**TM Forum Specification**

**Service Test Management API REST Specification**

**TMF653**

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Direct inquiries to the TM Forum office:

4 Century Drive, Suite 100

Parsippany, NJ 07054, USA

Tel No. +1 973 944 5100

Fax No. +1 973 998 7196

TM Forum Web Page: [www.tmforum.org](http://www.tmforum.org/)

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# INTRODUCTION

The following document is the specification of the REST API for Service Test Management. It includes the model definition as well as all available operations. Possible actions are creating, updating and retrieving Service Test.

The Service Test API provides a standardized mechanism for placing a service test with all of the necessary test parameters. The API consists of a simple set of operations that interact with CRM/Service Management systems in a consistent manner. A service test is a procedure intended to check the quality, performance, or reliability of a service.

Service Test Management API manages service test resource and service specification test resource:

* A service test specification describes the service test in terms of parameters to be configured and measures to be taken.
* A service exists for a controlled test invocation on a service. The service test is executed according to a schedule. and contains service test configuration parameters that are to be applied at execution time, and service test measures that result.

# SAMPLE USE CASES

## Service Test for Customer Experience Assurance

The Service Test can be used for customer experience assurance while:

* The subscriber can launch service test from Self Service Portal to make sure the service quality while his/her experience is not good.
* The Call Center operator can execute service test to check the quality and analyze root cause for response while one customer has complaint

**CC**



Customer

Service Test Management

Complaint

Service Test Request

Response

Feedback



Service Test Request

It could improve customer expereice and increase FCR(First Call Resolution) much.

It could improve customer expereice and increase FCR(First Call Resolution) much.

## Planned Service Test for Importance Service

The test job can be defined for some important services that the test will be executed against them periodically to assurance the service quality and find potential service downgrading in advance to avoid massive impact to customers.

# Support of polymorphism and extension patterns

Support of polymorphic collections and types and schema based extension is provided by means of a list of generic meta-attributes that we describe below.

Generic support of polymorphism and pattern extensions is described in the TMF API Guidelines v3.0 Part 2 document.

The @type attribute provides a way to represent the actual class type of an entity. All resources and sub-resources of this API have a @type attributes that can be provided when this is useful. Such as ServiceTest, ServiceTestSpecification Entity. All resources and sub-resources of this API have a @type attributes that can be provided when this is useful.

The @referredType can be used within reference entities (like for instance ServiceRef) to explicitly denote the actual entity type of the referred class. Notice that in reference entities the @type, when used, denotes the class types of the reference itself, such as ServiceRef, and not the class type of the referred object. However, since reference classes are rarely sub-classed, @type is generally not useful in reference objects.

The @schemaLocation property can be used in resources to allow specifying user-defined properties of an Entity or to specify the expected characteristics of an entity.

The @baseType attribute gives a way to provide explicitly the base of class of a given resource that has been extended.

Notice that because these meta-attributes have a generic meaning we will not repeat their definition in the resource description tables of each resource and each sub-resource.

# RESOURCE MODEL

## Managed Entity and Task Resource Models

### FIRST resource

## Notification Resource Models

### First Notification

# API OPERATIONS

Remember the following Uniform Contract:

|  |  |  |
| --- | --- | --- |
| 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 Part 1 document.

Notifications are also described in a subsequent section.

## VERB url

# 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 part 1. Refer to the guidelines for more details.

## 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 Part 1 document.

# Acknowledgements

## Version History

|  |  |  |  |
| --- | --- | --- | --- |
| **Release Number** | **Date** | **Release led by:** | **Description** |
| Release 1.0.0 | 11/28/2016 | Pierre Gauthier |  |
| Release 2.0.0 | 28-Feb-2018 | Hongxia Hao  [haohongxia@huawei.com](mailto:haohongxia@huawei.com) | **Main change points:**  1.Remove mandatory and non-mandatory related description to Conformance Profile document.  2. Align with DG 3.0 , but no hypermedia  3. Modify some names like RelatedClassRef (suggested by Mariano)  4.Modify some typos |
| Release 2.1.0 | 06-Dec-2018 | Hongxia Hao | Updated to TM Forum new brand guidelines. |
| Release 2.1.1 | 27-Jun-2018 | Adrienne Walcott | Formatting/style edits prior to R18 publishing. |
| Release 4.0 | 13-Jan-2019 | Jonathan Goldberg  [Jonathan.Goldberg@amdocs.com](mailto:Jonathan.Goldberg@amdocs.com) | Schema alignment for NaaS APIs |

## Release History

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| **Release Number** | **Date** | **Release led by:** | **Description** |
| 16.5.0 | December 2016 | Yisong Jiang in HUAWEI  Pierre Gauthier | Initial Release |
| 18.0.0 | June 2018 | Hongxia Hao  [haohongxia@huawei.com](mailto:haohongxia@huawei.com) | Updated Release |
| 18.5.0 | 13-Jan-2019 | Jonathan Goldberg | Schema alignment for NaaS APIs |

## Contributors to Document

|  |  |
| --- | --- |
| Hongxia Hao | Huawei |
| Yisong Jiang | Huawei |
| Mariano Belaunde | Orange |
| Pierre Gauthier | TM Forum |
| Jonathan Goldberg | Amdocs |