

TM Forum Specification

Shopping Cart Management API Conformance Profile

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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

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Introduction - API DESCRIPTION

See the introduction of the related specification document.

RESOURCE MODEL CONFORMANCE

API MANDATORY AND OPTIONAL RESOURCES

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

Resource Name	Mandatory or Optional	Comments
ShoppingCart	M	

ShoppingCart MANDATORY AND OPTIONAL ATTRIBUTES

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

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
validFor	M (in response messages)	Not available in POST request. Generated by the server (e.g.

			90 if no activity or 7 days if cart is empty). Attribute non patchable.
@baseType	O		
@type	O		
@schemaLocation	O		
contactMedium	O		
	characteristic	O	At list one characteristic must be populated (e.g. emailAddress, phoneNumber)
	mediumType	M	
	preferred	O	
	validFor	O	
	@baseType	O	
	@schemaLocation	O	
	@type	O	
cartTotalPrice	O		Not available in POST request. Generated by the server. Attribute non patchable.
relatedParty	O		
	id	M	
	href	O	

	role	O	
	name	O	
	@referredType	M	It allows to get id type : partyRole or Party or Party specialization: individual or organization
	@baseType	O	
	@schemaLocation	O	
	@type	O	
cartItem		O	Shopping Cart can be created empty
	id	M	
	quantity	O	By default '1' if not provided
	action	M	
	status	O	By default 'active' if not provided
	@baseType	O	
	@schemaLocation	O	
	@type	O	
	productOffering	O/M if cartItem.action = add a productOffering must be provided	0 or 1
	itemTerm	O	Array of term(s)
	note	O	Array of note(s).

			note.text must be provided
	cartItem	O	An array of cartItem embedded in this cartItem. Use to describe bundled structure of productOffering.
	cartItemRelationship	O	Array of Item relationship
	itemTotalPrice	O	
	itemPrice	O	<p>If provided, priceType is mandatory.</p> <p>If priceType is a recurrent, a recurringChargePeriod must be provided.</p> <p>If price used within a priceAlteration: dutyFreeAmount or taxIncludedAmount or percentage must be provided.</p> <p>if price is not used within a priceAlteration: percentage must not be filled, a dutyFreeAmount or a taxIncludedAmount must be filed.</p>
	product	M/O Must be provided if productOffering not provided	0 or 1 if isRef=true, an id must be provided.

NOTIFICATION MODEL CONFORMANCE

The Pub/Sub models are common and described in the TMF REST Design Guidelines. Use the following templates to describe the Hub Mandatory and Optional attributes and filtering support.

API MANDATORY AND OPTIONAL NOTIFICATIONS

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

Notification Name	Mandatory or Optional	Comments
ShoppingCartCreateEvent	O	
ShoppingCartDeleteEvent	O	
ShoppingCartAttributeValueChangeEvent	O	

All attributes of the resource associated with the notification are mandatory.

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	GET must be used to retrieve a representation of a resource

POST	M	POST must be used to create a new resource
PATCH	O	PATCH must be used to partially update a resource
DELETE	O	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.

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.:`?validFor=<value>&contactMedium.characteristic.emailAddress=<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=validFor,cardTotalPrice.price`) 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

All the GET operations in this API share the state status code pattern:

GET	M	
Response Status Code 200	M	With JSON objects as body response.
Response Status Code 404	M	When resource can't be found
Other Status Codes	N/A	

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

This operation list shopping cart entities.

Attribute selection is mandatory for all first level attributes.

Filtering is mandatory for first compliance level (L1) and optional otherwise.

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

This operation retrieves a shopping cart entity.

Attribute selection is mandatory for all first level attributes.

1. API POST OPERATION CONFORMANCE**POST /shoppingCart**

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

The response to this operation must include a Location header set to /shoppingCart /v4/shoppingCart/{ID} where {ID} indicates the identifier assigned by the server to the new shoppingCart 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 ShoppingCart as well as attributes with special considerations:

Attribute Name	Mandatory or Optional	Comments
id	N/A	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	N/A	Value in response must be the same as the one set in Location header provided upon entity

		creation
validFor	N/A	<p>Not available in POST request.</p> <p>Generated by the server (e.g. 90 if no activity or 7 days if cart is empty).</p> <p>Must be provided in response</p>
@baseType	O	
@type	O	
@schemaLocation	O	
contactMedium	O	<p>If provided. mediumType and at list one characteristic must be populated (e.g. emailAddress, phoneNumber)</p>
cartTotalPrice	N/A	<p>Not available in POST request.</p> <p>Generated by the server.</p> <p>Attribute non patchable.</p>
relatedParty	O	<p>If provided id and @referredType must be populated</p>
cartItem	O	<p>Shopping Cart can be created empty.</p> <p>If present then, action is mandatory, quantity is set to 1 by default, status is set to 'active' by default, if cartItem.action = add a productOffering must be provided.</p>

The response from the server must include a BODY with the contents of the new resource created, filled with at least the same information elements that were included in the request and are supported by the server.

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

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

- id
- href
- validFor

The BODY of the response from the server could include attribute “href” (or “reference”) under each one of the entities within the ShoppingCart model that can be addressed individually and were included in the response. This applies to any of the following entities

- relatedParty
- productSpecification
- product
- service
- etc...

API PATCH OPERATION CONFORMANCE

PATCH /shoppingCart /{id}

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

DELETE /shoppingCart /{id}

This section defines what operations can be used to delete a ProductOrder 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 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}/shoppingCart/v4, where {serverRoot} defines the certification endpoint

Nominal Scenarios

TC_ShoppingCart_N1 – Create new shopping cart (empty cart) with minimum mandatory information

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

```
{  
  
}
```

Note: there are no mandatory fields for the creation.

- Wait for a response from the server with the following characteristics
 - Response Code 201-Created
 - Include a location header in the body set to /{apiRoot}/shoppingCart/{IDshpct1} where {IDshpct1} indicates the identifier assigned by the server to the new shopping cart resource
 - The response message includes all mandatory parameters and calculated values (id,href,validFor)
 - The body of the response matches the values set in the original request
- Send a GET message to /{apiRoot}/shoppingcart/
- Wait for a response from the server with the following characteristics

- Response Code 200-OK
 - The body of the response includes one shopping cart resource with ID set to {IDshpc1}, the same identifier as assigned by the server to the new resource created
 - The response message includes all mandatory parameters and calculated values
 - The body of the response for the resource with identifier {IDshpc1} matches the values set in the original request
- Send a GET message to {apiRoot}/shoppingCart/{IDshpc1}
 - 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 shoppingCart resource structure that matches the values in the original request

TC_ShoppingCart_N2 – Create new shopping cart (including item) with minimum mandatory information

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

```
{  
  
  {  
    "cartItem": [  
      {  
        "action": "add",  
        "productOffering": {  
          "id": "142456",  
          "href": "https://mycsp.com:8080/tmf-  
api/productCatalogManagement/v4/productOffering/142456",  
          "name": "Talk Simple 25"  
        }  
      }  
    ]  
  }  
}
```

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

- Response Code 201-Created
- Include a location header in the body set to `{apiRoot}/shoppingCart/{IDshpc1}` where `{IDshpc1}` indicates the identifier assigned by the server to the new shopping cart resource
- The response message includes all mandatory attributes generated by the server
- The body of the response matches the values set in the original request
- Send a GET message to `{apiRoot}/shoppingcart/`
- Wait for a response from the server with the following characteristics
 - Response Code 200-OK
 - The body of the response includes one shopping cart resource with ID set to `{IDshpc1}`, 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 `{IDshpc1}` matches the values set in the original request
- Send a GET message to `{apiRoot}/shoppingCart/{IDshpc1}`
- 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 shoppingCart resource structure that matches the values in the original request

TC_ShoppingCart_N3 – Search for shopping cart with specific characteristics (expired in 7 days from today)

- Send a GET message to `/{{apiRoot}}/shoppingCart`
- Wait for a response from the server with the following characteristics
 - Response Code 200-OK
 - The body of the response includes at least one shopping cart resource
 - 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}}/shoppingCart/IDshp1?validFor.endDateTime<=2019-06-20T00:00:00`
- Wait for a response from the server with the following characteristics
 - Response Code 200-OK
 - The body of the response includes one shopping cart resource referring to `{IDshpc1}`
 - The response message includes all mandatory parameters
 - The body of the response for the resource with identifier `{IDshpc1}` matches the values in the original request

1. Release History

Release Number	Date	Release led by:	Description
Release 18.0.0	25-Jun-2018	Pierre Gauthier TM Forum pgauthier@tmforum.org	Initial Release
Release 18.0.1	10-Sep-2018	Adrienne Walcott	Updated to reflect TM Forum Approved Status

Release 18.0.2	13-Jan-2019	Jacob Avraham Amdocs jacoba@amdcs.com	Make cartItem.id optional
Release 19.0.0	20-Jun-2019	Jacob Avraham Amdocs jacoba@amdcs.com	Update content for Shopping Cart release 19.0 API version V4