present.
id	M
affectedResource (if present)	Array of ResourceRef. At least one of affectedResource, affectedService or affectedLocation should be present.

Mandatory attribute when parent is present		Rule
	id	M
affectedService (if present)		Array of ServiceRef. At least one of affectedResource, affectedService or affectedLocation should be present.
	id	M
externalIdentifier (if present)		Array of ExternalIdentifier
	id	M
note (if present)		Array of Note
	text	M
parentProblem (if present)		Array of ServiceProblemRef
	id	M
relatedEvent (if present)		Array of EventRef
	id	M
rootCauseResource (if present)		Array of ResourceRef See conditions for ResourceRef at affectedResource
rootCauseService (if present)		Array of ServiceRef See conditions for ServiceRef at affectedService
slaViolation (if present)		Array of SLAViolationRef
	id	M
troubleTicket (if present)		Array of TroubleTicketRef
	id	M
underlyingProblem (if present)		Array of ServiceProblemRef See conditions for ServiceProblemRef at parentProblem
characteristic (if present)		Array of Characteristic
	name	M

Mandatory attribute when parent is present		Rule
	value	M
impactPattern.characteristic (if present)		Array of Characteristic See conditions for Characteristic at characteristic
relatedParty (if present)		Array of RelatedParty See conditions for RelatedParty at originatorParty
responsibleParty (if present)		See conditions for RelatedParty at originatorParty
trackingRecord.characteristic (if present)		Array of Characteristic See conditions for Characteristic at characteristic
underlyingAlarm (if present)		Array of ResourceAlarmRef
	id	M
underlyingAlarm.changeRequest (if present)		
	id	M
firstAlert (if present)		
	@referredType	M
	id	M
	role	M
relatedEntity (if present)		Array of RelatedEntity See conditions for RelatedEntity at firstAlert

API OPERATIONS CONFORMANCE

For every single resource the following tables includes mandatory operations.

ServiceProblem Mandatory Operations

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

Uniform API Operation
GET
POST

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 subproperties. The tables below show which attributes need to be supported in top-level or contained resources.

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

This operation list or find ServiceProblem 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 /serviceProblem/{id}?fields=...&{filtering}

This operation retrieves a ServiceProblem 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 /serviceProblem

This operation creates a ServiceProblem entity.

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

Mandatory Attributes	Rule
category	
description	
originatorParty	
originatorParty.@referredType	
originatorParty.id	
priority	
reason	

ACKNOWLEDGEMENTS

Release History

Release Status	Date	Release led by	Description
Pre-production	26-May-2021	Abdul Majid Hussain	Initial release

Version History

Version Number	Date	Modified by	Description
4.0.0	26-May-2021	Alan Pope	Final edits prior to publication