TM Forum Specification

Recommendation API Conformance Profile

TMF680B

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INTRODUCTION - API DESCRIPTION

Recommendation API manages the following data resources:

- **Recommendation**
  - o Recommendation is a type of automated (typically, conditional) system action to determine which products offerings to be presented as up-sells, cross-sells, and related products to each customer segment based on customer and session specific information. The design-time offers and product recommendations may come from Marketing and Catalog. The run-time evaluation and presentment will be executed with contextual/session information. Normally, it supports the recommendation of the offer which is proper for the customer, provides Up-sell and cross-sell based on contextual and catalog rules.

Recommendation API is used to recommend offering quickly based on the history and real-time context of customer. It is a real-time and personalized recommendation API. It is usually provided by e-commerce or BSS, CRM system in omni-channel

The Recommendation API provides the standardized client interface to get the recommendation based on the related information.

The operations that can be exercised over a recommendation resource using the API and covered in this document are those identified as mandatory to be supported:

- Get recommendation

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.

RESOURCE MODEL CONFORMANCE

Recommendation API MANDATORY AND OPTIONAL RESOURCES

For the Resources defined by the API, here the following table indicates which are mandatory and which ones are optional.

Resource Name	Mandatory / Optional	Comments
Recommendation	M	

Recommendation Message Resource MANDATORY AND OPTIONAL ATTRIBUTES

For the resources defined by the API the following table indicates which ones are mandatory and which ones are optional.

Parameter	Mandatory/Optional	Comments
@type	O	
@baseType	O	
@schemaLocation	O	
id	M (in response messages) O (otherwise)	Generated by the server and provided in the response upon resource creation. Accepted in entity-creation requests if the server supports the incoming identifier as the reference to create new resources
href	M (in response messages) O (otherwise)	Value in response must be the same as the one set in Location header provided upon entity creation

description			O	
name			M	
validFor			O	
type			O	
item			O	A list of recommendation items. (RecommendationItem[*])
	priority		M	
	offering		M	
		id	M	
		name	M	
		href	M	
		@referredType	O	
category			O	CategoryRef
	id		M	
	href		M	
	name		M	
	@referredType		O	
channel			O	ChannelRef
	id		M	
	href		M	
	name		M	
	@referredType		O	
shoppingCart			O	ShoppingCartRef
	id		M	
	href		M	
	@referredType		O	

order		O	ProductOrderRef
	Id	M	
	href	M	
	@referredType	O	
location		O	Place
	id	M	
	href	O	
	name	O	
	role	O	
	@referredType	O	
	@type	O	
	@baseType	O	
	@schemaLocation	O	
relatedParty		O	RelatedPartyRef
	@referredType	O	
	id	M	
	href	M	
	name	M	
	role	O	

API OPERATIONS CONFORMANCE

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

API MANDATORY AND OPTIONAL OPERATIONS

The following table indicates which ones are mandatory and which ones are optional for each one of the resources in the API (default is for all resources).

Uniform API Operation	Mandatory/Optional	Comments
GET	M for all resources	GET must be used to retrieve a representation of a resource
POST	M for all resources	POST must be used to create a new resource
PUT	O for all resources	PUT must be used to completely update a resource identified by its resource URI
PATCH	O for all resources	PATCH must be used to partially update a resource
DELETE	O for all resources	DELETE must be used to remove a resource

API GET OPERATION CONFORMANCE

For every single resource use the following template to specify the mandatory and optional features supported by the GET operation.

GET	M	
Response Status Code 200	M	
Other Status Codes	NA	

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.:?severity=<value> &status=<value>)

Attribute selection (Filtered Response Data): 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=severity,status) will provide in the response only the values assigned to attributes category and channel. Attribute selection capabilities are the same for collections retrieval and individual resource queries

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

This operation list recommendation entities.
Attribute selection is mandatory for all first level attributes.
Filtering is mandatory for first compliance level (L1) and optional otherwise.

API CONFORMANCE TEST SCENARIOS

This section describes the test scenarios required for the basic CONNECT certification of the 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}/recommendation/v2**, where {serverRoot} defines the certification endpoint

Recommendation Resource TEST CASES

Nominal Scenarios

TC_Recommendation_N1 – Search for recommendations with specific characteristics

- Send a GET message to /{apiRoot}/recommendations

- Wait for a response from the server with the following characteristics
  - Response Code 200-OK
  -
  - The body of the response for the resource with each identifier matches the values in the corresponding original request
  -
  - The body of the response should include the required paramter name

ACKNOWLEDGEMENTS

RELEASE HISTORY

Release Number	Date	Release led by:	Description
17.5.0	January 2018	Hongxia Hao, Ma Xu	Initial Release
18.0.0	June 2018	Hongxia Hao,	Second Release

VERSION HISTORY

Version Number	Date	Modified by	Description
Version 1.0.0	8/05/2017	Ma Xu Maxu@huawei.com Hongxia Hao haohongxia@huawei.com	initial version
Version 1.01	14-Jun-2017		Updated version
Version 1.02	9-Sep-2017	Hongxia Hao Ma Xu	Align with the newest specification document
Version 1.0.3	23-Jan-2018	Adrienne Walcott	Formatting/style edits prior to publishing
Version 2.0.0	12-June-2018	Hongxia Hao	Modify some typos. Change the descriptions of @attributes related with DG3.0 Add test cases
Version 2.0.1	28-Jun-2018	Adrienne Walcott	Formatting/style edits prior to R18 publishing