TM Forum Specification

Product Catalog Management Conformance Profile

TMF620B

Release 20.0

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NOTICE

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INTRODUCTION - API DESCRIPTION

This document is the REST API Conformance for Release 19.0 of the Product Catalog API TMF620. The Product Catalog API allows defining product catalog entities such as offerings and specifications, creating pricing for offerings, and transferring information between catalogs.

RESOURCE MODEL CONFORMANCE

API MANDATORY RESOURCES

The following table indicates the mandatory resources for this API.

Resource Name	Comment
ProductOffering	
ProductOfferingPrice	
ProductSpecification	

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.

PRODUCTOFFERING RESOURCE MANDATORY ATTRIBUTES

Mandatory attribute when parent is present	Rule	
bundledProductOffering	M (if isBundle is true) Array of BundledProductOffering Array of product offerings bundled within this product offering	
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	
id	M (in response messages) O (otherwise) Generated by the server when the first version of the Product Offering is created and provided in the response upon resource creation.Accepted in an entity-creation request for a new version of the Product Offering	
lastUpdate	M (in response messages) O (otherwise) This is a change from release 17.5. In release 19, lastUpdate is mandatory in response messages.	
lifecycleStatus	M (in response messages) O (otherwise)	
name	M (in response messages) O (otherwise)	
productSpecification	M (if isBundle is false) O (if isBundle is true must be empty) A single Product Specification ref structure (not an array)	
	id	M
productSpecification.targetProductSchema (if present)		
	@schemaLocation	M
	@type	M
agreement (if present)	Array of AgreementRef	

Mandatory attribute when parent is present	Rule	
	Array of agreement ref structures	
	id	M
category (if present)	Array of CategoryRef Array of category ref structures	
	id	M
channel (if present)	Array of ChannelRef Array of channel ref structures	
	id	M
marketSegment (if present)	Array of MarketSegmentRef Array of market segment refs	
	id	M
productOfferingPrice (if present)	Array of ProductOfferingPriceRef Array of product offering price refs	
	id	M
resourceCandidate (if present)	A single Resource Candidate ref (not an array)	
	id	M
serviceCandidate (if present)	A single Service Candidate ref (not an array)	
	id	M
serviceLevelAgreement (if present)	Array of SLA ref structures	
	id	M
place (if present)	Array of PlaceRef Array of place ref structures	
	@referredType	M
	id	M
prodSpecCharValueUse.productSpecification (if present)	See conditions for ProductSpecificationRef at productSpecification	

Mandatory attribute when parent is present	Rule
prodSpecCharValueUse.productSpecification.targetProductSchema (if present)	See conditions for TargetProductSchema at productSpecification.targetProductSchema

PRODUCTOFFERINGPRICE RESOURCE MANDATORY ATTRIBUTES

Mandatory attribute when parent is present	Rule
bundledPopRelationship	M (if isBundle is true) O (if isBundle is false must be empty) Array of BundledProductOfferingPriceRelationship Array of bundled product offering price relationships
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
id	M (in response messages) O (otherwise) Generated by the server when the first version of the Product Offering is created and provided in the response upon resource creation.Accepted in an entity-creation request for a new version of the Product Offering
lastUpdate	M (in response messages) O (otherwise) This is a change from release 17.5. In release 19, lastUpdate is mandatory in response messages.
lifecycleStatus	M (in response messages) O (otherwise)
name	M (in response messages) O (otherwise)
priceType	M (if isBundle is false) O (otherwise) A bundled price might contain other prices of different types (e.g. an allowance has a usage price and a one-time price), and thus cannot itself be assigned a type

Mandatory attribute when parent is present	Rule	
constraint (if present)	Array of ConstraintRef Array of constraint ref structures	
	id	M
place (if present)	Array of PlaceRef Array of place ref structures	
	@referredType	M
	id	M
prodSpecCharValueUse.productSpecification (if present)		
	id	M
prodSpecCharValueUse.productSpecification.targetProductSchema (if present)		
	@schemaLocation	M
	@type	M

PRODUCTSPECIFICATION RESOURCE MANDATORY ATTRIBUTES

Mandatory attribute when parent is present	Rule
bundledProductSpecification	M (if isBundle is true) O (if isBundle is false must be empty) Array of BundledProductSpecification Array of product specifications referred to within this product specification
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
id	M (in response messages) O (otherwise) Generated by the server when the first version of the Product

Mandatory attribute when parent is present	Rule	
	Specification is created and provided in the response upon resource creation.Accepted in an entity-creation request for a new version of the Product Specification	
lastUpdate	M (in response messages) O (otherwise) This is a change from release 17.5. In release 19, lastUpdate is mandatory in response messages.	
lifecycleStatus	M (in response messages) O (otherwise)	
name	M	
resourceSpecification (if present)	Array of ResourceSpecificationRef Array of resource specification ref structures	
	id	M
serviceSpecification (if present)	Array of ServiceSpecificationRef Array of service specification ref structures	
	id	M
relatedParty (if present)	Array of RelatedParty Array of related party structures	
	@referredType	M
	id	M
targetProductSchema (if present)		
	@schemaLocation	M
	@type	M

API OPERATIONS CONFORMANCE

For every single resource the following tables includes mandatory operations.

PRODUCTOFFERING MANDATORY OPERATIONS

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

Uniform API Operation
GET
POST
PATCH
DELETE

PRODUCTOFFERINGPRICE MANDATORY OPERATIONS

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

Uniform API Operation
GET
POST
PATCH
DELETE

PRODUCTSPECIFICATION MANDATORY OPERATIONS

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

Uniform API Operation
GET
POST
PATCH
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 subproperties. The tables below show which attributes need to be supported in top-level or contained resources.

GET /PRODUCTOFFERING?FIELDS=...&{FILTERING}

This operation list or find ProductOffering 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 /PRODUCTOFFERING/{ID}?FIELDS=...&{FILTERING}

This operation retrieves a ProductOffering 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 /PRODUCTOFFERINGPRICE?FIELDS=...&{FILTERING}

This operation list or find ProductOfferingPrice 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 /PRODUCTOFFERINGPRICE/{ID}? FIELDS=...&{FILTERING}

This operation retrieves a ProductOfferingPrice 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 /PRODUCTSPECIFICATION?FIELDS=...&{FILTERING}

This operation list or find ProductSpecification 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 /PRODUCTSPECIFICATION/{ID}? FIELDS=...&{FILTERING}

This operation retrieves a ProductSpecification 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 /PRODUCTOFFERING

This operation creates a ProductOffering entity.

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

Mandatory Attributes	Rule
name	

POST /PRODUCTOFFERINGPRICE

This operation creates a ProductOfferingPrice entity.

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

Mandatory Attributes	Rule
name	

POST /PRODUCTSPECIFICATION

This operation creates a ProductSpecification entity.

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

Mandatory Attributes	Rule
name	

API PATCH OPERATION CONFORMANCE

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

The mandatory application context is JSON Merge.

PATCH	Mandatory/Optional
Status Code 200 if resource modified	M

PATCH /PRODUCTOFFERING/{ID}

This operation updates partially a ProductOffering entity.

Patchable Attributes	Rule
name	

PATCH /PRODUCTOFFERINGPRICE/{ID}

This operation updates partially a ProductOfferingPrice entity.

Patchable Attributes	Rule
name	

PATCH /PRODUCTSPECIFICATION/{ID}

This operation updates partially a ProductSpecification entity.

Patchable Attributes	Rule
name	

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 /PRODUCTOFFERING/{ID}

This operation deletes a ProductOffering entity.

DELETE /PRODUCTOFFERINGPRICE/{ID}

This operation deletes a ProductOfferingPrice entity.

DELETE /PRODUCTSPECIFICATION/{ID}

This operation deletes a ProductSpecification entity.

ACKNOWLEDGEMENTS

RELEASE HISTORY

Release Number	Date	Release led by:	Description

VERSION HISTORY

Version Number	Date	Modified by	Description