Frameworx Specification

Product Catalog
API Conformance Profile

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NOTICE

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INTRODUCTION

The following document is the REST API Conformance for the Product Catalog API.

API DESCRIPTION

The Product Catalog Management API Provides a standardized solution for rapidly adding partners' products to an existing Catalog. It brings the capability for Service Providers to directly feed partners systems with the technical description of the products they propose to them.

RESOURCE MODEL CONFORMANCE

Product Catalog API MANDATORY AND OPTIONAL RESOURCES

Resource Name	Mandatory or Optional	Comments
ProductOffering	M	
ProductSpecification	M	
Category	O	The description of categories can be directly provided as part of the ProductOffering structure
Catalog	O	There are no operations defined over this resource

ProductOffering resource MANDATORY AND OPTIONAL ATTRIBUTES

Attribute Name	Mandatory or Optional	Comments
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)	Value in response must be the same as the one set in

	O (otherwise)	Location header provided upon entity creation
version	O	
lastUpdate	O	
name	M	
description	O	
isBundle	O	Default value is "false"
lifecycleStatus	M/O	Only required in response messages from the server when providing the ProductOffering entity contents
validFor	M/O	Only required in response messages from the server when providing the ProductOffering entity contents
startDateTime	O	
endDateTime	O	
category	O	Array of structures
id	M (if category included) O (otherwise)	
href	M (in response messages and if category included) O (otherwise)	Only required in response messages from the server

	version	O	
	name	O	
channel		O	Array of structures
	id	M (if channel included) O (otherwise)	
	href	M (in response messages and if channel included) O (otherwise)	Only required in response messages from the server
	name	O	
place		O	Array of structures
	id	M (if place included) O (otherwise)	
	href	M (in response messages and if place included) O (otherwise)	Only required in response messages from the server
	name	O	
bundledProductOffering		M (if isBundle set to true) O (otherwise)	Array of structures Mandatory if isBundle set to true, including at least one entity
	id	M (if bundledProductOffering included)	

		O (otherwise)	
	href	M (in response messages and if bundledProductOffering included) O (otherwise)	Only required in response messages from the server
	lifeCycleStatus	O	
	name	O	
serviceLevelAgreement		O	
	id	M (if serviceLevelAgreement included) O (otherwise)	
	href	M (in response messages and if serviceLevelAgreement included) O (otherwise)	Only required in response messages from the server
	name	O	
productSpecification		M (if isBundle set to false) O (otherwise)	Mandatory if isBundle set to false
	id	M (if productSpecification included) O (otherwise)	
	href	M (in response messages and if productSpecification	Only required in response messages from the server

		included)	
		O (otherwise)	
	version	O	
	name	O	
serviceCandidate		O	
	id	M (if serviceCandidate included)	
		O (otherwise)	
	href	M (in response messages and if serviceCandidate included)	Only required in response messages from the server
		O (otherwise)	
	version	O	
	name	O	
resourceCandidate		O	
	id	M (if resourceCandidate included)	
		O (otherwise)	
	href	M (in response messages and if resourceCandidate included)	Only required in response messages from the server
		O (otherwise)	
	version	O	
	name	O	

productOfferingTerm	O	Array of structures
name	M (if productOfferingTerm included) O (otherwise)	
description	O	
duration	M (if productOfferingTerm included) O (otherwise)	
validFor	M (if productOfferingTerm included) O (otherwise)	
startDateTime	O	
endDateTime	O	
productOfferingPrice	O	Array of structures
name	M (if productOfferingPrice included) O (otherwise)	
description	O	
validFor	M (if productOfferingPrice included) O (otherwise)	
startDateTime	O	
endDateTime	O	

priceType		M (if productOfferingPrice included) O (otherwise)	
unitOfMeasure		M (if productOfferingPrice included) O (otherwise)	
price		M (if productOfferingPrice included) O (otherwise)	
	taxIncludedAmount	M (if price included) O (otherwise)	
	dutyFreeAmount	O	
	taxRate	O	
	currencyCode	M (if price included) O (otherwise)	
recurringChargePeriod		M (if priceType set to "recurring") O (otherwise)	Mandatory if priceType set to "recurring"
version		O	
productOfferPriceAlteration		O	
	name	M (if productOfferPriceAlteration included) O (otherwise)	Mandatory if productOfferPriceAlteration included

		description	O	
		validFor	M (if productOfferPriceAlteration included) O (otherwise)	Mandatory if productOfferPriceAlteration included
		startDateTime	O	
		endDateTime	O	
		priceType	M (if productOfferPriceAlteration included) O (otherwise)	Mandatory if productOfferPriceAlteration included
		unitOfMeasure	M (if productOfferPriceAlteration included) O (otherwise)	Mandatory if productOfferPriceAlteration included
		price	M (if productOfferPriceAlteration included) O (otherwise)	Mandatory if productOfferPriceAlteration included
		taxIncludedAmount	M (if price included) O (otherwise)	
		dutyFreeAmount	O	
		taxRate	O	
		currencyCode	M (if price included) O (otherwise)	

		percentage	O	
		recurringChargePeriod	O	
		priceCondition	O	
		applicationDuration	O	

ProductSpecification resource MANDATORY AND OPTIONAL ATTRIBUTES

Attribute Name	Mandatory or Optional	Comments
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
productNumber	O	
version	O	
lastUpdate	O	

name	M	
description	O	
isBundle	O	Default value is "false"
brand	O	
lifeCycleStatus	M/O	Only required in response messages from the server when providing the ProductSpecification entity contents
validFor	M/O	Only required in response messages from the server when providing the ProductSpecification entity contents
startDateTime	O	
endDateTime	O	
relatedParty	O	Array of structures
id	M (if relatedParty included) O (otherwise)	
href	M (in response messages and if relatedParty included) O (otherwise)	Only required in response messages from the server
role	O	

	name	O	
	validFor	O	
		startDateTime	O	
		endDateTime	O	
attachment		O	Array of structures
	id	M (if relatedParty included) O (otherwise)	
	href	M (in response messages and if relatedParty included) O (otherwise)	Only required in response messages from the server
	type	O	
	url	O	
bundledProductSpecification		M (if isBundle set to true) O (otherwise)	Array of structures Mandatory if isBundle set to true, including at least one entity
	id	M (if bundledProductSpecification included) O (otherwise)	
	href	M (in response messages and if bundledProductSpecification included)	Only required in response messages from the server

		O (otherwise)	
	lifeCycleStatus	O	
	name	O	
productSpecificationRelationship		O	Array of structures
	id	M (if productSpecificationRelationship included) O (otherwise)	
	href	M (in response messages and if productSpecificationRelationship included) O (otherwise)	Only required in response messages from the server
	type	O	
	url	O	
serviceSpecification		O	Array of structures
	id	M (if serviceSpecification included) O (otherwise)	
	href	M (in response messages and if serviceSpecification included) O (otherwise)	Only required in response messages from the server
	name	O	
	version	O	

resourceSpecification	O	Array of structures
id	M (if resourceSpecification included) O (otherwise)	
href	M (in response messages and if resourceSpecification included) O (otherwise)	Only required in response messages from the server
name	O	
version	O	
productSpecCharacteristic	O	Array of structures
name	M (if productSpecCharacteristic included) O (otherwise)	
description	O	
valueType	M (if productSpecCharacteristic included) O (otherwise)	
configurable	O	
productSpecCharacteristicValue	M (if productSpecCharacteristic included) O (otherwise)	Array of structures Mandatory if productSpecCharacteristic is present, including at least one entity

	valueType	O	
	default	O	
	rangeInterval	O	
	value	O	
	unitOfMeasure	O	
	valueFrom	O	
	valueTo	O	
	validFor	O	
	startDateTime	O	
	endDateTime	O	
validFor		O	
	startDateTime	O	
	endDateTime	O	

Category resource MANDATORY AND OPTIONAL ATTRIBUTES

This resource is optional and not included in the basic CONNECT certification. The description of categories can be directly provided as part of the ProductOffering structure.

Catalog resource MANDATORY AND OPTIONAL ATTRIBUTES

There are no operations defined over this resource.

API OPERATIONS CONFORMANCE

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

Product Catalog MANDATORY AND OPTIONAL OPERATIONS

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

API GET FILTERING OPERATION CONFORMANCE

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.:?category=<value>&isBundle=<value>)

Filtered Data (Attribute selection): 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=category,channel) 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

Filtering in Product Offering resource

Attribute name	Filtered search First Level	Filtered search N Level	Attribute Selection First Level	Attribute Selection N Level
id	NA	NA	M	NA
href	NA	NA	M	NA
version	O	NA	M	NA
lastUpdate	O	NA	M	NA
name	O	NA	M	NA
description	O	NA	M	NA
isBundle	M	NA	M	NA
lifecycleStatus	M	NA	M	NA
validFor	NA	O	M	O

category	O	NA	M	O
channel	O	NA	M	O
place	NA	O	M	O
bundledProductOffering	NA	O	M	O
serviceLevelAgreement	NA	O	M	O
productSpecification	NA	O	M	O
serviceCandidate	NA	O	M	O
resourceCandidate	NA	O	M	O
productOfferingTerm	NA	O	M	O
productOfferingPrice	NA	O	M	O

GET /catalogManagement/productOffering/

Filtered Search: A filtered search can be applied using the following filtering criteria

- isBundle: to obtain the list of offerings that are single product (false) or bundle (true)

- lifecycleStatus: To obtain the list of offerings that are in a given status

- name (optional): To obtain the details of the offering with a given name

- category (optional): To obtain the list of offerings belonging to a given category identifier

- channel (optional): To obtain the list of offerings belonging to a given channel identifier

- other optional attributes as defined in the table above

Filtered Data: A filtered response can be requested for the following attributes using the "?fields=" query parameter

- Any of the attributes in the first level of ProductOffering resource definition

GET /catalogManagement/productOffering/{ID}

Filtered Search: A filtered response can be requested for the following attributes using the "?fields=" query parameter

- Any of the attributes in thefirst level of ProductOffering resource definition

Filtering in Product Specification resource

Attribute name	Filtered search First Level	Filtered search N Level	Attribute Selection First Level	Attribute Selection N Level
id	NA	NA	M	NA
href	NA	NA	M	NA
productNumber	O	NA	M	NA
version	O	NA	M	NA
lastUpdate	O	NA	M	NA
name	O	NA	M	NA
description	O	NA	M	NA
isBundle	M	NA	M	NA
brand	O	NA	M	NA
lifecycleStatus	M	NA	M	NA

validFor	NA	O	M	O
relatedParty	NA	O	M	O
attachment	NA	O	M	O
bundledProductSpecification	NA	O	M	O
productSpecificationrelationship	NA	O	M	O
serviceSpecification	NA	O	M	O
resourceSpecification	NA	O	M	O
productSpecCharacteristic	NA	O	M	O

GET /catalogManagement/productSpecification/

Filtered Search: A filtered search can be applied using the following filtering criteria

- isBundle: to obtain the list of product specifications that are single product (false) or bundle (true)

- lifecycleStatus: To obtain the list of product specifications that are in a given status

- name (optional): To obtain the details of the product specification with a given name

- productNumber (optional): To obtain the list of product specifications with a given product number

- brand (optional): To obtain the list of product specifications associated to a given brand name

- other optional attributes as defined in the table above

Filtered Data: A filtered response can be requested for the following attributes using the "?fields=" query parameter

- Any of the attributes in the first level of ProductSpecification resource definition

GET /catalogManagement/productSpecification/{ID}

Filtered Search: A filtered response can be requested for the following attributes using the "?fields=" query parameter

- Any of the attributes in thefirst level of ProductSpecification resource definition

API POST OPERATION CONFORMANCE

POST to /catalogManagement/productOffering

This Uniform Contract operation is used to create a Product Offering resource in the server.

The response to this operation must include a Location header set to /catalogManagement/productOffering/{ID} where {ID} indicates the identifier assigned by the server to the new Product Offering resource created

POST	M	
Response Status Code 201	M	
Other Status Codes	NA	

The following table indicates attributes that are required to be sent when creating a new Product Offering resource as well as attributes with special considerations. All other attributes defining the resource are not required to be sent as aprt of the BODY of the POST request message:

Attribute name	Mandatory	Default	Rule
id	N		Accepted in entity-creation requests if the server supports the incoming identifier as the reference to create new resources
name	Y		
isBundle	N	"false"	If not send it will be considered the same as set to "false"
bundledProductOffering	N		Mandatory if isBundle set to "true", including at least one entity
productSpecification	N		Mandatory if isBundle set to "false"

productOfferingPrice	N		It is possible to have a Product Offering without prices assigned
category:id	N		Mandatory if category included The consumer must indicate the identifier for every category assigned to the Product Offering
channel:id	N		Mandatory if channel included The consumer must indicate the identifier for every channel assigned to the Product Offering
place:id	N		Mandatory if place included The consumer must indicate the identifier for every place assigned to the Product Offering
bundledProductOffering:id	N		Mandatory if bundledProductOffering included The consumer must indicate the identifier for every bundled product offering assigned to the Product Offering
serviceLevelAgreement:id	N		Mandatory if serviceLevelAgreement included The consumer must indicate the identifier for every SLA assigned to the Product Offering

productSpecification:id	N		Mandatory if productSpecification included The consumer must indicate the identifier for the product specification assigned to the Product Offering
serviceCandidate:id	N		Mandatory if serviceCandidate included The consumer must indicate the identifier for the service candidate assigned to the Product Offering
resourceCandidate:id	N		Mandatory if resourceCandidate included The consumer must indicate the identifier for the resource candidate assigned to the Product Offering
productOfferingTerm.name	N		Mandatory if productOfferingTerm included
productOfferingTerm.durati on	N		Mandatory if productOfferingTerm included
productOfferingTerm.validF or	N		Mandatory if productOfferingTerm included
productOfferingPrice.name	N		Mandatory if productOfferingPrice included

productOfferingPrice.validF or	N		Mandatory if productOfferingPrice included
productOfferingPrice.price Type	N		Mandatory if productOfferingPrice included
productOfferingPrice.unitOf Measure	N		Mandatory if productOfferingPrice included
productOfferingPrice.price	N		Mandatory if productOfferingPrice included
productOfferingPrice .price.taxIncludedAmount	N		Mandatory if productOfferingPrice. price included
productOfferingPrice .price. currencyCode	N		Mandatory if productOfferingPrice. price included
productOfferingPrice.recurr ingChargePeriod	N		Mandatory if productOfferingPrice .priceType set to "recurring"
productOfferPriceAlteration .name	N		Mandatory if productOfferPriceAlteration included
productOfferPriceAlteration .validFor	N		Mandatory if productOfferPriceAlteration

			included
productOfferPriceAlteration.priceType	N		Mandatory if productOfferPriceAlteration included
productOfferPriceAlteration.unitOfMeasure	N		Mandatory if productOfferPriceAlteration included
productOfferPriceAlteration.price	N		Mandatory if productOfferPriceAlteration included
productOfferPriceAlteration.price.taxIncludedAmount	N		Mandatory if productOfferPriceAlteration.price included
productOfferPriceAlteration.price.currencyCode	N		Mandatory if productOfferPriceAlteration.price included

The response from the server must include a BODY with the contents of the new resource created

If the POST request includes optional parameters (as per the model resource definition) that are not supported by the server, then the server must reject the request (replying with a 4xx error response) indicating the parameter not supported.

The following parameters must be supported by the server when included in the request to create a new resource

- name

- lifecycleStatus
- description
- isBundle
- validFor
- bundledProductOffering
- bundledProductOffering.id
- bundledProductOffering.name
- productSpecification
- productSpecification.id
- productSpecification.name
- productOfferingPrice
- productOfferingPrice.name
- productOfferingPrice.description
- productOfferingPrice.validFor
- productOfferingPrice.priceType
- productOfferingPrice.unitOfMeasure
- productOfferingPrice.recurringChargePeriod productOfferingPrice.price
- productOfferingPrice.price.taxIncludedAmount
- productOfferingPrice.price.currencyCode

The BODY of the response from the server must include attribute "href" set to the same value as the one in the Location header.

The BODY of the response from the server must include the following attributes that are mandatory in the definition of a Product Offering as per the resource model defined even if they are not included in the request

- id
- lifecycleStatus
- validFor

The BODY of the response from the server must include attribute "href" under each one of the entities within the Product Offering model that can be addressed individually and were included in the request. This applies to any of the following entities

- category
- channel
- place
- bundledProductOffering
- serviceLevelAgreement

- productSpecification
- serviceCandidate
- resourceCandidate

POST to /catalogManagement/productSpecification

This Uniform Contract operation is used to create a Product Specification resource in the server.

The response to this operation must include a Location header set to /catalogManagement/productSpecification/{ID} where {ID} indicates the identifier assigned by the server to the new Product Specification resource created

POST	M	
Response Status Code 201	M	
Other Status Codes	NA	

The following table indicates attributes that are required to be sent when creating a new Product Specification resource as well as attributes with special considerations. All other attributes defining the resource are not required to be sent as aprt of the BODY of the POST request message:

Attribute name	Mandatory	Default	Rule
id	N		Accepted in entity-creation requests if the server supports the incoming identifier as the reference to create new resources
name	Y		
isBundle	N	"false"	If not send it will be considered the same as set to "false"
bundledProductSpecification	N		Mandatory if isBundle set to "true", including at least one entity

productSpecCharacteristic	N		It is possible to have a Product Specification without characteristics assigned
productSpecCharacteristic Value	N		Mandatory if productSpecCharacteristic is present, including at least one entity
relatedParty:id	N		Mandatory if relatedParty included The consumer must indicate the identifier for every related party assigned to the Product Spec
attachment:id	N		Mandatory if attachment included The consumer must indicate the identifier for every attachment assigned to the Product Spec
bundledProductSpecificatio n:id	N		Mandatory if bundledProductSpecification included The consumer must indicate the identifier for every bundled product spec assigned to the Product Specification
productSpecificationRelatio nship:id	N		Mandatory if productSpecificationRelations hip included The consumer must indicate the identifier for every relationship assigned to the Product Spec

serviceSpecification:id	N		Mandatory if serviceSpecification included The consumer must indicate the identifier for the service spec assigned to the Product Spec
resourceSpecification:id	N		Mandatory if resourceSpecification included The consumer must indicate the identifier for the resource spec assigned to the Product Spec
productSpecCharacteristic. name	N		Mandatory if productSpecCharacteristic included
productSpecCharacteristic. valueType	N		Mandatory if productSpecCharacteristic included

The response from the server must include a BODY with the contents of the new resource created

If the POST request includes optional parameters (as per the model resource definition) that are not supported by the server, then the server must reject the request (replying with a 4xx error response) indicating the parameter not supported.

The following parameters must be supported by the server when included in the request to create a new resource

- name
- lifecycleStatus
- description
- isBundle

- validFor
- productNumber
- brand
- bundledProductSpecification
- bundledProductSpecification.id
- bundledProductSpecification.name
- productSpecCharacteristic
- productSpecCharacteristic.name
- productSpecCharacteristic.valueType
- productSpecCharacteristic.productSpecCharacteristicValue
- productSpecCharacteristic.productSpecCharacteristicValue.valueType
- productSpecCharacteristic.productSpecCharacteristicValue.default
- productSpecCharacteristic.productSpecCharacteristicValue.value

The BODY of the response from the server must include attribute "href" set to the same value as the one in the Location header.

The BODY of the response from the server must include the following attributes that are mandatory in the definition of a Product Specification as per the resource model defined even if they are not included in the request

- id
- lifeCycleStatus
- validFor

The BODY of the response from the server must include attribute "href" under each one of the entities within the Product Offering model that can be addressed individually and were included in the request. This applies to any of the following entities

- relatedParty
- attachment
- bundledProductSpecification
- productSpecificationRelationship
- serviceSpecification
- resourceSpecification

API PATCH OPERATION CONFORMANCE

This section defines which attributes are patchable.

Since PATCH operation is optional and not included in the basic CONNECT certification this is not applicable in this conformance document.

API DELETE OPERATION CONFORMANCE

This section defines what operations can be used to delete a Product Offering or Product Specification resource.

Since DELETE operation is optional and not included in the basic CONNECT certification this is not applicable in this conformance document

API CONFORMANCE TEST SCENARIOS

This section describes the test scenarios required for the basic CONNECT certification of Product Catalog 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}/catalogManagement/v1**, being {serverRoot} defines the certification endpoint

ProductOffering resource TEST CASES

Nominal Scenarios

TC_ProdOff_N1 – Create new single Product Offering

- Send a POST message to {apiRoot}/productOffering/ with the following contents in the BODY

```
{
    "name": "<anytext>",
    "description": "<anytext>",
    "isBundle": false,
    "lifecycleStatus": "Active",
    "validFor":
    {
        "startDateTime": "<any value with correct datetime format>",
        "endDateTime": "<any value with correct datetime format>"
    },
    "productSpecification":
    {
        "id": "11",
        "name": "Product11"
    }
}
```

- Wait for a response from the server with the following characteristics

    - Response Code 201-Created

    - Include a location header in the body set to /catalogManagement/productOffering/{IDpo1} where {IDpo1} indicates the identifier assigned by the server to the new ProductOffering resource

- The response message includes all mandatory parameters

- The body of the response matches the values in the original request

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

- Wait for a response from the server with the following characteristics

  - Response Code 200-OK

  - The body of the response includes one ProductOffering resource with ID set to {IDpo1}, the same identifier as assigned by the server to the new resource created

  - The response message includes all mandatory parameters

  - The body of the response for the resource with identifier {IDpo1} matches the values in the original request

- Send a GET message to /{apiRoot}/productOffering/{IDpo1}

- Wait for a response from the server with the following characteristics

  - Response Code 200-OK

  - The response message includes all mandatory parameters

  - The body of the response includes a ProductOffering resource structure that matches the values in the original request

TC_ProdOff_N2 – Create new bundled Product Offering

- Send POST to /{apiRoot}/productOffering/ with the following contents in the BODY

```
{
    "name": "<anytext>",
    "description": "<anytext>",
    "isBundle": true,
    "lifecycleStatus": "Active",
    "validFor":
    {
        "startDateTime": "<any value with correct datetime format>",
        "endDateTime": "<any value with correct datetime format>"
    },
```

```
"bundledProductOffering":
[
    {
        "id": "121",
        "name": "ProductOffering121"
    },
    {
        "id": "122",
        "name": "ProductOffering122"
    }
]
}
```

- Wait for a response from the server with the following characteristics

    - Response Code 201-Created

    - Include a location header in the body set to /catalogManagement/productOffering/{IDpo2} where {IDpo2} indicates the identifier assigned by the server to the new ProductOffering resource

    - The response message includes all mandatory parameters

    - The body of the response matches the values in the original request

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

- Wait for a response from the server with the following characteristics

    - Response Code 200-OK

    - The body of the response includes two ProductOffering resources, one of them with ID set to {IDpo2}, the same identifier as assigned by the server to the new resource created

    - The response message includes all mandatory parameters

    - The body of the response for the resource with identifier {IDpo2} matches the values in the original request

- Send a GET message to /{apiRoot}/productOffering/{IDpo2}

- Wait for a response from the server with the following characteristics

    - Response Code 200-OK

- The response message includes all mandatory parameters

- The body of the response includes a ProductOffering resource structure that matches the values in the original request

TC_ProdOff_N3 – Create new single Product Offering with prices included

- Send a POST message to /{apiRoot}/productOffering/ with the following contents in the BODY

```
{
    "name": "<anytext>",
    "description": "<anytext>",
    "isBundle": false,
    "lifecycleStatus": "Retired",
    "validFor":
    {
        "startDateTime": "<any value with correct datetime format>",
        "endDateTime": "<any value with correct datetime format>"
    },
    "productSpecification":
     {
        "id": "13",
        "name": "Product13"
    },
    "productOfferingPrice":
    [
        {
            "name": "Price13_1",
            "description": "This is the first price plan for
ProductOffering13",
            "validFor":
            {
                "startDateTime": "<any value with correct datetime
format>",
                "endDateTime": "<any value with correct datetime
format>"
            },
            "priceType": "recurring",
            "unitOfMeasure": "1 subscription",
            "price":
                {
                    "taxIncludedAmount": 131,
                    "currencyCode": "GBP",
                },
            "recurringChargePeriod": "monthly"
        },
        {
            "name": "Price13_2",
```

```
                “description”: “This is the second price plan for
ProductOffering13”
                “validFor”:
                {
                    “startDateTime”: ”<any value with correct datetime
format>”,
                    “endDateTime”: “<any value with correct datetime
format>”
                },
                “priceType”: “one time”,
                “unitOfMeasure”: “1 subscription”,
                “price”:
                    {
                        “taxIncludedAmount”: 132,
                        “currencyCode”: “EUR”
                    }
            }
        ]
    }
```

- Wait for a response from the server with the following characteristics

    - Response Code 201-Created

    - Include a location header in the body set to /catalogManagement/productOffering/{IDpo3} where {IDpo3} indicates the identifier assigned by the server to the new ProductOffering resource

    - The response message includes all mandatory parameters

    - The body of the response matches the values in the original request

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

- Wait for a response from the server with the following characteristics

    - Response Code 200-OK

    - The body of the response includes three ProductOffering resources, one of them with ID set to {IDpo3}, the same identifier as assigned by the server to the new resource created

    - The response message includes all mandatory parameters

    - The body of the response for the resource with identifier IDn3 matches the values in the original request

- Send a GET message to /{apiRoot}/productOffering/{IDpo3}

- Wait for a response from the server with the following characteristics

    - Response Code 200-OK

    - The response message includes all mandatory parameters

    - The body of the response includes a ProductOffering resource structure that matches the values in the original request

TC_ProdOff_N4 – Search for Product Offerings with specific characteristics

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

- Wait for a response from the server with the following characteristics
    - Response Code 200-OK

    - The body of the response includes three productSpecification resources, referring to {IDps1}, {IDps2} and {IDps3}

    - The body of the response for the resource with each identifier matches the values in the corresponding original request

- Send a GET message to /{apiRoot}/productOffering/?isBundle=true

- Wait for a response from the server with the following characteristics

    - Response Code 200-OK

    - The body of the response includes one ProductOffering resource, referring to {IDpo2}

    - The response message includes all mandatory parameters

    - The body of the response for the resource with identifier {IDpo2} matches the values in the original request

- Send a GET message to /{apiRoot}/productOffering/?isBundle=false

- Wait for a response from the server with the following characteristics

- Response Code 200-OK

- The body of the response includes two ProductOffering resources, referring to {IDpo1} and {IDpo3}

- The response message includes all mandatory parameters

- The body of the response for the resource with each identifier matches the values in the corresponding original request

- Send a GET message to /{apiRoot}/productOffering/?status=Active

- Wait for a response from the server with the following characteristics

  - Response Code 200-OK

  - The body of the response includes two ProductOffering resources, referring to {IDpo1} and {IDpo2}

  - The response message includes all mandatory parameters

  - The body of the response for the resource with each identifier matches the values in the corresponding original request

- Send a GET message to /{apiRoot}/productOffering/?status=Retired

- Wait for a response from the server with the following characteristics

  - Response Code 200-OK

  - The body of the response includes one ProductOffering resource, referring to {IDpo3}

  - The response message includes all mandatory parameters

  - The body of the response for the resource with identifier {IDpo3} matches the values in the original request

TC_ProdOff_N5 – Filtered retrieval of Product Offering data

- Send a GET message to /{apiRoot}/productOffering/{IDpo1}?fields=name,description

- Wait for a response from the server with the following characteristics

    - Response Code 200-OK

    - The body of the response includes one ProductOffering resource, referring to {IDpo1} and including only attributes name and description, matching the values in the original request

- Send a GET message to /{apiRoot}/productOffering/{IDpo2}?fields=name, validFor,bundledProductOffering

- Wait for a response from the server with the following characteristics

    - Response Code 200-OK

    - The body of the response includes one ProductOffering resource, referring to {IDpo2} and including only attributes name, validFor and bundledProductOffering, matching the values in the original request

Notice that this test case is using parameters "name" and "description" to filter the data included in the response but any other parameter could be used

TC_ProdOff_N6 – Filtered Search and Filtered data response

- Send a GET message to /{apiRoot}/productOffering/?isBundle=false&fields=name,description,validFor

- Wait for a response from the server with the following characteristics

    - Response Code 200-OK

    - The body of the response includes two ProductOffering resources, referring to {IDpo1} and {IDpo3}

    - The body of the response for the resource with each identifier includes only attributes name, description and validFor, matching the values in the corresponding original request

Notice that this test case is using parameters "name" , "description" and "validFor" to filter the data included in the response but any other parameter could be used

TC_ProdOff_N7 – Parameter not included in create request but provided in response

- Send a POST message to {apiRoot}/productOffering/ with the following contents in the BODY

```
{
    "name": "<anytext>",
    "description": "<anytext>",
    "isBundle": false,
    "validFor":
    {
        "startDateTime": "<any value with correct datetime format>",
        "endDateTime": "<any value with correct datetime format>"
    },
    "productSpecification":
    {
        "id": "11",
        "name": "Product71"
    }
}
```

- Wait for a response from the server with the following characteristics

    - Response Code 201-Created

    - Include a location header in the body including the identifier assigned by the server to the new ProductOffering resource

    - The body of the response includes parameter "lifecycleStatus"

Notice that this test case is using parameters "lifecycleStatus" but any other parameter that is mandatory as part of the entity definition stored in the server (as defined by SID) but not required to be sent in the creation request, can be used, as for instance "validFor".

Error Scenarios

TC_ProdOff_E1 – Unknown Product Offering

- Send a GET message to /{apiRoot}/productOffering/{IDpo4}, where {IDpo4} does not match any of the identifiers previously creted in the server

- Wait for a response from the server with the following characteristics

    o Response Code 404-Not Found

TC_ProdOff_E2 – Invalid Request – Missing mandatory parameter

- Send a POST message to {apiRoot}/productOffering/ with the following contents in the BODY.

```
{
    "description": "<anytext>",
    "isBundle": false,
    "lifecycleStatus": "Active",
    "validFor":
    {
        "startDateTime": "<any value with correct datetime format>",
        "endDateTime": "<any value with correct datetime format>"
    },
    "productSpecification":
     {
        "id": "11",
        "name": "Product11"
    }
}
```

Notice that this request is missing mandatory parameter "name" but any other mandatory parameter could be used

- Wait for an error response from the server indicating the mandatory parameter is missing in the request

TC_ProdOff_E3 – Invalid Request – Missing parameter mandatory in context

- Send a POST message to {apiRoot}/productOffering/ with the following contents in the BODY.

```
{
    "name": "",
    "description": "",
    "isBundle": true,
    "lifecycleStatus": "Active",
    "validFor":
    {
        "startDateTime": "<any value with correct datetime format>",
        "endDateTime": "<any value with correct datetime format>"
    }
}
```

Notice that this request is missing mandatory parameter
"bundledProductOffering" when parameter "isBundle" is set to true but any

other parameter that becomes mandatory based on the context could be used

- Wait for an error response from the server indicating the mandatory parameter is missing in the request

ProductSpecification resource TEST CASES

Nominal Scenarios

TC_ProdSpec_N1 – Create new single Product Specification

- Send a POST message to {apiRoot}/productSpecification/ with the following contents in the BODY

```
{
    "name": "<anytext>",
    "description": "<anytext>",
    "productNumber": "<anytext>",
    "brand": "<anytext>",
    "isBundle": false,
    "lifecycleStatus": "Retired",
    "validFor":
    {
        "startDateTime": "<any value with correct datetime format>",
        "endDateTime": "<any value with correct datetime format>"
    },
    "productSpecCharacteristic":
    [
      {
        "name": "Characteristic1",
        "valueType": "string",
        "productSpecCharacteristicValue":
            [
                {
                  "valueType": "string",
                  "default": true,
                  "value": "value11"
                },
                {
                  "valueType": "string",
                  "default": false,
                  "value": "value12"
                }
            ]
      }
    ]
}
```

- Wait for a response from the server with the following characteristics

    - Response Code 201-Created

    - Include a location header in the body set to /catalogManagement/productSpecification/{IDps1} where {IDps1} indicates the identifier assigned by the server to the new ProductSpecification resource

    - The response message includes all mandatory parameters

    - The body of the response matches the values in the original request

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

- Wait for a response from the server with the following characteristics

    - Response Code 200-OK

    - The body of the response includes one ProductSpecification resource with ID set to {IDps1}, the same identifier as assigned by the server to the new resource created

    - The response message includes all mandatory parameters

    - The body of the response for the resource with identifier {IDps1} matches the values in the original request

- Send a GET message to /{apiRoot}/productOffering/{IDps1}

- Wait for a response from the server with the following characteristics

    - Response Code 200-OK

    - The response message includes all mandatory parameters

    - The body of the response includes a ProductSpecification resource structure that matches the values in the original request

TC_ProdSpec_N2 – Create new bundled Product Specification

- Send a POST message to {apiRoot}/productSpecification/ with the following contents in the BODY

```
{
    "name": "<anytext>",
    "description": "<anytext>",
    "productNumber": "<anytext>",
    "brand": "<anytext>",
    "isBundle": true,
    "lifecycleStatus": "Active",
    "validFor":
    {
        "startDateTime": "<any value with correct datetime format>",
        "endDateTime": "<any value with correct datetime format>"
    },
    "bundledProductSpecification":
    [
        {
            "id": "121",
            "name": "ProductSpec121"
        },
        {
            "id": "122",
            "name": "ProductSpec122"
        }
    ]
}
```

- Wait for a response from the server with the following characteristics

  - Response Code 201-Created

  - Include a location header in the body set to /catalogManagement/productSpecification/{IDps2} where {IDps2} indicates the identifier assigned by the server to the new ProductSpecification resource

  - The response message includes all mandatory parameters

  - The body of the response matches the values in the original request

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

- Wait for a response from the server with the following characteristics

  - Response Code 200-OK

- The body of the response includes one ProductSpecification resource with ID set to {IDps2}, the same identifier as assigned by the server to the new resource created

- The response message includes all mandatory parameters

- The body of the response for the resource with identifier {IDps2} matches the values in the original request

- Send a GET message to /{apiRoot}/productSpecification/{IDps2}

- Wait for a response from the server with the following characteristics

  - Response Code 200-OK

  - The response message includes all mandatory parameters

The body of the response includes a ProductSpecification resource structure that matches the values in the original request

TC_ProdSpec_N3 – Search for Product Spec with specific characteristics

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

- Wait for a response from the server with the following characteristics
  - Response Code 200-OK

  - The body of the response includes two productSpecification resources, referring to {IDps1} and {IDps2}

  - The body of the response for the resource with each identifier matches the values in the corresponding original request

- Send a GET message to /{apiRoot}/productSpecification/?isBundle=true

- Wait for a response from the server with the following characteristics

  - Response Code 200-OK

  - The body of the response includes one single productSpecification resource, referring to {IDps2}

- The response message includes all mandatory parameters

- The body of the response for the resource matches the values in the original request for {IDps2}

- Send a GET message to /{apiRoot}/ productSpecification /?isBundle=false

- Wait for a response from the server with the following characteristics

  - Response Code 200-OK

  - The body of the response includes one single productSpecification resource, referring to {IDps1}

  - The response message includes all mandatory parameters

  - The body of the response for the resource matches the values in the original request for {IDps1}

- Send a GET message to /{apiRoot}/ productSpecification /?status=Active

- Wait for a response from the server with the following characteristics

  - Response Code 200-OK

  - The body of the response includes one single productSpecification resources, referring to {IDps2}

  - The response message includes all mandatory parameters

  - The body of the response for the resource matches the values in the original request for {IDps2}

- Send a GET message to /{apiRoot}/ productSpecification /?status=Retired

- Wait for a response from the server with the following characteristics

  - Response Code 200-OK

  - The body of the response includes one single productSpecification resource, referring to {IDps1}

- The response message includes all mandatory parameters

- The body of the response for the resource matches the values in the original request for {IDps1}

TC_ProdSpec_N4 – Filtered retrieval of Product Offering data

- Send a GET message to /{apiRoot}/ productSpecification/{IDps1}?fields=name,description

- Wait for a response from the server with the following characteristics

  - Response Code 200-OK

  - The body of the response includes one productSpecification resource, referring to {IDps1} and including only attributes name and description, matching the values in the original request for {IDps1}

- Send a GET message to /{apiRoot}/ productSpecification /{IDps2}?fields=name, validFor,bundledProductSpecification

- Wait for a response from the server with the following characteristics

  - Response Code 200-OK

  - The body of the response includes one productSpecification resource, referring to {IDps2} and including only attributes name, validFor and bundledProductOffering, matching the values in the original request for {IDps2}

  Notice that this test case is using parameters "name" and "description" to filter the data included in the response but any other parameter could be used

TC_ProdSpec_N5 – Filtered Search and Filtered data response

- Send a GET message to /{apiRoot}/productSpecification/?isBundle=false&fields=name,description,validFor

- Wait for a response from the server with the following characteristics

- Response Code 200-OK

- The body of the response includes on single productSpecification resource, referring to {IDps1}

- The body of the response for the resource includes only attributes name, description and validFor, matching the values in the corresponding original request for {IDps1}

Notice that this test case is using parameters "name" and "description" to filter the data included in the response but any other parameter could be used

TC_ProdSpec_N6 – Parameter not included in create request but provided in response

- Send a POST message to {apiRoot}/productSpecification/ with the following contents in the BODY

```
{
    "name": "<anytext>",
    "description": "<anytext>",
    "brand": "<anytext>",
    "isBundle": false,
    "validFor":
    {
        "startDateTime": "<any value with correct datetime format>",
        "endDateTime": "<any value with correct datetime format>"
    },
    "productSpecCharacteristic":
    [
      {
        "name": "Characteristic1",
        "valueType": "string",
        "productSpecCharacteristicValue":
        [
            {
              "valueType": "string"
              "default": true,
              "value": "value61"
            }
        ]
      }
    ]
}
```

- Wait for a response from the server with the following characteristics

- Response Code 201-Created

- The body of the response includes parameter "lifecycleStatus"

Notice that this test case is using parameters "lifecycleStatus" but any other parameter that is mandatory as part of the entity definition stored in the server (as defined by SID) but not required to be sent in the creation request, can be used, as for instance "validFor".

Error Scenarios

TC_ProdSpec_E1 – Unknown Product Specification

- Send a GET message to /{apiRoot}/productSpecification/{IDps4}, where {IDps4} does not match any of the identifiers previously creted in the server

- Wait for a response from the server with the following characteristics

  o Response Code 404-Not Found

TC_ ProdSpec _E2 – Invalid Request – Missing mandatory parameter

- Send a POST message to {apiRoot}/ productSpecification/ with the following contents in the BODY.

```
{
    "description": "<anytext>",
    "productNumber": "<anytext>",
    "brand": "<anytext>",
    "isBundle": false,
    "lifecycleStatus": "Retired",
    "validFor":
    {
        "startDateTime": "<any value with correct datetime format>",
        "endDateTime": "<any value with correct datetime format>"
    },
    "productSpecCharacteristic":
    [
      {
      "name": "Characteristic1",
      "valueType": "string",
      "productSpecCharacteristicValue":
      [
{
        "valueType": "string"
        "default": true,
```

```
            "value": "value11"
        },
        {
            "valueType": "string"
            "default": false,
            "value": "value12"
        }
    ]
        }
    ]
}
```

Notice that this request is missing mandatory parameter "name" but any other mandatory parameter could be used

- Wait for an error response from the server indicating the mandatory parameter is missing in the request

TC_ ProdSpec _E3 – Invalid Request – Missing parameter mandatory in context

- Send a POST message to {apiRoot}/productOffering/ with the following contents in the BODY.

```
{
    "name": "<anytext>",
    "description": "<anytext>",
    "productNumber": "<anytext>",
    "brand": "<anytext>",
    "isBundle": true,
    "lifecycleStatus": "Active",
    "validFor":
    {
        "startDateTime": "<any value with correct datetime format>",
        "endDateTime": "<any value with correct datetime format>"
    },
}
```

Notice that this request is missing mandatory parameter "bundledProductSpecification" when parameter "isBundle" is set to true but any other parameter that becomes mandatory based on the context could be used

- Wait for an error response from the server indicating the mandatory parameter is missing in the request

ACKNOWLEDGEMENTS

RELEASE HISTORY