

# ProductInventory Conformance Profile

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# Introduction - API description

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

# Resource Model Conformance

## API Mandatory Resources

The following table indicates the mandatory resources for this API.

Resource Name	Comment
Product	

## 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. CREATE, 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. RETRIEVE, LIST, CREATE), 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. retrieveTroubleTicket.commandRequest {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.

# Product Resource Mandatory Attributes

Mandatory attribute when parent is present	Rule
@type	M
id	M (in response messages)
status	M
topicRef	M
agreementItem (if present)	
@type	M
agreementId	M
agreementItemId	M
agreementhref	M (in response message)
billingAccount (if present)	
@type	M
id	M
place (if present)	
@type	M
place	M
role	M
productCharacteristic (if present)	
@type	M
name	M
productCharacteristic.characteristicRelationship (if present)	
@type	M
id	M
relationshipType	M
productOffering (if present)	
@type	M
id	M
productOrderItem (if present)	
@type	M
orderId	M
orderItemId	M
orderhref	M (in response message)

Mandatory attribute when parent is present		Rule
	role	M
productPrice (if present)		
	@type	M
	price	M
	priceType	M
	recurringChargePeriod	M
productPrice.price (if present)		
	dutyFreeAmount	M
	taxIncludedAmount	M
productPrice.price.dutyFreeAmount (if present)		
	unit	M
	value	M
productPrice.price.taxIncludedAmount (if present)		
	unit	M
	value	M
productPrice.priceAlteration (if present)		
	@type	M
	price	M
	priceType	M
productPrice.priceAlteration.price (if present)		
	@type	M
	dutyFreeAmount	M
	taxIncludedAmount	M
productPrice.priceAlteration.price.dutyFreeAmount (if present)		
	unit	M
	value	M
productPrice.priceAlteration.price.taxIncludedAmount (if present)		
	unit	M
	value	M
productPrice.priceAlteration.productOfferingPrice (if present)		
	@type	M



Mandatory attribute when parent is present		Rule
productPrice.productOfferingPrice (if present)		
	@type	M
	id	M
productRelationship (if present)		
	@type	M
	id	M
	relationshipType	M
productSpecification (if present)		
	@type	M
	id	M
productSpecification.targetProductSchema (if present)		
	@schemaLocation	M
	@type	M
productTerm (if present)		
	@type	M
	duration	M
	name	M
productTerm.duration (if present)		
	amount	M
	units	M
realizingResource (if present)		
	@type	M
	id	M
realizingService (if present)		
	@type	M
	id	M
relatedParty (if present)		
	@type	M
	role	M

# Notification Model Conformance

There are no mandatory notifications for this API.

# API Operations Conformance

For every single resource, the following tables include mandatory operations.

## Operation

Every operation consists of two parts:

- REQUEST: Publish a message on a 'commandRequest' channel.
- RESPONSE: Subscribe to the corresponding 'commandReply' channel to receive the response.

## Prefix

All channel names are defined with a "{prefix}" parameter.

Let's take the example of {prefix}.tmfapi.Product.v5.retrieveProduct.commandRequest.

This topic name consists of two pieces:

1. a optional prefix **{prefix}**
2. a constant: **tmfapi.Product.v5.retrieveProduct.commandRequest**

Your application may support this channel both with and without a prefix, but the constant must always be present.

Without the prefix, the channel name is: **tmfapi.Product.v5.retrieveProduct.commandRequest**

However, some organisations may prefix the channel name for administrative purposes, say to denote the name of a company, department, etc. When using a prefix, say 'acme' for a company named 'Acme Telecom', the channel name is:

**acme.tmfapi.Product.v5.retrieveProduct.commandRequest**

## Product Mandatory Operations

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

Uniform API Operation	Comment
RETRIEVE	Retrieve a Product given it's id
LIST	Retrieve a list of Products

# RETRIEVE Operation Conformance

## Product

This operation retrieves a Product entity.

### Channels

REQUEST CHANNEL	{prefix}.productInventory.v5.retrieveProduct.co mmandRequest
REPLY CHANNEL	{prefix}.productInventory.v5.retrieveProduct.co mmandReply

Note: See the API Operations Conformance section above for more details on the request and reply channels.

### Request Message Schema

#### Payload

The parameters for this operation are to be sent as headers.

#### Headers

Property		Mandatory/Optional
X-Correlation-Id		M
Reply-Channel		M
Parameters		M
	id	M
	fields	
Query-Filters		

### Response Message Schema

#### Payload

The Payload is is a Product resource entity.

#### Headers

Property	Mandatory/Optional
X-Correlation-Id	M
Status-Code	M

Property	Mandatory/Optional
X-Request-Channel	M

#### Expected Status Codes:

Status Code	Mandatory/Optional
200 if successful	M
404 if not found	M

## Definitions for Filter

- **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 request. Several elements can be applied to the filtered search as part of the 'filters' parameter. 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 RETRIEVE request payload can include the fields 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.

# LIST Operation Conformance

## Product

This operation retrieves an array of Product entities. Attribute selection is enabled for all first level attributes.

## Channels

REQUEST CHANNEL	{prefix}.productInventory.v5.listProduct.commandRequest
REPLY CHANNEL	{prefix}.productInventory.v5.listProduct.commandReply

Note: See the API Operations Conformance section above for more details on the request and reply channels.

## Request Message Schema

### Payload

The parameters for this operation are to be sent as headers.

### Headers

Property		Mandatory/Optional
X-Correlation-Id		M
Reply-Channel		M
Parameters		M
	fields	
	offset	
	limit	
Query-Filters		

## Response Message Schema

### Payload

The Payload is is an array of Product resource entities.

### Headers

Property	Mandatory/Optional
X-Correlation-Id	M
Status-Code	M
X-Total-Count	
X-Result-Count	
X-Request-Channel	M

#### Expected Status Codes:

Status Code	Mandatory/Optional
200 if successful	M
404 if not found	M

## Definitions for Filter

- **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 request. Several elements can be applied to the filtered search as part of the 'filters' parameter. 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 RETRIEVE request payload can include the fields 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.

# CREATE Operation Conformance

## Product

This operation creates a Product entity.

### Channels

REQUEST CHANNEL	{prefix}.productInventory.v5.createProduct.commandRequest
REPLY CHANNEL	{prefix}.productInventory.v5.createProduct.commandReply

Note: See the API Operations Conformance section above for more details on the request and reply channels.

### Request Message Schema

#### Payload

The Payload is is a Product FVO resource entity.

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

Mandatory Attribute	Rule
status	

#### Headers

Property		Mandatory/Optional
X-Correlation-Id		M
Reply-Channel		M
Parameters		M
	fields	

### Response Message Schema

#### Payload

The Payload is is a Product resource entity.

#### Headers



Property	Mandatory/Optional
X-Correlation-Id	M
Status-Code	M
X-Request-Channel	M

### Expected Status Codes:

Status Code	Mandatory/Optional
201 if successful	M

# PATCH Operation Conformance

## Product

This operation updates partially a Product entity.

### Channels

REQUEST CHANNEL	{prefix}.productInventory.v5.patchProduct.commandRequest
REPLY CHANNEL	{prefix}.productInventory.v5.patchProduct.commandReply

Note: See the API Operations Conformance section above for more details on the request and reply channels.

## Request Message Schema

### Payload

The Payload is is a Product MVO resource entity.

### Headers

Property		Mandatory/Optional
X-Correlation-Id		M
Reply-Channel		M
Parameters		M
	id	M
	fields	

## Response Message Schema

### Payload

The Payload is is a Product resource entity.

### Headers

Property		Mandatory/Optional
X-Correlation-Id		M
Status-Code		M
X-Request-Channel		M

## Expected Status Codes:

Status Code	Mandatory/Optional
200 if successful	M

## Patchable and Non Patchable Attributes:

Non Patchable Attribute	Rule
creationDate	
href	
id	

Patchable Attribute	Rule
agreementItem	
billingAccount	
description	
intent	
isBundle	
isCustomerVisible	
name	
orderDate	
place	
product	
productCharacteristic	
productOffering	
productOrderItem	
productPrice	
productRelationship	
productSerialNumber	
productSpecification	
productTerm	
realizingResource	
realizingService	
relatedParty	
startDate	
status	

Patchable Attribute	Rule
terminationDate	

# DELETE Operation Conformance

## Product

This operation deletes a Product entity.

### Channels

REQUEST CHANNEL	{prefix}.productInventory.v5.deleteProduct.commandRequest
REPLY CHANNEL	{prefix}.productInventory.v5.deleteProduct.commandReply

Note: See the API Operations Conformance section above for more details on the request and reply channels.

### Request Message Schema

#### Payload

The parameters for this operation are to be sent as headers.

#### Headers

Property		Mandatory/Optional
X-Correlation-Id		M
Reply-Channel		M
Parameters		M
	id	M

### Response Message Schema

#### Payload

There is no Payload defined for this channel

#### Headers

Property		Mandatory/Optional
X-Correlation-Id		M
Status-Code		M
X-Request-Channel		M

## Expected Status Codes:

Status Code	Mandatory/Optional
204 if successful	M

# Acknowledgements

## Release History

Release Number	Date	Release led by:	Description

## Version History

Version Number	Date	Modified by	Description