

# TM Forum Specification

## Shopping Cart Conformance Profile

**TMF663B**

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## Introduction - API description

The following document is the conformance specification of the REST API for Any management.

## Resource Model Conformance

### API Mandatory Resources

The following table indicates the mandatory resources for this API.

Resource Name	Comment
ShoppingCart	

### 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.

### ShoppingCart Resource Mandatory Attributes

Mandatory attribute when parent is present	Rule
href	M (in response messages)

Mandatory attribute when parent is present	Rule
@type	M
cartItem (if present)	
@type	M
cartItem.cartItemRelationship (if present)	
id	M
relationshipType	M
@type	M
cartItem.itemPrice (if present)	
price	M
priceType	M
cartItem.itemPrice.price	
@type	M
cartItem.itemPrice.priceAlteration (if present)	
price	M  See conditions for Price at cartItem.itemPrice.price.
priceType	M
@type	M
cartItem.itemPrice.priceAlteration.price	M  See conditions for Price at cartItem.itemPrice.price.
cartItem.itemPrice.priceAlteration.productOfferingPrice (if present)	
id	M
@type	M
@type	M
cartItem.itemPrice.productOfferingPrice (if present)	See conditions for ProductOfferingPriceRef at cartItem.itemPrice.priceAlteration.productOfferingPrice.
cartItem.itemTerm (if present)	
@type	M
cartItem.itemTotalPrice (if present)	See conditions for CartPrice at cartItem.itemPrice.

Mandatory attribute when parent is present	Rule
cartItem.itemTotalPrice.price	M See conditions for Price at cartItem.itemPrice.price.
cartItem.itemTotalPrice.priceAlteration (if present)	See conditions for PriceAlteration at cartItem.itemPrice.priceAlteration.
cartItem.itemTotalPrice.priceAlteration.price	M See conditions for Price at cartItem.itemPrice.price.
cartItem.itemTotalPrice.priceAlteration.productOfferingPrice (if present)	See conditions for ProductOfferingPriceRef at cartItem.itemPrice.priceAlteration.productOfferingPrice.
cartItem.itemTotalPrice.productOfferingPrice (if present)	See conditions for ProductOfferingPriceRef at cartItem.itemPrice.priceAlteration.productOfferingPrice.
cartItem.note (if present)	
@type	M
cartItem.product (if present)	
id	M Require only if passed as reference.
@type	M
cartItem.product.agreementItem (if present)	
agreementId	M
agreementItemId	M
@type	M
cartItem.product.billingAccount (if present)	
id	M
@type	M
cartItem.product.intent (if present)	
creationDate	M
expression	M
cartItem.product.intent.expression	
@type	M
id	M
lastUpdate	M

Mandatory attribute when parent is present	Rule
lifecycleStatus	M
name	M
@type	M
cartItem.product.intent.attachment (if present)	
attachmentType	M
id	M
mimeType	M
@type	M
cartItem.product.intent.characteristic (if present)	
name	M
@type	M
cartItem.product.intent.characteristic.characteristicRelationship (if present)	
id	M
relationshipType	M
@type	M
cartItem.product.intent.intentRelationship (if present)	
id	M
relationshipType	M
@referredType	M
@type	M
cartItem.product.intent.intentRelationship.associationSpec (if present)	
id	M
@type	M
cartItem.product.intent.intentSpecification (if present)	See conditions for EntityRef at cartItem.product.intent.intentRelationship.associationSpec.
cartItem.product.intent.relatedParty (if present)	
role	M
@type	M
cartItem.product.intent.relatedParty.partyOrPartyRole (if present)	
id	M
@type	M
cartItem.product.place (if present)	



Mandatory attribute when parent is present	Rule
place	M
cartItem.product.place.place	
id	M
@type	M
cartItem.product.place.place.calendar (if present)	
status	M
@type	M
cartItem.product.place.place.calendar.hourPeriod (if present)	
@type	M
cartItem.product.place.place.countryCode (if present)	
href	M (in response messages)
@type	M
cartItem.product.place.place.externalIdentifier (if present)	
id	M
@type	M
cartItem.product.place.place.geographicLocation (if present)	
id	M
@type	M
cartItem.product.place.place.geographicSubAddress (if present)	
@type	M
cartItem.product.place.place.geographicSubAddress.subUnit (if present)	
subUnitNumber	M
subUnitType	M
@type	M
cartItem.product.place.place.relatedParty (if present)	See conditions for RelatedPartyRefOrPartyRoleRef at cartItem.product.intent.relatedParty.
cartItem.product.place.place.relatedParty.partyOrPartyRole (if present)	See conditions for PartyRefOrPartyRoleRef at cartItem.product.intent.relatedParty.partyOrPartyRole.
cartItem.product.place.place.siteRelationship (if present)	
id	M

Mandatory attribute when parent is present	Rule
relationshipType	M
@type	M
role	M
@type	M
cartItem.product.productCharacteristic (if present)	See conditions for Characteristic at cartItem.product.intent.characteristic.
cartItem.product.productCharacteristic.characteristicRelationship (if present)	See conditions for CharacteristicRelationship at cartItem.product.intent.characteristic.characteristicRelationship.
cartItem.product.productOffering (if present)	
id	M
@type	M
cartItem.product.productOrderItem (if present)	
orderId	M
orderItemId	M
role	M
@type	M
cartItem.product.productPrice (if present)	
price	M  See conditions for Price at cartItem.itemPrice.price.
priceType	M
cartItem.product.productPrice.price	M  See conditions for Price at cartItem.itemPrice.price.
cartItem.product.productPrice.priceAlteration (if present)	See conditions for PriceAlteration at cartItem.itemPrice.priceAlteration.
cartItem.product.productPrice.priceAlteration.price	M  See conditions for Price at cartItem.itemPrice.price.
cartItem.product.productPrice.priceAlteration.productOfferingPrice (if present)	See conditions for ProductOfferingPriceRef at cartItem.itemPrice.priceAlteration.productOfferingPrice.
@type	M

Mandatory attribute when parent is present	Rule
cartItem.product.productPrice.productOfferingPrice (if present)	See conditions for ProductOfferingPriceRef at cartItem.itemPrice.priceAlteration.productOfferingPrice.
cartItem.product.productRelationship (if present)	
id	M
relationshipType	M
@type	M
cartItem.product.productSpecification (if present)	
id	M
@type	M
cartItem.product.productSpecification.targetProductSchema (if present)	
@schemaLocation	M
@type	M
cartItem.product.productTerm (if present)	
@type	M
cartItem.product.realizingResource (if present)	
id	M
@type	M
cartItem.product.realizingService (if present)	
id	M
@type	M
cartItem.product.relatedParty (if present)	
role	M
@type	M
cartItem.product.relatedParty.partyOrPartyRole (if present)	
engagedParty	M
cartItem.product.relatedParty.partyOrPartyRole.engagedParty	
id	M
@type	M
id	M
name	M
@type	M

Mandatory attribute when parent is present	Rule
cartItem.product.relatedParty.partyOrPartyRole.account (if present)	
id	M
@type	M
cartItem.product.relatedParty.partyOrPartyRole.agreement (if present)	
id	M
@type	M
cartItem.product.relatedParty.partyOrPartyRole.characteristic (if present)	See conditions for Characteristic at cartItem.product.intent.characteristic.
cartItem.product.relatedParty.partyOrPartyRole.characteristic.characteristicRelationship (if present)	See conditions for CharacteristicRelationship at cartItem.product.intent.characteristic.characteristicRelationship.
cartItem.product.relatedParty.partyOrPartyRole.contactMedium (if present)	
@type	M
cartItem.product.relatedParty.partyOrPartyRole.creditProfile (if present)	
href	M (in response messages)
@type	M
cartItem.product.relatedParty.partyOrPartyRole.creditRating (if present)	
href	M (in response messages)
@type	M
cartItem.product.relatedParty.partyOrPartyRole.externalReference (if present)	See conditions for ExternalIdentifier at cartItem.product.place.place.externalIdentifier.
cartItem.product.relatedParty.partyOrPartyRole.individualIdentification (if present)	
@type	M
cartItem.product.relatedParty.partyOrPartyRole.individualIdentification.attachment (if present)	See conditions for AttachmentRefOrValue at cartItem.product.intent.attachment.
cartItem.product.relatedParty.partyOrPartyRole.organizationChildRelationship (if present)	
@type	M
cartItem.product.relatedParty.partyOrPartyRole.organizationChildRelationship.organization (if present)	
id	M

Mandatory attribute when parent is present	Rule
@type	M
cartItem.product.relatedParty.partyOrPartyRole.organizationIdentification (if present)	
@type	M
cartItem.product.relatedParty.partyOrPartyRole.organizationIdentification.attachment (if present)	See conditions for AttachmentRefOrValue at cartItem.product.intent.attachment.
cartItem.product.relatedParty.partyOrPartyRole.organizationParentRelationship (if present)	
@type	M
cartItem.product.relatedParty.partyOrPartyRole.organizationParentRelationship.organization (if present)	See conditions for OrganizationRef at cartItem.product.relatedParty.partyOrPartyRole.organizationChildRelationship.organization.
cartItem.product.relatedParty.partyOrPartyRole.otherName (if present)	
@type	M
cartItem.product.relatedParty.partyOrPartyRole.partyCharacteristic (if present)	See conditions for Characteristic at cartItem.product.intent.characteristic.
cartItem.product.relatedParty.partyOrPartyRole.partyCharacteristic.characteristicRelationship (if present)	See conditions for CharacteristicRelationship at cartItem.product.intent.characteristic.characteristicRelationship.
cartItem.product.relatedParty.partyOrPartyRole.partyRoleSpecification (if present)	
id	M
@type	M
cartItem.product.relatedParty.partyOrPartyRole.paymentMethod (if present)	
id	M
@type	M
cartItem.product.relatedParty.partyOrPartyRole.taxExemptionCertificate (if present)	
@type	M
cartItem.product.relatedParty.partyOrPartyRole.taxExemptionCertificate.attachment (if present)	See conditions for AttachmentRefOrValue at cartItem.product.intent.attachment.
cartItem.product.relatedParty.partyOrPartyRole.taxExemptionCertificate.taxDefinition (if present)	
@type	M

Mandatory attribute when parent is present	Rule
cartItem.productOffering (if present)	See conditions for ProductOfferingRef at cartItem.product.productOffering.
cartTotalPrice (if present)	See conditions for CartPrice at cartItem.itemPrice.
cartTotalPrice.price	M  See conditions for Price at cartItem.itemPrice.price.
cartTotalPrice.priceAlteration (if present)	See conditions for PriceAlteration at cartItem.itemPrice.priceAlteration.
cartTotalPrice.priceAlteration.price	M  See conditions for Price at cartItem.itemPrice.price.
cartTotalPrice.priceAlteration.productOfferingPrice (if present)	See conditions for ProductOfferingPriceRef at cartItem.itemPrice.priceAlteration.productOfferingPrice.
cartTotalPrice.productOfferingPrice (if present)	See conditions for ProductOfferingPriceRef at cartItem.itemPrice.priceAlteration.productOfferingPrice.
contactMedium (if present)	See conditions for ContactMedium at cartItem.product.relatedParty.partyOrPartyRole.contactMedium.
relatedParty (if present)	See conditions for RelatedPartyOrPartyRole at cartItem.product.relatedParty.
relatedParty.partyOrPartyRole (if present)	See conditions for PartyOrPartyRole at cartItem.product.relatedParty.partyOrPartyRole.
relatedParty.partyOrPartyRole.engagedParty	M  See conditions for PartyRef at cartItem.product.relatedParty.partyOrPartyRole.engagedParty.
relatedParty.partyOrPartyRole.account (if present)	See conditions for AccountRef at cartItem.product.relatedParty.partyOrPartyRole.account.
relatedParty.partyOrPartyRole.agreement (if present)	See conditions for AgreementRef at cartItem.product.relatedParty.partyOrPartyRole.agreement.
relatedParty.partyOrPartyRole.characteristic (if present)	See conditions for Characteristic at cartItem.product.intent.characteristic.

Mandatory attribute when parent is present	Rule
relatedParty.partyOrPartyRole.characteristic.characteristicRelationship (if present)	See conditions for CharacteristicRelationship at cartItem.product.intent.characteristic.characteristicRelationship.
relatedParty.partyOrPartyRole.contactMedium (if present)	See conditions for ContactMedium at cartItem.product.relatedParty.partyOrPartyRole.contactMedium.
relatedParty.partyOrPartyRole.creditProfile (if present)	See conditions for CreditProfile at cartItem.product.relatedParty.partyOrPartyRole.creditProfile.
relatedParty.partyOrPartyRole.creditRating (if present)	See conditions for PartyCreditProfile at cartItem.product.relatedParty.partyOrPartyRole.creditRating.
relatedParty.partyOrPartyRole.externalReference (if present)	See conditions for ExternalIdentifier at cartItem.product.place.place.externalIdentifier.
relatedParty.partyOrPartyRole.individualIdentification (if present)	See conditions for IndividualIdentification at cartItem.product.relatedParty.partyOrPartyRole.individualIdentification.
relatedParty.partyOrPartyRole.individualIdentification.attachment (if present)	See conditions for AttachmentRefOrValue at cartItem.product.intent.attachment.
relatedParty.partyOrPartyRole.organizationChildRelationship (if present)	See conditions for OrganizationChildRelationship at cartItem.product.relatedParty.partyOrPartyRole.organizationChildRelationship.
relatedParty.partyOrPartyRole.organizationChildRelationship.organization (if present)	See conditions for OrganizationRef at cartItem.product.relatedParty.partyOrPartyRole.organizationChildRelationship.organization.
relatedParty.partyOrPartyRole.organizationIdentification (if present)	See conditions for OrganizationIdentification at cartItem.product.relatedParty.partyOrPartyRole.organizationIdentification.
relatedParty.partyOrPartyRole.organizationIdentification.attachment (if present)	See conditions for AttachmentRefOrValue at cartItem.product.intent.attachment.
relatedParty.partyOrPartyRole.organizationParentRelationship (if present)	See conditions for OrganizationParentRelationship at cartItem.product.relatedParty.partyOrPartyRole.organizationParentRelationship.
relatedParty.partyOrPartyRole.organizationParentRelationship.organization (if present)	See conditions for OrganizationRef at cartItem.product.relatedParty.partyOrPartyRole.organizationChildRelationship.organization.

Mandatory attribute when parent is present	Rule
relatedParty.partyOrPartyRole.otherName (if present)	See conditions for OtherNameOrganization at cartItem.product.relatedParty.partyOrPartyRole.otherName.
relatedParty.partyOrPartyRole.partyCharacteristic (if present)	See conditions for Characteristic at cartItem.product.intent.characteristic.
relatedParty.partyOrPartyRole.partyCharacteristic.characteristicRelationship (if present)	See conditions for CharacteristicRelationship at cartItem.product.intent.characteristic.characteristicRelationship.
relatedParty.partyOrPartyRole.partyRoleSpecification (if present)	See conditions for PartyRoleSpecificationRef at cartItem.product.relatedParty.partyOrPartyRole.partyRoleSpecification.
relatedParty.partyOrPartyRole.paymentMethod (if present)	See conditions for PaymentMethodRef at cartItem.product.relatedParty.partyOrPartyRole.paymentMethod.
relatedParty.partyOrPartyRole.taxExemptionCertificate (if present)	See conditions for TaxExemptionCertificate at cartItem.product.relatedParty.partyOrPartyRole.taxExemptionCertificate.
relatedParty.partyOrPartyRole.taxExemptionCertificate.attachment (if present)	See conditions for AttachmentRefOrValue at cartItem.product.intent.attachment.
relatedParty.partyOrPartyRole.taxExemptionCertificate.taxDefinition (if present)	See conditions for TaxDefinition at cartItem.product.relatedParty.partyOrPartyRole.taxExemptionCertificate.taxDefinition.



## Notification Model Conformance

There are no mandatory notifications for this API.

## API Operations Conformance

For every single resource the following tables includes mandatory operations.

### ShoppingCart Mandatory Operations

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

Uniform API Operation	Comment
GET	
POST	
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 /shoppingCart?fields=...&{filtering}

List or find ShoppingCart objects.

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

This operation retrieves a ShoppingCart entity. Attribute selection 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 /shoppingCart?fields=...&{filtering}

This operation creates a ShoppingCart entity.

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

Mandatory Attribute	Rule
@type	

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

This operation updates partially a ShoppingCart entity.

Non Patchable Attribute	Rule
cartTotalPrice	
creationDate	
href	
id	
lastUpdate	
@baseType	@baseType is immutable
@schemaLocation	@schemaLocation is immutable
@type	@type is immutable

Patchable Attribute	Rule
cartItem	
contactMedium	
relatedParty	
validFor	

## 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 /shoppingCart/{id}

This operation deletes a ShoppingCart entity.

## Acknowledgements

### Release History

Release Number	Date	Release led by:	Description

### Version History

Version Number	Date	Modified by	Description