TM Forum Specification

Shipping Order API REST Specification

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NOTICE

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Introduction

The following document is the specification of the REST API for Shipping Order Management. Shipping Order is part of the Shipping set of APIs, beside the Shipment Management (TMF 711), Shipment Qualification (TMF 712), Shipment Tracking (TMF 684).

It includes the model definition as well as all available operations. Possible actions are creating, updating and retrieving Shipping Orders.

The Shipping Ordering API provides a standardized mechanism for placing a shipping order with all of the necessary order parameters. The API consists of a simple set of operations that interact with logistic systems in a consistent manner. A shipping order is created based on a product order that is managed via Product Order Management. The shipping order captures all the details required to ship a product or a set of products that have been purchased via the product order to the customer. It includes beside the details related to the products identified by the product offers, the actors involved in the process (sender, recipient), locations (from, to), shipping details, instructions and characteristics at the shipping order level or fine grained at every item from the shipping order.

The shipping order references the product order (product order items, product order item offer) and identifies any specific requests made by the customer in regards to the shipping.

Shipping Order API manages shipping order resource:
- A Shipping Order is a document used by a business to specify what items are to be transferred by a logisitic partner from a storage location or warehouse to a party location. When goods are sent to the customers, shipment information can be provided to them so they can be aware of when things were shipped and when they will arrive.
- The service provider creates a Shipping Order which can be sent to a Logistic Partner to manage the physical shipment(s). The Shipping Order can be split into one or more Shipments (Shipment Managment (TMF711)) with associated Shipment Tracking (via TMF 684) to capture information about the current status of the shipment, the past checkpoints and the estimated arrival date.
- Main Shipping Order attributes are its identifier, state, items, shipping instructions, related parties involved (recipient, sender), source and destination place.
- Main Shipping Order Items (aka shipping order lines) attributes are the ordered items and product characteristics with the related action to be performed (e.g. add or delete the products), state, location information for delivery.

Shipping Ordering API performs the following operations
…on Shipping Order:
- Retrieval of a shipping order or a collection of shipping orders depending on filter criteria
- Partial update of a shipping order (including updating rules)
- Creation of a shipping order (including default values and creation rules)
- Notification of events on shipping order
  - o Shipping Order creation
  - o Shipping Order state change
  - o Shipping Order value change used to notify that any data in an order has just changed

o   Shipping Order information required used to notify that some data in the order need to be filled / are missing

The following assumptions were considered in the development of this document:
- The Logistic Management system has access to additional systems to retrieve additional information required like product offerings, parties, places, etc.

SAMPLE USE CASES

The main use case the shipping order is created as a result of a Product Order.

1. Order Management System (OMS) sends a request to create a shipping order in the Partner Logistics System. The OMS will pass the information on the Product Order and the items and an indication on the shipments that will take place.

2. The new Shipping Order is created in the Partner Logistics System. The Logistic Partner will receive the order items, check/update stock, organize items by pick list, pick & pack, select carriers (depending on the services from orders), etc.

3. Part of the fulfillment the Logistic Partner, depending on warehouse stocks, customer preferences will create one or multiple shipments that can contain one or multiple items from the original Shipping Order. The Logistic Partner (+ customer preference) might create multiple shipments depending on the stock availability or might bundle and keep the order open until stock replenish.

4. Each shipment will be updated by the carrier service with the delivery of good progress. Upon creation of each shipment, if the tracking information will be available from the carrier service the shipment will be updated to reflect it.

5. Upon completion of all shipments, the Shipping Order will be updated.

6. Upon successfully completing the shipping order, the Product Order will be updated.
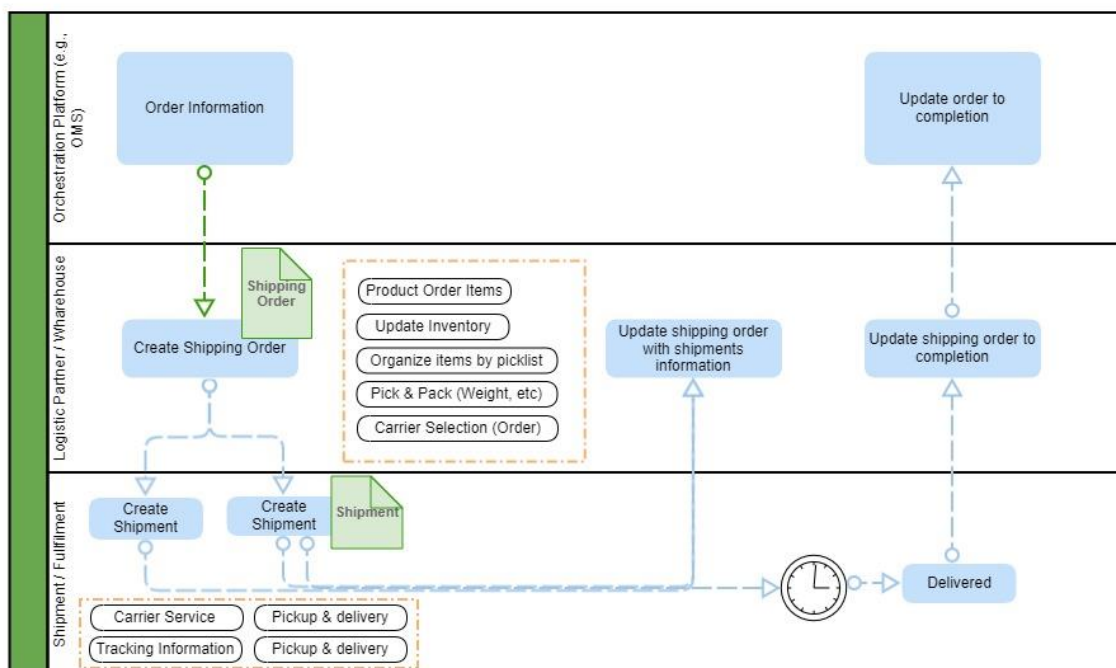
The high-level interaction diagram below:
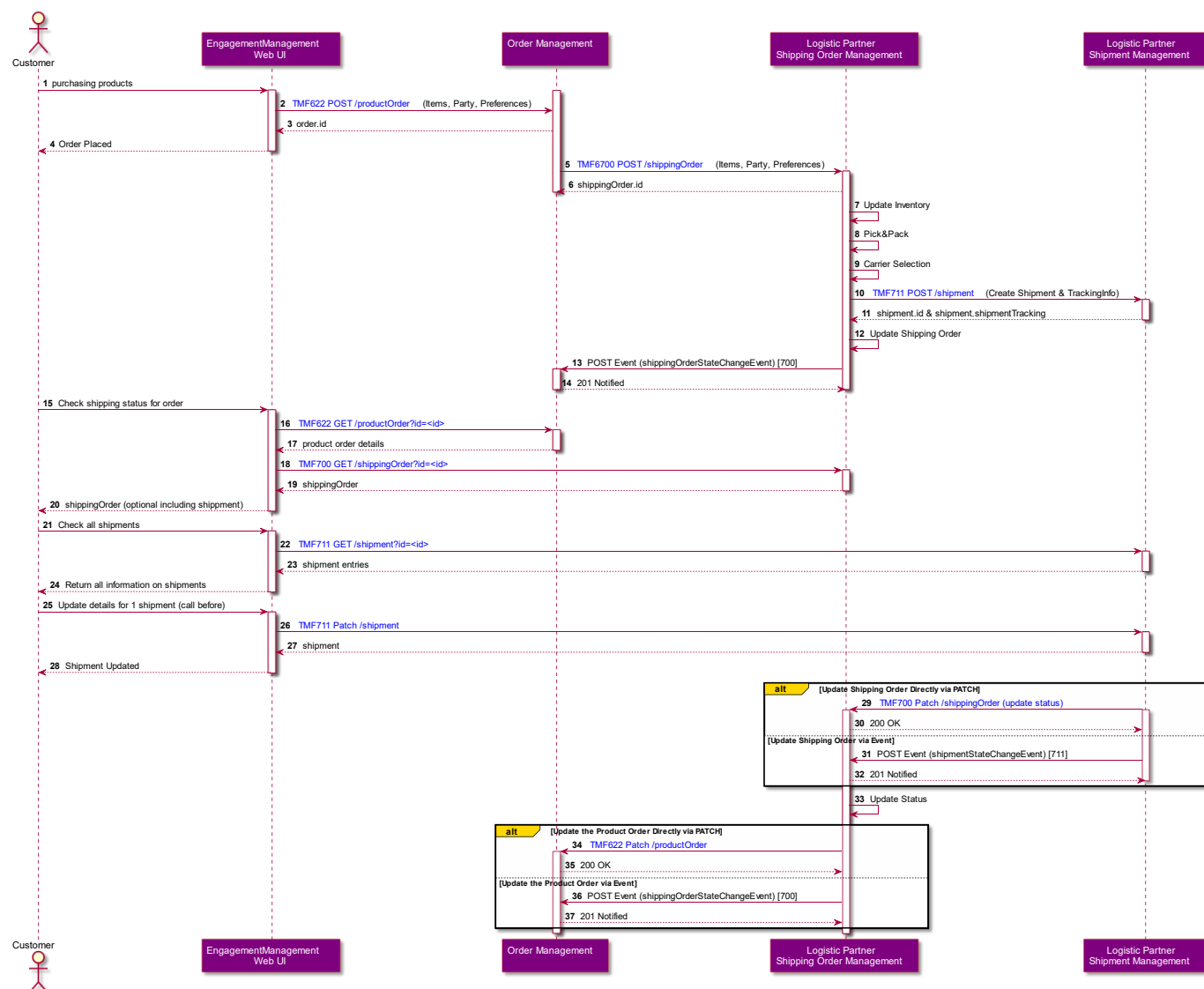
Different use cases covering differing shipping configurations (multiple addresses, multiple recipients, different shipping settings, etc.) can be found in API OPERATIONS chapter.

Support of polymorphism and extension patterns

Support of polymorphic collections and types and schema based extension is provided by means of a list of generic meta-attributes that we describe below. Polymorphism in collections occurs when entities inherit from base entities, for instance a BillingAccount and SettlementAccount inheriting properties from the abstract Account entity.

Generic support of polymorphism and pattern extensions is described in the TMF API Guidelines v3.0 Part 2 document.

The @type attribute provides a way to represent the actual class type of an entity. For example, within a list of Account instances some may be instances of BillingAccount where other could be instances of SettlementAccount. The @type gives this information. All resources and sub-resources of this API have a @type attributes that can be provided when this is useful.

The @referredType can be used within reference entities (like for instance an PartyAccountRef object) to explicitly denote the actual entity type of the referred class. Notice that in reference entities the @type, when used, denotes the class type of the reference itself, such as BillingAccountRef or SettlementAccountRef, and not the class type of the referred object. However since reference classes are rarely sub-classed, @type is generally not useful in reference objects.

The @schemaLocation property can be used in resources to allow specifying user-defined properties of an Entity or to specify the expected *characteristics* of an entity.

The @baseType attribute gives a way to provide explicitly the base of class of a given resource that has been extended.

RESOURCE MODEL

Managed Entity and Task Resource Models

Shipping Order resource

A Shipping Order is a document used by a business to specify what items are to be transferred by a logistic partner from a storage location or warehouse to a party location. When goods are sent to the customers, shipment information can be provided to them so they can be aware of when things were shipped and when they will arrive. The service provider creates a Shipping Order which can be sent to a Logistic Partner to manage the physical shipment. The Shipping Order can be split into one or more Shipments with associated Shipment Tracking to capture information about the current status of the shipment, the past checkpoints and the estimated arrival date.
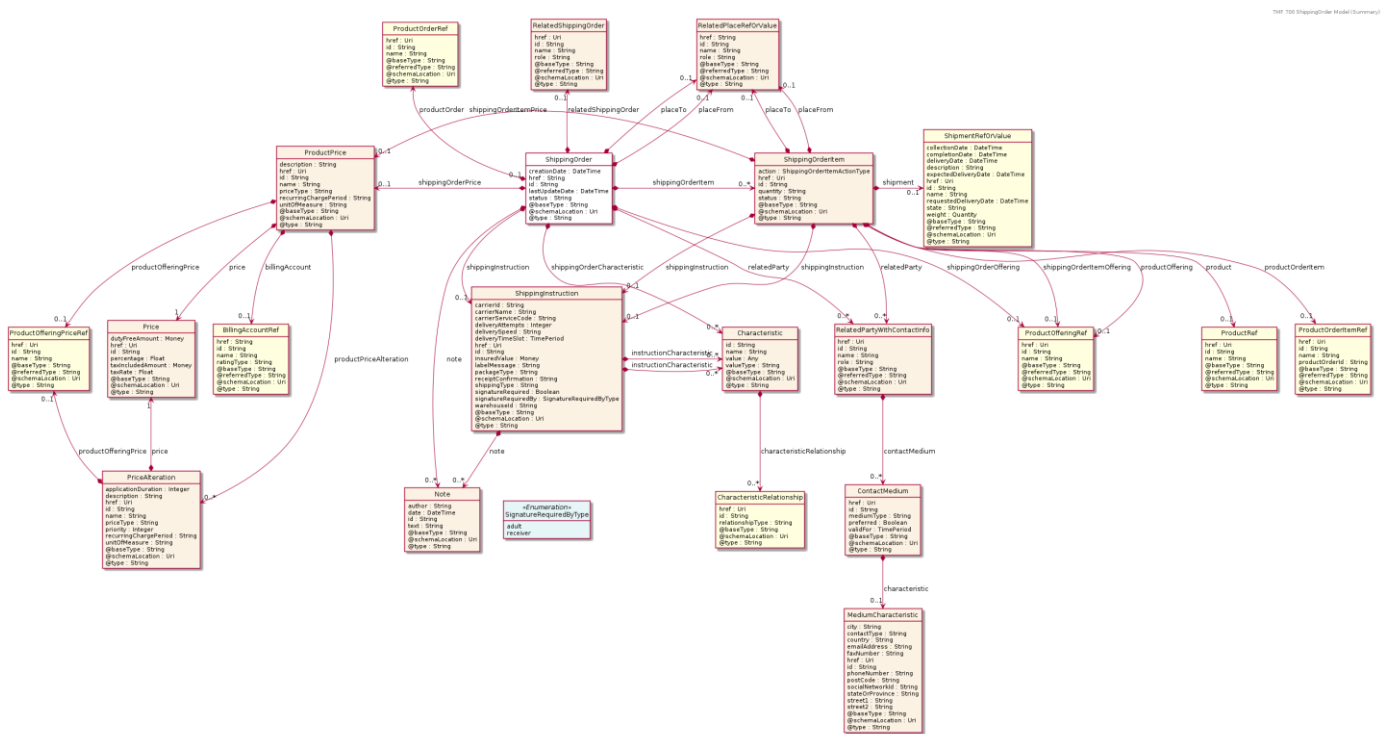
TMF 700 ShippingOrder Lifecycle
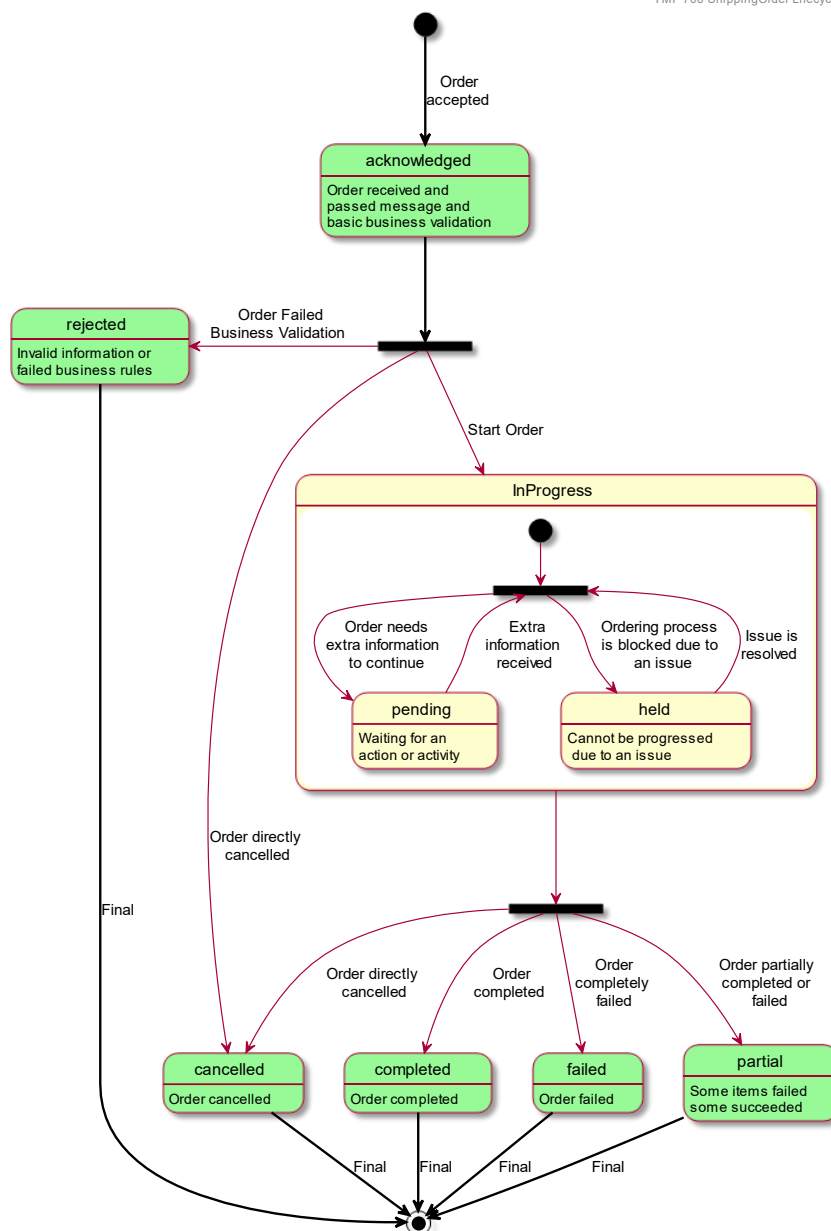
State	Definition
Acknowledged	The Acknowledged state is where an shipping order has been received and has passed message and basic business validations.
Rejected	The Rejected state is where: • Invalid information is provided through the order request • The order request fails to meet business rules for ordering Same rules applied for order item.
Pending	The Pending state is used when an order/item is currently in a waiting stage for an action/activity to be completed before the order/item can progress further. In situations where Access Seeker action is required, an "information required" notification will be issued on transition into this state.

	A pending stage can lead into auto cancellation of an order/item, if no action is taken within the defined timeframes to be described under the Agreement.
InProgress	The In Progress state is where an order Item has an associated shipment associated successfully and product delivery has started. For the order at least one order item is inProgress
Held	The Held state is used when an order/item cannot be progressed due to an issue. SP has temporarily delayed completing an order/item to resolve an infrastructure shortfall to facilitate supply of order. Upon resolution of the issue, the order/item will continue to progress.
Cancelled	The Cancelled state is where an In-Flight Order/item has been successfully cancelled.
Completed	The Completed state is where an item has complete provision and the service is now active. For an order all order item are completed
Failed	Order item as not a successful delivery completion. The product is not delivered and the order item failed. All Order items have failed which results in the entire Order has Failed.
Partial	Some Order items have failed and some have succeeded so the entire Order is in a Partial state. This provides support for partial Failure of an Order. This state is not available at item level

Resource model
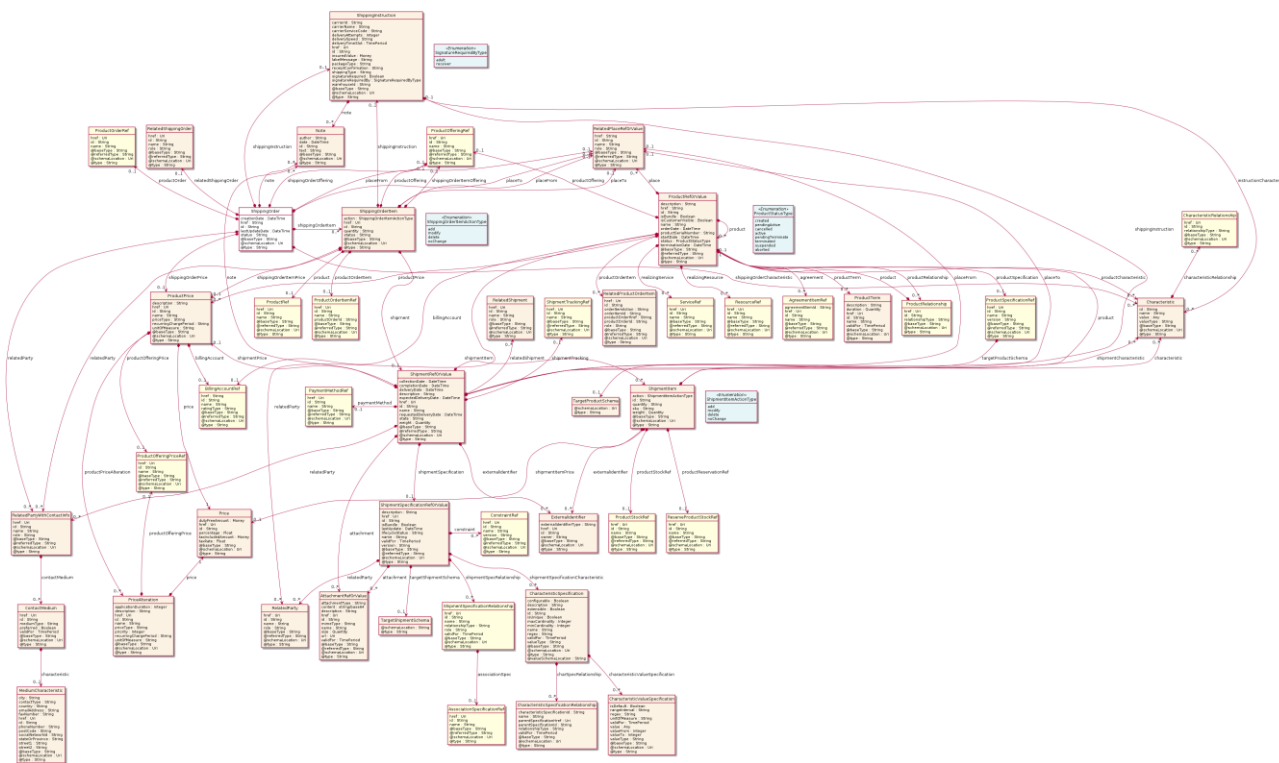
Field descriptions

ShippingOrder fields

href	A string. Shipping Order unique reference.
id	A string. Identifier of the Shipping Order.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
creationDate	A date time (DateTime). Date of the Shipping Order.
href	A string. Shipping Order unique reference.
id	A string. Identifier of the Shipping Order.
lastUpdateDate	A date time (DateTime). Date of the Shipping Order.
note	A list of notes (Note [*]). A list of notes made on this shipping shipment.
placeFrom	A related place ref or value (RelatedPlaceRefOrValue). Source location of the item. E.g. warehouse or shop location. The location can be specified at the shipping order level or at the shipping order item level if multiple sources are specified part of the same shipping order.
placeTo	A related place ref or value (RelatedPlaceRefOrValue). Destination of the item. E.g. customer home address. The location can be specified at the shipping order level or at the shipping order item level if multiple destinations are specified part of the same shipping order.
productOrder	A product order reference (ProductOrderRef). The product order for which the shipping order is created, if supplied as input the attribute id must be populated.
relatedParty	A list of related party with contact infos (RelatedPartyWithContactInfo [*]). An existing related party that has some form of correlation with the given shipping order. It can be recipient, payer, etc.
relatedShippingOrder	A related shipping order (RelatedShippingOrder). An existing shipping order that has some form of correlation with the given shipping order.
shippingInstruction	A shipping instruction (ShippingInstruction). The product order for which the shipping order is created, if supplied as input the attribute id must be populated.

shippingOrderCharacteristic	A list of characteristics (Characteristic [*]). List of characteristics with values.
shippingOrderItem	A list of shipping order items (ShippingOrderItem [*]). Each shipping order item has a corresponding Shipment(e.g. parcel) which has one or multiple products in it.
shippingOrderOffering	A product offering reference (ProductOfferingRef). Shipping order can have a corresponding entry in the product catalog (product offering).
shippingOrderPrice	A product price (ProductPrice). Shipping Order price.
status	A string. status of shipping order e.g "active" , "savedForLater".

AttachmentRefOrValue sub-resource

An attachment by value or by reference. An attachment complements the description of an element, for example through a document, a video, a picture.

@referredType	A string. The actual type of the target instance when needed for disambiguation.
description	A string. A narrative text describing the content of the attachment.
href	An uri (Uri). URI for this Attachment.
id	A string. Unique identifier for this particular attachment.
url	An uri (Uri). Uniform Resource Locator, is a web page address (a subset of URI).
name	A string. The name of the attachment.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
attachmentType	A string. Attachment type such as video, picture.
content	A base 6 4 (Base64). The actual contents of the attachment object, if embedded, encoded as base64.
mimeType	A string. Attachment mime type such as extension file for video, picture and document.
size	A quantity (Quantity). The size of the attachment.
validFor	A time period. The period of time for which the attachment is valid.

Characteristic sub-resource

Describes a given characteristic of an object or entity through a name/value pair.

@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
characteristicRelationship	A list of characteristic relationships (CharacteristicRelationship [*]). Another Characteristic that is related to the current Characteristic;.
id	A string. Unique identifier of the characteristic.
name	A string. Name of the characteristic.
value	An any (Any). The value of the characteristic.
valueType	A string. Data type of the value of the characteristic.

CharacteristicRelationship sub-resource

Another Characteristic that is related to the current Characteristic;.

href	An uri (Uri). Hyperlink reference.
id	A string. Unique identifier of the characteristic.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
relationshipType	A string. The type of relationship.

CharacteristicSpecification sub-resource

This class defines a characteristic specification.

@valueSchemaLocation	A string. This (optional) field provides a link to the schema describing the value type.
configurable	A boolean. If true, the Boolean indicates that the target Characteristic is configurable.
description	A string. A narrative that explains the CharacteristicSpecification.

extensible	A boolean. An indicator that specifies that the values for the characteristic can be extended by adding new values when instantiating a characteristic for a resource.
id	A string. Unique ID for the characteristic.
isUnique	A boolean. Specifies if the value of this characteristic is unique across all entities instantiated from the specification that uses this characteristc. For example, consider a ProductSpecification for a set-top box, with a CharacteristicSpecification cardID. Each set-top box must have a different value for cardID, so this isUnique attribute would be set to true for the characteristic.
maxCardinality	An integer. The maximum number of instances a CharacteristicValue can take on. For example, zero to five phone numbers in a group calling plan, where five is the value for the maxCardinality.
minCardinality	An integer. The minimum number of instances a CharacteristicValue can take on. For example, zero to five phone numbers in a group calling plan, where zero is the value for the minCardinality.
name	A string. A word, term, or phrase by which this characteristic specification is known and distinguished from other characteristic specifications.
regex	A string. A rule or principle represented in regular expression used to derive the value of a characteristic value.
valueType	A string. A kind of value that the characteristic can take on, such as numeric, text and so forth.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
charSpecRelationship	A list of characteristic specification relationships (CharacteristicSpecificationRelationship [*]). An aggregation, migration, substitution, dependency or exclusivity relationship between/among Specification Characteristics.
characteristicValueSpecification	A list of characteristic value specifications (CharacteristicValueSpecification [*]). A CharacteristicValueSpecification object is used to define a set of attributes, each of which can be assigned to a corresponding set of attributes in a CharacteristicSpecification object. The values of the attributes in the

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CharacteristicValueSpecification object describe the values of the attributes that a corresponding Characteristic object can take on.

validFor — A time period. The period of time for which a characteristic is applicable.

CharacteristicSpecificationRelationship sub-resource

An aggregation, migration, substitution, dependency or exclusivity relationship between/among Characteristic specifications. The specification characteristic is embedded within the specification whose ID and href are in this entity, and identified by its ID.

@baseType — A string. When sub-classing, this defines the super-class.

@schemaLocation — An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.

@type — A string. When sub-classing, this defines the sub-class Extensible name.

characteristicSpecificationId — A string. Unique identifier of the characteristic within the specification.

name — A string. Name of the target characteristic within the specification.

parentSpecificationHref — An uri (Uri). Hyperlink reference to the parent specification containing the target characteristic.

parentSpecificationId — A string. Unique identifier of the parent specification containing the target characteristic.

relationshipType — A string. Type of relationship such as aggregation, migration, substitution, dependency, exclusivity.

validFor — A time period. The period for which the object is valid.

CharacteristicValueSpecification sub-resource

specification of a value (number or text or an object) that can be assigned to a Characteristic.

@baseType — A string. When sub-classing, this defines the super-class.

@schemaLocation — An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.

@type — A string. When sub-classing, this defines the sub-class Extensible name.

isDefault — A boolean. If true, the Boolean Indicates if the value is the default value for a characteristic.

rangeInterval	A string. An indicator that specifies the inclusion or exclusion of the valueFrom and valueTo attributes. If applicable, possible values are "open", "closed", "closedBottom" and "closedTop".
regex	A string. A regular expression constraint for given value.
unitOfMeasure	A string. A length, surface, volume, dry measure, liquid measure, money, weight, time, and the like. In general, a determinate quantity or magnitude of the kind designated, taken as a standard of comparison for others of the same kind, in assigning to them numerical values, as 1 foot, 1 yard, 1 mile, 1 square foot.
validFor	A time period. The period of time for which a value is applicable.
value	An any (Any). A discrete value that the characteristic can take on, or the actual value of the characteristic.
valueFrom	An integer. The low range value that a characteristic can take on.
valueTo	An integer. The upper range value that a characteristic can take on.
valueType	A string. A kind of value that the characteristic value can take on, such as numeric, text and so forth.

ContactMedium sub-resource

Indicates the contact medium that could be used to contact the party.

href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
characteristic	A medium characteristic (MediumCharacteristic). Any additional characteristic(s) of this contact medium.
mediumType	A string. Type of the contact medium, such as: email address, telephone number, postal address.
preferred	A boolean. If true, indicates that is the preferred contact medium.
validFor	A time period. The time period that the contact medium is valid for.

ExternalIdentifier sub-resource

An identification of an entity that is owned by or originates in a software system different from the current system, for example a ProductOrder handed off from a commerce platform into an order handling system. The structure identifies the system itself, the nature of the entity within the system (e.g. class name) and the unique ID of the entity within the system. It is anticipated that multiple external IDs can be held for a single entity, e.g. if the entity passed through multiple systems on the way to the current system. In this case the consumer is expected to sequence the IDs in the array in reverse order of provenance, i.e. most recent system first in the list.

href	An uri (Uri). Hyperlink reference.
id	A string. identification of the entity within the external system.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
externalIdentifierType	A string. Type of the identification, typically would be the type of the entity within the external system.
owner	A string. Name of the external system that owns the entity.

MediumCharacteristic sub-resource

Describes the contact medium characteristics that could be used to contact a party (an individual or an organization).

href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
city	A string. The city.
contactType	A string. The type of contact, for example: phone number such as mobile, fixed home, fixed office. postal address such as shipping instalation….
country	A string. The country.
emailAddress	A string. Full email address in standard format.
faxNumber	A string. The fax number of the contact.

phoneNumber	A string. The primary phone number of the contact.
postCode	A string. Postcode.
socialNetworkId	A string. Identifier as a member of a social network.
stateOrProvince	A string. State or province.
street1	A string. Describes the street.
street2	A string. Complementary street description.

Money sub-resource

A base / value business entity used to represent money.

| unit | A string. Currency (ISO4217 norm uses 3 letters to define the currency). |
| value | A float. A signed floating point number, the meaning of the sign is according to the context of the API that uses this Data type. |

Note sub-resource

Extra information about a given entity.

@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
author	A string. Author of the note.
date	A date time (DateTime). Date of the note.
id	A string. Identifier of the note within its containing entity.
text	A string. Text of the note.

Price sub-resource

Provides all amounts (tax included, duty free, tax rate), used currency and percentage to apply for Price Alteration.

href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.

@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
dutyFreeAmount	A money (Money). All taxes excluded amount (expressed in the given currency).
percentage	A float. Percentage to apply for ProdOfferPriceAlteration.
taxIncludedAmount	A money (Money). All taxes included amount (expressed in the given currency).
taxRate	A float. Tax rate.

PriceAlteration sub-resource

Is an amount, usually of money, that modifies the price charged for an order item.

href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
applicationDuration	An integer. Duration during which the alteration applies on the order item price (for instance 2 months free of charge for the recurring charge).
description	A string. A narrative that explains in detail the semantics of this order item price alteration.
name	A string. Name of the order item price alteration.
price	A price (Price). Provides all amounts (tax included, duty free, tax rate), used currency and percentage to apply for Price Alteration.
priceType	A string. A category that describes the price such as recurring, one time and usage.
priority	An integer. Priority level for applying this alteration among all the defined alterations on the order item price.
productOfferingPrice	A product offering price reference (ProductOfferingPriceRef). ProductPriceOffering reference. An amount, usually of money, that is asked for or allowed when a ProductOffering is bought, rented, or leased.
recurringChargePeriod	A string. Could be month, week...

unitOfMeasure	A string. Could be minutes, GB...

ProductPrice sub-resource

An amount, usually of money, that represents the actual price paid by a Customer for a purchase, a rent or a lease of a Product. The price is valid for a defined period of time.

href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
billingAccount	A billing account reference (BillingAccountRef). A BillingAccount is a detailed description of a bill structure.
description	A string. A narrative that explains in detail the semantics of this product price.
name	A string. A short descriptive name such as "Subscription price".
price	A price (Price). Provides all amounts (tax included, duty free, tax rate), used currency and percentage to apply for Price Alteration.
priceType	A string. A category that describes the price, such as recurring, discount, allowance, penalty, and so forth.
productOfferingPrice	A product offering price reference (ProductOfferingPriceRef). ProductPriceOffering reference. An amount, usually of money, that is asked for or allowed when a ProductOffering is bought, rented, or leased.
productPriceAlteration	A list of price alterations (PriceAlteration [*]). Is an amount, usually of money, that modifies the price charged for an order item.
recurringChargePeriod	A string. Could be month, week...
unitOfMeasure	A string. Could be minutes, GB...

ProductRefOrValue sub-resource

A product to be created defined by value or existing defined by reference. The polymorphic attributes @type, @schemaLocation & @referredType are related to the product entity and not the RelatedProductRefOrValue class itself.

@referredType	A string. The actual type of the target instance when needed for disambiguation.

name	A string. Name of the product. It could be the same as the name of the product offering.
href	A string. Reference of the product.
id	A string. Unique identifier of the product.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
description	A string. Is the description of the product. It could be copied from the description of the Product Offering.
isBundle	A boolean. If true, the product is a ProductBundle which is an instantiation of a BundledProductOffering. If false, the product is a ProductComponent which is an instantiation of a SimpleProductOffering.
isCustomerVisible	A boolean. If true, the product is visible by the customer.
orderDate	A date time (DateTime). Is the date when the product was ordered.
productSerialNumber	A string. Is the serial number for the product. This is typically applicable to tangible products e.g. Broadband Router.
startDate	A date time (DateTime). Is the date from which the product starts.
terminationDate	A date time (DateTime). Is the date when the product was terminated.
agreement	A list of agreement item references (AgreementItemRef [*]). Agreement reference. An agreement represents a contract or arrangement, either written or verbal and sometimes enforceable by law, such as a service level agreement or a customer price agreement. An agreement involves a number of other business entities, such as products, services, and resources and/or their specifications.
billingAccount	A billing account reference (BillingAccountRef). A BillingAccount is a detailed description of a bill structure.
place	A list of related place ref or values (RelatedPlaceRefOrValue [*]). Related Entity reference. A related place defines a place described by reference or by value linked to a specific entity. The polymorphic attributes @type, @schemaLocation & @referredType are related to the place entity and not the RelatedPlaceRefOrValue class itself.
product	A list of product ref or values (ProductRefOrValue [*]). A product to be created defined by value or existing defined by reference. The polymorphic attributes @type,

@schemaLocation & @referredType are related to the product entity and not the RelatedProductRefOrValue class itself.

productCharacteristic	A list of characteristics (Characteristic [*]). Describes a given characteristic of an object or entity through a name/value pair.
productOffering	A product offering reference (ProductOfferingRef). A product offering represents entities that are orderable from the provider of the catalog, this resource includes pricing information.
productOrderItem	A list of related product order items (RelatedProductOrderItem [*]). RelatedProductOrderItem (ProductOrder item) .The product order item which triggered product creation/change/termination.
productPrice	A list of product prices (ProductPrice [*]). An amount, usually of money, that represents the actual price paid by a Customer for a purchase, a rent or a lease of a Product. The price is valid for a defined period of time.
productRelationship	A list of product relationships (ProductRelationship [*]). Linked products to the one instantiate, such as [bundled] if the product is a bundle and you want to describe the bundled products inside this bundle; [reliesOn] if the product needs another already owned product to rely on (e.g. an option on an already owned mobile access product) [targets] or [isTargeted] (depending on the way of expressing the link) for any other kind of links that may be useful.
productSpecification	A product specification reference (ProductSpecificationRef). A ProductSpecification is a detailed description of a tangible or intangible object made available externally in the form of a ProductOffering to customers or other parties playing a party role.
productTerm	A list of product terms (ProductTerm [*]). Description of a productTerm linked to this product. This represent a commitment with a duration.
realizingResource	A list of resource references (ResourceRef [*]).
realizingService	A list of service references (ServiceRef [*]). for when Service is used by other entities.
relatedParty	A list of related parties (RelatedParty [*]). Related Entity reference. A related party defines party or party role linked to a specific entity.
status	A product status type (ProductStatusType). Is the lifecycle status of the product.

ProductRelationship sub-resource

Linked products to the one instantiate, such as [bundled] if the product is a bundle and you want to describe the bundled products inside this bundle; [reliesOn] if the product needs another already owned product to rely on (e.g. an option on an already owned mobile access product) [targets] or [isTargeted] (depending on the way of expressing the link) for any other kind of links that may be useful.

href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
product	A product ref or value (ProductRefOrValue). A product to be created defined by value or existing defined by reference. The polymorphic attributes @type, @schemaLocation & @referredType are related to the product entity and not the RelatedProductRefOrValue class itself.
relationshipType	A string. Type of the product relationship, such as [bundled] if the product is a bundle and you want to describe the bundled products inside this bundle; [reliesOn] if the product needs another already owned product to rely on (e.g. an option on an already owned mobile access product) [targets] or [isTargeted] (depending on the way of expressing the link) for any other kind of links that may be useful.

ProductTerm sub-resource

Description of a productTerm linked to this product. This represent a commitment with a duration.

href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
description	A string. Description of the productTerm.
duration	A quantity (Quantity). Duration of the productTerm.
name	A string. Name of the productTerm.
validFor	A time period. productTerm validity period.

Quantity sub-resource

An amount in a given unit.

| amount | A float. Numeric value in a given unit. |
| units | A string. Unit. |

RelatedParty sub-resource

Related Entity reference. A related party defines party or party role linked to a specific entity.

@referredType	A string. The actual type of the target instance when needed for disambiguation.
name	A string. Name of the related entity.
href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
role	A string. Role played by the related party.

RelatedPartyWithContactInfo sub-resource

Related party specialization that includes contact information.

@referredType	A string. The actual type of the target instance when needed for disambiguation.
role	A string. Role played by the related party.
name	A string. Name of the related entity.
href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
contactMedium	A list of contact mediums (ContactMedium [*]). Indicates the contact medium that could be used to contact the party.

RelatedPlaceRefOrValue sub-resource

Related Entity reference. A related place defines a place described by reference or by value linked to a specific entity. The polymorphic attributes @type, @schemaLocation & @referredType are related to the place entity and not the RelatedPlaceRefOrValue class itself.

@referredType	A string. The actual type of the target instance when needed for disambiguation.
name	A string. A user-friendly name for the place, such as [Paris Store], [London Store], [Main Home].
href	A string. Unique reference of the place.
id	A string. Unique identifier of the place.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
role	A string.

RelatedProductOrderItem sub-resource

RelatedProductOrderItem (ProductOrder item) .The product order item which triggered product creation/change/termination.

href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
@referredType	A string. The actual type of the target instance when needed for disambiguation.
orderItemAction	A string. Action of the order item for this product.
orderItemId	A string. Identifier of the order item where the product was managed.
productOrderHref	A string. Reference of the related entity.
productOrderId	A string. Unique identifier of a related entity.
role	A string. role of the product order item for this product.

RelatedShipment sub-resource

A related shipment addressable entity.

role	A string. The role of an entity.
@referredType	A string. The actual type of the target instance when needed for disambiguation.
name	A string. Name of the related entity.
href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.

RelatedShippingOrder sub-resource

A related shipping order addressable entity.

role	A string. The role of an entity.
@referredType	A string. The actual type of the target instance when needed for disambiguation.
name	A string. Name of the related entity.
href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.

ShipmentItem sub-resource

@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.

action	A shipment item action type (ShipmentItemActionType). The action to be carried out on the shipment item. Can be: add, modify, delete, noChange.
characteristic	A list of characteristics (Characteristic [*]). List of characteristics with values that define the test run.
externalIdentifier	A list of external identifiers (ExternalIdentifier [*]). An identification of an entity that is owned by or originates in a software system different from the current system, for example a ProductOrder handed off from a commerce platform into an order handling system. The structure identifies the system itself, the nature of the entity within the system (e.g. class name) and the unique ID of the entity within the system. It is anticipated that multiple external IDs can be held for a single entity, e.g. if the entity passed through multiple systems on the way to the current system. In this case the consumer is expected to sequence the IDs in the array in reverse order of provenance, i.e. most recent system first in the list.
id	A string. Identifier of the individual shipment line item.
product	A product ref or value (ProductRefOrValue). This data structure captures the product information.
productReservationRef	A reserve product stock reference (ReserveProductStockRef). Product Stock Reservation reference.
productStockRef	A product stock reference (ProductStockRef). ProductStockRef is a reference to a product stock.
quantity	A string. Quantity the individual shipment line item.
shipmentItemPrice	A price (Price). Item price details.
sku	A string. SKU (Stock Keeping Unit) is a unique code that you use to identify every inventory item in your warehouse.
weight	A quantity (Quantity). Weight of the shipping item package/parcel.

ShipmentRefOrValue sub-resource

A shipment defined by value or existing defined by reference. The polymorphic attributes @type, @schemaLocation & @referredType are related to the shipment entity and not the related ShipmentRefOrValue class itself.

collectionDate	A date time (DateTime). The date the package was collected from the carrier (Collection scenario).
completionDate	A date time (DateTime). Effective delivery date amended by the provider.

deliveryDate	A date time (DateTime). Is the date at which the shipment was completed (customer has taken ownership of the package).
description	A string. Description of the shipment. It could be the same as the description of the shipment specification.
expectedDeliveryDate	A date time (DateTime). The date that the shipment will be delivered.
href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
name	A string. Name of the related entity.
requestedDeliveryDate	A date time (DateTime). The date requester by the sender for shipment delivery.
state	A string. The current status of the shipment.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
@referredType	A string. The actual type of the target instance when needed for disambiguation.
attachment	A list of attachment ref or values (AttachmentRefOrValue [*]). Attachments that may be of relevance to this shipment, such as shippingLabels, Signature or photos of the delivery.
externalIdentifier	A list of external identifiers (ExternalIdentifier [*]). An identification of an entity that is owned by or originates in a software system different from the current system, for example a ProductOrder handed off from a commerce platform into an order handling system. The structure identifies the system itself, the nature of the entity within the system (e.g. class name) and the unique ID of the entity within the system. It is anticipated that multiple external IDs can be held for a single entity, e.g. if the entity passed through multiple systems on the way to the current system. In this case the consumer is expected to sequence the IDs in the array in reverse order of provenance, i.e. most recent system first in the list.
note	A list of notes (Note [*]). A list of notes made on this shipment.
paymentMethod	A payment method reference (PaymentMethodRef). Payment method to be used when delivering the package(e.g.: cash, credit card,). Structure including at least attribute name. Notice that the use of a voucher can be managed as a specific methodtype, where he voucher code can be passed as value.

placeFrom	A related place ref or value (RelatedPlaceRefOrValue). Source location of the package. E.g. warehouse or shop location.
placeTo	A related place ref or value (RelatedPlaceRefOrValue). Destination of the package. E.g. customer home address.
relatedParty	A list of related party with contact infos (RelatedPartyWithContactInfo [*]). A list of parties which are involved in this shipment and the role they are playing.
relatedShipment	A list of related shipments (RelatedShipment [*]). A list of existing shipments that has some form of correlation with the given shipment.
shipmentCharacteristic	A list of characteristics (Characteristic [*]). List of characteristics with values.
shipmentItem	A list of shipment items (ShipmentItem [*]). List of items that are part of the shipment (parcel/package).
shipmentPrice	A product price (ProductPrice). Shipment price.
shipmentSpecification	A shipment specification ref or value (ShipmentSpecificationRefOrValue). A set of characteristics to describe the shipment.
shipmentTracking	A shipment tracking reference (ShipmentTrackingRef). A reference number usually provided by the delivery partner(carrier) used to identify and track shipments across the delivery network.
shippingInstruction	A shipping instruction (ShippingInstruction). Shipping instructions, usually relevant for the carrier.
weight	A quantity (Quantity). Weight of the shipping package/parcel.

ShipmentSpecificationRefOrValue sub-resource

A shipment specification defined by value or existing defined by reference. The polymorphic attributes @type, @schemaLocation & @referredType are related to the shipment specification entity and not the related ShipmentSpecificationRefOrValue class itself.

description	A string. Description of this REST resource.
isBundle	A boolean. isBundle determines whether an ShipmentSpecification represents a single ShipmentSpecification (false), or a bundle of ShipmentSpecification (true).
lastUpdate	A date time (DateTime). Date and time of the last update of this REST resource.
lifecycleStatus	A string. Used to indicate the current lifecycle status of this catalog item.

name	A string. Name of the related entity.
version	A string. Entity specification version.
href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
@referredType	A string. The actual type of the target instance when needed for disambiguation.
attachment	A list of attachment ref or values (AttachmentRefOrValue [*]). Attachments that may be of relevance to this specification, such as picture, document, media.
constraint	A list of constraint references (ConstraintRef [*]). This is a list of constraint references applied to this specification.
relatedParty	A list of related parties (RelatedParty [*]). Parties who manage or otherwise have an interest in this shipment specification.
shipmentSpecRelationship	A list of shipment specification relationships (ShipmentSpecificationRelationship [*]). Relationship to another shipment specification, might be dependency, substitution, etc.
shipmentSpecificationCharacteristic	A list of characteristic specifications (CharacteristicSpecification [*]). List of characteristics that the shipment can take.
targetShipmentSchema	A target shipment schema (TargetShipmentSchema). Pointer to a schema that defines the target shipment.
validFor	A time period. The period for which this REST resource is valid.

ShipmentSpecificationRelationship sub-resource

A migration, substitution, dependency or exclusivity relationship between/among entity specifications.

href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.

@schemaLocation   An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.

@type   A string. When sub-classing, this defines the sub-class Extensible name.

associationSpec   An association specification reference (AssociationSpecificationRef). A specification for an association used by this relationship.

name   A string. The name given to the target entity specification instance.

relationshipType   A string. Type of relationship such as migration, substitution, dependency, exclusivity.

role   A string. The association role for this entity specification.

validFor   A time period. The period for which this REST resource is valid.

ShippingInstruction sub-resource

Instructions and details for the carrier.

href   An uri (Uri). Hyperlink reference.

id   A string. unique identifier.

@baseType   A string. When sub-classing, this defines the super-class.

@schemaLocation   An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.

@type   A string. When sub-classing, this defines the sub-class Extensible name.

carrierId   A string. The carrier identifier.

carrierName   A string. The carrier name.

carrierServiceCode   A string. The service code used by the carrier to ship the package, royal mail ground, royal mail first class, etc.

deliveryAttempts   An integer. Shipping delivery attempts that should be performed.

deliverySpeed   A string. Shipping delivery speed, same day, next day, next business day, etc.

deliveryTimeSlot   A time period. Shipping delivery time slot.

instructionCharacteristic   A list of characteristics (Characteristic [*]). Additional shipping characteristics that maybe specific to one or another carrier.

insuredValue   A money (Money). Shipping delivery value.

labelMessage   A string. Shipping delivery message label.

note	A list of notes (Note [*]). A list of notes made on this shipment item.
packageType	A string. The type of packaging.
receiptConfirmation	A string. Delivery confirmation required for the shipment (none, signature, over18Signature).
shippingType	A string. The shipping type, e.g. thick_envelope, small_flat_rate_box, large_package, etc.
signatureRequired	A boolean.
signatureRequiredBy	A signature required by type (SignatureRequiredByType). Possible values for the signature requirement upon receiving the shipment.
warehouseId	A string. The identification of the warehouse that the shipment is being shipped from.

ShippingOrderItem sub-resource

A list of shipping order items.

href	An uri (Uri). Hyperlink reference.
id	A string. Identifier of the Shipping Order Item.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
action	A shipping order item action type (ShippingOrderItemActionType). The action to be carried out on the Product. Can be: add, modify, delete, noChange.
placeFrom	A related place ref or value (RelatedPlaceRefOrValue). Source location of the item. E.g. warehouse or shop location.
placeTo	A related place ref or value (RelatedPlaceRefOrValue). Destination of the item. E.g. customer home address.
product	A product reference (ProductRef). The product for which the shipping order is created, if supplied as input the attribute id must be populated.
productOffering	A product offering reference (ProductOfferingRef). Item has a corresponding offering in the product catalog.

productOrderItem	A product order item reference (ProductOrderItemRef). The product order item for which the shipping order is created, if supplied as input the attribute id must be populated.
quantity	A string. Quantity the individual shipment line item.
relatedParty	A list of related party with contact infos (RelatedPartyWithContactInfo [*]). A party which is involved in this shipment and the role they are playing and address. In case of shipping to addresses where a geo location is needed than then PlaceTo,PlaceFrom can be used.
shipment	A shipment ref or value (ShipmentRefOrValue). A set of goods to be shipped.
shippingInstruction	A shipping instruction (ShippingInstruction). Shipping instructions, usually relevant for the carrier.
shippingOrderItemOffering	A product offering reference (ProductOfferingRef). Each shipping order item can have a corresponding product offer in the product catalog.
shippingOrderItemPrice	A product price (ProductPrice). Shipping Order Item price. The price of shipping this item. It depends if there is a ShippingOrder level price or per each individual item.
status	A string. status of shipping order item. e.g "active" , "savedForLater".

TargetProductSchema sub-resource

The reference object to the schema and type of target product which is described by product specification.

@schemaLocation	An uri (Uri). This field provides a link to the schema describing the target product.
@type	A string. Class type of the target product.

TargetShipmentSchema sub-resource

The reference object to the schema and type of target shipment which is described by shipment specification.

@schemaLocation	A string. This field provides a link to the schema describing the target shipment.
@type	A string. Class type of the target shipment.

AgreementItemRef relationship

Agreement reference. An agreement represents a contract or arrangement, either written or verbal and sometimes enforceable by law, such as a service level agreement or a customer price agreement. An agreement involves a number of other business entities, such as products, services, and resources and/or their specifications.

@referredType	A string. The actual type of the target instance when needed for disambiguation.
name	A string. Name of the related entity.

href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
agreementItemId	A string. Identifier of the agreement.

AssociationSpecificationRef relationship

reference to an AssociationSpecification object.

@referredType	A string. The actual type of the target instance when needed for disambiguation.
name	A string. Name of the related entity.
href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.

BillingAccountRef relationship

BillingAccount reference. A BillingAccount is a detailed description of a bill structure.

href	A string. Reference of the billing account.
id	A string. Unique identifier of the billing account.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
@referredType	A string. The actual type of the target instance when needed for disambiguation.
name	A string. Name of the billing account.

ratingType — A string. Indicates whether the account follows a specific payment option such as prepaid or postpaid.

ConstraintRef relationship

Constraint reference. The Constraint resource represents a policy/rule applied to an entity or entity spec.

@referredType — A string. The actual type of the target instance when needed for disambiguation.

name — A string. Name of the related entity.

href — An uri (Uri). Hyperlink reference.

id — A string. unique identifier.

@baseType — A string. When sub-classing, this defines the super-class.

@schemaLocation — An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.

@type — A string. When sub-classing, this defines the sub-class Extensible name.

version — A string. constraint version.

PaymentMethodRef relationship

PaymentMethod reference. A payment method defines a specific mean of payment (e.g direct debit).

@referredType — A string. The actual type of the target instance when needed for disambiguation.

name — A string. Name of the related entity.

href — An uri (Uri). Hyperlink reference.

id — A string. unique identifier.

@baseType — A string. When sub-classing, this defines the super-class.

@schemaLocation — An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.

@type — A string. When sub-classing, this defines the sub-class Extensible name.

ProductOfferingPriceRef relationship

ProductPriceOffering reference. An amount, usually of money, that is asked for or allowed when a ProductOffering is bought, rented, or leased.

@referredType — A string. The actual type of the target instance when needed for disambiguation.

name	A string. Name of the related entity.
href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.

ProductOfferingRef relationship

ProductOffering reference. A product offering represents entities that are orderable from the provider of the catalog, this resource includes pricing information.

@referredType	A string. The actual type of the target instance when needed for disambiguation.
name	A string. Name of the related entity.
href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.

ProductOrderItemRef relationship

Reference to an order item that can typically be queried with another API.

@referredType	A string. The actual type of the target instance when needed for disambiguation.
name	A string. Name of the related entity.
href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.

| @type | A string. When sub-classing, this defines the sub-class Extensible name. |
| productOrderId | A string. Identifier of the order of which the item is a part of. |

ProductOrderRef relationship

ProductOrder (ProductOrder) .The product order which the recommendation is related with.

@referredType	A string. The actual type of the target instance when needed for disambiguation.
name	A string. Name of the related entity.
href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.

ProductRef relationship

@referredType	A string. The actual type of the target instance when needed for disambiguation.
name	A string. Name of the related entity.
href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.

ProductSpecificationRef relationship

Product specification reference: A ProductSpecification is a detailed description of a tangible or intangible object made available externally in the form of a ProductOffering to customers or other parties playing a party role.

| @referredType | A string. The actual type of the target instance when needed for disambiguation. |
| name | A string. Name of the related entity. |

href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.
targetProductSchema	A target product schema (TargetProductSchema). A target product schema reference. The reference object to the schema and type of target product which is described by product specification.
version	A string. Version of the product specification.

ProductStockRef relationship

ProductStockRef is a reference to a product stock.

@referredType	A string. The actual type of the target instance when needed for disambiguation.
name	A string. Name of the ProductStockRef.
href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.

ReserveProductStockRef relationship

Product Stock Reservation reference.

@referredType	A string. The actual type of the target instance when needed for disambiguation.
name	A string. Name of the related entity.
href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.

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@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.

ResourceRef relationship

@referredType	A string. The actual type of the target instance when needed for disambiguation.
name	A string. Name of the related entity.
href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.

ServiceRef relationship

Service reference, for when Service is used by other entities.

@referredType	A string. The actual type of the target instance when needed for disambiguation.
name	A string. Name of the related entity.
href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.

ShipmentTrackingRef relationship

ShipmentTracking reference.

@referredType	A string. The actual type of the target instance when needed for disambiguation.
name	A string. Name of the related entity.

href	An uri (Uri). Hyperlink reference.
id	A string. unique identifier.
@baseType	A string. When sub-classing, this defines the super-class.
@schemaLocation	An uri (Uri). A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A string. When sub-classing, this defines the sub-class Extensible name.

Json representation sample

We provide below the json representation of an example of a 'ShippingOrder' resource object

```
{
    "id": "0d3db49d-8cf8-476f-91d6-2b3c4a482b8a",
    "href": "https://host/tmf-api/shippingOrder/v4.0/shippingOrder/0d3db49d-8cf8-476f-91d6-
2b3c4a482b8a",
    "status": "pending",
    "creationDate": "2021-05-31T07:34:45.968Z",
    "lastUpdateDate": "2021-06-07T07:34:45.968Z",
    "productOrder": {
        "id": "7800",
        "href": "http://host/productOrderingManagement/v4/productOrder/7800"
    },
    "note": [
        {
            "id": "935ad476-0c8f-475a-b34d-88527e53398c",
            "text": "Upgrade purchase customer journey"
        }
    ],
    "placeTo": {
        "id": "9979",
        "href": "https://host/tmf-
api/geographicAddressManagement/v4/geographicAddress/9979",
        "@baseType": "Place",
        "@referredType": "GeographicAddress",
        "streetNr": "23",
        "streetName": "Borney Road",
        "streetType": "Road",
        "postcode": "OX11 6TR",
        "locality": "Oxford",
        "city": "Oxford",
        "stateOrProvince": "Oxfordshire",
        "country": "United Kingdom",
        "role": "Recipient"
    },
    "relatedParty": [
        {
            "name": "John Doe",
            "role": "Recepient",
            "@referredType": "Individual",
            "contactMedium": [
                {
                    "mediumType": "Phone",
                    "preferred": true,
                    "characteristic": {
                        "phoneNumber": "00447766000111"
                    }
                },
```

```
                        {
                            "mediumType": "Address",
                            "characteristic": {
                                "postCode": "OX11 6TR",
                                "city": "Oxford",
                                "street1": "23 Borney Road"
                            }
                        }
                    ]
                }
        ],
        "shippingInstruction": {
            "deliveryAttempts": 3,
            "deliverySpeed": "SameDay",
            "labelMessage": "FAO Ink Industries",
            "packageType": "Bottle",
            "receiptConfirmation": "SignatureRequired",
            "shippingType": "largePackage",
            "signatureRequired": true,
            "signatureRequiredBy": "adult",
            "instructionCharacteristic": [
                {
                    "name": "CustomerCall",
                    "value": "Yes, 1h before arriving"
                }
            ]
        },
        "shippingOrderItem": [
            {
                "id": "1",
                "action": "add",
                "productOrderItem": {
                    "id": "1",
                    "name": "Maker XPhone",
                    "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
                    "productOrderId": "7800"
                },
                "product": {
                    "id": "100",
                    "name": "Maker XPhone",
                    "href": "https://host/tmf-api/productInventoryManagement/v4/product/100"
                },
                "productOffering": {
                    "id": "4500",
                    "name": "Maker XPhone",
                    "href": "https://host/tmf-
api/productCatalogManagement/v4/productOffering/4500"
                },
                "quantity": "1",
                "shipment": {
                    "id": "53f59e7c-e3cd-4deb-b8f1-c0fde56dd3c6",
                    "href": "https://host/tmf-api/shipmentManagement/v4/shipment/53f59e7c-e3cd-
4deb-b8f1-c0fde56dd3c6",
                    "requestedDeliveryDate": "2021-10-31T07:34:45.968Z",
                    "weight": {
                        "amount": 100,
                        "units": "grams"
                    }
                }
            },
            {
                "id": "2",
                "action": "add",
                "productOrderItem": {
                    "id": "2",
```

```
                  "name": "Headset XQuevy",
                  "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
                  "productOrderId": "7800"
              },
              "productOffering": {
                  "id": "4600",
                  "name": "Headset XQuevy",
                  "href": "https://host/tmf-
api/productCatalogManagement/v4/productOffering/4600"
              },
              "product": {
                  "id": "200",
                  "name": "Headset XQuevy",
                  "href": "https://host/tmf-api/productInventoryManagement/v4/product/200"
              },
              "quantity": "1",
              "shipment": {
                  "id": "53f59e7c-e3cd-4deb-b8f1-c0fde56dd3c6",
                  "href": "https://host/tmf-api/shipmentManagement/v4/shipment/53f59e7c-e3cd-
4deb-b8f1-c0fde56dd3c6",
                  "requestedDeliveryDate": "2021-10-31T07:34:45.968Z",
                  "weight": {
                      "amount": 200,
                      "units": "grams"
                  }
              }
          },
          {
              "id": "3",
              "action": "add",
              "productOrderItem": {
                  "id": "3",
                  "name": "Red 75",
                  "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
                  "productOrderId": "7800"
              },
              "product": {
                  "id": "300",
                  "name": "Red 75",
                  "href": "https://host/tmf-api/productInventoryManagement/v4/product/300"
              },
              "productOffering": {
                  "id": "4700",
                  "name": "Headset XQuevy",
                  "href": "https://host/tmf-
api/productCatalogManagement/v4/productOffering/4700"
              },
              "quantity": "1",
              "shipment": {
                  "id": "53f59e7c-e3cd-4deb-b8f1-c0fde56dd3c6",
                  "href": "https://host/tmf-api/shipmentManagement/v4/shipment/53f59e7c-e3cd-
4deb-b8f1-c0fde56dd3c6",
                  "requestedDeliveryDate": "2021-10-31T07:34:45.968Z",
                  "weight": {
                      "amount": 200,
                      "units": "grams"
                  }
              }
          }
      ],
      "shippingOrderOffering": {
          "id": "8000",
          "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/8000"
      },
      "shippingOrderPrice": {
```

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```
        "priceType": "Promotional Shipping",
        "price": {
            "dutyFreeAmount": {
                "unit": "EUR",
                "value": 5
            },
            "taxIncludedAmount": {
                "unit": "EUR",
                "value": 10
            }
        },
        "productPriceAlteration": [
            {
                "name": "Discount 10%",
                "description": "Shipping Order Discount, applied during the promotional
shipping",
                "priceType": "discount",
                "price": {
                    "percentage": 10
                },
                "productOfferingPrice": {
                    "id": "4adcf7f6-d073-431b-ae9a-be8a6a594371",
                    "href": "https://host/tmf-
api/productCatalogManagement/v4/productOffering/4adcf7f6-d073-431b-ae9a-be8a6a594371",
                    "name": "Promotional Shipping - Discount 10%"
                }
            }
        ],
        "billingAccount": {
            "id": "9c188364-a969-4bea-8959-4eb0b8e5eec8",
            "href": "https://host/tmf-api/accountManagement/v4/billingAccount/9c188364-
a969-4bea-8959-4eb0b8e5eec8",
            "name": "John Doe"
        }
    }
}
```

Notification Resource Models

5 notifications are defined for this API

Notifications related to ShippingOrder:
  - ShippingOrderCreateEvent
  - ShippingOrderAttributeValueChangeEvent
  - ShippingOrderDeleteEvent
  - ShippingOrderStateChangeEvent
  - ShippingOrderInformationRequiredEvent

The notification structure for all notifications in this API follow the pattern depicted by the figure below.
A notification event resource (depicted by "SpecificEvent" placeholder) is a sub class of a generic Event structure containing at least an id of the event occurrence (eventId), an event timestamp (eventTime), and the name of the resource (eventType).

This notification structure owns an event payload structure ("SpecificEventPayload" placeholder) linked to the resource concerned by the notification using the resource name as access field ("resourceName" placeholder).
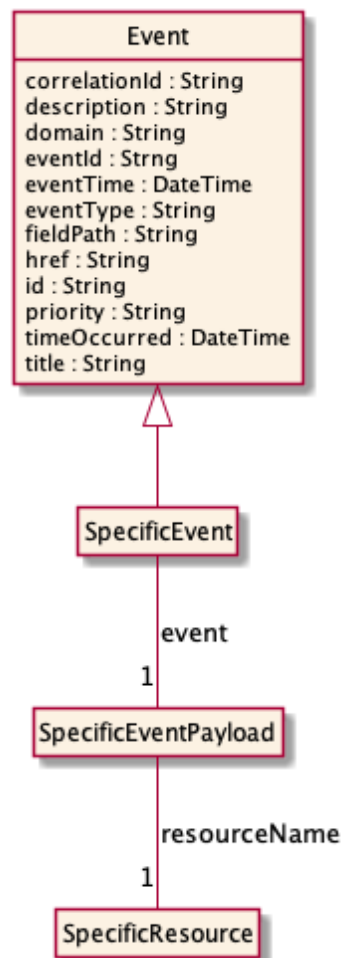
Shipping Order Create Event

Notification ShippingOrderCreateEvent case for resource ShippingOrder

Json representation sample

We provide below the json representation of an example of a 'ShippingOrderCreateEvent' notification event object

```
{
    "eventId":"00001",
    "eventTime":"2015-11-16T16:42:25-04:00",
    "eventType":"ShippingOrderCreateEvent",
    "event": {
        "shippingOrder" :
            {-- SEE ShippingOrder RESOURCE SAMPLE --}
    }
}
```

Shipping Order Attribute Value Change Event

Notification ShippingOrderAttributeValueChangeEvent case for resource ShippingOrder

Json representation sample

We provide below the json representation of an example of a 'ShippingOrderAttributeValueChangeEvent' notification event object

```
{
    "eventId":"00001",
    "eventTime":"2015-11-16T16:42:25-04:00",
    "eventType":"ShippingOrderAttributeValueChangeEvent",
    "event": {
      "shippingOrder" :
          {-- SEE ShippingOrder RESOURCE SAMPLE --}
    }
}
```

Shipping Order Delete Event

Notification ShippingOrderDeleteEvent case for resource ShippingOrder

Json representation sample

We provide below the json representation of an example of a 'ShippingOrderDeleteEvent' notification event object

```
{
    "eventId":"00001",
    "eventTime":"2015-11-16T16:42:25-04:00",
    "eventType":"ShippingOrderDeleteEvent",
    "event": {
      "shippingOrder" :
          {-- SEE ShippingOrder RESOURCE SAMPLE --}
    }
}
```

Shipping Order State Change Event

Notification ShippingOrderStateChangeEvent case for resource ShippingOrder

Json representation sample

We provide below the json representation of an example of a 'ShippingOrderStateChangeEvent' notification event object

```
{
    "eventId":"00001",
    "eventTime":"2015-11-16T16:42:25-04:00",
    "eventType":"ShippingOrderStateChangeEvent",
    "event": {
```

```
    "shippingOrder" :
        {-- SEE ShippingOrder RESOURCE SAMPLE --}
    }
}
```

Shipping Order Information Required Event

Notification ShippingOrderInformationRequiredEvent case for resource ShippingOrder

Json representation sample

We provide below the json representation of an example of a 'ShippingOrderInformationRequiredEvent' notification event object

```
{
    "eventId":"00001",
    "eventTime":"2015-11-16T16:42:25-04:00",
    "eventType":"ShippingOrderInformationRequiredEvent",
    "event": {
        "shippingOrder" :
            {-- SEE ShippingOrder RESOURCE SAMPLE --}
    }
}
```

API OPERATIONS

Remember the following Uniform Contract:

Operation on Entities	Uniform API Operation	Description
Query Entities	GET Resource	GET must be used to retrieve a representation of a resource.
Create Entity	POST Resource	POST must be used to create a new resource
Partial Update of an Entity	PATCH Resource	PATCH must be used to partially update a resource
Remove an Entity	DELETE Resource	DELETE must be used to remove a resource
Execute an Action on an Entity	POST on TASK Resource	POST must be used to execute Task Resources
Other Request Methods	POST on TASK Resource	GET and POST must not be used to tunnel other request methods.

Filtering and attribute selection rules are described in the TMF REST Design Guidelines.

Notifications are also described in a subsequent section.

Operations on Shipping Order

List shipping orders

```
GET /shippingOrder?fields=...&{filtering}
```

Description

This operation list shipping order entities.
Attribute selection is enabled for all first level attributes.
Filtering may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving a list of shipping orders.

Request
GET /tmf-api/shippingOrder/v4.0/shippingOrder Accept: application/json

Response

200
 	
[
  {
    "id": "fbc3a5a7-f80b-4243-809d-eb3fefa7ebed",
    "href": "https://host/tmf-api/shippingOrder/v4/shippingOrder/fbc3a5a7-f80b-4243-809d-eb3fefa7ebed",
    "creationDate": "2020-11-10T08:00:00Z",
    "status": "open",
    "productOrder": {
      "id": "7800",
      "href": "http://host/productOrderingManagement/v4/productOrder/7800"
    },
    "relatedParty": [
      {
        "name": "John Doe",
        "role": "Recepient",
        "@referredType": "Individual",
        "contactMedium": [
          {
            "mediumType": "Phone",
            "preferred": true,
            "characteristic": {
              "phoneNumber": "00447766000111"
            }

```json
            },
            {
              "mediumType": "Address",
              "characteristic": {
                "postCode": "OX11 6TR",
                "city": "Oxford",
                "street1": "23 Borney Road"
              }
            }
          ]
        }
      ],
      "shippingInstruction": {
        "deliveryAttempts": 3,
        "deliverySpeed": "SameDay",
        "labelMessage": "FAO Ink Industries",
        "packageType": "Bottle",
        "receiptConfirmation": "SignatureRequired",
        "shippingType": "largePackage",
        "signatureRequired": true,
        "signatureRequiredBy": "adult",
        "instructionCharacteristic": [
          {
            "name": "CustomerCall",
            "value": "Yes, 1h before arriving"
          }
        ]
      },
      "shippingOrderItem": [
        {
          "id": "1",
          "action": "add",
          "productOrderItem": {
            "id": "1",
            "name": "Maker XPhone",
            "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
            "productOrderId": "7800"
          },
          "product": {
            "id": "100",
            "name": "Maker XPhone",
            "href": "https://host/tmf-api/productInventoryManagement/v4/product/100"
          },
          "productOffering": {
            "id": "4500",
            "name": "Maker XPhone",
            "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4500"
          },
          "quantity": "1"
        },
        {
          "id": "2",
          "action": "add",
          "productOrderItem": {
```

```json
          "id": "2",
          "name": "Headset XQuevy",
          "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
          "productOrderId": "7800"
        },
        "productOffering": {
          "id": "4600",
          "name": "Headset XQuevy",
          "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4600"
        },
        "product": {
          "id": "200",
          "name": "Headset XQuevy",
          "href": "https://host/tmf-api/productInventoryManagement/v4/product/200"
        },
        "quantity": "1"
      },
      {
        "id": "3",
        "action": "add",
        "productOrderItem": {
          "id": "3",
          "name": "Red 75",
          "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
          "productOrderId": "7800"
        },
        "product": {
          "id": "300",
          "name": "Red 75",
          "href": "https://host/tmf-api/productInventoryManagement/v4/product/300"
        },
        "productOffering": {
          "id": "4700",
          "name": "Headset XQuevy",
          "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4700"
        },
        "quantity": "1"
      }
    ],
    "placeTo": {
      "id": "9979",
      "href": "https://host/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
      "role": "DeliveryAddress",
      "@baseType": "Place",
      "@referredType": "GeographicAddress",
      "streetNr": "23",
      "streetName": "Borney Road",
      "streetType": "Road",
      "postcode": "OX11 6TR",
      "locality": "Oxford",
      "city": "Oxford",
      "stateOrProvince": "Oxfordshire",
      "country": "United Kingdom"
    },
```

```
    "shippingOrderOffering": {
      "id": "8000",
      "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/8000"
    },
    "shippingOrderPrice": {
      "priceType": "Dicounted 10%",
      "price": {
        "dutyFreeAmount": {
          "unit": "EUR",
          "value": 5
        },
        "taxIncludedAmount": {
          "unit": "EUR",
          "value": 10
        }
      }
    }
  }
},
{
  "id": "6b6eef0e-f192-4634-ae2d-a13d36078274",
  "href": "https://host/tmf-api/shippingOrder/v4/shippingOrder/fbc3a5a7-f80b-4243-809d-eb3fefa7ebed",
  "creationDate": "2020-11-10T08:00:00Z",
  "status": "open",
  "productOrder": {
    "id": "7800",
    "href": "http://host/productOrderingManagement/v4/productOrder/7800"
  },
  "relatedParty": [
    {
      "name": "John Doe",
      "role": "Customer",
      "@referredType": "Individual",
      "contactMedium": [
        {
          "mediumType": "Phone",
          "preferred": true,
          "characteristic": {
            "phoneNumber": "00447766000111"
          }
        },
        {
          "mediumType": "Address",
          "characteristic": {
            "postCode": "OX11 6TR",
            "city": "Oxford",
            "street1": "23 Borney Road"
          }
        }
      ]
    }
  ],
  "shippingInstruction": {
    "deliveryAttempts": 3,
    "deliverySpeed": "SameDay",
```

```json
         "labelMessage": "FAO Ink Industries",
         "packageType": "Bottle",
         "receiptConfirmation": "SignatureRequired",
         "shippingType": "largePackage",
         "signatureRequired": true,
         "signatureRequiredBy": "adult",
         "instructionCharacteristic": [
            {
               "name": "CustomerCall",
               "value": "Yes, 1h before arriving"
            }
         ]
      },
      "shippingOrderItem": [
         {
            "id": "1",
            "action": "add",
            "productOrderItem": {
               "id": "1",
               "name": "Maker XPhone",
               "href": "https://localhost/tmf-api/productOrder/v4/productOrder/7800",
               "productOrderId": "7800"
            },
            "product": {
               "id": "100",
               "name": "Maker XPhone",
               "href": "https://localhost/tmf-api/productInventoryManagement/v4/product/100"
            },
            "productOffering": {
               "id": "4500",
               "name": "Maker XPhone",
               "href": "https://localhost/tmf-api/productCatalogManagement/v4/productOffering/4500"
            },
            "quantity": "1",
            "relatedParty": [
               {
                  "name": "John Doe",
                  "role": "recipient",
                  "@referredType": "Individual",
                  "contactMedium": [
                     {
                        "mediumType": "Phone",
                        "preferred": true,
                        "characteristic": {
                           "phoneNumber": "00447766000111"
                        }
                     }
                  ]
               }
            ],
            "placeTo": {
               "id": "9979",
               "href": "https://localhost/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
               "role": "DeliveryAddress",
```

```
          "@baseType": "Place",
          "@referredType": "GeographicAddress",
          "streetNr": "23",
          "streetName": "Borney Road",
          "streetType": "Road",
          "postcode": "OX11 6TR",
          "locality": "Oxford",
          "city": "Oxford",
          "stateOrProvince": "Oxfordshire",
          "country": "United Kingdom"
        }
      },
      {
        "id": "2",
        "action": "add",
        "productOrderItem": {
          "id": "2",
          "name": "Headset XQuevy",
          "href": "https://localhost/tmf-api/productOrder/v4/productOrder/7800",
          "productOrderId": "7800"
        },
        "productOffering": {
          "id": "4600",
          "name": "Headset XQuevy",
          "href": "https://localhost/tmf-api/productCatalogManagement/v4/productOffering/4600"
        },
        "product": {
          "id": "200",
          "name": "Headset XQuevy",
          "href": "https://localhost/tmf-api/productInventoryManagement/v4/product/200"
        },
        "quantity": "1",
        "relatedParty": [
          {
            "name": "Vivienne Herrera",
            "role": "recipient",
            "@referredType": "Individual",
            "contactMedium": [
              {
                "mediumType": "Phone",
                "preferred": true,
                "characteristic": {
                  "phoneNumber": "00447766323987"
                }
              }
            ]
          }
        ],
        "placeTo": {
          "id": "9979",
          "href": "https://localhost/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
          "role": "DeliveryAddress",
          "@baseType": "Place",
          "@referredType": "GeographicAddress",
```

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```json
              "streetNr": "23",
              "streetName": "Graphey Road",
              "streetType": "Road",
              "postcode": "OX11 7QW",
              "locality": "Oxford",
              "city": "Oxford",
              "stateOrProvince": "Oxfordshire",
              "country": "United Kingdom"
          }
        },
        {
          "id": "3",
          "action": "add",
          "productOrderItem": {
            "id": "3",
            "name": "Red 75",
            "href": "https://localhost/tmf-api/productOrder/v4/productOrder/7800",
            "productOrderId": "7800"
          },
          "product": {
            "id": "300",
            "name": "Red 75",
            "href": "https://localhost/tmf-api/productInventoryManagement/v4/product/300"
          },
          "productOffering": {
            "id": "4700",
            "name": "Headset XQuevy",
            "href": "https://localhost/tmf-api/productCatalogManagement/v4/productOffering/4700"
          },
          "quantity": "1",
          "relatedParty": [
            {
              "name": "John Doe",
              "role": "recipient",
              "@referredType": "Individual",
              "contactMedium": [
                {
                  "mediumType": "Phone",
                  "preferred": true,
                  "characteristic": {
                      "phoneNumber": "00447766000111 "
                  }
                }
              ]
            }
          ],
          "placeTo": {
            "id": "9979",
            "href": "https://localhost/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
            "role": "DeliveryAddress",
            "@baseType": "Place",
            "@referredType": "GeographicAddress",
            "streetNr": "23",
            "streetName": "Borney Road",
```

```
                "streetType": "Road",
                "postcode": "OX11 6TR",
                "locality": "Oxford",
                "city": "Oxford",
                "stateOrProvince": "Oxfordshire",
                "country": "United Kingdom"
            }
        }
    ],
    "shippingOrderOffering": {
        "id": "8000",
        "href": "https://localhost/tmf-api/productCatalogManagement/v4/productOffering/8000"
    },
    "shippingOrderPrice": {
        "priceType": "Dicounted 10%",
        "price": {
            "dutyFreeAmount": {
                "unit": "EUR",
                "value": 5
            },
            "taxIncludedAmount": {
                "unit": "EUR",
                "value": 10
            }
        }
    }
},
{
    "id": "3f835762-0c7a-4473-8f03-d1724fc2b28b",
    "href": "https://host/tmf-api/shippingOrder/v4/shippingOrder/3f835762-0c7a-4473-8f03-d1724fc2b28b",
    "status": "open",
    "creationDate": "2020-11-10T08:00:00Z",
    "productOrder": {
        "id": "7800",
        "href": "http://host/productOrderingManagement/v4/productOrder/7800"
    },
    "relatedParty": [
        {
            "name": "John Doe",
            "role": "Customer",
            "@referredType": "Individual",
            "contactMedium": [
                {
                    "mediumType": "Phone",
                    "preferred": true,
                    "characteristic": {
                        "phoneNumber": "00447766000111"
                    }
                },
                {
                    "mediumType": "Address",
                    "characteristic": {
                        "postCode": "OX11 6TR",
                        "city": "Oxford",
```

```json
                    "street1": "23 Borney Road"
                }
            }
        ]
    }
],
"placeTo": {
    "id": "9979",
    "href": "https://host/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
    "role": "DeliveryAddress",
    "@baseType": "Place",
    "@referredType": "GeographicAddress",
    "streetNr": "23",
    "streetName": "Borney Road",
    "streetType": "Road",
    "postcode": "OX11 6TR",
    "locality": "Oxford",
    "city": "Oxford",
    "stateOrProvince": "Oxfordshire",
    "country": "United Kingdom"
},
"shippingOrderItem": [
    {
        "id": "1",
        "action": "add",
        "productOrderItem": {
            "id": "1",
            "name": "Maker XPhone",
            "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
            "productOrderId": "7800"
        },
        "product": {
            "id": "100",
            "name": "Maker XPhone",
            "href": "https://host/tmf-api/productInventoryManagement/v4/product/100"
        },
        "productOffering": {
            "id": "4500",
            "name": "Maker XPhone",
            "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4500"
        },
        "quantity": "1",
        "shippingInstruction": {
            "carrierName": "Alfa",
            "carrierId": "123",
            "carrierServiceCode": "ND100",
            "deliverySpeed": "NextDay",
            "signatureRequired": true,
            "signatureRequiredBy": "adult"
        },
        "shippingOrderItemOffering": {
            "id": "9000",
            "name": "Next Day Delivery",
            "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/9000"
```

```
      },
      "shippingOrderItemPrice": {
        "priceType": "one-off",
        "price": {
          "taxIncludedAmount": {
            "unit": "EUR",
            "value": 4
          }
        }
      }
    }
  },
  {
    "id": "2",
    "action": "add",
    "productOrderItem": {
      "id": "2",
      "name": "Headset XQuevy",
      "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
      "productOrderId": "7800"
    },
    "productOffering": {
      "id": "4600",
      "name": "Headset XQuevy",
      "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4600"
    },
    "product": {
      "id": "200",
      "name": "Headset XQuevy",
      "href": "https://host/tmf-api/productInventoryManagement/v4/product/200"
    },
    "quantity": "1",
    "shippingInstruction": {
      "carrierName": "Alfa",
      "carrierId": "123",
      "carrierServiceCode": "ND100",
      "deliverySpeed": "NextDay",
      "signatureRequired": true,
      "signatureRequiredBy": "adult"
    },
    "shippingOrderItemOffering": {
      "id": "9000",
      "name": "Next Day Delivery",
      "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/9000"
    },
    "shippingOrderItemPrice": {
      "priceType": "one-off",
      "price": {
        "taxIncludedAmount": {
          "unit": "EUR",
          "value": 4
        }
      }
    }
  },
```

```json
            {
              "id": "3",
              "action": "add",
              "productOrderItem": {
                "id": "3",
                "name": "Red 75",
                "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
                "productOrderId": "7800"
              },
              "product": {
                "id": "300",
                "name": "Red 75",
                "href": "https://host/tmf-api/productInventoryManagement/v4/product/300"
              },
              "productOffering": {
                "id": "4700",
                "name": "Headset XQuevy",
                "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4700"
              },
              "quantity": "1",
              "shippingInstruction": {
                "carrierName": "Beta",
                "carrierId": "333",
                "carrierServiceCode": "BT200",
                "deliverySpeed": "BusinessDeliverySpeed",
                "signatureRequired": true,
                "signatureRequiredBy": "adult"
              },
              "shippingOrderItemOffering": {
                "id": "8001",
                "name": "Beta Business Day Delivery",
                "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/8001"
              },
              "shippingOrderItemPrice": {
                "priceType": "one-off",
                "price": {
                  "taxIncludedAmount": {
                    "unit": "EUR",
                    "value": 2
                  }
                }
              }
            }
          ],
          "shippingOrderPrice": {
            "priceType": "Dicounted 10%",
            "price": {
              "dutyFreeAmount": {
                "unit": "EUR",
                "value": 5
              },
              "taxIncludedAmount": {
                "unit": "EUR",
                "value": 10
```

```
                }
            }
         }
      }
   }
]
```

Retrieve shipping order

GET /shippingOrder/{id}?fields=...&{filtering}

Description

This operation retrieves a shipping order entity.

Attribute selection is enabled for all first level attributes.

Filtering on sub-resources may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving a specific shipping order.

Request
GET /tmf-api/shippingOrder/v4.0/shippingOrder/fbc3a5a7-f80b-4243-809d-eb3fefa7ebed Accept: application/json
Response

200
 	
{
  "id": "fbc3a5a7-f80b-4243-809d-eb3fefa7ebed",
  "href": "https://host/tmf-api/shippingOrder/v4/shippingOrder/fbc3a5a7-f80b-4243-809d-eb3fefa7ebed",
  "creationDate": "2020-11-10T08:00:00Z",
  "status": "open",
  "productOrder": {
    "id": "7800",
    "href": "http://host/productOrderingManagement/v4/productOrder/7800"
  },
  "relatedParty": [
    {
      "name": "John Doe",
      "role": "Recepient",
      "@referredType": "Individual",
      "contactMedium": [
        {
          "mediumType": "Phone",

```json
          "preferred": true,
          "characteristic": {
            "phoneNumber": "00447766000111"
          }
        },
        {
          "mediumType": "Address",
          "characteristic": {
            "postCode": "OX11 6TR",
            "city": "Oxford",
            "street1": "23 Borney Road"
          }
        }
      ]
    }
  ],
  "shippingInstruction": {
    "deliveryAttempts": 3,
    "deliverySpeed": "SameDay",
    "labelMessage": "FAO Ink Industries",
    "packageType": "Bottle",
    "receiptConfirmation": "SignatureRequired",
    "shippingType": "largePackage",
    "signatureRequired": true,
    "signatureRequiredBy": "adult",
    "instructionCharacteristic": [
      {
        "name": "CustomerCall",
        "value": "Yes, 1h before arriving"
      }
    ]
  },
  "shippingOrderItem": [
    {
      "id": "1",
      "action": "add",
      "productOrderItem": {
        "id": "1",
        "name": "Maker XPhone",
        "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
        "productOrderId": "7800"
      },
      "product": {
        "id": "100",
        "name": "Maker XPhone",
        "href": "https://host/tmf-api/productInventoryManagement/v4/product/100"
      },
      "productOffering": {
        "id": "4500",
        "name": "Maker XPhone",
        "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4500"
      },
      "quantity": "1"
    },
```

```json
    {
      "id": "2",
      "action": "add",
      "productOrderItem": {
        "id": "2",
        "name": "Headset XQuevy",
        "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
        "productOrderId": "7800"
      },
      "productOffering": {
        "id": "4600",
        "name": "Headset XQuevy",
        "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4600"
      },
      "product": {
        "id": "200",
        "name": "Headset XQuevy",
        "href": "https://host/tmf-api/productInventoryManagement/v4/product/200"
      },
      "quantity": "1"
    },
    {
      "id": "3",
      "action": "add",
      "productOrderItem": {
        "id": "3",
        "name": "Red 75",
        "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
        "productOrderId": "7800"
      },
      "product": {
        "id": "300",
        "name": "Red 75",
        "href": "https://host/tmf-api/productInventoryManagement/v4/product/300"
      },
      "productOffering": {
        "id": "4700",
        "name": "Headset XQuevy",
        "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4700"
      },
      "quantity": "1"
    }
  ],
  "placeTo": {
    "id": "9979",
    "href": "https://host/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
    "role": "DeliveryAddress",
    "@baseType": "Place",
    "@referredType": "GeographicAddress",
    "streetNr": "23",
    "streetName": "Borney Road",
    "streetType": "Road",
    "postcode": "OX11 6TR",
    "locality": "Oxford",
```

```
      "city": "Oxford",
      "stateOrProvince": "Oxfordshire",
      "country": "United Kingdom"
    },
    "shippingOrderOffering": {
      "id": "8000",
      "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/8000"
    },
    "shippingOrderPrice": {
      "priceType": "Dicounted 10%",
      "price": {
        "dutyFreeAmount": {
          "unit": "EUR",
          "value": 5
        },
        "taxIncludedAmount": {
          "unit": "EUR",
          "value": 10
        }
      }
    }
  }
}
```

Create shipping order

POST /shippingOrder

Description

This operation creates a shipping order entity.

Mandatory and Non Mandatory Attributes

The following tables provide the list of mandatory and non mandatory attributes when creating a ShippingOrder, including any possible rule conditions and applicable default values. Notice that it is up to an implementer to add additional mandatory attributes.

Mandatory Attributes	Rule
shippingOrderItem	

Non Mandatory Attributes	Rule
@baseType	
@schemaLocation	
@type	
creationDate	
lastUpdateDate	
note	
placeFrom	
placeTo	

productOrder	
relatedParty	
relatedShippingOrder	
shippingInstruction	
shippingOrderCharacteristic	
shippingOrderOffering	
shippingOrderPrice	
status	

Additional Rules

The following table provides additional rules indicating mandatory fields in sub-resources or relationships when creating a ShippingOrder resource.

Context	Mandatory Sub-Attributes
shippingOrderItem	id, action

Usage Samples

Below is an example of a request for creating a Shipping Order resource for the following use case:

- 1 Product Order
- 3 items in the order (1 phone, 1 headset, 1 simcard)
- 1 Recipient (role: recipient)
- all items delivered to the same recipient at one address
- Logistic Partner can decide on shipments level

Request

POST /tmf-api/shippingOrder/v4.0/shippingOrder
Content-Type: application/json
 	
{
   "productOrder": {
     "id": "7800",
     "href": "http://host/productOrderingManagement/v4/productOrder/7800"
   },
   "relatedParty": [
     {
       "name": "John Doe",
       "role": "Recepient",
       "@referredType": "Individual",
       "contactMedium": [
         {
           "mediumType": "Phone",
           "preferred": true,

```
            "characteristic": {
              "phoneNumber": "00447766000111"
            }
          },
          {
            "mediumType": "Address",
            "characteristic": {
              "postCode": "OX11 6TR",
              "city": "Oxford",
              "street1": "23 Borney Road"
            }
          }
        ]
      }
    ],
    "shippingInstruction": {
      "deliveryAttempts": 3,
      "deliverySpeed": "SameDay",
      "labelMessage": "FAO Ink Industries",
      "packageType": "Bottle",
      "receiptConfirmation": "SignatureRequired",
      "shippingType": "largePackage",
      "signatureRequired": true,
      "signatureRequiredBy": "adult",
      "instructionCharacteristic": [
        {
          "name": "CustomerCall",
          "value": "Yes, 1h before arriving"
        }
      ]
    },
    "shippingOrderItem": [
      {
        "id": "1",
        "action": "add",
        "productOrderItem": {
          "id": "1",
          "name": "Maker XPhone",
          "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
          "productOrderId": "7800"
        },
        "product": {
          "id": "100",
          "name": "Maker XPhone",
          "href": "https://host/tmf-api/productInventoryManagement/v4/product/100"
        },
        "productOffering": {
          "id": "4500",
          "name": "Maker XPhone",
          "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4500"
        },
        "quantity": "1"
      },
      {
```

```
          "id": "2",
          "action": "add",
          "productOrderItem": {
            "id": "2",
            "name": "Headset XQuevy",
            "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
            "productOrderId": "7800"
          },
          "productOffering": {
            "id": "4600",
            "name": "Headset XQuevy",
            "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4600"
          },
          "product": {
            "id": "200",
            "name": "Headset XQuevy",
            "href": "https://host/tmf-api/productInventoryManagement/v4/product/200"
          },
          "quantity": "1"
        },
        {
          "id": "3",
          "action": "add",
          "productOrderItem": {
            "id": "3",
            "name": "Red 75",
            "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
            "productOrderId": "7800"
          },
          "product": {
            "id": "300",
            "name": "Red 75",
            "href": "https://host/tmf-api/productInventoryManagement/v4/product/300"
          },
          "productOffering": {
            "id": "4700",
            "name": "Headset XQuevy",
            "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4700"
          },
          "quantity": "1"
        }
      ],
      "placeTo": {
        "id": "9979",
        "href": "https://host/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
        "@baseType": "Place",
        "@referredType": "GeographicAddress",
        "streetNr": "23",
        "streetName": "Borney Road",
        "streetType": "Road",
        "postcode": "OX11 6TR",
        "locality": "Oxford",
        "city": "Oxford",
        "stateOrProvince": "Oxfordshire",
```

```
        "country": "United Kingdom",
        "role": "Recipient"
    },
    "shippingOrderOffering": {
        "id": "8000",
        "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/8000"
    },
    "shippingOrderPrice": {
        "priceType": "Dicounted 10%",
        "price": {
            "dutyFreeAmount": {
                "unit": "EUR",
                "value": 5
            },
            "taxIncludedAmount": {
                "unit": "EUR",
                "value": 10
            }
        }
    }
}
}
```

Response

```
201

{
    "id": "fbc3a5a7-f80b-4243-809d-eb3fefa7ebed",
    "href": "https://host/tmf-api/shippingOrder/v4/shippingOrder/fbc3a5a7-f80b-4243-809d-eb3fefa7ebed",
    "creationDate": "2020-11-10T08:00:00Z",
    "status": "open",
    "productOrder": {
        "id": "7800",
        "href": "http://host/productOrderingManagement/v4/productOrder/7800"
    },
    "relatedParty": [
        {
            "name": "John Doe",
            "role": "Recepient",
            "@referredType": "Individual",
            "contactMedium": [
                {
                    "mediumType": "Phone",
                    "preferred": true,
                    "characteristic": {
                        "phoneNumber": "00447766000111"
                    }
                },
                {
                    "mediumType": "Address",
                    "characteristic": {
                        "postCode": "OX11 6TR",
```

```
                    "city": "Oxford",
                    "street1": "23 Borney Road"
                }
            }
        ]
    }
],
"shippingInstruction": {
    "deliveryAttempts": 3,
    "deliverySpeed": "SameDay",
    "labelMessage": "FAO Ink Industries",
    "packageType": "Bottle",
    "receiptConfirmation": "SignatureRequired",
    "shippingType": "largePackage",
    "signatureRequired": true,
    "signatureRequiredBy": "adult",
    "instructionCharacteristic": [
        {
            "name": "CustomerCall",
            "value": "Yes, 1h before arriving"
        }
    ]
},
"shippingOrderItem": [
    {
        "id": "1",
        "action": "add",
        "productOrderItem": {
            "id": "1",
            "name": "Maker XPhone",
            "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
            "productOrderId": "7800"
        },
        "product": {
            "id": "100",
            "name": "Maker XPhone",
            "href": "https://host/tmf-api/productInventoryManagement/v4/product/100"
        },
        "productOffering": {
            "id": "4500",
            "name": "Maker XPhone",
            "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4500"
        },
        "quantity": "1"
    },
    {
        "id": "2",
        "action": "add",
        "productOrderItem": {
            "id": "2",
            "name": "Headset XQuevy",
            "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
            "productOrderId": "7800"
        },
```

```json
        "productOffering": {
          "id": "4600",
          "name": "Headset XQuevy",
          "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4600"
        },
        "product": {
          "id": "200",
          "name": "Headset XQuevy",
          "href": "https://host/tmf-api/productInventoryManagement/v4/product/200"
        },
        "quantity": "1"
      },
      {
        "id": "3",
        "action": "add",
        "productOrderItem": {
          "id": "3",
          "name": "Red 75",
          "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
          "productOrderId": "7800"
        },
        "product": {
          "id": "300",
          "name": "Red 75",
          "href": "https://host/tmf-api/productInventoryManagement/v4/product/300"
        },
        "productOffering": {
          "id": "4700",
          "name": "Headset XQuevy",
          "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4700"
        },
        "quantity": "1"
      }
    ],
    "placeTo": {
      "id": "9979",
      "href": "https://host/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
      "role": "DeliveryAddress",
      "@baseType": "Place",
      "@referredType": "GeographicAddress",
      "streetNr": "23",
      "streetName": "Borney Road",
      "streetType": "Road",
      "postcode": "OX11 6TR",
      "locality": "Oxford",
      "city": "Oxford",
      "stateOrProvince": "Oxfordshire",
      "country": "United Kingdom"
    },
    "shippingOrderOffering": {
      "id": "8000",
      "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/8000"
    },
    "shippingOrderPrice": {
```

```
      "priceType": "Dicounted 10%",
      "price": {
        "dutyFreeAmount": {
          "unit": "EUR",
          "value": 5
        },
        "taxIncludedAmount": {
          "unit": "EUR",
          "value": 10
        }
      }
    }
  }
}
```

Below is an example of a request for creating a Shipping Order resource for the following use case:

- 1 Product Order
- 3 items in the order (1 phone, 1 headset, 1 simcard)
- 2 Recipient (role: recipient), 1 paying customer (John Doe)
- 2 items (Phone & simcard) to be delivered to 1 address, headset to be delivered to another address
- Logistic Partner can decide on shipments level

Request

```
POST /tmf-api/shippingOrder/v4.0/shippingOrder
Content-Type: application/json

{
  "productOrder": {
    "id": "7800",
    "href": "http://host/productOrderingManagement/v4/productOrder/7800"
  },
  "relatedParty": [
    {
      "name": "John Doe",
      "role": "Customer",
      "@referredType": "Individual",
      "contactMedium": [
        {
          "mediumType": "Phone",
          "preferred": true,
          "characteristic": {
            "phoneNumber": "00447766000111"
          }
        },
        {
          "mediumType": "Address",
```

```
              "characteristic": {
                "postCode": "OX11 6TR",
                "city": "Oxford",
                "street1": "23 Borney Road"
              }
            }
          ]
        }
    ],
    "shippingInstruction": {
      "deliveryAttempts": 3,
      "deliverySpeed": "SameDay",
      "labelMessage": "FAO Ink Industries",
      "packageType": "Bottle",
      "receiptConfirmation": "SignatureRequired",
      "shippingType": "largePackage",
      "signatureRequired": true,
      "signatureRequiredBy": "adult",
      "instructionCharacteristic": [
        {
          "name": "CustomerCall",
          "value": "Yes, 1h before arriving"
        }
      ]
    },
    "shippingOrderItem": [
      {
        "id": "1",
        "action": "add",
        "productOrderItem": {
          "id": "1",
          "name": "Maker XPhone",
          "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
          "productOrderId": "7800"
        },
        "product": {
          "id": "100",
          "name": "Maker XPhone",
          "href": "https://host/tmf-api/productInventoryManagement/v4/product/100"
        },
        "productOffering": {
          "id": "4500",
          "name": "Maker XPhone",
          "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4500"
        },
        "quantity": "1",
        "relatedParty": [
          {
            "name": "John Doe",
            "role": "recipient",
            "@referredType": "Individual",
            "contactMedium": [
              {
                "mediumType": "Phone",
```

```
                    "preferred": true,
                    "characteristic": {
                        "phoneNumber": "00447766000111"
                    }
                }
            }
        ]
    }
],
"placeTo": {
    "id": "9979",
    "href": "https://host/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
    "role": "DeliveryAddress",
    "@baseType": "Place",
    "@referredType": "GeographicAddress",
    "streetNr": "23",
    "streetName": "Borney Road",
    "streetType": "Road",
    "postcode": "OX11 6TR",
    "locality": "Oxford",
    "city": "Oxford",
    "stateOrProvince": "Oxfordshire",
    "country": "United Kingdom"
}
},
{
    "id": "2",
    "action": "add",
    "productOrderItem": {
        "id": "2",
        "name": "Headset XQuevy",
        "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
        "productOrderId": "7800"
    },
    "productOffering": {
        "id": "4600",
        "name": "Headset XQuevy",
        "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4600"
    },
    "product": {
        "id": "200",
        "name": "Headset XQuevy",
        "href": "https://host/tmf-api/productInventoryManagement/v4/product/200"
    },
    "quantity": "1",
    "relatedParty": [
        {
            "name": "Vivienne Herrera",
            "role": "recipient",
            "@referredType": "Individual",
            "contactMedium": [
                {
                    "mediumType": "Phone",
                    "preferred": true,
                    "characteristic": {
```

```json
                        "phoneNumber": "00447766323987"
                    }
                }
            ]
        }
    ],
    "placeTo": {
        "id": "9979",
        "href": "https://host/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
        "role": "DeliveryAddress",
        "@baseType": "Place",
        "@referredType": "GeographicAddress",
        "streetNr": "23",
        "streetName": "Graphey Road",
        "streetType": "Road",
        "postcode": "OX11 7QW",
        "locality": "Oxford",
        "city": "Oxford",
        "stateOrProvince": "Oxfordshire",
        "country": "United Kingdom"
    }
},
{
    "id": "3",
    "action": "add",
    "productOrderItem": {
        "id": "3",
        "name": "Red 75",
        "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
        "productOrderId": "7800"
    },
    "product": {
        "id": "300",
        "name": "Red 75",
        "href": "https://host/tmf-api/productInventoryManagement/v4/product/300"
    },
    "productOffering": {
        "id": "4700",
        "name": "Red 75",
        "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4700"
    },
    "quantity": "1",
    "relatedParty": [
        {
            "name": "John Doe",
            "role": "recipient",
            "@referredType": "Individual",
            "contactMedium": [
                {
                    "mediumType": "Phone",
                    "preferred": true,
                    "characteristic": {
                        "phoneNumber": "00447766000111 "
                    }
```

```
                    }
                ]
            }
        ],
        "placeTo": {
            "id": "9979",
            "href": "https://host/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
            "role": "DeliveryAddress",
            "@baseType": "Place",
            "@referredType": "GeographicAddress",
            "streetNr": "23",
            "streetName": "Borney Road",
            "streetType": "Road",
            "postcode": "OX11 6TR",
            "locality": "Oxford",
            "city": "Oxford",
            "stateOrProvince": "Oxfordshire",
            "country": "United Kingdom"
        }
    }
    ],
    "shippingOrderOffering": {
        "id": "8000",
        "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/8000"
    },
    "shippingOrderPrice": {
        "priceType": "Dicounted 10%",
        "price": {
            "dutyFreeAmount": {
                "unit": "EUR",
                "value": 5
            },
            "taxIncludedAmount": {
                "unit": "EUR",
                "value": 10
            }
        }
    }
    }
}
```

Response

```
201

{
    "id": "6b6eef0e-f192-4634-ae2d-a13d36078274",
    "href": "https://host/tmf-api/shippingOrder/v4/shippingOrder/fbc3a5a7-f80b-4243-809d-eb3fefa7ebed",
    "creationDate": "2020-11-10T08:00:00Z",
    "status": "open",
    "productOrder": {
        "id": "7800",
        "href": "http://host/productOrderingManagement/v4/productOrder/7800"
```

```
    },
    "relatedParty": [
        {
            "name": "John Doe",
            "role": "Customer",
            "@referredType": "Individual",
            "contactMedium": [
                {
                    "mediumType": "Phone",
                    "preferred": true,
                    "characteristic": {
                        "phoneNumber": "00447766000111"
                    }
                },
                {
                    "mediumType": "Address",
                    "characteristic": {
                        "postCode": "OX11 6TR",
                        "city": "Oxford",
                        "street1": "23 Borney Road"
                    }
                }
            ]
        }
    ],
    "shippingInstruction": {
        "deliveryAttempts": 3,
        "deliverySpeed": "SameDay",
        "labelMessage": "FAO Ink Industries",
        "packageType": "Bottle",
        "receiptConfirmation": "SignatureRequired",
        "shippingType": "largePackage",
        "signatureRequired": true,
        "signatureRequiredBy": "adult",
        "instructionCharacteristic": [
            {
                "name": "CustomerCall",
                "value": "Yes, 1h before arriving"
            }
        ]
    },
    "shippingOrderItem": [
        {
            "id": "1",
            "action": "add",
            "productOrderItem": {
                "id": "1",
                "name": "Maker XPhone",
                "href": "https://localhost/tmf-api/productOrder/v4/productOrder/7800",
                "productOrderId": "7800"
            },
            "product": {
                "id": "100",
                "name": "Maker XPhone",
```

```
        "href": "https://localhost/tmf-api/productInventoryManagement/v4/product/100"
      },
      "productOffering": {
        "id": "4500",
        "name": "Maker XPhone",
        "href": "https://localhost/tmf-api/productCatalogManagement/v4/productOffering/4500"
      },
      "quantity": "1",
      "relatedParty": [
        {
          "name": "John Doe",
          "role": "recipient",
          "@referredType": "Individual",
          "contactMedium": [
            {
              "mediumType": "Phone",
              "preferred": true,
              "characteristic": {
                "phoneNumber": "00447766000111"
              }
            }
          ]
        }
      ],
      "placeTo": {
        "id": "9979",
        "href": "https://localhost/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
        "role": "DeliveryAddress",
        "@baseType": "Place",
        "@referredType": "GeographicAddress",
        "streetNr": "23",
        "streetName": "Borney Road",
        "streetType": "Road",
        "postcode": "OX11 6TR",
        "locality": "Oxford",
        "city": "Oxford",
        "stateOrProvince": "Oxfordshire",
        "country": "United Kingdom"
      }
    },
    {
      "id": "2",
      "action": "add",
      "productOrderItem": {
        "id": "2",
        "name": "Headset XQuevy",
        "href": "https://localhost/tmf-api/productOrder/v4/productOrder/7800",
        "productOrderId": "7800"
      },
      "productOffering": {
        "id": "4600",
        "name": "Headset XQuevy",
        "href": "https://localhost/tmf-api/productCatalogManagement/v4/productOffering/4600"
      },
```

```json
      "product": {
        "id": "200",
        "name": "Headset XQuevy",
        "href": "https://localhost/tmf-api/productInventoryManagement/v4/product/200"
      },
      "quantity": "1",
      "relatedParty": [
        {
          "name": "Vivienne Herrera",
          "role": "recipient",
          "@referredType": "Individual",
          "contactMedium": [
            {
              "mediumType": "Phone",
              "preferred": true,
              "characteristic": {
                "phoneNumber": "00447766323987"
              }
            }
          ]
        }
      ],
      "placeTo": {
        "id": "9979",
        "href": "https://localhost/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
        "role": "DeliveryAddress",
        "@baseType": "Place",
        "@referredType": "GeographicAddress",
        "streetNr": "23",
        "streetName": "Graphey Road",
        "streetType": "Road",
        "postcode": "OX11 7QW",
        "locality": "Oxford",
        "city": "Oxford",
        "stateOrProvince": "Oxfordshire",
        "country": "United Kingdom"
      }
    },
    {
      "id": "3",
      "action": "add",
      "productOrderItem": {
        "id": "3",
        "name": "Red 75",
        "href": "https://localhost/tmf-api/productOrder/v4/productOrder/7800",
        "productOrderId": "7800"
      },
      "product": {
        "id": "300",
        "name": "Red 75",
        "href": "https://localhost/tmf-api/productInventoryManagement/v4/product/300"
      },
      "productOffering": {
        "id": "4700",
```

```json
        "name": "Headset XQuevy",
        "href": "https://localhost/tmf-api/productCatalogManagement/v4/productOffering/4700"
      },
      "quantity": "1",
      "relatedParty": [
        {
          "name": "John Doe",
          "role": "recipient",
          "@referredType": "Individual",
          "contactMedium": [
            {
              "mediumType": "Phone",
              "preferred": true,
              "characteristic": {
                "phoneNumber": "00447766000111 "
              }
            }
          ]
        }
      ],
      "placeTo": {
        "id": "9979",
        "href": "https://localhost/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
        "role": "DeliveryAddress",
        "@baseType": "Place",
        "@referredType": "GeographicAddress",
        "streetNr": "23",
        "streetName": "Borney Road",
        "streetType": "Road",
        "postcode": "OX11 6TR",
        "locality": "Oxford",
        "city": "Oxford",
        "stateOrProvince": "Oxfordshire",
        "country": "United Kingdom"
      }
    }
  ],
  "shippingOrderOffering": {
    "id": "8000",
    "href": "https://localhost/tmf-api/productCatalogManagement/v4/productOffering/8000"
  },
  "shippingOrderPrice": {
    "priceType": "Dicounted 10%",
    "price": {
      "dutyFreeAmount": {
        "unit": "EUR",
        "value": 5
      },
      "taxIncludedAmount": {
        "unit": "EUR",
        "value": 10
      }
    }
  }
}
```

```
}
```

Below is an example of a request for creating a Shipping Order resource for the following use case:

- 1 Product Order
- 3 items in the order (1 phone, 1 headset, 1 simcard)
- 1 Recipient (role: recipient)
- 2 items (Phone & simcard) to be shipped using the NextDay delivery, carrier Alfa
- 1 item (headset) to be shipped using a cheaper rate carrier, carrier Beta
- Logistic Partner can decide on shipments level

Request

```
POST /tmf-api/shippingOrder/v4.0/shippingOrder
Content-Type: application/json

{
  "productOrder": {
    "id": "7800",
    "href": "http://host/productOrderingManagement/v4/productOrder/7800"
  },
  "relatedParty": [
    {
      "name": "John Doe",
      "role": "Customer",
      "@referredType": "Individual",
      "contactMedium": [
        {
          "mediumType": "Phone",
          "preferred": true,
          "characteristic": {
            "phoneNumber": "00447766000111"
          }
        },
        {
          "mediumType": "Address",
          "characteristic": {
            "postCode": "OX11 6TR",
            "city": "Oxford",
            "street1": "23 Borney Road"
          }
        }
      ]
    }
  ],
  "placeTo": {
    "id": "9979",
```

```
        "href": "https://host/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
        "role": "DeliveryAddress",
        "@baseType": "Place",
        "@referredType": "GeographicAddress",
        "streetNr": "23",
        "streetName": "Borney Road",
        "streetType": "Road",
        "postcode": "OX11 6TR",
        "locality": "Oxford",
        "city": "Oxford",
        "stateOrProvince": "Oxfordshire",
        "country": "United Kingdom"
    },
    "shippingOrderItem": [
        {
            "id": "1",
            "action": "add",
            "productOrderItem": {
                "id": "1",
                "name": "Maker XPhone",
                "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
                "productOrderId": "7800"
            },
            "product": {
                "id": "100",
                "name": "Maker XPhone",
                "href": "https://host/tmf-api/productInventoryManagement/v4/product/100"
            },
            "productOffering": {
                "id": "4500",
                "name": "Maker XPhone",
                "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4500"
            },
            "quantity": "1",
            "shippingInstruction": {
                "carrierName": "Alfa",
                "carrierId": "123",
                "carrierServiceCode": "ND100",
                "deliverySpeed": "NextDay",
                "signatureRequired": true,
                "signatureRequiredBy": "adult"
            },
            "shippingOrderItemOffering": {
                "id": "9000",
                "name": "Next Day Delivery",
                "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/9000"
            },
            "shippingOrderItemPrice": {
                "priceType": "one-off",
                "price": {
                    "taxIncludedAmount": {
                        "unit": "EUR",
                        "value": 4
                    }
```

```
        }
      }
    },
    {
      "id": "2",
      "action": "add",
      "productOrderItem": {
        "id": "2",
        "name": "Headset XQuevy",
        "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
        "productOrderId": "7800"
      },
      "productOffering": {
        "id": "4600",
        "name": "Headset XQuevy",
        "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4600"
      },
      "product": {
        "id": "200",
        "name": "Headset XQuevy",
        "href": "https://host/tmf-api/productInventoryManagement/v4/product/200"
      },
      "quantity": "1",
      "shippingInstruction": {
        "carrierName": "Alfa",
        "carrierId": "123",
        "carrierServiceCode": "ND100",
        "deliverySpeed": "NextDay",
        "signatureRequired": true,
        "signatureRequiredBy": "adult"
      },
      "shippingOrderItemOffering": {
        "id": "9000",
        "name": "Next Day Delivery",
        "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/9000"
      },
      "shippingOrderItemPrice": {
        "priceType": "one-off",
        "price": {
          "taxIncludedAmount": {
            "unit": "EUR",
            "value": 4
          }
        }
      }
    },
    {
      "id": "3",
      "action": "add",
      "productOrderItem": {
        "id": "3",
        "name": "Red 75",
        "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
        "productOrderId": "7800"
```

```
        },
        "product": {
          "id": "300",
          "name": "Red 75",
          "href": "https://host/tmf-api/productInventoryManagement/v4/product/300"
        },
        "productOffering": {
          "id": "4700",
          "name": "Headset XQuevy",
          "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4700"
        },
        "quantity": "1",
        "shippingInstruction": {
          "carrierName": "Beta",
          "carrierId": "333",
          "carrierServiceCode": "BT200",
          "deliverySpeed": "BusinessDeliverySpeed",
          "signatureRequired": true,
          "signatureRequiredBy": "adult"
        },
        "shippingOrderItemOffering": {
          "id": "8001",
          "name": "Beta Business Day Delivery",
          "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/8001"
        },
        "shippingOrderItemPrice": {
          "priceType": "one-off",
          "price": {
            "taxIncludedAmount": {
              "unit": "EUR",
              "value": 2
            }
          }
        }
      }
    }
  ],
  "shippingOrderPrice": {
    "priceType": "Dicounted 10%",
    "price": {
      "dutyFreeAmount": {
        "unit": "EUR",
        "value": 5
      },
      "taxIncludedAmount": {
        "unit": "EUR",
        "value": 10
      }
    }
  }
}
```

Response

```
201

{
  "id": "3f835762-0c7a-4473-8f03-d1724fc2b28b",
  "href": "https://host/tmf-api/shippingOrder/v4/shippingOrder/3f835762-0c7a-4473-8f03-d1724fc2b28b",
  "status": "open",
  "creationDate": "2020-11-10T08:00:00Z",
  "productOrder": {
    "id": "7800",
    "href": "http://host/productOrderingManagement/v4/productOrder/7800"
  },
  "relatedParty": [
    {
      "name": "John Doe",
      "role": "Customer",
      "@referredType": "Individual",
      "contactMedium": [
        {
          "mediumType": "Phone",
          "preferred": true,
          "characteristic": {
            "phoneNumber": "00447766000111"
          }
        },
        {
          "mediumType": "Address",
          "characteristic": {
            "postCode": "OX11 6TR",
            "city": "Oxford",
            "street1": "23 Borney Road"
          }
        }
      ]
    }
  ],
  "placeTo": {
    "id": "9979",
    "href": "https://host/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
    "role": "DeliveryAddress",
    "@baseType": "Place",
    "@referredType": "GeographicAddress",
    "streetNr": "23",
    "streetName": "Borney Road",
    "streetType": "Road",
    "postcode": "OX11 6TR",
    "locality": "Oxford",
    "city": "Oxford",
    "stateOrProvince": "Oxfordshire",
    "country": "United Kingdom"
  },
  "shippingOrderItem": [
```

```json
{
    "id": "1",
    "action": "add",
    "productOrderItem": {
        "id": "1",
        "name": "Maker XPhone",
        "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
        "productOrderId": "7800"
    },
    "product": {
        "id": "100",
        "name": "Maker XPhone",
        "href": "https://host/tmf-api/productInventoryManagement/v4/product/100"
    },
    "productOffering": {
        "id": "4500",
        "name": "Maker XPhone",
        "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4500"
    },
    "quantity": "1",
    "shippingInstruction": {
        "carrierName": "Alfa",
        "carrierId": "123",
        "carrierServiceCode": "ND100",
        "deliverySpeed": "NextDay",
        "signatureRequired": true,
        "signatureRequiredBy": "adult"
    },
    "shippingOrderItemOffering": {
        "id": "9000",
        "name": "Next Day Delivery",
        "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/9000"
    },
    "shippingOrderItemPrice": {
        "priceType": "one-off",
        "price": {
            "taxIncludedAmount": {
                "unit": "EUR",
                "value": 4
            }
        }
    }
},
{
    "id": "2",
    "action": "add",
    "productOrderItem": {
        "id": "2",
        "name": "Headset XQuevy",
        "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
        "productOrderId": "7800"
    },
    "productOffering": {
        "id": "4600",
```

C2 General

```
      "name": "Headset XQuevy",
      "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4600"
    },
    "product": {
      "id": "200",
      "name": "Headset XQuevy",
      "href": "https://host/tmf-api/productInventoryManagement/v4/product/200"
    },
    "quantity": "1",
    "shippingInstruction": {
      "carrierName": "Alfa",
      "carrierId": "123",
      "carrierServiceCode": "ND100",
      "deliverySpeed": "NextDay",
      "signatureRequired": true,
      "signatureRequiredBy": "adult"
    },
    "shippingOrderItemOffering": {
      "id": "9000",
      "name": "Next Day Delivery",
      "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/9000"
    },
    "shippingOrderItemPrice": {
      "priceType": "one-off",
      "price": {
        "taxIncludedAmount": {
          "unit": "EUR",
          "value": 4
        }
      }
    }
  }
},
{
  "id": "3",
  "action": "add",
  "productOrderItem": {
    "id": "3",
    "name": "Red 75",
    "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
    "productOrderId": "7800"
  },
  "product": {
    "id": "300",
    "name": "Red 75",
    "href": "https://host/tmf-api/productInventoryManagement/v4/product/300"
  },
  "productOffering": {
    "id": "4700",
    "name": "Headset XQuevy",
    "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4700"
  },
  "quantity": "1",
  "shippingInstruction": {
    "carrierName": "Beta",
```

```
                "carrierId": "333",
                "carrierServiceCode": "BT200",
                "deliverySpeed": "BusinessDeliverySpeed",
                "signatureRequired": true,
                "signatureRequiredBy": "adult"
            },
            "shippingOrderItemOffering": {
                "id": "8001",
                "name": "Beta Business Day Delivery",
                "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/8001"
            },
            "shippingOrderItemPrice": {
                "priceType": "one-off",
                "price": {
                    "taxIncludedAmount": {
                        "unit": "EUR",
                        "value": 2
                    }
                }
            }
        }
    ],
    "shippingOrderPrice": {
        "priceType": "Dicounted 10%",
        "price": {
            "dutyFreeAmount": {
                "unit": "EUR",
                "value": 5
            },
            "taxIncludedAmount": {
                "unit": "EUR",
                "value": 10
            }
        }
    }
}
}
```

Below is an example of a request for creating a Shipping Order resource for the following use case:

- 1 Product Order
- 3 items in the order (1 phone, 1 headset, 1 simcard)
- 2 Recipients (role: recipient), 1 customer
- 2 locations (phone&headset to one address and simcard to another address)
- shipping price is provided for each item
- shipping offering ref is provided for each item
- each item has a ProductOrderItemRef - points to the product order
- each item has a ProductRef - points to the product inventory
- shipping instructions specified at the item level

Request

```
POST /tmf-api/shippingOrder/v4.0/shippingOrder
Content-Type: application/json

{
  "productOrder": {
    "id": "7800",
    "href": "http://host/productOrderingManagement/v4/productOrder/7800"
  },
  "relatedParty": [
    {
      "name": "John Doe",
      "role": "customer",
      "@referredType": "Individual",
      "contactMedium": [
        {
          "mediumType": "Phone",
          "preferred": true,
          "characteristic": {
            "phoneNumber": "00447766000111"
          }
        },
        {
          "mediumType": "Address",
          "characteristic": {
            "postCode": "OX11 6TR",
            "city": "Oxford",
            "street1": "23 Borney Road"
          }
        }
      ]
    }
  ],
  "note": [
    {
      "text": "Customer would like to be called a couple of hours before the delivery"
    }
  ],
  "shippingOrderItem": [
    {
      "id": "1",
      "action": "add",
      "productOrderItem": {
        "id": "1",
        "name": "Maker XPhone",
        "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
        "productOrderId": "7800"
      },
      "product": {
        "id": "100",
        "name": "Maker XPhone",
        "href": "https://host/tmf-api/productInventoryManagement/v4/product/100"
```

```json
      },
      "productOffering": {
        "id": "4500",
        "name": "Maker XPhone",
        "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4500"
      },
      "shippingOrderItemOffering": {
        "id": "9000",
        "name": "Next Day Delivery",
        "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/9000"
      },
      "shippingOrderItemPrice": {
        "priceType": "one-off",
        "price": {
          "taxIncludedAmount": {
            "unit": "EUR",
            "value": 4
          }
        }
      },
      "quantity": "1",
      "shippingInstruction": {
        "carrierId": "123",
        "carrierName": "Alfa",
        "carrierServiceCode": "ND100",
        "deliveryAttempts": 3,
        "deliverySpeed": "NextDay",
        "receiptConfirmation": "required",
        "signatureRequired": true,
        "signatureRequiredBy": "adult",
        "deliveryTimeSlot": {
          "startDateTime": "2021-04-11T16:00:00.00Z",
          "endDateTime": "2021-04-11T20:00:00.00Z"
        },
        "insuredValue": {
          "unit": "EUR",
          "value": 1000
        }
      },
      "placeTo": {
        "id": "9979",
        "href": "https://host/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
        "role": "DeliveryAddress",
        "@baseType": "Place",
        "@referredType": "GeographicAddress",
        "name": "Main Home",
        "streetNr": "1",
        "streetName": "Parks Rd",
        "streetType": "road",
        "postcode": "OX1 3PW",
        "locality": "Oxford",
        "city": "Oxford",
        "stateOrProvince": "Oxfordshire",
        "country": "United Kingdom"
```

C2 General

```
          },
          "relatedParty": [
            {
              "name": "John Davieur",
              "role": "Recepient",
              "@referredType": "Individual",
              "contactMedium": [
                {
                  "mediumType": "Phone",
                  "preferred": true,
                  "characteristic": {
                    "phoneNumber": "00447766000111"
                  }
                }
              ]
            }
          ],
          "shipment": {
            "requestedDeliveryDate": "2021-04-11T16:00:00.00Z"
          }
        },
        {
          "id": "2",
          "action": "add",
          "productOrderItem": {
            "id": "2",
            "name": "Headset XQuevy",
            "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
            "productOrderId": "7800"
          },
          "productOffering": {
            "id": "4600",
            "name": "Headset XQuevy",
            "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4600"
          },
          "product": {
            "id": "200",
            "name": "Headset XQuevy",
            "href": "https://host/tmf-api/productInventoryManagement/v4/product/200"
          },
          "shippingOrderItemOffering": {
            "id": "9000",
            "name": "Next Day Delivery",
            "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/9000"
          },
          "shippingOrderItemPrice": {
            "priceType": "one-off",
            "price": {
              "taxIncludedAmount": {
                "unit": "EUR",
                "value": 4
              }
            }
          },
```

```
    "placeTo": {
      "id": "9979",
      "href": "https://host/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
      "role": "DeliveryAddress",
      "@baseType": "Place",
      "@referredType": "GeographicAddress",
      "name": "Main Home",
      "streetNr": "1",
      "streetName": "Parks Rd",
      "streetType": "road",
      "postcode": "OX1 3PW",
      "locality": "Oxford",
      "city": "Oxford",
      "stateOrProvince": "Oxfordshire",
      "country": "United Kingdom"
    },
    "quantity": "1",
    "shippingInstruction": {
      "carrierId": "123",
      "carrierName": "Alfa",
      "carrierServiceCode": "ND100",
      "deliveryAttempts": 3,
      "deliverySpeed": "NextDay",
      "receiptConfirmation": "required",
      "signatureRequired": true,
      "signatureRequiredBy": "adult",
      "deliveryTimeSlot": {
        "startDateTime": "2021-04-11T16:00:00.00Z",
        "endDateTime": "2021-04-11T20:00:00.00Z"
      },
      "insuredValue": {
        "unit": "EUR",
        "value": 1000
      }
    },
    "relatedParty": [
      {
        "name": "John Davieur",
        "role": "Recepient",
        "@referredType": "Individual",
        "contactMedium": [
          {
            "mediumType": "Phone",
            "preferred": true,
            "characteristic": {
              "phoneNumber": "00447766000111"
            }
          },
          {
            "mediumType": "Address",
            "characteristic": {
              "postCode": "OX11 6TR",
              "city": "Oxford",
              "street1": "23 Borney Road"
```

```
                  }
                }
              ]
            }
          ],
          "shipment": {
            "requestedDeliveryDate": "2021-04-11T16:00:00.00Z"
          }
        },
        {
          "id": "3",
          "action": "add",
          "productOrderItem": {
            "id": "3",
            "name": "Red 75",
            "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
            "productOrderId": "7800"
          },
          "product": {
            "id": "300",
            "name": "Red 75",
            "href": "https://host/tmf-api/productInventoryManagement/v4/product/300"
          },
          "productOffering": {
            "id": "4700",
            "name": "Headset XQuevy",
            "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4700"
          },
          "shippingOrderItemOffering": {
            "id": "9100",
            "name": "Business Day Delivery",
            "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/9100"
          },
          "shippingOrderItemPrice": {
            "priceType": "one-off",
            "price": {
              "taxIncludedAmount": {
                "unit": "EUR",
                "value": 2
              }
            }
          }
        },
        "quantity": "1",
        "shippingInstruction": {
          "carrierId": "678",
          "carrierName": "Beta",
          "carrierServiceCode": "BT678",
          "deliveryAttempts": 3,
          "deliverySpeed": "BusinessDays",
          "receiptConfirmation": "required",
          "signatureRequired": true,
          "signatureRequiredBy": "adult",
          "deliveryTimeSlot": {
            "startDateTime": "2021-04-11T16:00:00.00Z",
```

```json
        "endDateTime": "2021-04-11T20:00:00.00Z"
      },
      "insuredValue": {
        "unit": "EUR",
        "value": 1000
      }
    },
    "placeTo": {
      "id": "10000",
      "href": "https://host/tmf-api/geographicAddressManagement/v4/geographicAddress/10000",
      "role": "DeliveryAddress",
      "@baseType": "Place",
      "@referredType": "GeographicAddress",
      "name": "Office",
      "streetNr": "1",
      "streetName": "Parks Rd",
      "streetType": "road",
      "postcode": "OX1 3PW",
      "locality": "Oxford",
      "city": "Oxford",
      "stateOrProvince": "Oxfordshire",
      "country": "United Kingdom"
    },
    "relatedParty": [
      {
        "name": "John Davieur",
        "role": "Recepient",
        "@referredType": "Individual",
        "contactMedium": [
          {
            "mediumType": "Phone",
            "preferred": true,
            "characteristic": {
              "phoneNumber": "00447766000111"
            }
          },
          {
            "mediumType": "Address",
            "characteristic": {
              "postCode": "OX11 6TR",
              "city": "Oxford",
              "street1": "23 Borney Road"
            }
          }
        ]
      }
    ],
    "shipment": {
      "requestedDeliveryDate": "2021-04-11T16:00:00.00Z"
    }
  }
],
"shippingOrderOffering": {
  "id": "8000",
```

C2 General

```
            "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/8000"
    },
    "shippingOrderPrice": {
        "priceType": "Dicounted",
        "price": {
            "dutyFreeAmount": {
                "unit": "EUR",
                "value": 5
            },
            "taxIncludedAmount": {
                "unit": "EUR",
                "value": 10
            }
        }
    }
}
```

Response

```
201

{
    "id": "2f8bc049-05b6-4e8b-be97-119b20cfa390",
    "href": "https://host/tmf-api/shippingOrder/v4/shippingOrder/2f8bc049-05b6-4e8b-be97-119b20cfa390",
    "status": "open",
    "creationDate": "2020-11-10T08:00:00Z",
    "productOrder": {
        "id": "7800",
        "href": "http://host/productOrderingManagement/v4/productOrder/7800"
    },
    "relatedParty": [
        {
            "name": "John Doe",
            "role": "customer",
            "@referredType": "Individual",
            "contactMedium": [
                {
                    "mediumType": "Phone",
                    "preferred": true,
                    "characteristic": {
                        "phoneNumber": "00447766000111"
                    }
                },
                {
                    "mediumType": "Address",
                    "characteristic": {
                        "postCode": "OX11 6TR",
                        "city": "Oxford",
                        "street1": "23 Borney Road"
                    }
                }
            ]
```

```
        }
      ],
      "note": [
        {
          "text": "Customer would like to be called a couple of hours before the delivery"
        }
      ],
      "shippingOrderItem": [
        {
          "id": "1",
          "action": "add",
          "productOrderItem": {
            "id": "1",
            "name": "Maker XPhone",
            "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
            "productOrderId": "7800"
          },
          "product": {
            "id": "100",
            "name": "Maker XPhone",
            "href": "https://host/tmf-api/productInventoryManagement/v4/product/100"
          },
          "productOffering": {
            "id": "4500",
            "name": "Maker XPhone",
            "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4500"
          },
          "shippingOrderItemOffering": {
            "id": "9000",
            "name": "Next Day Delivery",
            "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/9000"
          },
          "shippingOrderItemPrice": {
            "priceType": "one-off",
            "price": {
              "taxIncludedAmount": {
                "unit": "EUR",
                "value": 4
              }
            }
          },
          "quantity": "1",
          "shippingInstruction": {
            "carrierId": "123",
            "carrierName": "Alfa",
            "carrierServiceCode": "ND100",
            "deliveryAttempts": 3,
            "deliverySpeed": "NextDay",
            "receiptConfirmation": "required",
            "signatureRequired": true,
            "signatureRequiredBy": "adult",
            "deliveryTimeSlot": {
              "startDateTime": "2021-04-11T16:00:00.00Z",
              "endDateTime": "2021-04-11T20:00:00.00Z"
```

```
          },
          "insuredValue": {
            "unit": "EUR",
            "value": 1000
          }
        },
        "placeTo": {
          "id": "9979",
          "href": "https://host/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
          "role": "DeliveryAddress",
          "@baseType": "Place",
          "@referredType": "GeographicAddress",
          "name": "Main Home",
          "streetNr": "1",
          "streetName": "Parks Rd",
          "streetType": "road",
          "postcode": "OX1 3PW",
          "locality": "Oxford",
          "city": "Oxford",
          "stateOrProvince": "Oxfordshire",
          "country": "United Kingdom"
        },
        "relatedParty": [
          {
            "name": "John Davieur",
            "role": "Recepient",
            "@referredType": "Individual",
            "contactMedium": [
              {
                "mediumType": "Phone",
                "preferred": true,
                "characteristic": {
                  "phoneNumber": "00447766000111"
                }
              }
            ]
          }
        ],
        "shipment": {
          "requestedDeliveryDate": "2021-04-11T16:00:00.00Z"
        }
      },
      {
        "id": "2",
        "action": "add",
        "productOrderItem": {
          "id": "2",
          "name": "Headset XQuevy",
          "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
          "productOrderId": "7800"
        },
        "productOffering": {
          "id": "4600",
          "name": "Headset XQuevy",
```

```
        "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4600"
      },
      "product": {
        "id": "200",
        "name": "Headset XQuevy",
        "href": "https://host/tmf-api/productInventoryManagement/v4/product/200"
      },
      "shippingOrderItemOffering": {
        "id": "9000",
        "name": "Next Day Delivery",
        "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/9000"
      },
      "shippingOrderItemPrice": {
        "priceType": "one-off",
        "price": {
          "taxIncludedAmount": {
            "unit": "EUR",
            "value": 4
          }
        }
      },
      "placeTo": {
        "id": "9979",
        "href": "https://host/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
        "role": "DeliveryAddress",
        "@baseType": "Place",
        "@referredType": "GeographicAddress",
        "name": "Main Home",
        "streetNr": "1",
        "streetName": "Parks Rd",
        "streetType": "road",
        "postcode": "OX1 3PW",
        "locality": "Oxford",
        "city": "Oxford",
        "stateOrProvince": "Oxfordshire",
        "country": "United Kingdom"
      },
      "quantity": "1",
      "shippingInstruction": {
        "carrierId": "123",
        "carrierName": "Alfa",
        "carrierServiceCode": "ND100",
        "deliveryAttempts": 3,
        "deliverySpeed": "NextDay",
        "receiptConfirmation": "required",
        "signatureRequired": true,
        "signatureRequiredBy": "adult",
        "deliveryTimeSlot": {
          "startDateTime": "2021-04-11T16:00:00.00Z",
          "endDateTime": "2021-04-11T20:00:00.00Z"
        },
        "insuredValue": {
          "unit": "EUR",
          "value": 1000
```

```
              }
          },
          "relatedParty": [
              {
                  "name": "John Davieur",
                  "role": "Recepient",
                  "@referredType": "Individual",
                  "contactMedium": [
                      {
                          "mediumType": "Phone",
                          "preferred": true,
                          "characteristic": {
                              "phoneNumber": "00447766000111"
                          }
                      },
                      {
                          "mediumType": "Address",
                          "characteristic": {
                              "postCode": "OX11 6TR",
                              "city": "Oxford",
                              "street1": "23 Borney Road"
                          }
                      }
                  ]
              }
          ],
          "shipment": {
              "requestedDeliveryDate": "2021-04-11T16:00:00.00Z"
          }
      },
      {
          "id": "3",
          "action": "add",
          "productOrderItem": {
              "id": "3",
              "name": "Red 75",
              "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
              "productOrderId": "7800"
          },
          "product": {
              "id": "300",
              "name": "Red 75",
              "href": "https://host/tmf-api/productInventoryManagement/v4/product/300"
          },
          "productOffering": {
              "id": "4700",
              "name": "Headset XQuevy",
              "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4700"
          },
          "shippingOrderItemOffering": {
              "id": "9100",
              "name": "Business Day Delivery",
              "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/9100"
          },
```

```
"shippingOrderItemPrice": {
  "priceType": "one-off",
  "price": {
    "taxIncludedAmount": {
      "unit": "EUR",
      "value": 2
    }
  }
},
"quantity": "1",
"shippingInstruction": {
  "carrierId": "678",
  "carrierName": "Beta",
  "carrierServiceCode": "BT678",
  "deliveryAttempts": 3,
  "deliverySpeed": "BusinessDays",
  "receiptConfirmation": "required",
  "signatureRequired": true,
  "signatureRequiredBy": "adult",
  "deliveryTimeSlot": {
    "startDateTime": "2021-04-11T16:00:00.00Z",
    "endDateTime": "2021-04-11T20:00:00.00Z"
  },
  "insuredValue": {
    "unit": "EUR",
    "value": 1000
  }
},
"placeTo": {
  "id": "10000",
  "href": "https://host/tmf-api/geographicAddressManagement/v4/geographicAddress/10000",
  "role": "DeliveryAddress",
  "@baseType": "Place",
  "@referredType": "GeographicAddress",
  "name": "Office",
  "streetNr": "1",
  "streetName": "Parks Rd",
  "streetType": "road",
  "postcode": "OX1 3PW",
  "locality": "Oxford",
  "city": "Oxford",
  "stateOrProvince": "Oxfordshire",
  "country": "United Kingdom"
},
"relatedParty": [
  {
    "name": "John Davieur",
    "role": "Recepient",
    "@referredType": "Individual",
    "contactMedium": [
      {
        "mediumType": "Phone",
        "preferred": true,
        "characteristic": {
```

```
                        "phoneNumber": "00447766000111"
                    }
                },
                {
                    "mediumType": "Address",
                    "characteristic": {
                        "postCode": "OX11 6TR",
                        "city": "Oxford",
                        "street1": "23 Borney Road"
                    }
                }
            ]
        }
    ],
    "shipment": {
        "requestedDeliveryDate": "2021-04-11T16:00:00.00Z"
    }
}
],
"shippingOrderOffering": {
    "id": "8000",
    "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/8000"
},
"shippingOrderPrice": {
    "priceType": "Dicounted",
    "price": {
        "dutyFreeAmount": {
            "unit": "EUR",
            "value": 5
        },
        "taxIncludedAmount": {
            "unit": "EUR",
            "value": 10
        }
    }
}
}
}
```

Update shipping order

PUT /shippingOrder/{id}

Description

This operation updates a shipping order entity.

Note: If the update operation yields to the creation of sub-resources or relationships, the same rules concerning mandatory sub-resource attributes and default value settings in the POST operation applies to the PUT operation. Hence these tables are not repeated here.

Usage Samples

Here's an example of a request for updating a shipping order.

<table>
<tr><td>

Request

</td></tr>
<tr><td>

```
PUT /tmf-api/shippingOrder/v4.0/shippingOrder/fbc3a5a7-f80b-4243-809d-eb3fefa7ebed
Content-Type: application/json

{
    "status": "pending",
    "productOrder": {
        "id": "7800",
        "href": "http://host/productOrderingManagement/v4/productOrder/7800"
    },
    "note": [
        {
            "id": "221b71c1-04ca-4f06-9001-f459d0fb05d4",
            "author": "Jack Smith",
            "text": "Shipping Order is pending stock management"
        }
    ],
    "relatedParty": [
        {
            "name": "John Doe",
            "role": "Recepient",
            "@referredType": "Individual",
            "contactMedium": [
                {
                    "mediumType": "Phone",
                    "preferred": true,
                    "characteristic": {
                        "phoneNumber": "00447766000111"
                    }
                },
                {
                    "mediumType": "Address",
                    "characteristic": {
                        "postCode": "OX11 6TR",
                        "city": "Oxford",
                        "street1": "23 Borney Road"
                    }
                }
            ]
        }
    ],
    "shippingInstruction": {
        "deliveryAttempts": 3,
        "deliverySpeed": "SameDay",
        "labelMessage": "FAO Ink Industries",
        "packageType": "Bottle",
        "receiptConfirmation": "SignatureRequired",
        "shippingType": "largePackage",
```

</td></tr>
</table>

```json
      "signatureRequired": true,
      "signatureRequiredBy": "adult",
      "instructionCharacteristic": [
        {
          "name": "CustomerCall",
          "value": "Yes, 1h before arriving"
        }
      ]
    },
    "shippingOrderItem": [
      {
        "id": "1",
        "action": "add",
        "productOrderItem": {
          "id": "1",
          "name": "Maker XPhone",
          "href": "https://localhost/tmf-api/productOrder/v4/productOrder/7800",
          "productOrderId": "7800"
        },
        "product": {
          "id": "100",
          "name": "Maker XPhone",
          "href": "https://localhost/tmf-api/productInventoryManagement/v4/product/100"
        },
        "productOffering": {
          "id": "4500",
          "name": "Maker XPhone",
          "href": "https://localhost/tmf-api/productCatalogManagement/v4/productOffering/4500"
        },
        "quantity": "1"
      },
      {
        "id": "2",
        "action": "add",
        "productOrderItem": {
          "id": "2",
          "name": "Headset XQuevy",
          "href": "https://localhost/tmf-api/productOrder/v4/productOrder/7800",
          "productOrderId": "7800"
        },
        "productOffering": {
          "id": "4600",
          "name": "Headset XQuevy",
          "href": "https://localhost/tmf-api/productCatalogManagement/v4/productOffering/4600"
        },
        "product": {
          "id": "200",
          "name": "Headset XQuevy",
          "href": "https://localhost/tmf-api/productInventoryManagement/v4/product/200"
        },
        "quantity": "1"
      },
      {
        "id": "3",
```

```json
        "action": "add",
        "productOrderItem": {
          "id": "3",
          "name": "Red 75",
          "href": "https://localhost/tmf-api/productOrder/v4/productOrder/7800",
          "productOrderId": "7800"
        },
        "product": {
          "id": "300",
          "name": "Red 75",
          "href": "https://localhost/tmf-api/productInventoryManagement/v4/product/300"
        },
        "productOffering": {
          "id": "4700",
          "name": "Headset XQuevy",
          "href": "https://localhost/tmf-api/productCatalogManagement/v4/productOffering/4700"
        },
        "quantity": "1"
      }
    ],
    "placeTo": {
      "id": "9979",
      "href": "https://localhost/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
      "role": "DeliveryAddress",
      "@baseType": "Place",
      "@referredType": "GeographicAddress",
      "streetNr": "23",
      "streetName": "Borney Road",
      "streetType": "Road",
      "postcode": "OX11 6TR",
      "locality": "Oxford",
      "city": "Oxford",
      "stateOrProvince": "Oxfordshire",
      "country": "United Kingdom"
    },
    "shippingOrderOffering": {
      "id": "8000",
      "href": "https://localhost/tmf-api/productCatalogManagement/v4/productOffering/8000"
    },
    "shippingOrderPrice": {
      "priceType": "Dicounted 10%",
      "price": {
        "dutyFreeAmount": {
          "unit": "EUR",
          "value": 5
        },
        "taxIncludedAmount": {
          "unit": "EUR",
          "value": 10
        }
      }
    }
  }
}
```

Response

200

```
{
  "id": "fbc3a5a7-f80b-4243-809d-eb3fefa7ebed",
  "href": "https://host/tmf-api/shippingOrder/v4/shippingOrder/fbc3a5a7-f80b-4243-809d-eb3fefa7ebed",
  "status": "pending",
  "productOrder": {
    "id": "7800",
    "href": "http://host/productOrderingManagement/v4/productOrder/7800"
  },
  "note": [
    {
      "id": "221b71c1-04ca-4f06-9001-f459d0fb05d4",
      "author": "Jack Smith",
      "text": "Shipping Order is pending stock management"
    }
  ],
  "relatedParty": [
    {
      "name": "John Doe",
      "role": "Recepient",
      "@referredType": "Individual",
      "contactMedium": [
        {
          "mediumType": "Phone",
          "preferred": true,
          "characteristic": {
            "phoneNumber": "00447766000111"
          }
        },
        {
          "mediumType": "Address",
          "characteristic": {
            "postCode": "OX11 6TR",
            "city": "Oxford",
            "street1": "23 Borney Road"
          }
        }
      ]
    }
  ],
  "shippingInstruction": {
    "deliveryAttempts": 3,
    "deliverySpeed": "SameDay",
    "labelMessage": "FAO Ink Industries",
    "packageType": "Bottle",
    "receiptConfirmation": "SignatureRequired",
    "shippingType": "largePackage",
    "signatureRequired": true,
```

```
        "signatureRequiredBy": "adult",
        "instructionCharacteristic": [
          {
            "name": "CustomerCall",
            "value": "Yes, 1h before arriving"
          }
        ]
    },
    "shippingOrderItem": [
      {
        "id": "1",
        "action": "add",
        "productOrderItem": {
          "id": "1",
          "name": "Maker XPhone",
          "href": "https://localhost/tmf-api/productOrder/v4/productOrder/7800",
          "productOrderId": "7800"
        },
        "product": {
          "id": "100",
          "name": "Maker XPhone",
          "href": "https://localhost/tmf-api/productInventoryManagement/v4/product/100"
        },
        "productOffering": {
          "id": "4500",
          "name": "Maker XPhone",
          "href": "https://localhost/tmf-api/productCatalogManagement/v4/productOffering/4500"
        },
        "quantity": "1"
      },
      {
        "id": "2",
        "action": "add",
        "productOrderItem": {
          "id": "2",
          "name": "Headset XQuevy",
          "href": "https://localhost/tmf-api/productOrder/v4/productOrder/7800",
          "productOrderId": "7800"
        },
        "productOffering": {
          "id": "4600",
          "name": "Headset XQuevy",
          "href": "https://localhost/tmf-api/productCatalogManagement/v4/productOffering/4600"
        },
        "product": {
          "id": "200",
          "name": "Headset XQuevy",
          "href": "https://localhost/tmf-api/productInventoryManagement/v4/product/200"
        },
        "quantity": "1"
      },
      {
        "id": "3",
        "action": "add",
```

```json
        "productOrderItem": {
          "id": "3",
          "name": "Red 75",
          "href": "https://localhost/tmf-api/productOrder/v4/productOrder/7800",
          "productOrderId": "7800"
        },
        "product": {
          "id": "300",
          "name": "Red 75",
          "href": "https://localhost/tmf-api/productInventoryManagement/v4/product/300"
        },
        "productOffering": {
          "id": "4700",
          "name": "Headset XQuevy",
          "href": "https://localhost/tmf-api/productCatalogManagement/v4/productOffering/4700"
        },
        "quantity": "1"
      }
    ],
    "placeTo": {
      "id": "9979",
      "href": "https://localhost/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
      "role": "DeliveryAddress",
      "@baseType": "Place",
      "@referredType": "GeographicAddress",
      "streetNr": "23",
      "streetName": "Borney Road",
      "streetType": "Road",
      "postcode": "OX11 6TR",
      "locality": "Oxford",
      "city": "Oxford",
      "stateOrProvince": "Oxfordshire",
      "country": "United Kingdom"
    },
    "shippingOrderOffering": {
      "id": "8000",
      "href": "https://localhost/tmf-api/productCatalogManagement/v4/productOffering/8000"
    },
    "shippingOrderPrice": {
      "priceType": "Dicounted 10%",
      "price": {
        "dutyFreeAmount": {
          "unit": "EUR",
          "value": 5
        },
        "taxIncludedAmount": {
          "unit": "EUR",
          "value": 10
        }
      }
    }
  }
}
```

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Patch shipping order

PATCH /shippingOrder/{id}

Description

This operation allows partial updates of a shipping order entity. Support of json/merge (https://tools.ietf.org/html/rfc7386) is mandatory, support of json/patch (http://tools.ietf.org/html/rfc5789) is optional.

Note: If the update operation yields to the creation of sub-resources or relationships, the same rules concerning mandatory sub-resource attributes and default value settings in the POST operation applies to the PATCH operation. Hence these tables are not repeated here.

Patchable and Non Patchable Attributes

The tables below provide the list of patchable and non patchable attributes, including constraint rules on their usage.

Patchable Attributes	Rule
@baseType	
@schemaLocation	
@type	
note	
placeFrom	
placeTo	
productOrder	
relatedParty	
relatedShippingOrder	
shippingInstruction	
shippingOrderCharacteristic	
shippingOrderItem	
shippingOrderOffering	
shippingOrderPrice	
status	

Non Patchable Attributes	Rule
id	
href	
creationDate	
lastUpdateDate	

Usage Samples

Here's an example of a request for partial updating a shipping order - set status to pending. This example illustrating patch merge, When PATCH is implemeted merge syntaxt is mandatory

Request

```
PATCH /tmf-api/shippingOrder/v4.0/shippingOrder/fbc3a5a7-f80b-4243-809d-eb3fefa7ebed
Content-Type: merge-patch+json

{
    "status": "pending",
    "note": [
        {
            "id": "221b71c1-04ca-4f06-9001-f459d0fb05d4",
            "author": "Jack Smith",
            "text": "Shipping Order is pending stock management"
        }
    ]
}
```

Response

```
200

{
    "id": "fbc3a5a7-f80b-4243-809d-eb3fefa7ebed",
    "href": "https://host/tmf-api/shippingOrder/v4/shippingOrder/fbc3a5a7-f80b-4243-809d-eb3fefa7ebed",
    "creationDate": "2020-11-10T08:00:00Z",
    "status": "pending",
    "productOrder": {
        "id": "7800",
        "href": "http://host/productOrderingManagement/v4/productOrder/7800"
    },
    "note": [
        {
            "id": "221b71c1-04ca-4f06-9001-f459d0fb05d4",
            "author": "Jack Smith",
            "text": "Shipping Order is pending stock management"
        }
    ],
    "relatedParty": [
        {
            "name": "John Doe",
            "role": "Recepient",
            "@referredType": "Individual",
            "contactMedium": [
                {
                    "mediumType": "Phone",
                    "preferred": true,
                    "characteristic": {
                        "phoneNumber": "00447766000111"
                    }
                },
                {
                    "mediumType": "Address",
```

```
            "characteristic": {
                "postCode": "OX11 6TR",
                "city": "Oxford",
                "street1": "23 Borney Road"
            }
          }
        ]
      }
    ],
    "shippingInstruction": {
      "deliveryAttempts": 3,
      "deliverySpeed": "SameDay",
      "labelMessage": "FAO Ink Industries",
      "packageType": "Bottle",
      "receiptConfirmation": "SignatureRequired",
      "shippingType": "largePackage",
      "signatureRequired": true,
      "signatureRequiredBy": "adult",
      "instructionCharacteristic": [
        {
          "name": "CustomerCall",
          "value": "Yes, 1h before arriving"
        }
      ]
    },
    "shippingOrderItem": [
      {
        "id": "1",
        "action": "add",
        "productOrderItem": {
          "id": "1",
          "name": "Maker XPhone",
          "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
          "productOrderId": "7800"
        },
        "product": {
          "id": "100",
          "name": "Maker XPhone",
          "href": "https://host/tmf-api/productInventoryManagement/v4/product/100"
        },
        "productOffering": {
          "id": "4500",
          "name": "Maker XPhone",
          "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4500"
        },
        "quantity": "1"
      },
      {
        "id": "2",
        "action": "add",
        "productOrderItem": {
          "id": "2",
          "name": "Headset XQuevy",
          "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
```

```json
          "productOrderId": "7800"
        },
        "productOffering": {
          "id": "4600",
          "name": "Headset XQuevy",
          "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4600"
        },
        "product": {
          "id": "200",
          "name": "Headset XQuevy",
          "href": "https://host/tmf-api/productInventoryManagement/v4/product/200"
        },
        "quantity": "1"
      },
      {
        "id": "3",
        "action": "add",
        "productOrderItem": {
          "id": "3",
          "name": "Red 75",
          "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
          "productOrderId": "7800"
        },
        "product": {
          "id": "300",
          "name": "Red 75",
          "href": "https://host/tmf-api/productInventoryManagement/v4/product/300"
        },
        "productOffering": {
          "id": "4700",
          "name": "Headset XQuevy",
          "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4700"
        },
        "quantity": "1"
      }
    ],
    "placeTo": {
      "id": "9979",
      "href": "https://host/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
      "role": "DeliveryAddress",
      "@baseType": "Place",
      "@referredType": "GeographicAddress",
      "streetNr": "23",
      "streetName": "Borney Road",
      "streetType": "Road",
      "postcode": "OX11 6TR",
      "locality": "Oxford",
      "city": "Oxford",
      "stateOrProvince": "Oxfordshire",
      "country": "United Kingdom"
    },
    "shippingOrderOffering": {
      "id": "8000",
      "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/8000"
```

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```
    },
    "shippingOrderPrice": {
      "priceType": "Dicounted 10%",
      "price": {
        "dutyFreeAmount": {
          "unit": "EUR",
          "value": 5
        },
        "taxIncludedAmount": {
          "unit": "EUR",
          "value": 10
        }
      }
    }
  }
}
```

Here's an example of a request for partial updating a shipping order - set status to pending. This example illustrating patch json

Request

```
PATCH /tmf-api/shippingOrder/v4.0/shippingOrder/fbc3a5a7-f80b-4243-809d-eb3fefa7ebed
Content-Type: json-patch+json

[
  {
    "op": "replace",
    "path": "/status",
    "value": "pending"
  },
  {
    "op": "add",
    "path": "/note",
    "value": {
      "id": "221b71c1-04ca-4f06-9001-f459d0fb05d4",
      "author": "Jack Smith",
      "text": "Shipping Order is pending stock management"
    }
  }
]
```

Response

```
200

{
  "id": "fbc3a5a7-f80b-4243-809d-eb3fefa7ebed",
  "href": "https://host/tmf-api/shippingOrder/v4/shippingOrder/fbc3a5a7-f80b-4243-809d-eb3fefa7ebed",
  "creationDate": "2020-11-10T08:00:00Z",
```

```json
    "status": "pending",
    "productOrder": {
      "id": "7800",
      "href": "http://host/productOrderingManagement/v4/productOrder/7800"
    },
    "note": [
      {
        "id": "221b71c1-04ca-4f06-9001-f459d0fb05d4",
        "author": "Jack Smith",
        "text": "Shipping Order is pending stock management"
      }
    ],
    "relatedParty": [
      {
        "name": "John Doe",
        "role": "Recepient",
        "@referredType": "Individual",
        "contactMedium": [
          {
            "mediumType": "Phone",
            "preferred": true,
            "characteristic": {
              "phoneNumber": "00447766000111"
            }
          },
          {
            "mediumType": "Address",
            "characteristic": {
              "postCode": "OX11 6TR",
              "city": "Oxford",
              "street1": "23 Borney Road"
            }
          }
        ]
      }
    ],
    "shippingInstruction": {
      "deliveryAttempts": 3,
      "deliverySpeed": "SameDay",
      "labelMessage": "FAO Ink Industries",
      "packageType": "Bottle",
      "receiptConfirmation": "SignatureRequired",
      "shippingType": "largePackage",
      "signatureRequired": true,
      "signatureRequiredBy": "adult",
      "instructionCharacteristic": [
        {
          "name": "CustomerCall",
          "value": "Yes, 1h before arriving"
        }
      ]
    },
    "shippingOrderItem": [
      {
```

```
      "id": "1",
      "action": "add",
      "productOrderItem": {
        "id": "1",
        "name": "Maker XPhone",
        "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
        "productOrderId": "7800"
      },
      "product": {
        "id": "100",
        "name": "Maker XPhone",
        "href": "https://host/tmf-api/productInventoryManagement/v4/product/100"
      },
      "productOffering": {
        "id": "4500",
        "name": "Maker XPhone",
        "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4500"
      },
      "quantity": "1"
    },
    {
      "id": "2",
      "action": "add",
      "productOrderItem": {
        "id": "2",
        "name": "Headset XQuevy",
        "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
        "productOrderId": "7800"
      },
      "productOffering": {
        "id": "4600",
        "name": "Headset XQuevy",
        "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4600"
      },
      "product": {
        "id": "200",
        "name": "Headset XQuevy",
        "href": "https://host/tmf-api/productInventoryManagement/v4/product/200"
      },
      "quantity": "1"
    },
    {
      "id": "3",
      "action": "add",
      "productOrderItem": {
        "id": "3",
        "name": "Red 75",
        "href": "https://host/tmf-api/productOrder/v4/productOrder/7800",
        "productOrderId": "7800"
      },
      "product": {
        "id": "300",
        "name": "Red 75",
        "href": "https://host/tmf-api/productInventoryManagement/v4/product/300"
```

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```
      },
      "productOffering": {
        "id": "4700",
        "name": "Headset XQuevy",
        "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/4700"
      },
      "quantity": "1"
    }
  ],
  "placeTo": {
    "id": "9979",
    "href": "https://host/tmf-api/geographicAddressManagement/v4/geographicAddress/9979",
    "role": "DeliveryAddress",
    "@baseType": "Place",
    "@referredType": "GeographicAddress",
    "streetNr": "23",
    "streetName": "Borney Road",
    "streetType": "Road",
    "postcode": "OX11 6TR",
    "locality": "Oxford",
    "city": "Oxford",
    "stateOrProvince": "Oxfordshire",
    "country": "United Kingdom"
  },
  "shippingOrderOffering": {
    "id": "8000",
    "href": "https://host/tmf-api/productCatalogManagement/v4/productOffering/8000"
  },
  "shippingOrderPrice": {
    "priceType": "Dicounted 10%",
    "price": {
      "dutyFreeAmount": {
        "unit": "EUR",
        "value": 5
      },
      "taxIncludedAmount": {
        "unit": "EUR",
        "value": 10
      }
    }
  }
}
```

API NOTIFICATIONS

For every single of operation on the entities use the following templates and provide sample REST notification POST calls.

It is assumed that the Pub/Sub uses the Register and UnRegister mechanisms described in the REST Guidelines reproduced below.

Register listener

POST /hub

Description

Sets the communication endpoint address the service instance must use to deliver information about its health state, execution state, failures and metrics. Subsequent POST calls will be rejected by the service if it does not support multiple listeners. In this case DELETE /api/hub/{id} must be called before an endpoint can be created again.

Behavior

Returns HTTP/1.1 status code 204 if the request was successful.

Returns HTTP/1.1 status code 409 if request is not successful.

Usage Samples

Here's an example of a request for registering a listener.

Request
POST /api/hub Accept: application/json {"callback": "http://in.listener.com"}
Response
201 Content-Type: application/json Location: /api/hub/42 {"id":"42","callback":"http://in.listener.com","query":null}

Unregister listener

`DELETE /hub/{id}`

Description

Clears the communication endpoint address that was set by creating the Hub..

Behavior

Returns HTTP/1.1 status code 204 if the request was successful.

Returns HTTP/1.1 status code 404 if the resource is not found.

Usage Samples

Here's an example of a request for un-registering a listener.

Request
DELETE /api/hub/42 Accept: application/json
Response
204

Publish Event to listener

`POST /client/listener`

Description

Clears the communication endpoint address that was set by creating the Hub.

Provides to a registered listener the description of the event that was raised. The /client/listener url is the callback url passed when registering the listener.

Behavior

Returns HTTP/1.1 status code 201 if the service is able to set the configuration.

Usage Samples

Here's an example of a notification received by the listener. In this example "EVENT TYPE" should be replaced by one of the notification types supported by this API (see Notification resources Models section) and EVENT BODY refers to the data structure of the given notification type.

Request

POST /client/listener
Accept: application/json
 	
{
   "event": {
         EVENT BODY
      },
   "eventType": "EVENT_TYPE"
}

Response
201

For detailed examples on the general TM Forum notification mechanism, see the TMF REST Design Guidelines.

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Acknowledgements

Release History

Release Number	Date	Release led by:	Description
Release 4.0	30/09/2021	Pierre Gauthier TM Forum pgauthier@tmforum.org Florin Tene Vodafone Group	First Release of the Document.

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