

TM Forum Specification

Recommendation API Conformance Profile

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INTRODUCTION - API DESCRIPTION

The service qualification API can be used to create and query QueryProductRecommendation. Complete description of this API is available in the user guide.

RESOURCE MODEL CONFORMANCE

API MANDATORY RESOURCES

The following table indicates the mandatory resources for this API.

Resource Name	Comment
QueryProductRecommendation	POST operation is mandatory. if POST returns 201 code then GET is also mandatory. If POST returns a 200 code GET is optional.

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. 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.

QueryProductRecommendation Resource

Mandatory Attributes

Mandatory attribute when parent is present	Rule
href	M (in response messages)
id	M (in response messages)
category (if present)	Array of CategoryRef
id	M
channel (if present)	Array of ChannelRef
id	M
productOrder (if present)	Array of ProductOrderRef
id	M
shoppingCart (if present)	Array of ShoppingCartRef
id	M
place (if present)	<p>The place could be pass by ref or by value.</p> <p>If place is pass by reference (@type valued to PlaceRef) id & @referredType attributes must be provided. The @referredType must indicate the place type (GeographicSite, GeographicLocation or GeographicAddress)</p> <p>If place is pass by value (@type valued to place type used: GeographicSite, GeographicLocation or GeographicAddress). The place payload must comply with place type used.</p>
@type	M
role	M
relatedParty (if present)	<p>The role attribute is not mandatory because the id could be a partyRole id. In this case @referredType must indicate the partyRole (example User, Customer, etc.).</p>

Mandatory attribute when parent is present		Rule
		If the id is a Party id then a role must be provided.
	@referredType	M
	id	M
recommendationItem (if present)		Array of RecommendationItem
	product	M
recommendationItem.product.agreement (if present)		Array of AgreementItemRef
	id	M
recommendationItem.product.billingAccount (if present)		
	id	M
recommendationItem.product.productOffering (if present)		
	id	M
recommendationItem.product.realizingResource (if present)		Array of ResourceRef
	id	M
recommendationItem.product.realizingService (if present)		Array of ServiceRef
	id	M
recommendationItem.product.place (if present)		Array of RelatedPlaceRefOrValue See conditions for RelatedPlaceRefOrValue at place
recommendationItem.product.productCharacteristic (if present)		Array of Characteristic
	name	M
	value	M
recommendationItem.product.productOrderItem (if present)		Array of RelatedProductOrderItem
	orderItemId	M
	productOrderId	M

Mandatory attribute when parent is present		Rule
recommendationItem.product.productRelationship (if present)		Array of ProductRelationship
	product	M
	relationshipType	M
recommendationItem.product.relatedParty (if present)		Array of RelatedParty See conditions for RelatedParty at relatedParty
recommendationItem.product.productSpecification (if present)		
	id	M
recommendationItem.product.productSpecification.target ProductSchema (if present)		
	@schemaLocation	M
	@type	M
recommendationItem.product.productPrice (if present)		Array of ProductPrice
	price	M
	priceType	M
recommendationItem.product.productPrice.billingAccount (if present)		See conditions for BillingAccountRef at recommendationItem.product.billingAccount
recommendationItem.product.productPrice.productOfferingPrice (if present)		
	id	M
recommendationItem.product.productPrice.productPriceAlteration (if present)		Array of PriceAlteration
	price	M
	priceType	M
recommendationItem.product.productPrice.productPriceAlteration.productOfferingPrice (if present)		See conditions for ProductOfferingPriceRef at recommendationItem.product.productPrice.productOfferingPrice

Mandatory attribute when parent is present	Rule
recommendationItem.productOffering (if present)	See conditions for ProductOfferingRef at recommendationItem.product.productOffering

API OPERATIONS CONFORMANCE

For every single resource the following tables includes mandatory operations.

QueryProductRecommendation Mandatory Operations

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

Uniform API Operation
GET
POST

API GET OPERATION CONFORMANCE

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

GET operation must be provided only if implementation provided code 201 for POST operation.

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

/queryProductRecommendation?fields=...&{filtering}

This operation list or find QueryProductRecommendation 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

/queryProductRecommendation/{id}?fields=...&{filtering}

This operation retrieves a QueryProductRecommendation 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.

Implementation could return http code 200 or/and http code 201 to be conformant. If http code 201 is returned, operation GET is mandatory.

POST	Mandatory/Optional
Status Code 201 if resource created	M
Status Code 200 if qualification provided in the response	M

POST /queryProductRecommendation

This operation creates a QueryProductRecommendation entity.

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

Mandatory Attributes	Rule
shoppingCart shoppingCartItem productOrder productOrderItem category relatedParty place	At least one of these attributes is mandatory in this operation

ADMINISTRATIVE APPENDIX

Document History

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