

TM Forum Specification

ProductConfiguration

TMF760

TBD

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Direct inquiries to the TM Forum office:

4 Century Drive, Suite 100
Parsippany, NJ 07054, USA
Tel No. +1 973 944 5100
Fax No. +1 973 988 7196

TM Forum Web Page: www.tmforum.org

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Introduction

The scope of this document is to define the Product Configuration API exposed by the Product Configurator ODA component (TMFC027). The telecommunications industry has witnessed a significant shift towards digital customer engagement channels such as mobile apps and self-care portals. While these channels support a wide range of actions, ensuring consistency in product and pricing rules and policies across channels can be a challenge. CSPs must implement changes rapidly while keeping costs low, and consistency in product and pricing rules must be maintained regardless of the customer touchpoint.

To address these issues, the Product Configurator component exposes the Product Configuration API, providing sales representatives and customers with a fast and error-free product configuration capability across all channels.

The Product Configurator ODA component exposes a Product Offering Qualification API (TMF679) that is used to establish commercial offering eligibility and provide alternative product offerings in case of ineligible product offering selection. TMF679 is used in the product offering discovery phase (browsing the catalog and establishing eligibility in a given context). The Product Configuration API is invoked after qualification has been established using TMF679 and leads the configuration of selected eligible product offerings in a given context. Product configuration includes computation of characteristic values, allowed values, characteristic metadata, bundled and related product offerings, pricing, and discounts.

The Product Configuration API computes product configurations based on contextual information, existing product inventory, product catalog rules, product policy rules, and other information provided by engagement management (e.g. characteristic values). The Product Configuration API is used for a range of different use-cases in pre-ordering and product ordering processes across all channels.

High-level architecture

The product Configuration API drives the configuration of selected product offering or selected product instance in a given context.

The Product Configuration API computes product configurations based on:

- product catalog (TMF620) and specific policy rules (TMF723),
- customer's existing product inventory or past purchases (TMF637),
- specific contextual information provided by the engagement management as input, e.g. PartyRole (Customer), sales representative, channel, etc.

The Product Configuration API is engaged by various engagement management systems to support a range of different scenarios and use-cases, e.g.:

- quote management / Configure-Price-Quote (CPQ) in pre-ordering use-cases,
- product ordering in product ordering use-cases,
- shopping cart (E-commerce) in customer self-service use-cases,
- different digital engagement channels in various pre-ordering use-cases, e.g. customer enquiry for a product configuration & pricing prior to placing an item in the cart or placing a product order (pre-sale discovery).

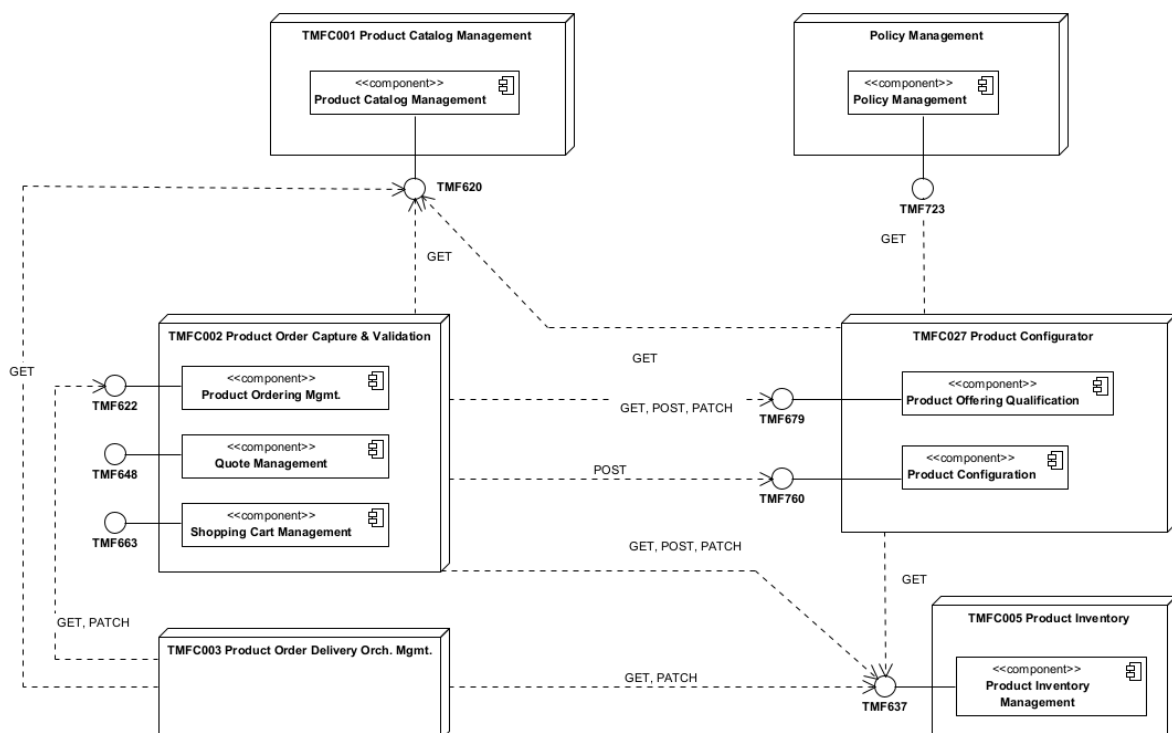


Figure above shows the architecture and component dependencies. Product Configuration depends on Product Catalog, Product Inventory, and Policy Management. Product Configurator is invoked from an appropriate back-end for front-end component of Quote, Product Ordering, Shopping Cart,

or any other user engagement application (which is not explicitly depicted in the figure below).

The use of the Product Configuration API is further explained in the IG1228 document. Please, refer to the use-case 003 (see TMFXXX API).

Configurable products in the telecommunications industry

The product Configuration API assists end-users with configuring configurable products and drives various engagement management UIs. Examples of configurable products in telecommunications include:

- internet bandwidth selection; basic bandwidth is included in the broadband bundle monthly fee, while higher bandwidths require a surcharge;
- TV service includes a selection of channels and picture quality (FHD, 4K) as well as configuration of optional payable add-ons (e.g. HBO, Netflix) which may be priced depending on parameters of the basic TV service;
- mobile handset configuration including memory storage capacity, handset color, and subsidy linked to a mobile service contract;
- cross-technology service bundles where a CSP markets a single product offering regardless of the network technology available at the customer's premises/site; a single commercial product offering is configured and priced depending on technical feasibility (e.g. fiber/copper network, maximum bandwidth determines both, internet speed and HD/4K IPTV quality);
- on-the-fly configuration of mobile tariff plans; a CSP markets several plans with predefined total free units; each customer may distribute free units among voice minutes, SMSs, and mobile data on the subscription level;
- convergent bundles where a single commercial product offering includes a mobile service, fixed broadband & voice, and TV; each service may be ordered as an independent subscription, but the bundle offers special discounts and promotions
- SLA/QoS parameters where a certain QoS is included as a part of basic ("guaranteed") SLA and higher QoS may be available as an optional add-on;
- various SaaS and PaaS subscription products provided by the CSP or its partners and resold independently or as a part of a connectivity bundle;
- virtual server (re)sold in an IaaS fashion with CPU, memory, and disk space as configurable parameters and a back-up service as an optional add-on;
- a combination of all the above-mentioned possibilities.

Sample Use Cases

This section describes the use-cases the Product Configuration API supports to configure products in pre-ordering and product ordering processes.

This section contains 3 full use cases representing the use of the Product Configuration API from the user's perspective.

Additionally, these 3 full user stories are broken down into atomic functions that the Product Configuration API performs.

Full use case 1: new product configuration

User story: as a customer, I want to configure a new product offering (broadband subscription, mobile subscription) using a selfcare portal.

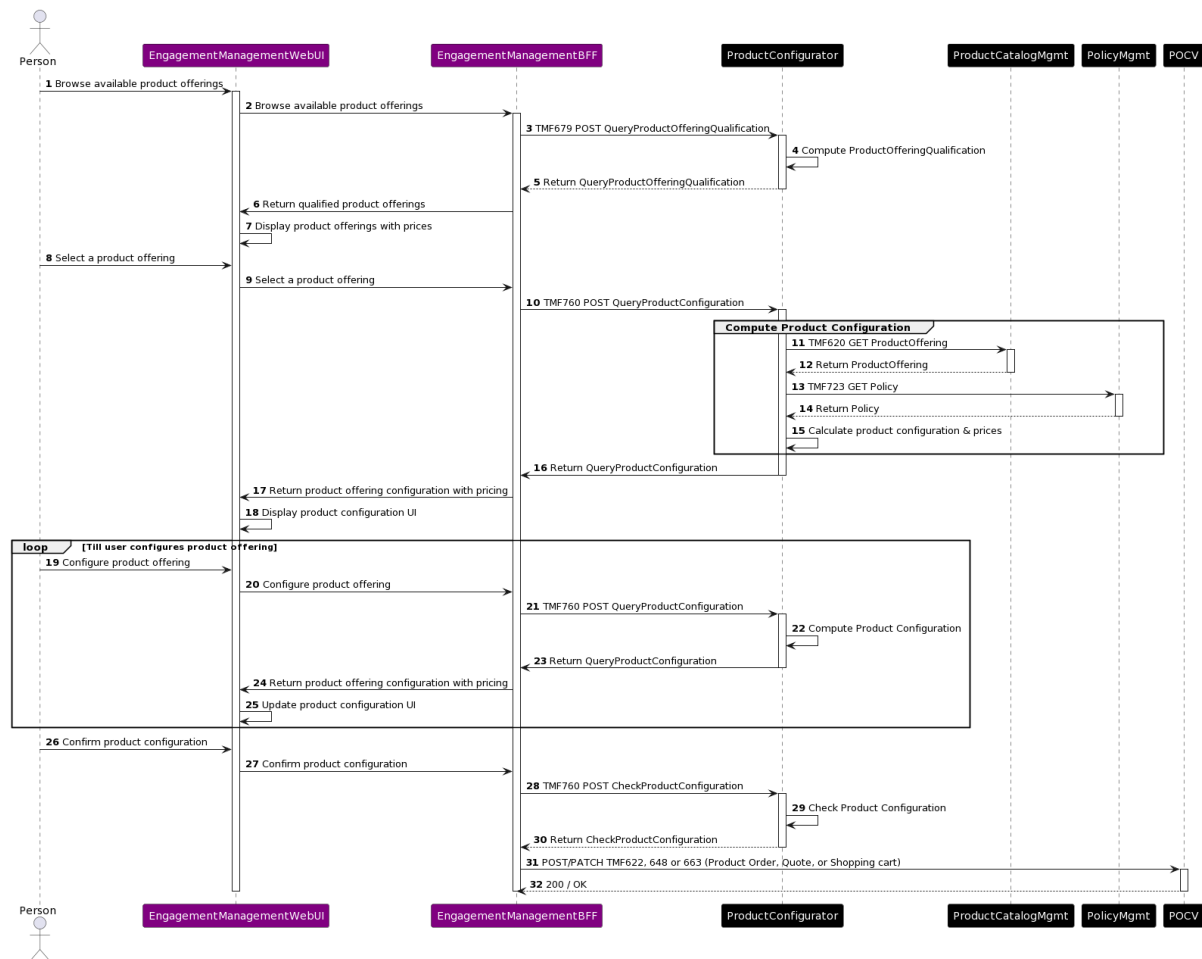
Alternative user story: as a sales representative, I want to configure a new product offering for a B2B customer and place it on a quote as a quote item.

A user browses product catalog for desired product offerings. Product configurator is used to compute commercial eligibility of product offerings (TMF679 API – Product Offering Qualification).

Once the user selects an eligible product offering, the product configurator computes a product configuration to configure the product in a given context. Engagement management uses this product configuration to construct the UI and lead the product configuration.

On user input, product configurator is invoked to recompute the product configuration. This may include recomputing characteristic values, list of (allowed) values, bundled offerings, pricing, and discounts.

Once the user finishes configuring the product in a given context, the product configurator checks the configuration. In case of valid configuration, the BFF may create a quote item, order item or cart item.



Full use case 2: configuration of existint product change

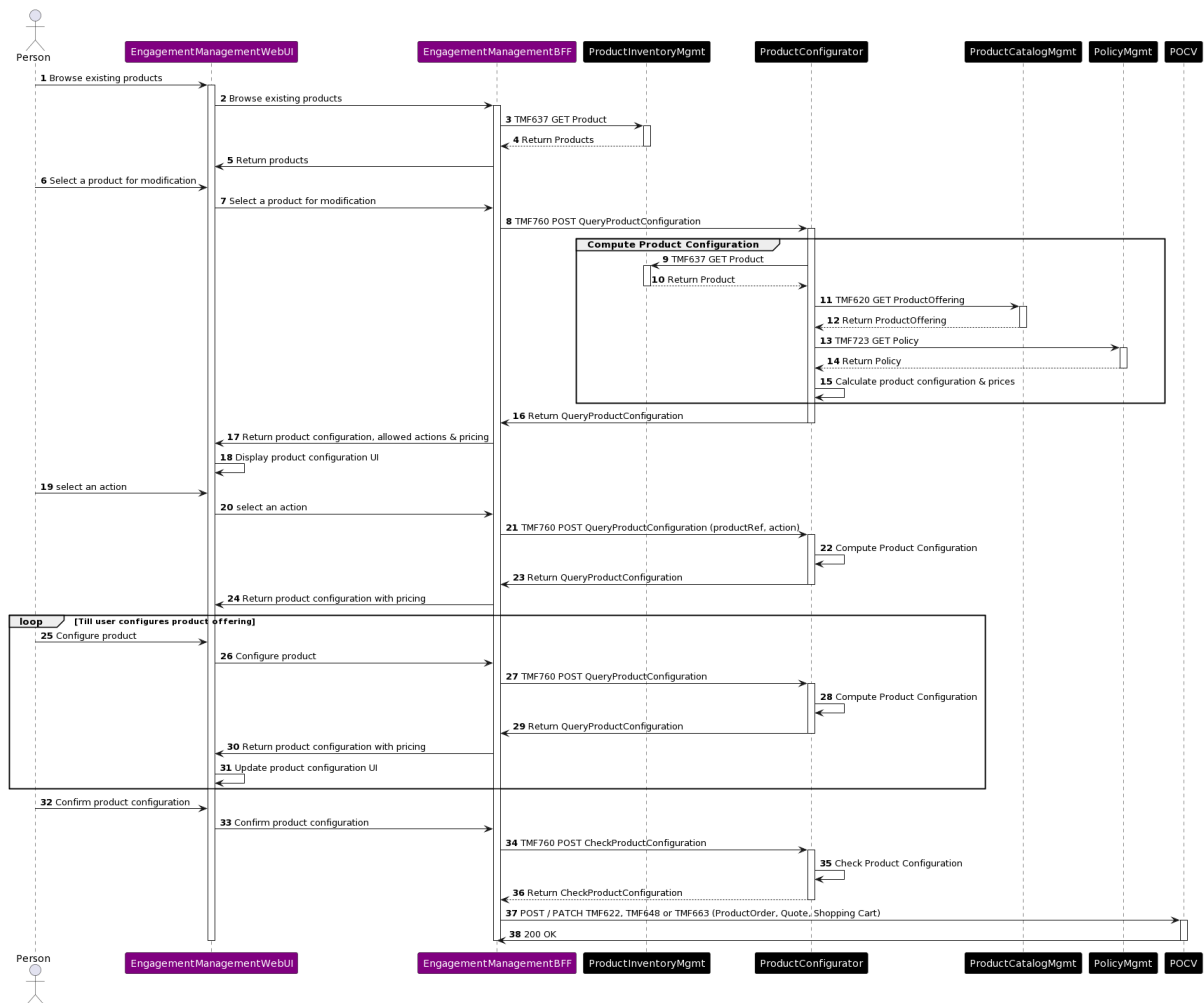
User story: as a customer, I want to change my existing product (e.g. change mobile tariff plan, increase internet bandwidth, activate a TV add-on) using a selfcare portal.

First, the user is presented with existing products (e.g. subscriptions). The user selects a product instance and product configurator is invoked to provide a list of available actions representing move, change, or delete operations. Actions may include pricing.

The user selects an action and product configurator computes a product configuration representing performing this action on selected product instance. The product configuration is used to present an appropriate UI.

The user reconfigures the product. On user input the product configurator is invoked to recompute the product configuration. This may include recomputing characteristic values, list of (allowed) values, bundled offerings, pricing, and discounts.

Once the user finishes configuring the product in a given context, the product configurator checks the configuration. In case of valid configuration, the BFF may create a quote item, order item or cart item.



Full use case 3: reconfiguration of a cart/quote/product order item

User story: as a customer, I want to change a shopping cart item (e.g. change characteristic value, (un)select a bundled offering, add an optional add-on) before the shopping cart has been submitted.

Alternative user story: as a sales representative, I want to change a quote or product order item before the quote/product order has been submitted so that the items better reflect customer's needs.

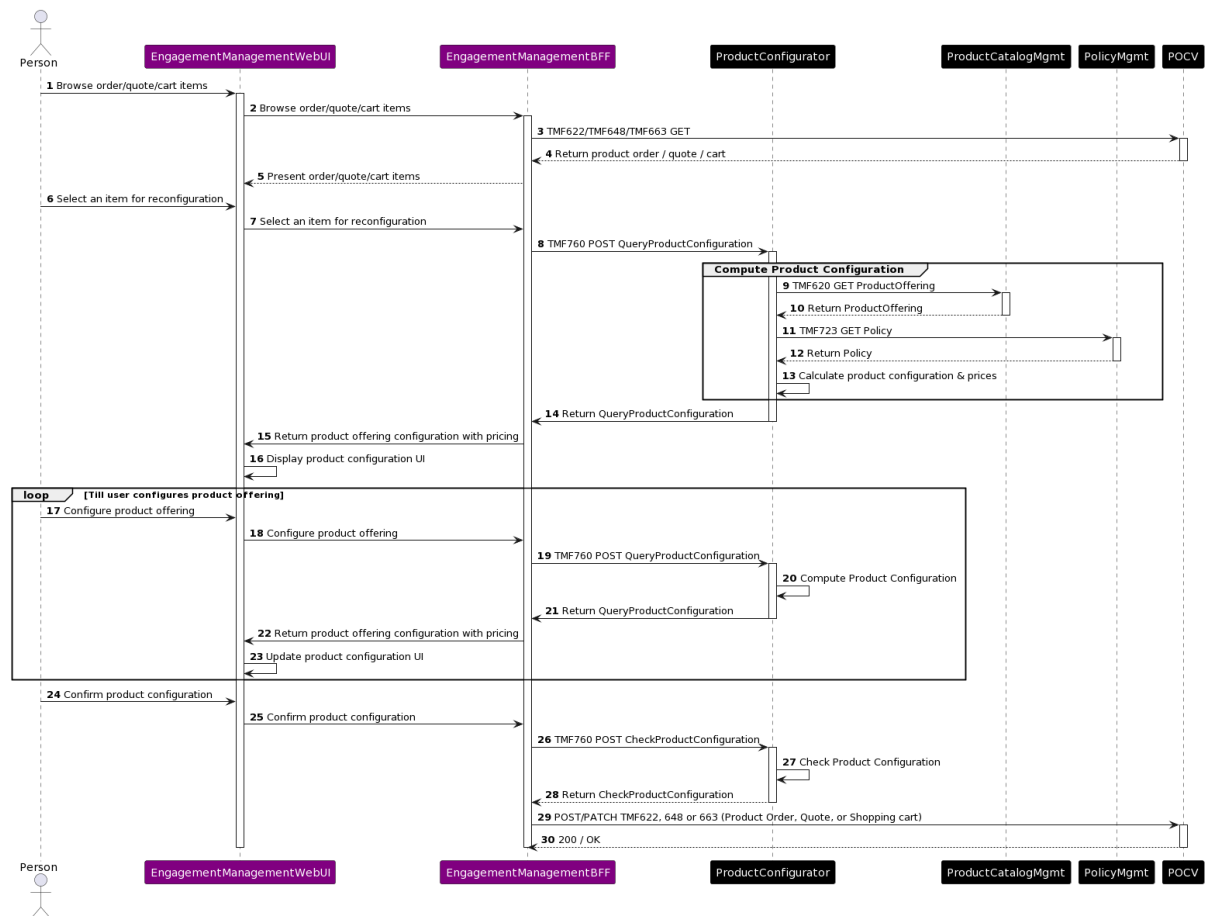
First, the user obtains a cart, quote, or product order with all associated items. The engagement management BFF invokes an appropriate API exposed by the order capture & validation component (TMF622, TMF649 or TMF663).

The user selects an item for reconfiguration.

The product configuration API (TMF760) is invoked to compute a product configuration. The product configuration is used to present an appropriate UI. The user reconfigures the product. On user input the product configurator is invoked to recompute the product configuration. This may include recomputing characteristic values, list of (allowed) values, bundled offerings, pricing, and discounts.

Once the user finishes reconfiguring the item in a given context, the product configurator checks the

configuration. In case of valid configuration, the BFF updates a quote item, order item or cart item.



Query a new product configuration for a new root product

A customer wants to buy a new product based on a product offering as defined by the product catalog. This product offering is sold as a “root” offering, e.g. a mobile tariff plan for a new mobile subscription or a bundle offering for a new broadband subscription.

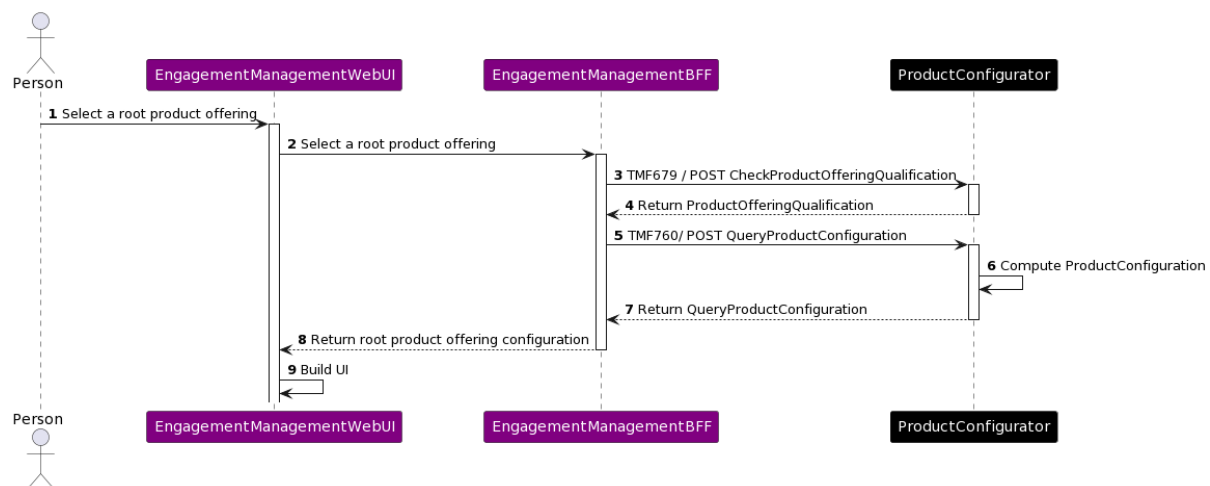
The product configurator first evaluates commercial eligibility using product offering qualification API (TMF679).

Once the eligibility is established, the product configuration API is invoked to compute appropriate product configuration based on the contextual information. Product configuration includes a list of characteristics, characteristic values (default, list of allowed values), bundled product offerings (with groups and group options), and related product offerings. The engagement management uses product configuration to build appropriate UI to configure the product.

Product configuration computation includes the following steps:

- product offering & product specification are obtained from the product catalog (TMF620);
- in case there are specific policies associated with the product specification and/or product offering, policies are obtained (TMF723);

- product configurator evaluates product and policy rules based on contextual information provided as input (e.g. party role / customer, channel, sales representative);
- initial pricing is calculated based on product catalog default values and policy rule execution results;
- initial product configuration is created, including:
 - characteristics with default values and lists of allowed values,
 - bundled product offerings with selected defaults, groups, and group options
 - related product offerings,



To support various pre-ordering and product ordering use-cases, the following user engagement scenarios should be considered:

- customer quote: user wants to place a quote item for a product offering; product configuration guides the configuration of the quote item through a quote management application;
- product order: user wants to place a product order item for a product offering; product configuration guides the configuration of the product order item through an order entry application;
- shopping cart: customer wants to place a shopping cart item for a product offering; product configuration guides the configuration of the shopping cart item through an e-commerce application;
- customer product/pricing discovery: a prospect customer is browsing the catalog and wants to obtain a price estimate for a specific product offering configuration using a digital engagement channel; the outcome of this scenario may be creation of a product order/item or shopping cart/item.

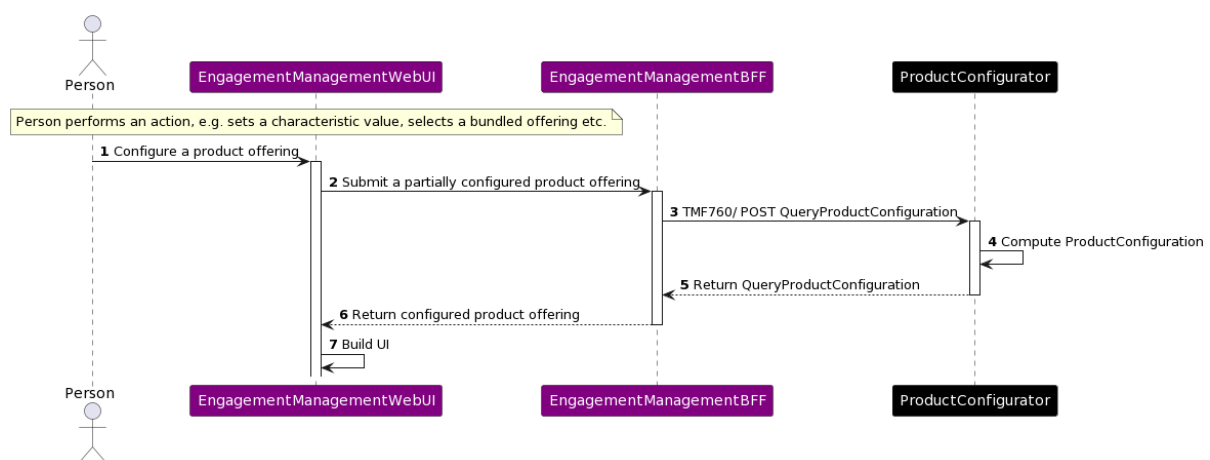
Query a product configuration based on a partially configured product configuration

A user is configuring a product offering from a quote, product order, shopping cart, or any other digital engagement front-end. A user may also reconfigure existing cart/quote/product order item.

Configuring product offering includes (but is not limited to):

- setting a characteristic value,
- selecting a bundled product offering,
- setting quantity of a bundled product offering,
- selecting a related product offering (e.g. add-on),
- setting quantity of a related offering,
- applying a promotion or discount.

On user interaction, the product configuration and pricing have to be recomputed following product catalog and policy rules. Product configuration changes must also be reflected on the UI layer.



Examples include:

- setting a characteristic value automatically sets a value of another characteristic,
- setting a characteristic value limits allowed values of another characteristic,
- setting a characteristic value enables or disables another characteristic,
- setting a characteristic value changes metadata of another characteristic (e.g. cardinality, regEx, min/max value etc.),
- setting a characteristic value enables or disables a bundled product offering or bundled product offering group,
- setting a characteristic value may impact pricing,
- setting a characteristic value may trigger an alarm in case of invalid product configuration,
- selecting a bundled or related product offering may require presentation of additional characteristics that require user input,
- selecting a bundled product offering may limit selection of another bundled product offering considering groups, options, and min/max cardinality rules,
- selecting a bundled product offering may impact pricing,

- setting quantity of a bundled product offering may limit selection of another bundled product offering considering groups, options, and min/max cardinality rules,
- setting a bundled product offering quantity may impact pricing,
- setting bundled offering quantity may trigger an alarm in case of invalid product configuration,
- selecting a promotion or discount may require price recalculation.

Product configuration is an interactive process where user performs UI actions and product configurator executes logic that guides user experience layer to reflect these changes.

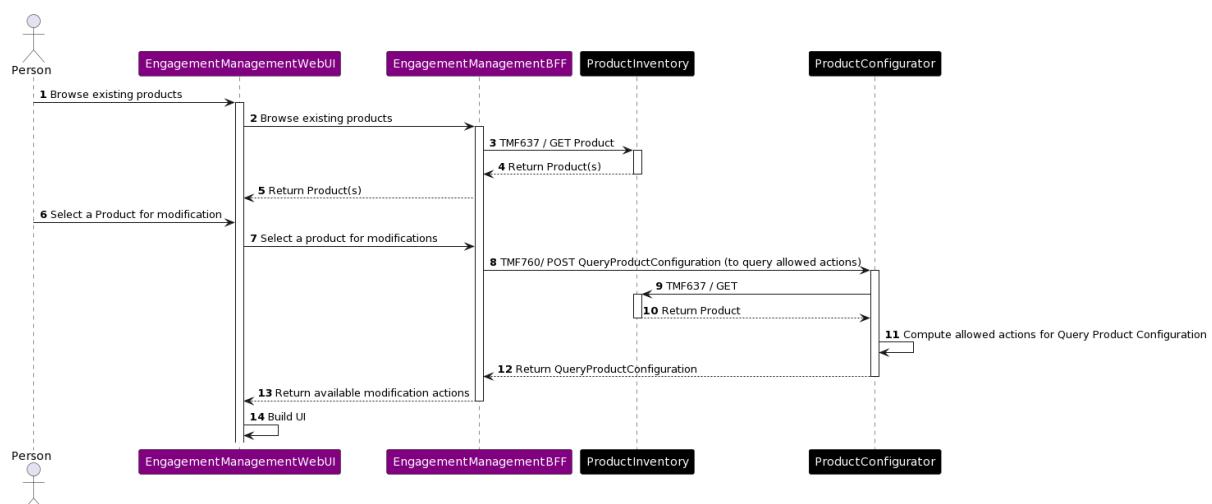
Engagement Management Web UI may be quote entry UI, order entry UI, e-commerce UI, or any other digital customer engagement UI that CSP uses.

Query allowed actions for existing product instance

A customer has an existing product in the product inventory and wants to make a modification. The product configuration API is used to query a list of allowed actions (operations) on existing product instance. Each action may incur charges that have to be calculated and presented to the customer.

Product configurator receives a product reference and other relevant contextual information as input (e.g. channel, sales representative, etc.). Product configurator obtains details from product inventory, product catalog management, and policy management and executes product and policy rules to compute a list of allowed product actions (modifications) including pricing.

Engagement management Web UI may be quote entry UI, order entry UI, e-commerce UI, or any other digital customer engagement UI that CSP uses. The purpose of the diagram is to present interactions between front-ends and the product configurator component. Interactions between product configurator and other back-end APIs and intentionally omitted for the sake of simplicity.



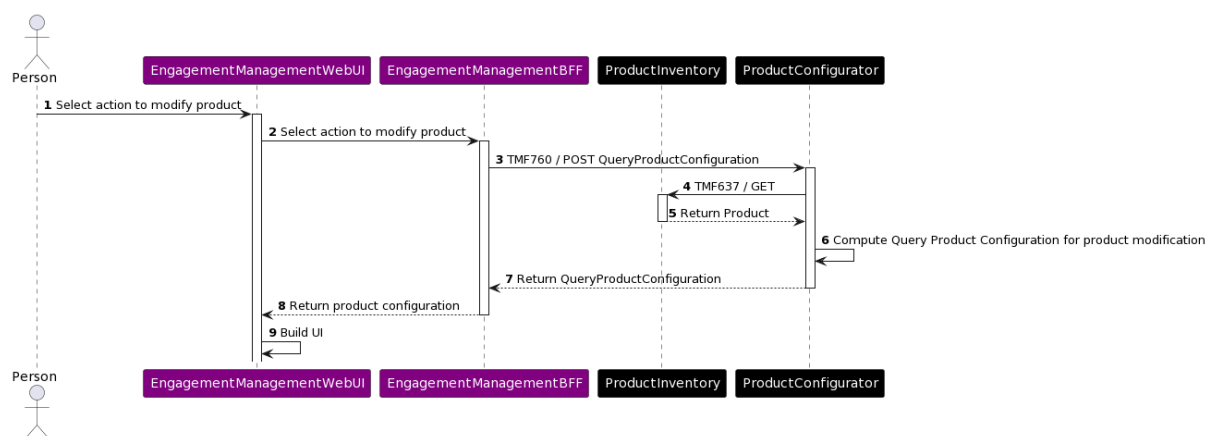
Query a product configuration for an existing product modification

A customer has an existing product in the product inventory. Product configurator has already returned a list of allowed actions for the product. The customer chooses to make a modification of

an existing product instance by selecting an action from the list of allowed actions. The product configurator is invoked to compute a corresponding product configuration to make the modification.

Product configurator receives a product reference, an action (operation), and other relevant contextual information as input (e.g. channel, sales representative, etc.). Product configurator obtains details from product inventory, product catalog management, and policy management and executes product and policy rules to create an appropriate product configuration for product modification.

Configuring an existing product modification is an iterative and interactive process between the front-end and product configurator. During the configuration process, the product configuration may be recreated as described by the use case "Query a product configuration based on a partially configured product configuration" to reflect user selection & input.



Check product configuration

A user has configured a product configuration for a new product purchase or an existing product modification through any supported engagement management system (quote management, order entry, shopping cart, selfcare portal, mobile app etc.).

User may be a CPS's employee (e.g. sales representative) or end-customer.

Prior to proceeding, the user needs to validate the correctness of the product configuration. During the validation (check) procedure, the checks that may be executed include (but are not limited to):

- mandatory characteristic values are set,
- characteristic values are not in conflict with allow lists, regExps, min/max values,
- no conflict exists with characteristic metadata (e.g. cardinality),
- bundle product offering selection & quantities are not in conflict with groups and group options,
- all required bundle product offerings are configured as a part of product configuration structure,
- all required related product offerings are configured as a part or product configuration structure,
- policy rules execution returns no conflicts,

- no conflicting prices exist.

The result of check product configuration tells the client if the product configuration is valid or not to be presented to the user. It may also propose an alternative validated product configuration that may be presented to the user on the UI as a preview / confirm changes screen.

Upon successful validation of product configuration, the user may continue with the product ordering process by creating a product order (item) or shopping cart (item) in the Product Order Capture & Validation ODA component (TMFC002).

Retrieve query product configuration

This use case supports the retrieval of the query product configuration task by ID.

List query product configuration

This use case supports listing of query product configuration tasks matching the input criteria.

Delete query product configuration

This use case supports deleting a query product configuration task. On query product configuration state change event a state change notification is created. The query product configuration task is not completed but the partially computed result contains sufficient information for the client. The client triggers a delete operation.

Retrieve check product configuration

This use case supports retrieval of the check product configuration task by ID.

List check product configuration

This use case supports listing of check product configuration tasks matching the input criteria.

Delete check product configuration

This use case supports deleting a check product configuration task. On check product configuration state change event a state change notification is created. The check product configuration task is not completed but the partially computed result contains sufficient information for the client. The client triggers a delete operation.

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, Part 2 (TMF630).

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 `AccountRef` 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

CheckProductConfiguration resource

Resource model

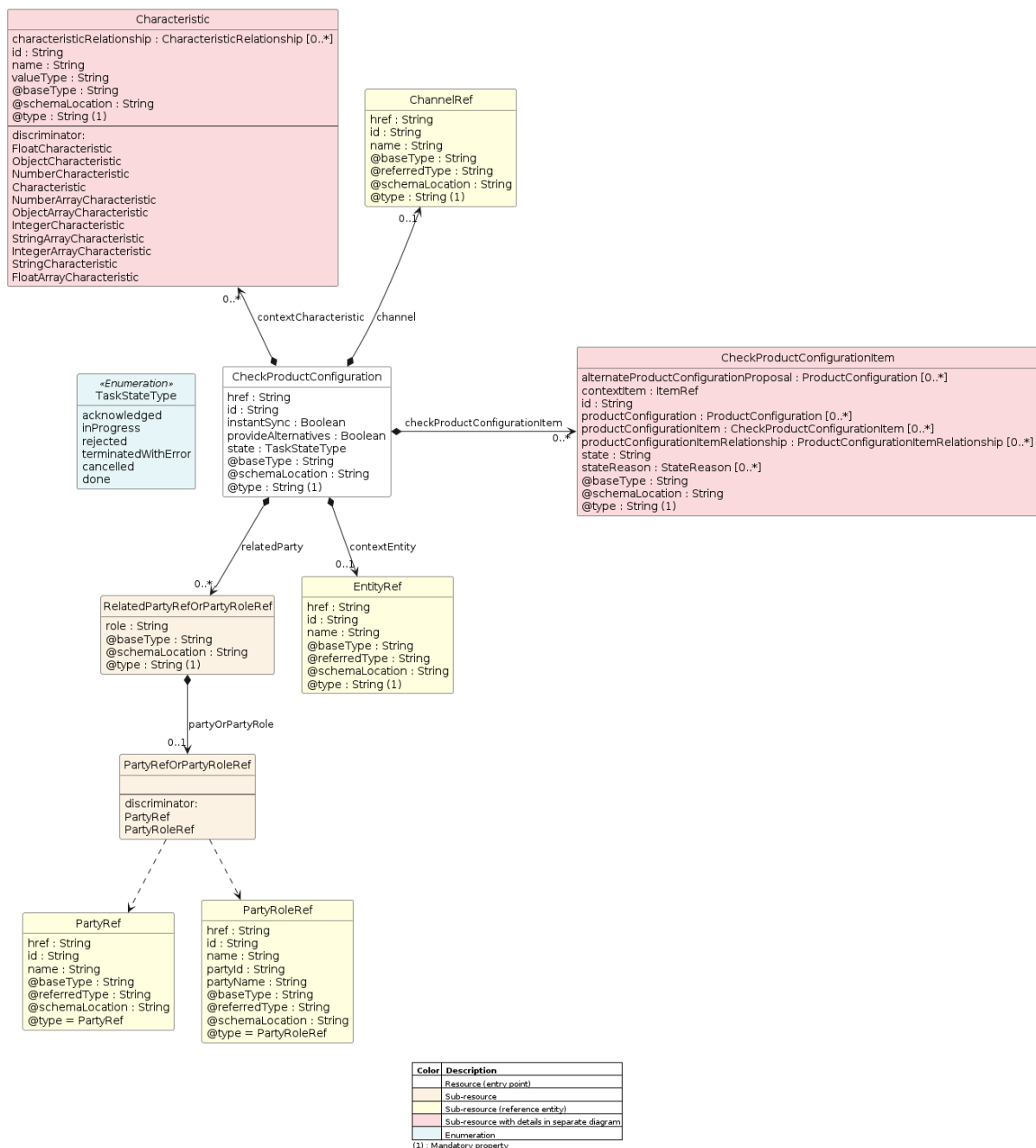


Figure 1 - CheckProductConfiguration

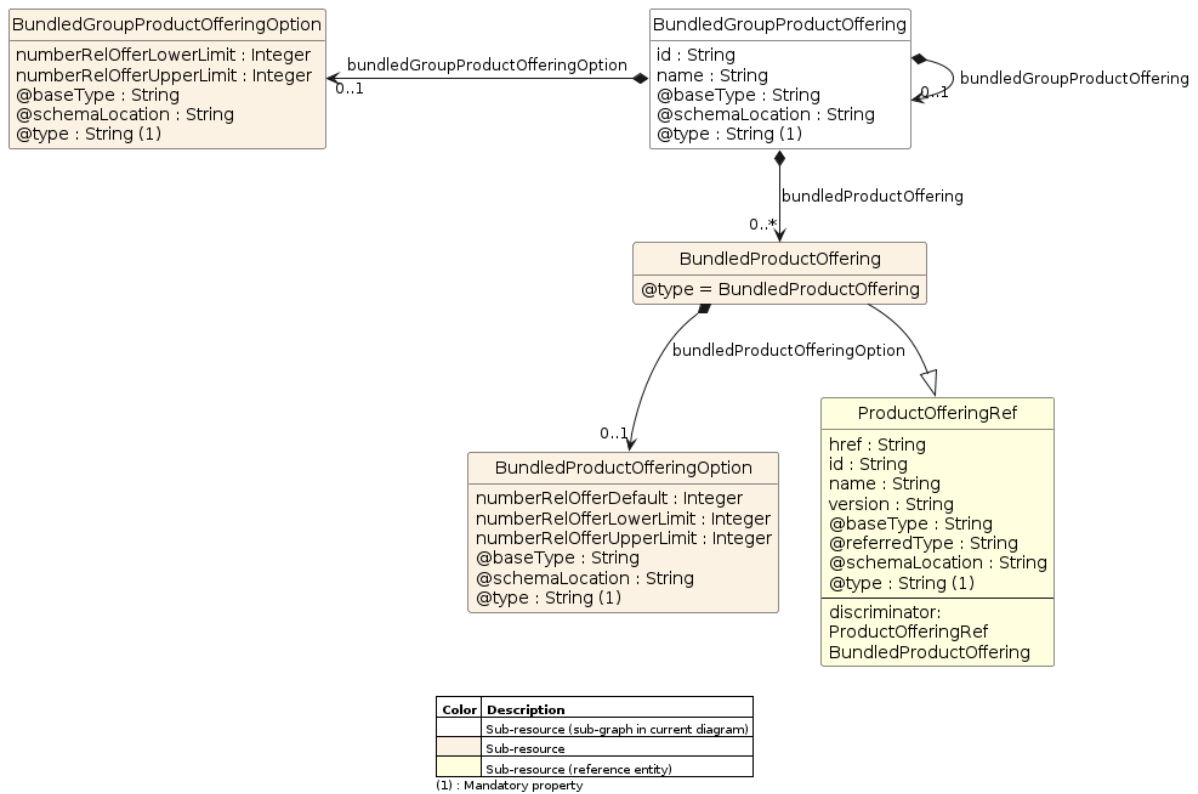


Figure 2 - BundledGroupProductOffering

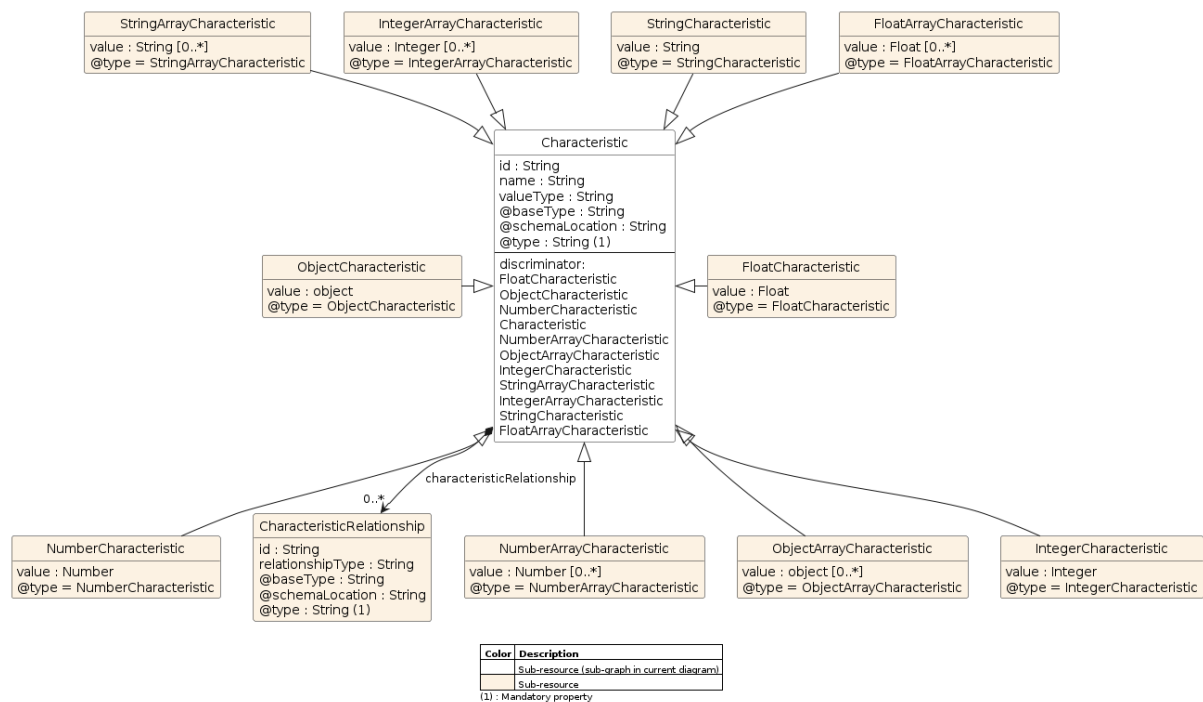


Figure 3 - Characteristic

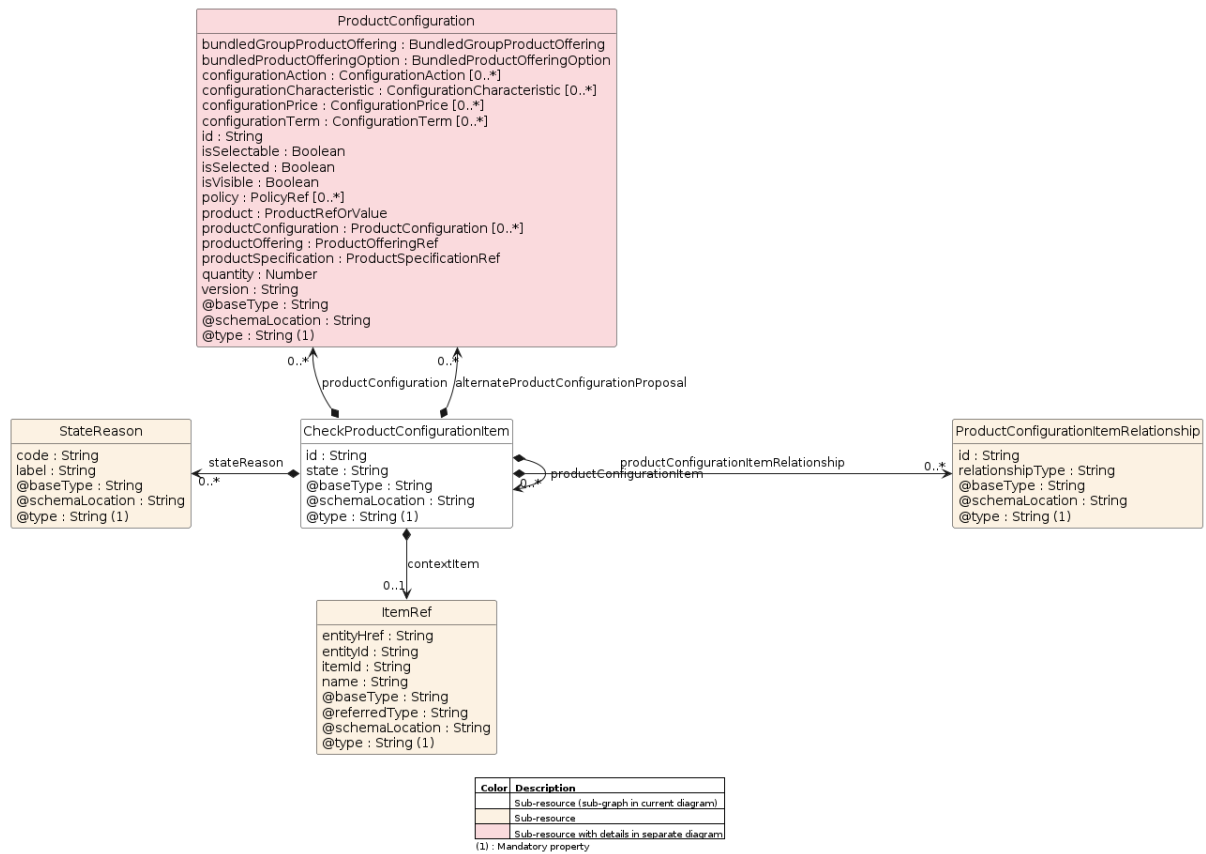


Figure 4 - CheckProductConfigurationItem

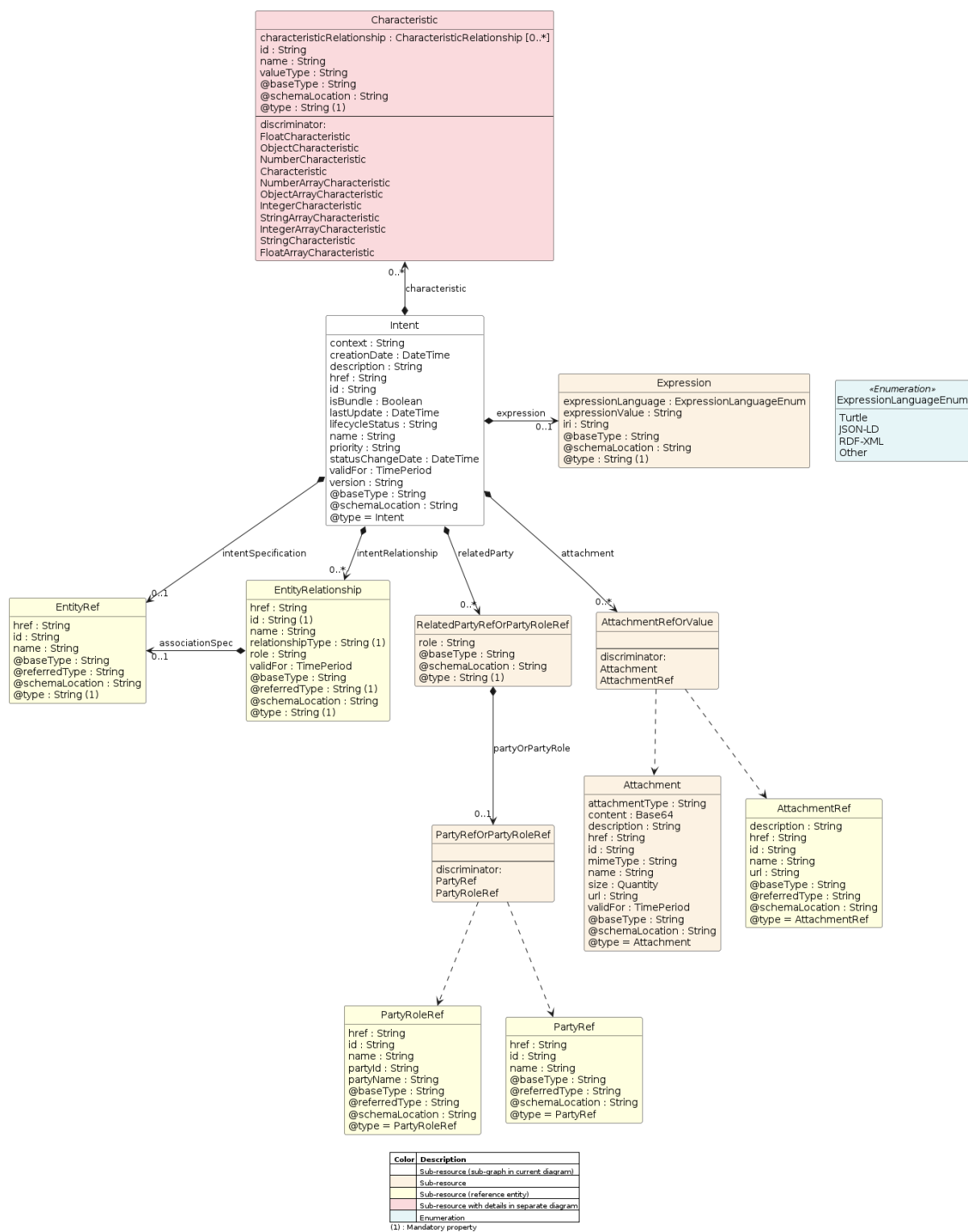


Figure 5 - Intent

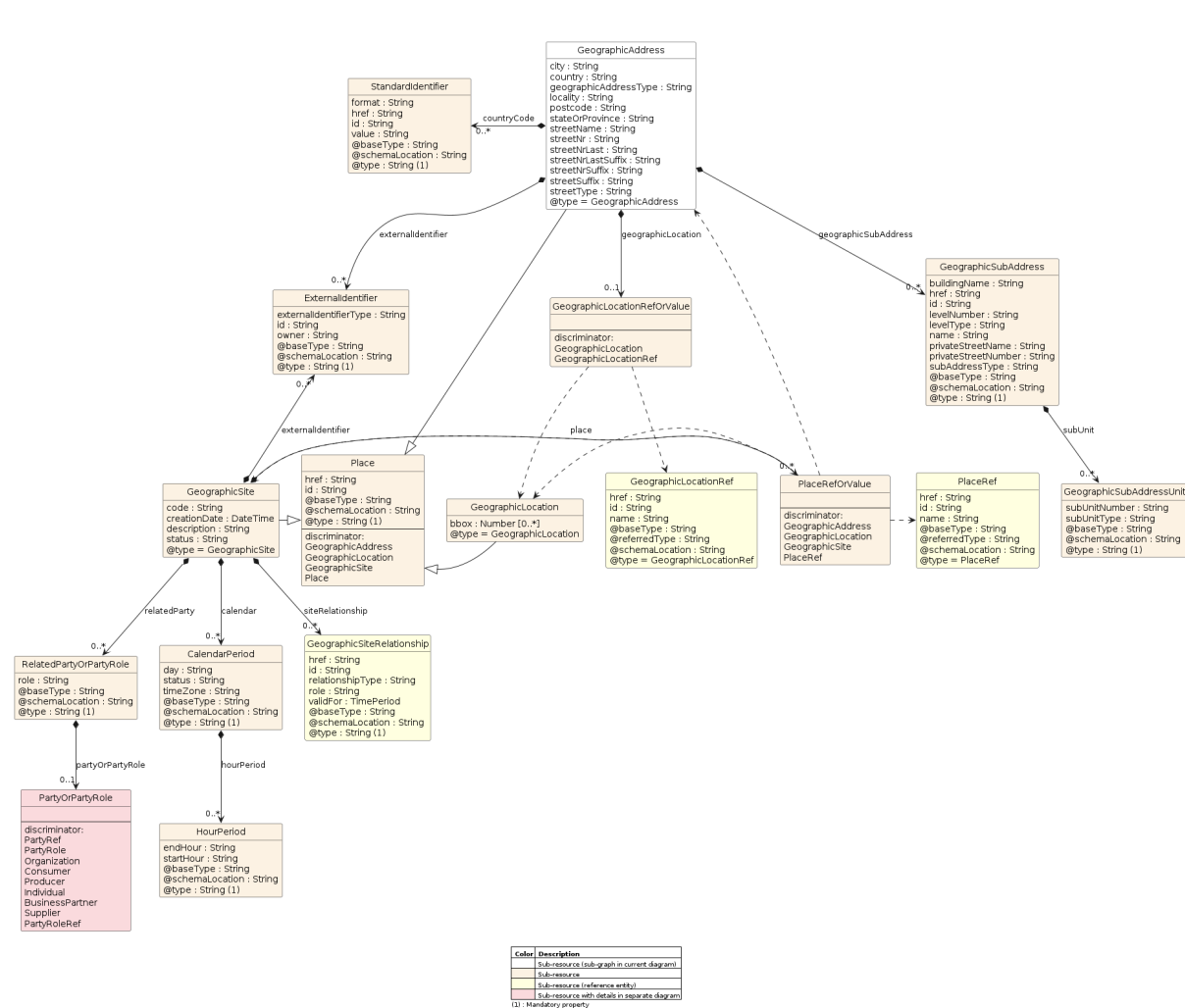
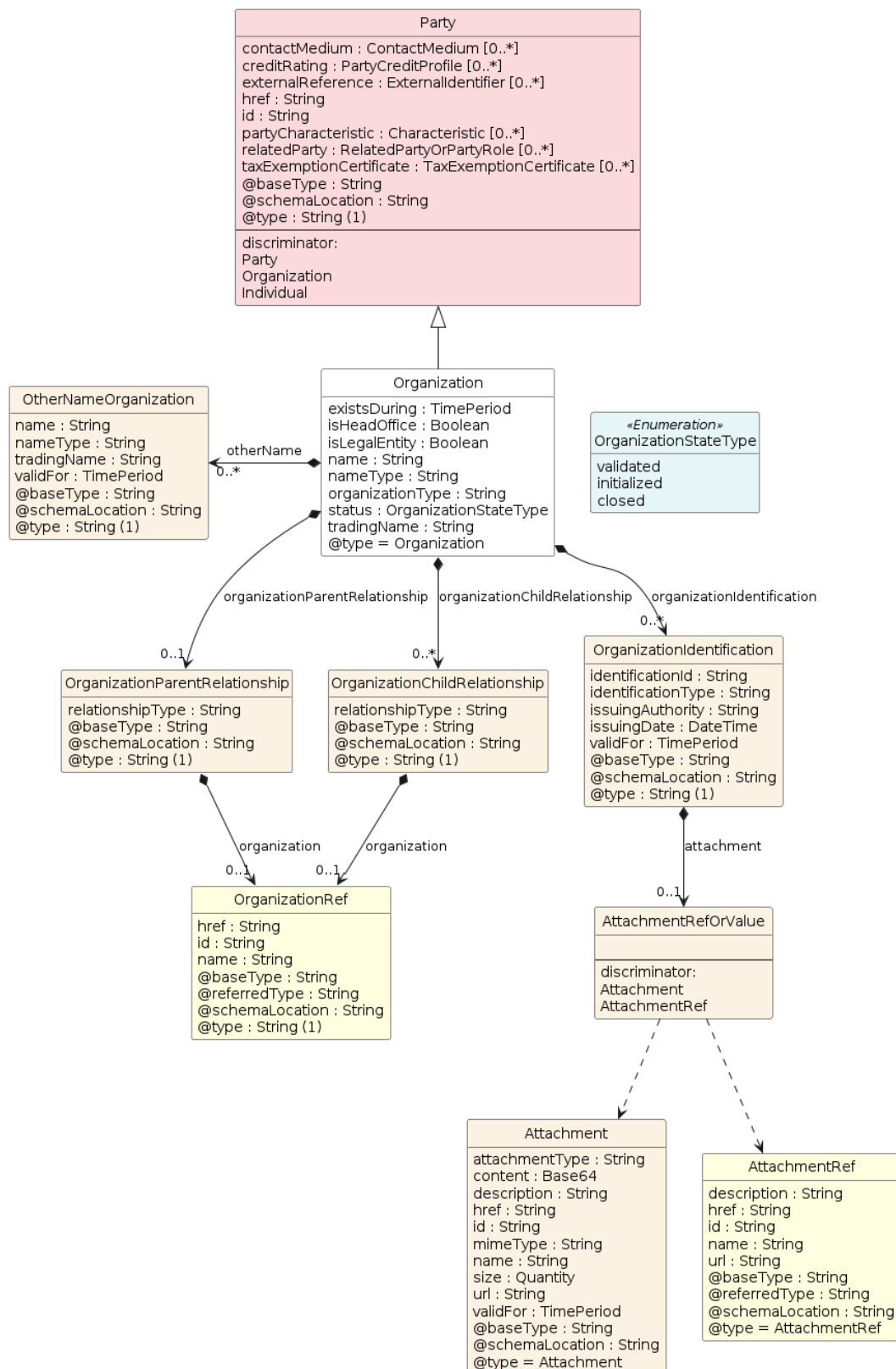


Figure 6 - GeographicAddress



Color	Description
	Sub-resource (sub-graph in current diagram)
	Sub-resource
	Sub-resource (reference entity)
	Sub-resource with details in separate diagram
	Enumeration

(1) : Mandatory property

Figure 7 - Organization



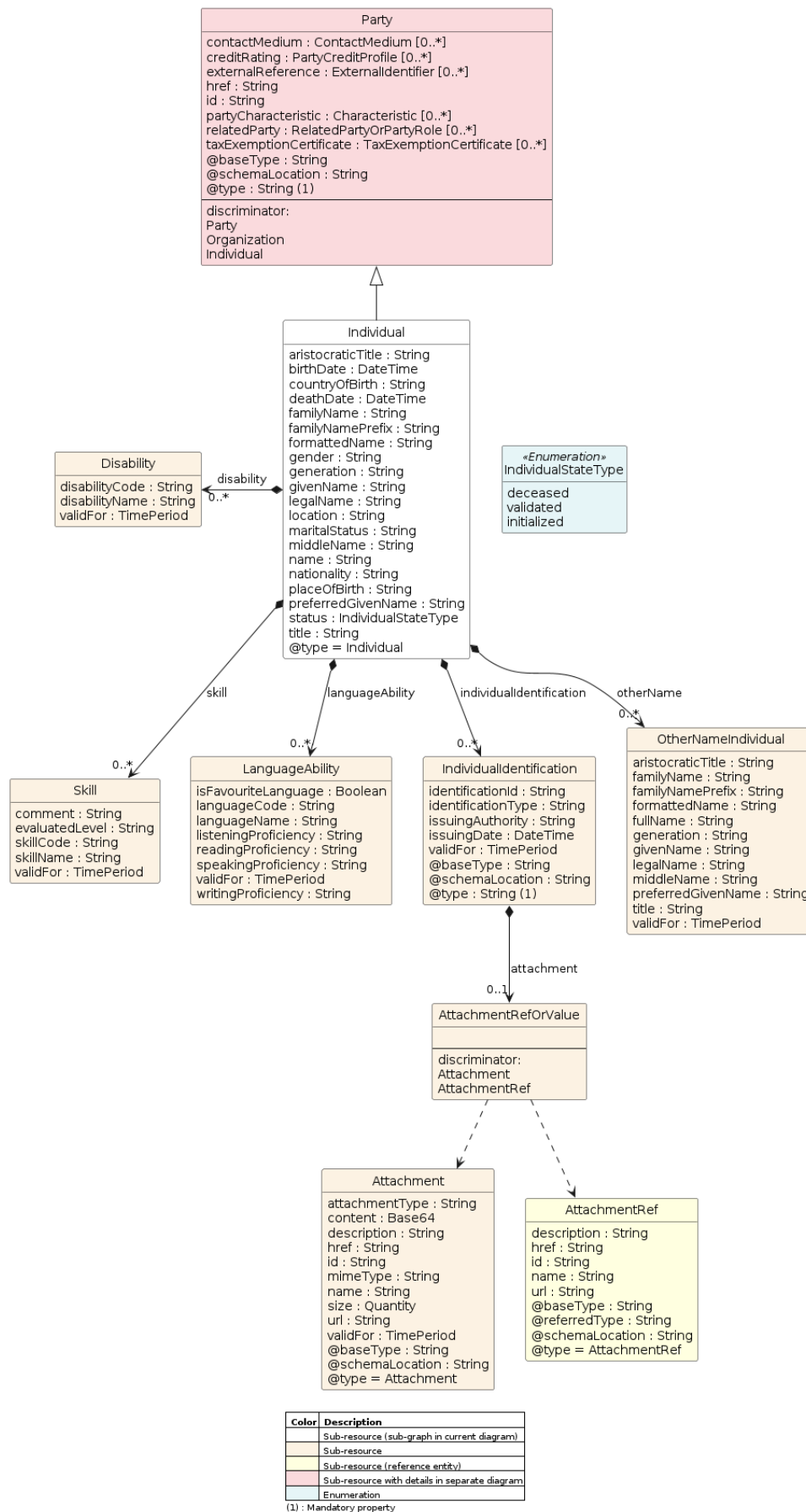


Figure 9 - Individual

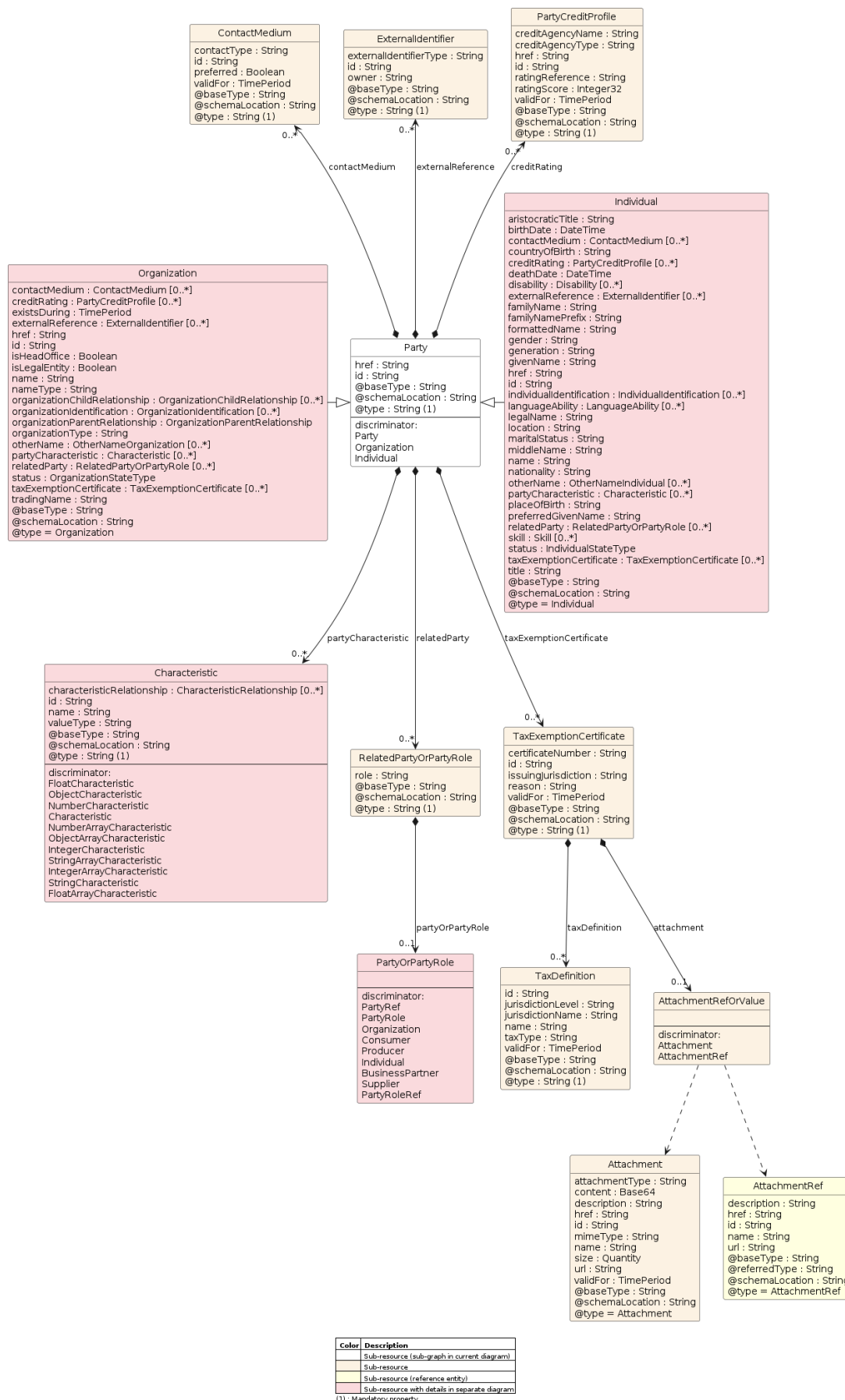


Figure 10 - Party

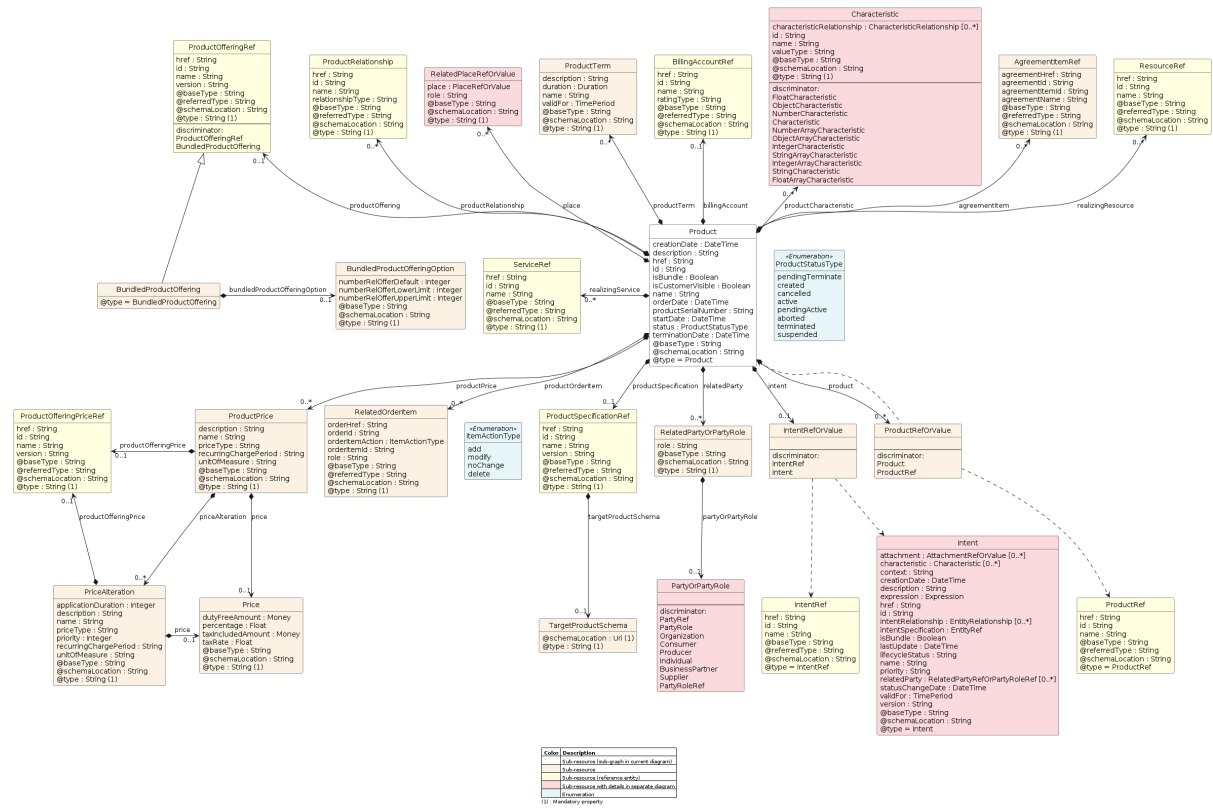


Figure 11 - Product

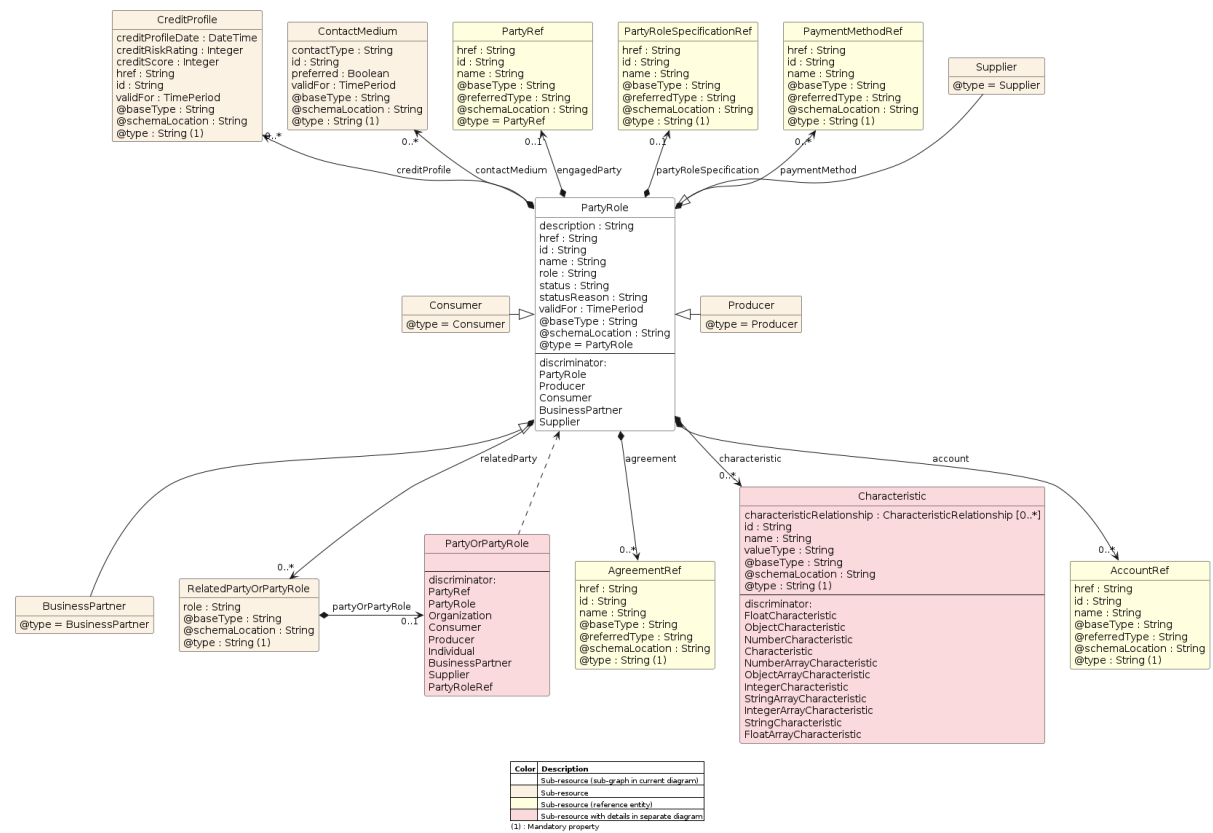


Figure 12 - PartyRole

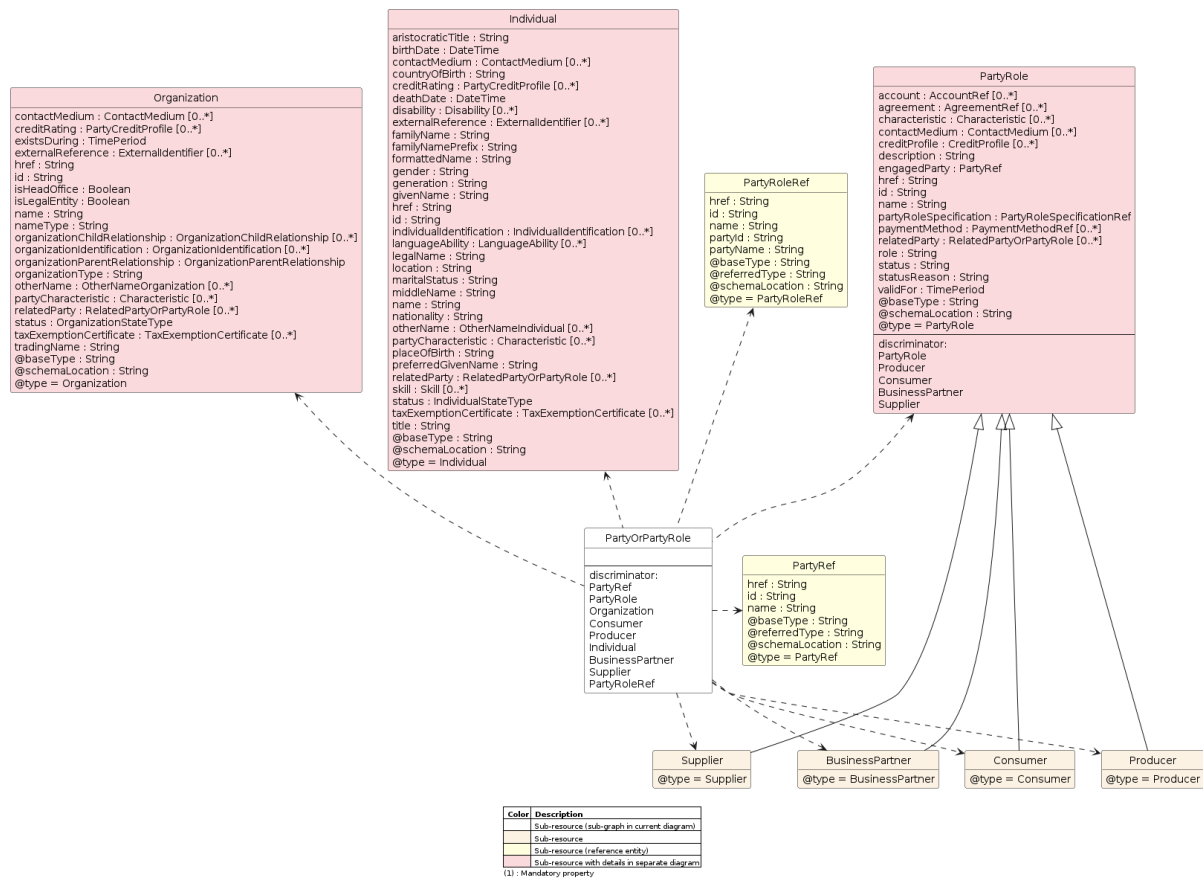


Figure 13 - PartyOrPartyRole

Field descriptions

CheckProductConfiguration fields

channel	A ChannelRef. The channel to which the resource reference to. e.g. channel for selling product offerings, channel for opening a trouble ticket etc..
checkProductConfigurationItem	A CheckProductConfigurationItem. CheckProductConfigurationItem is a list of product configuration items representing the input and the output of the check product configuration API.
contextCharacteristic	A Characteristic. ContextCharacteristic is a list of characteristics providing additional contextual information required to check validity of product configurations(s) and are not included in channel and relatedParty.
contextEntity	An EntityRef.
href	A String. Hyperlink reference.
id	A String. Unique identifier.

instantSync	A Boolean. An indicator which when the value is "true" means that requester expects to get configuration result immediately in the response. If the indicator is true then the response code of 200 indicates the operation is successful otherwise a task is created with a response 201.
provideAlternatives	A Boolean. An indicator which when the value is "true" means that alternative solutions should be provided.
relatedParty	A RelatedPartyRefOrPartyRoleRef. Party playing a role for this configuration, e.g. a customer, prospect, employee.
state	A TaskStateType. Possible values for the state of a task.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

AccountRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

AgreementItemRef sub-resource fields

agreementHref	A String. Reference of the related entity.
agreementId	A String. Unique identifier of a related entity.
agreementItemId	A String. Id of an item of a Agreement.
agreementName	A String. Name of the related entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.

@schemaLocation	A String. 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.

AgreementRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

Attachment sub-resource fields

attachmentType	A String. A business characterization of the purpose of the attachment, for example logo, instructionManual, contractCopy.
content	A Base64. The actual contents of the attachment object, if embedded, encoded as base64.
description	A String. A narrative text describing the content of the attachment.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
contentType	A String. A technical characterization of the attachment content format using IETF Mime Types.
name	A String. The name of the attachment.
size	A Quantity. An amount in a given unit.
url	A String. Uniform Resource Locator, is a web page address (a subset of URI).
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.
-------	--

AttachmentRef sub-resource fields

description	A String. A narrative text describing the content of the attachment.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
url	A String. Link to the attachment media/content.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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 sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
ratingType	A String. Indicates whether the account follows a specific payment option such as prepaid or postpaid.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

BundledGroupProductOffering sub-resource fields

bundledGroupProductOffering	A BundledGroupProductOffering. Child groups of product offerings, to enable hierarchical sub-grouping.
bundledGroupProductOfferingOption	A BundledGroupProductOfferingOption.

bundledProductOffering	A BundledProductOffering. Child offerings, from which instances can be created as direct or hierarchically indirect children of the parent offering.
id	A String. Locally unique identifier of the group, useful in case the parent product offering or group includes multiple groups.
name	A String. The name of the group of child offerings. Required to distinguish several choice groups.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

BundledGroupProductOfferingOption sub-resource fields

numberRelOfferLowerLimit	An Integer. The minimum total number of instances of the child offerings directly of hierarchically in the group that should be instantiated.
numberRelOfferUpperLimit	An Integer. The maximum total number of instances of the child offerings directly of hierarchically in the group that should be instantiated.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

BundledProductOffering sub-resource fields

bundledProductOfferingOption	A BundledProductOfferingOption.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
version	A String. Version of the product offering.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.
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BundledProductOfferingOption sub-resource fields

numberRelOfferDefault	An Integer. Default number of product offerings that should be procured as part of the related BundledProductOffering.
numberRelOfferLowerLimit	An Integer. Lower limit for a product offering that can be procured as part of the related BundledProductOffering.
numberRelOfferUpperLimit	An Integer. Upper limit for a product offering that can be procured as part of the related BundledProductOffering.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

CalendarPeriod sub-resource fields

day	A String. Day where the calendar status applies (e.g.: monday, mon-to-fri, weekdays, weekend, all week, ...).
hourPeriod	A HourPeriod.
status	A String. Indication of the availability of the calendar period (e.g.: available, booked, etc.).
timeZone	A String. Indication of the timezone applicable to the calendar information (e.g.: Paris, GMT+1).
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

ChannelRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.

@schemaLocation	A String. 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 sub-resource fields

characteristicRelationship	A CharacteristicRelationship.
id	A String. Unique identifier of the characteristic.
name	A String. Name of the characteristic.
valueType	A String. Data type of the value of the characteristic.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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 sub-resource fields

id	A String. Unique identifier of the characteristic.
relationshipType	A String. The type of relationship.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

CheckProductConfigurationItem sub-resource fields

alternateProductConfigurationProposal	A ProductConfiguration. A list of alternative product configurations proposed to the requester of the check product configuration operation. The list may be populated in case product configuration was rejected.
contextItem	An ItemRef.
id	A String. Identifier of the ProductConfigurationItem (generally it is a sequence number 01, 02, 03,...).
productConfiguration	A ProductConfiguration.
productConfigurationItem	A CheckProductConfigurationItem. ProductConfigurationItem is a list of product configuration items contained in the ProductConfigurationItem.

productConfigurationItemRelationship	A ProductConfigurationItemRelationship. ProductConfigurationItemRelationship is a list of product configuration item(s) related to the ProductConfigurationItem from the same CheckProductConfiguration. Relationship may represent a bundle, an add-on etc.
state	A String. State of the CheckProductConfiguration item (e.g.: accepted, rejected).
stateReason	A StateReason. List of human readable reasons for the current state of the check product configuration computation (e.g.: Configured product is missing a characteristic value 'Bandwidth').
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

ConfigurationAction sub-resource fields

action	A String. The name of the action.
description	A String. The description of the action (human-readable explanation of what the action does).
isSelected	A Boolean. A flag indicating whether the action is selected in the current product configuration.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

ConfigurationCharacteristic sub-resource fields

configurationCharacteristicRelationship	A ConfigurationCharacteristicRelationship. Relationship to other configuration characteristics, such as dependency (the value that this characteristic can take or may be limited by the value of the related characteristic).
configurationCharacteristicValue	A ConfigurationCharacteristicValue. A list of configuration characteristic values.
description	A String. A narrative that explains the ConfigurationCharacteristic.
id	A String. Unique identifier of the configuration characteristic.

isConfigurable	A Boolean. A flag indicating whether this configuration characteristic may be configured (i.e. value may be set by the end-user). In case of false value, the characteristic value may not be set by the end-user and is preset by the product configurator.
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 configuration characteristic is known and distinguished from other configuration characteristics.
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	A String. 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.

ConfigurationCharacteristicRelationship sub-resource fields

id	A String. Unique identifier of the configuration characteristic.
relationshipType	A String. The type of relationship.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

ConfigurationCharacteristicValue sub-resource fields

characteristicValue	A Characteristic.
isSelectable	A Boolean. A flag indicating whether this configuration characteristic value may be selected by the end-user in the context of the product configuration.
isSelected	A Boolean. A flag indicating whether this configuration characteristic value is selected in the context of the product configuration.

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

ConfigurationPrice sub-resource fields

description	A String. Description of the product configuration price.
name	A String. Name of the product configuration price.
price	A Price.
priceAlteration	A PriceAlteration. Alteration (discount, allowance) applied to the product configuration price.
priceType	A String. Indicates if the price is for recurrent or no-recurrent charge.
productOfferingPrice	A ProductOfferingPriceRef.
recurringChargePeriod	A Quantity. An amount in a given unit.
unitOfMeasure	A String. Unit of Measure if price depending on it (Gb, SMS volume, etc..).
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

ConfigurationTerm sub-resource fields

description	A String. Description of the configuration term.
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duration	A Duration. A time interval in a given unit of time.
isSelectable	A Boolean. A flag indicating whether this configuration term may be selected by the end-user in the context of the product configuration.
isSelected	A Boolean. A flag indicating whether this configuration term is selected is the context of the product configuration.
name	A String. Name of the configuration term.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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 sub-resource fields

contactType	A String. Type of the contact medium to qualify it like pro email / personal email. This is not used to define the contact medium used.
id	A String. Identifier for this contact medium.
preferred	A Boolean. If true, indicates that is the preferred contact medium.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

CreditProfile sub-resource fields

creditProfileDate	A DateTime. The date the profile was established.
creditRiskRating	An Integer. This is an integer whose value is used to rate the risk.
creditScore	An Integer. A measure of a person or organizations creditworthiness calculated on the basis of a combination of factors such as their income and credit history.
href	A String. Hyperlink reference.
id	A String. Unique identifier.

validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

Disability sub-resource fields

disabilityCode	A String. Code of the disability.
disabilityName	A String. Name of the disability.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.

Duration sub-resource fields

amount	An Integer. Time interval (number of seconds, minutes, hours, etc.).
units	A String. Unit of time (seconds, minutes, hours, etc.).

EntityRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

EntityRelationship sub-resource fields

associationSpec	An EntityRef.
href	A String.
id	A String.
name	A String.

relationshipType	A String. Type of relationship such as migration, substitution, dependency, exclusivity.
role	A String. The association role for this entity.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String.
@schemaLocation	A String. A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A String.

Expression sub-resource fields

expressionLanguage	An ExpressionLanguageEnum. Possible values for the serialized Expression language of an intent or Intent report.
expressionValue	A String. Expression value is the ontology-encoded form of the Intent such as RDF/XML, Turtle, Json-LD,...
iri	A String. Internationalized Resource Identifier of the intent Expression.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

ExternalIdentifier sub-resource fields

externalIdentifierType	A String. Type of the identification, typically would be the type of the entity within the external system.
id	A String. Identification of the entity within the external system.
owner	A String. Name of the external system that owns the entity.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

FloatArrayCharacteristic sub-resource fields

characteristicRelationship	A CharacteristicRelationship.
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id	A String. Unique identifier of the characteristic.
name	A String. Name of the characteristic.
value	A Float.
valueType	A String. Data type of the value of the characteristic.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

FloatCharacteristic sub-resource fields

characteristicRelationship	A CharacteristicRelationship.
id	A String. Unique identifier of the characteristic.
name	A String. Name of the characteristic.
value	A Float. Value of the characteristic.
valueType	A String. Data type of the value of the characteristic.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

GeographicAddress sub-resource fields

city	A String. City that the address is in.
country	A String. Country that the address is in.
countryCode	A StandardIdentifier. Country codes are short alphabetic or numeric geographical codes (geocodes) developed to represent countries and dependent areas, for use in data processing and communications. Several different systems have been developed to do this. The term country code frequently refers to ISO 3166-1 alpha-2 or international dialing codes, the E.164 country calling codes.
externalIdentifier	An ExternalIdentifier.
geographicAddressType	A String. Classification of the address, e.g., residential, industrial.

geographicLocation	A GeographicLocationRefOrValue. The polymorphic attributes @type, @schemaLocation & @referredType are related to the GeographicLocation entity and not the GeographicLocationRefOrValue class itself.
geographicSubAddress	A GeographicSubAddress.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
locality	A String. An area of defined or undefined boundaries within a local authority or other legislatively defined area, usually rural or semi rural in nature. [ANZLIC-STREET], or a suburb, a bounded locality within a city, town or shire principally of urban character [ANZLICSTREET].
postcode	A String. Descriptor for a postal delivery area, used to speed and simplify the delivery of mail (also know as zipcode).
stateOrProvince	A String. The State or Province that the address is in.
streetName	A String. Name of the street or other street type.
streetNr	A String. Number identifying a specific property on a public street. It may be combined with streetNrLast for ranged addresses.
streetNrLast	A String. Last number in a range of street numbers allocated to a property.
streetNrLastSuffix	A String. Last street number suffix for a ranged address.
streetNrSuffix	A String. The first street number suffix.
streetSuffix	A String. A modifier denoting a relative direction.
streetType	A String. Alley, avenue, boulevard, brae, crescent, drive, highway, lane, terrace, parade, place, tarn, way, wharf.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

GeographicLocation sub-resource fields

bbox	A Number. A bounding box array that contains the geometry. The axes order follows the axes order of the geometry.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
@baseType	A String. When sub-classing, this defines the super-class.

@schemaLocation	A String. 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.

GeographicLocationRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

GeographicSite sub-resource fields

calendar	A CalendarPeriod.
code	A String. A code that may be used for some addressing schemes eg: [ANSI T1.253-1999].
creationDate	A DateTime. Date and time when the GeographicSite was created.
description	A String. Text describing additional information regarding the site.
externalIdentifier	An ExternalIdentifier.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
place	A PlaceRefOrValue. The polymorphic attributes @type, @schemaLocation & @referredType are related to the Place entity and not the PlaceRefOrValue class itself.
relatedParty	A RelatedPartyOrPartyRole.
siteRelationship	A GeographicSiteRelationship.
status	A String. The condition of the GeographicSite, such as planned, underConstruction, cancelled, active, inactive, former.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.
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GeographicSiteRelationship sub-resource fields

href	A String. Reference of the related geographic site.
id	A String. Unique identifier of the related site entity within the server.
relationshipType	A String. Type of relationship.
role	A String. Role of the related site in the relationship.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

GeographicSubAddress sub-resource fields

buildingName	A String. Allows for buildings that have well-known names.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
levelNumber	A String. Used where a level type may be repeated e.g. BASEMENT 1, BASEMENT 2.
levelType	A String. Describes level types within a building.
name	A String. Name of the subAddress to identify it with a meaningful identification.
privateStreetName	A String. Private streets internal to a property (e.g. a university) may have internal names that are not recorded by the land title office.
privateStreetNumber	A String. Private streets numbers internal to a private street.
subAddressType	A String. Type of subAddress : it can be a subunit or a private street.
subUnit	A GeographicSubAddressUnit. Representation of a SubUnit. It is used for describing subunit within a subAddress e.g. BERTH, FLAT, PIER, SUITE, SHOP, TOWER, UNIT, WHARF.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.
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GeographicSubAddressUnit sub-resource fields

subUnitNumber	A String. The discriminator used for the subunit, often just a simple number but may also be a range.
subUnitType	A String. The type of subunit e.g.BERTH, FLAT, PIER, SUITE, SHOP, TOWER, UNIT, WHARF, RACK.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

HourPeriod sub-resource fields

endHour	A String. The time when the status ends applying.
startHour	A String. The time when the status starts applying.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

Individual sub-resource fields

aristocraticTitle	A String. E.g. Baron, Graf, Earl.
birthDate	A DateTime. Birth date.
contactMedium	A ContactMedium. List of means for contacting the party, e.g. mobile phone, email address.
countryOfBirth	A String. Country where the individual was born.
creditRating	A PartyCreditProfile. List of credit profiles and scores for the party, typically received from an external credit broker.
deathDate	A DateTime. Date of death.
disability	A Disability. List of disabilities suffered by the individual.
externalReference	An ExternalIdentifier. List of identifiers of the Party in an external system, for example when party information is imported from a commerce system.

familyName	A String. Contains the non-chosen or inherited name. Also known as last name in the Western context.
familyNamePrefix	A String. Family name prefix.
formattedName	A String. A fully formatted name in one string with all of its pieces in their proper place and all of the necessary punctuation. Useful for specific contexts (Chinese, Japanese, Korean).
gender	A String. Gender.
generation	A String. E.g., Sr, Jr, III (the third).
givenName	A String. First name of the individual.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
individualIdentification	An IndividualIdentification. List of official identifications issued to the individual, such as passport, driving licence, social security number.
languageAbility	A LanguageAbility. List of national languages known by the individual.
legalName	A String. Legal name or birth name (name one has for official purposes).
location	A String. Temporary current location of the individual (may be used if the individual has approved its sharing).
maritalStatus	A String. Marital status (married, divorced, widow ...).
middleName	A String. Middles name or initial.
name	A String. Full name flatten (first, middle, and last names) - this is the name that is expected to be presented in reference data types such as PartyRef, RelatedParty, etc. that refer to Individual.
nationality	A String. Nationality.
otherName	An OtherNameIndividual. List of other names by which this individual is known.
partyCharacteristic	A Characteristic. List of additional characteristics that a Party can take on.
placeOfBirth	A String. Reference to the place where the individual was born.
preferredGivenName	A String. Contains the chosen name by which the individual prefers to be addressed. Note: This name may be a name other than a given name, such as a nickname.
relatedParty	A RelatedPartyOrPartyRole. List of parties and/or party roles related to this party.
skill	A Skill. List of skills exhibited by the individual.
status	An IndividualStateType. Valid values for the lifecycle state of the individual.

taxExemptionCertificate	A TaxExemptionCertificate. List of tax exemptions granted to the party. For example, a war veteran might have partial exemption from state tax and a full exemption from federal tax.
title	A String. Useful for titles (aristocratic, social,...) Pr, Dr, Sir, ...
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

IndividualIdentification sub-resource fields

attachment	An AttachmentRefOrValue. The polymorphic attributes @type, @schemaLocation & @referredType are related to the Attachment entity and not the AttachmentRefOrValue class itself.
identificationId	A String. Identifier.
identificationType	A String. Identification type (passport, national identity card, drivers license, social security number, birth certificate).
issuingAuthority	A String. Authority which has issued the identifier, such as: social security, town hall.
issuingDate	A DateTime. Date at which the identifier was issued.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

IntegerArrayCharacteristic sub-resource fields

characteristicRelationship	A CharacteristicRelationship.
id	A String. Unique identifier of the characteristic.
name	A String. Name of the characteristic.
value	An Integer.
valueType	A String. Data type of the value of the characteristic.
@baseType	A String. When sub-classing, this defines the super-class.

@schemaLocation	A String. 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.

IntegerCharacteristic sub-resource fields

characteristicRelationship	A CharacteristicRelationship.
id	A String. Unique identifier of the characteristic.
name	A String. Name of the characteristic.
value	An Integer. Value of the characteristic.
valueType	A String. Data type of the value of the characteristic.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

Intent sub-resource fields

attachment	An AttachmentRefOrValue. Attachments that may be of relevance to this intent, such as picture, document, media.
characteristic	A Characteristic.
context	A String. A string used to give a context to the intent.
creationDate	A DateTime. Date and time of the creation of this REST resource.
description	A String. The description of the intent.
expression	An Expression.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
intentRelationship	An EntityRelationship. A list of intents related to this intent.
intentSpecification	An EntityRef.
isBundle	A Boolean. IsBundle determines whether an intent represents a single intent (false), or a bundle of intents(true).
lastUpdate	A DateTime. Date and time of the last update of this REST resource.
lifecycleStatus	A String. Used to indicate the current lifecycle status of this intent.
name	A String. The name of the intent.

priority	A String. Can be used by intent owner to prioritize intents in an intent management system.
relatedParty	A RelatedPartyRefOrPartyRoleRef.
statusChangeDate	A DateTime. A date time(DateTime). The date that the entity status changed to the current one.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
version	A String. A field that identifies the specific version of an instance of an intent.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

IntentRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

ItemRef sub-resource fields

entityHref	A String. Hypertext Reference of the parent element.
entityId	A String. Unique identifier of the parent element.
itemId	A String. Unique identifier of the considered item.
name	A String. Name of the related entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.

@schemaLocation	A String. 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.

LanguageAbility sub-resource fields

isFavouriteLanguage	A Boolean. A “true” value specifies whether the language is considered by the individual as his favourite one.
languageCode	A String. Language code (RFC 5646).
languageName	A String. Language name.
listeningProficiency	A String. Listening proficiency evaluated for this language.
readingProficiency	A String. Reading proficiency evaluated for this language.
speakingProficiency	A String. Speaking proficiency evaluated for this language.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
writingProficiency	A String. Writing proficiency evaluated for this language.

NumberArrayCharacteristic sub-resource fields

characteristicRelationship	A CharacteristicRelationship.
id	A String. Unique identifier of the characteristic.
name	A String. Name of the characteristic.
value	A Number.
valueType	A String. Data type of the value of the characteristic.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

NumberCharacteristic sub-resource fields

characteristicRelationship	A CharacteristicRelationship.
id	A String. Unique identifier of the characteristic.
name	A String. Name of the characteristic.
value	A Number. Value of the characteristic.

valueType	A String. Data type of the value of the characteristic.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

ObjectArrayCharacteristic sub-resource fields

characteristicRelationship	A CharacteristicRelationship.
id	A String. Unique identifier of the characteristic.
name	A String. Name of the characteristic.
value	An object.
valueType	A String. Data type of the value of the characteristic.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

ObjectCharacteristic sub-resource fields

characteristicRelationship	A CharacteristicRelationship.
id	A String. Unique identifier of the characteristic.
name	A String. Name of the characteristic.
value	An object. Value of the characteristic.
valueType	A String. Data type of the value of the characteristic.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

Organization sub-resource fields

contactMedium	A ContactMedium. List of means for contacting the party, e.g. mobile phone, email address.
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creditRating	A PartyCreditProfile. List of credit profiles and scores for the party, typically received from an external credit broker.
existsDuring	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
externalReference	An ExternalIdentifier. List of identifiers of the Party in an external system, for example when party information is imported from a commerce system.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
isHeadOffice	A Boolean. If value is true, the organization is the head office.
isLegalEntity	A Boolean. If value is true, the organization is a legal entity known by a national referential.
name	A String. Organization name (department name for example).
nameType	A String. Type of the name : Co, Inc, Ltd, etc.
organizationChildRelationship	An OrganizationChildRelationship. List of organizations that are contained within this organization. For example if this organization is the Legal Department, the child organizations might include Claims, Courts, Contracts.
organizationIdentification	An OrganizationIdentification. List of official identifiers given to the organization, for example company number in the registry of companies.
organizationParentRelationship	An OrganizationParentRelationship.
organizationType	A String. Type of Organization (company, department...).
otherName	An OtherNameOrganization. List of additional names by which the organization is known.
partyCharacteristic	A Characteristic. List of additional characteristics that a Party can take on.
relatedParty	A RelatedPartyOrPartyRole. List of parties and/or party roles related to this party.
status	An OrganizationStateType. Valid values for the lifecycle state of the organization.
taxExemptionCertificate	A TaxExemptionCertificate. List of tax exemptions granted to the party. For example, a war veteran might have partial exemption from state tax and a full exemption from federal tax.
tradingName	A String. Name that the organization (unit) trades under.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.
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OrganizationChildRelationship sub-resource fields

organization	An OrganizationRef.
relationshipType	A String. Type of the relationship. Could be juridical, hierarchical, geographical, functional for example.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

OrganizationIdentification sub-resource fields

attachment	An AttachmentRefOrValue. The polymorphic attributes @type, @schemaLocation & @referredType are related to the Attachment entity and not the AttachmentRefOrValue class itself.
identificationId	A String. Identifier.
identificationType	A String. Type of identification information used to identify the company in a country or internationally.
issuingAuthority	A String. Authority which has issued the identifier (chamber of commerce...).
issuingDate	A DateTime. Date at which the identifier was issued.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

OrganizationParentRelationship sub-resource fields

organization	An OrganizationRef.
relationshipType	A String. Type of the relationship. Could be juridical, hierarchical, geographical, functional for example.
@baseType	A String. When sub-classing, this defines the super-class.

@schemaLocation	A String. 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.

OrganizationRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

OtherNameIndividual sub-resource fields

aristocraticTitle	A String. E.g. Baron, Graf, Earl, etc.
familyName	A String. Contains the non-chosen or inherited name. Also known as last name in the Western context.
familyNamePrefix	A String. Family name prefix.
formattedName	A String. . A fully formatted name in one string with all of its pieces in their proper place and all of the necessary punctuation. Useful for specific contexts (Chinese, Japanese, Korean, etc.).
fullName	A String. Full name flatten (first, middle, and last names).
generation	A String. E.g. Sr, Jr, etc.
givenName	A String. First name.
legalName	A String. Legal name or birth name (name one has for official purposes).
middleName	A String. Middle name or initial.
preferredGivenName	A String. Contains the chosen name by which the person prefers to be addressed. Note: This name may be a name other than a given name, such as a nickname.
title	A String. Use for titles (aristocratic, social, ...): Pr, Dr, Sir,....

validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
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OtherNameOrganization sub-resource fields

name	A String. Organization name (department name for example).
nameType	A String. Co. , Inc. , Ltd. , Pty Ltd. , Plc; , Gmbh.
tradingName	A String. The name that the organization trades under.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

Party sub-resource fields

contactMedium	A ContactMedium. List of means for contacting the party, e.g. mobile phone, email address.
creditRating	A PartyCreditProfile. List of credit profiles and scores for the party, typically received from an external credit broker.
externalReference	An ExternalIdentifier. List of identifiers of the Party in an external system, for example when party information is imported from a commerce system.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
partyCharacteristic	A Characteristic. List of additional characteristics that a Party can take on.
relatedParty	A RelatedPartyOrPartyRole. List of parties and/or party roles related to this party.
taxExemptionCertificate	A TaxExemptionCertificate. List of tax exemptions granted to the party. For example, a war veteran might have partial exemption from state tax and a full exemption from federal tax.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

PartyCreditProfile sub-resource fields

creditAgencyName	A String. Name of the credit agency giving the score.
creditAgencyType	A String. Type of the credit agency giving the score.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
ratingReference	A String. Reference corresponding to the credit rating.
ratingScore	An Integer32. A measure of a party's creditworthiness calculated on the basis of a combination of factors such as their income and credit history.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

PartyRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

PartyRole sub-resource fields

account	An AccountRef. Account reference. A account may be a party account or a financial account.
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agreement	An AgreementRef. 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.
characteristic	A Characteristic. Describes the characteristic of a party role.
contactMedium	A ContactMedium.
creditProfile	A CreditProfile.
description	A String. A description of the PartyRole.
engagedParty	A PartyRef. A Party reference.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. A word, term, or phrase by which the PartyRole is known and distinguished from other PartyRoles. It's the name of the PartyRole unique entity.
partyRoleSpecification	A PartyRoleSpecificationRef. Party role specification reference. A party role specification gives additional details on the part played by a party in a given context.
paymentMethod	A PaymentMethodRef. PaymentMethod reference. A payment method defines a specific mean of payment (e.g direct debit).
relatedParty	A RelatedPartyOrPartyRole.
role	A String. Role played by the engagedParty in this context. As role is defined by partyRoleSpecification, this role attribute can be used to precise the role defined by partyRoleSpecification, or it can be used to define the role in case there is no partyRoleSpecification.
status	A String. Used to track the lifecycle status of the party role.
statusReason	A String. A string providing an explanation on the value of the status lifecycle. For instance if the status is Rejected, statusReason will provide the reason for rejection.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

PartyRoleRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
partyId	A String. The identifier of the engaged party that is linked to the PartyRole object.
partyName	A String. The name of the engaged party that is linked to the PartyRole object.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

PartyRoleSpecificationRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

PaymentMethodRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.
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Place sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

PlaceRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

PolicyRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
version	A String.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.
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Price sub-resource fields

dutyFreeAmount	A Money. A base / value business entity used to represent money.
percentage	A Float. Percentage to apply for ProdOfferPriceAlteration.
taxIncludedAmount	A Money. A base / value business entity used to represent money.
taxRate	A Float. Tax rate.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

PriceAlteration sub-resource fields

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.
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 ProductOfferingPriceRef.
recurringChargePeriod	A String. Could be month, week...
unitOfMeasure	A String. Could be minutes, GB...
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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 sub-resource fields

agreementItem	An AgreementItemRef.
billingAccount	A BillingAccountRef.
creationDate	A DateTime. Date and time when the product was created.
description	A String. Is the description of the product. It could be copied from the description of the Product Offering.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
intent	An IntentRefOrValue. Intent Ref (if Intent already exists) or Value (if Intent be created or its details be presented).
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.
name	A String. Name of the product. It could be the same as the name of the product offering.
orderDate	A DateTime. Is the date when the product was ordered.
place	A RelatedPlaceRefOrValue.
product	A ProductRefOrValue. The polymorphic attributes @type, @schemaLocation & @referredType are related to the Product entity and not the ProductRefOrValue class itself.
productCharacteristic	A Characteristic.
productOffering	A ProductOfferingRef.
productOrderItem	A RelatedOrderItem.
productPrice	A ProductPrice.
productRelationship	A ProductRelationship.
productSerialNumber	A String. Is the serial number for the product. This is typically applicable to tangible products e.g. Broadband Router.
productSpecification	A ProductSpecificationRef.
productTerm	A ProductTerm.
realizingResource	A ResourceRef. Resource reference, for when Resource is used by other entities.
realizingService	A ServiceRef. Service reference, for when Service is used by other entities.
relatedParty	A RelatedPartyOrPartyRole.
startDate	A DateTime. Is the date from which the product starts.

status	A ProductStatusType. Possible values for the status of the product.
terminationDate	A DateTime. Is the date when the product was terminated.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

ProductConfiguration sub-resource fields

bundledGroupProductOffering	A BundledGroupProductOffering.
bundledProductOfferingOption	A BundledProductOfferingOption.
configurationAction	A ConfigurationAction. A list of allowed actions or a list of selected actions.
configurationCharacteristic	A ConfigurationCharacteristic. List of characteristics of the product configuration. Each may correspond 1-1 to product/productSpecification characteristics.
configurationPrice	A ConfigurationPrice. List of prices of the product configuration. Prices are computed based on product configuration, selected characteristic values, selected bundled offerings, terms etc.
configurationTerm	A ConfigurationTerm. A list of allowed terms or a list of selected terms.
id	A String. Either an index or a unique identifier for a ProductConfiguration.
isSelectable	A Boolean. A flag indicating whether the Product Configuration (associated with product/productOffering) can be selected - configured by the client.
isSelected	A Boolean. A flag indicating whether the Product Configuration is selected by API client.
isVisible	A Boolean. A flag indicating whether the Product Configuration is visible by API client and presented to the end-user.
policy	A PolicyRef. Relevant policies used to compute the product configuration.
product	A ProductRefOrValue. The polymorphic attributes @type, @schemaLocation & @referredType are related to the Product entity and not the ProductRefOrValue class itself.
productConfiguration	A ProductConfiguration. List of the child product configurations. The list may include product configurations computed based on bundled product specifications.
productOffering	A ProductOfferingRef.

productSpecification	A ProductSpecificationRef.
quantity	A Number. Quantity of identical Product Configuration chosen by API client.
version	A String. Used only in the case of id being a unique identifier.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

ProductConfigurationItemRelationship sub-resource fields

id	A String. Id of the related ProductConfiguration item (must be in the same CheckProductConfiguration or QueryProductConfiguration).
relationshipType	A String. Relationship type as relies on, bundles, etc...
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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 sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
version	A String. Version of the product offering price.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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 sub-resource fields

href	A String. Hyperlink reference.
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id	A String. Unique identifier.
name	A String. Name of the referred entity.
version	A String. Version of the product offering.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

ProductPrice sub-resource fields

description	A String. Description of the Product price.
name	A String. Name of the Product price.
price	A Price.
priceAlteration	A PriceAlteration.
priceType	A String. Indicate if the price is for recurrent or no-recurrent charge.
productOfferingPrice	A ProductOfferingPriceRef.
recurringChargePeriod	A String. Used for recurring charge to indicate period (month, week, etc..).
unitOfMeasure	A String. Unit of Measure if price depending on it (Gb, SMS volume, etc..).
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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 sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.

@schemaLocation	A String. 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.

ProductRelationship sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
relationshipType	A String. Relationship type as relies on, bundles, etc...
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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 sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
targetProductSchema	A TargetProductSchema. 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.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

ProductTerm sub-resource fields

description	A String. Description of the productTerm.
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duration	A Duration. A time interval in a given unit of time.
name	A String. Name of the productTerm.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

RelatedOrderItem sub-resource fields

orderHref	A String. Reference of the related entity.
orderId	A String. Unique identifier of a related Order.
orderItemAction	An ItemActionType. Action to be performed on the entity managed by the item.
orderItemId	A String. Id of an item of a product order.
role	A String. Role played by the Order.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

RelatedPartyOrPartyRole sub-resource fields

partyOrPartyRole	A PartyOrPartyRole.
role	A String. Role played by the related party or party role in the context of the specific entity it is linked to. Such as 'initiator', 'customer', 'salesAgent', 'user'.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

RelatedPartyRefOrPartyRoleRef sub-resource fields

partyOrPartyRole	A PartyRefOrPartyRoleRef.
role	A String. Role played by the related party or party role in the context of the specific entity it is linked to. Such as 'initiator', 'customer', 'salesAgent', 'user'.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

RelatedPlaceRefOrValue sub-resource fields

place	A PlaceRefOrValue. The polymorphic attributes @type, @schemaLocation & @referredType are related to the Place entity and not the PlaceRefOrValue class itself.
role	A String.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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 sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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 sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.

name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

Skill sub-resource fields

comment	A String. A free text comment linked to the evaluation done.
evaluatedLevel	A String. Level of expertise in a skill evaluated for an individual.
skillCode	A String. Code of the skill.
skillName	A String. Name of the skill, such as Java language.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.

StandardIdentifier sub-resource fields

format	A String. Standard/Regulatory definition identifier. e.g., ISO 3166-1.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
value	A String. The value of the resource in the corresponding standard.e.g., a country code value.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

StateReason sub-resource fields

code	A String. State reason code.
label	A String. State reason label.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.
-------	--

StringArrayCharacteristic sub-resource fields

characteristicRelationship	A CharacteristicRelationship.
id	A String. Unique identifier of the characteristic.
name	A String. Name of the characteristic.
value	A String.
valueType	A String. Data type of the value of the characteristic.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

StringCharacteristic sub-resource fields

characteristicRelationship	A CharacteristicRelationship.
id	A String. Unique identifier of the characteristic.
name	A String. Name of the characteristic.
value	A String. Value of the characteristic.
valueType	A String. Data type of the value of the characteristic.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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 sub-resource fields

@schemaLocation	A Uri. This field provides a link to the schema describing the target product.
@type	A String. Class type of the target product.

TaxDefinition sub-resource fields

id	A String. Unique identifier of the tax.
jurisdictionLevel	A String. Level of the jurisdiction that levies the tax.

jurisdictionName	A String. Name of the jurisdiction that levies the tax.
name	A String. Tax name.
taxType	A String. Type of the tax.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

TaxExemptionCertificate sub-resource fields

attachment	An AttachmentRefOrValue. The polymorphic attributes @type, @schemaLocation & @referredType are related to the Attachment entity and not the AttachmentRefOrValue class itself.
certificateNumber	A String. Identifier of a document that shows proof of exemption from taxes for the taxing jurisdiction.
id	A String. Identifier of the tax exemption within list of the exemptions.
issuingJurisdiction	A String. Name of the jurisdiction that issued the exemption.
reason	A String. Reason for the tax exemption.
taxDefinition	A TaxDefinition. A list of taxes that are covered by the exemption, e.g. City Tax, State Tax. The definition would include the exemption (e.g. for a rate exemption 0% would be a full exemption, 5% could be a partial exemption if the actual rate was 10%).
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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(s)

We provide below a JSON representation as example of the 'CheckProductConfiguration' resource object.

```
{
  "@type": "CheckProductConfiguration",
  "href": "https://mycsp.com:8080/tmf-
```

```

api/productConfiguration/v5/CheckProductConfiguration/456",
  "id": "456",
  "state": "done",
  "channel": {
    "id": "4407",
    "href": "https://host:port/tmf-api/salesChannelManagement/v5/channel/4407",
    "name": "Assisted Channel",
    "@referredType": "SalesChannel",
    "@type": "ChannelRef"
  },
  "relatedParty": [
    {
      "role": "prospect",
      "@type": "RelatedPartyOrPartyRole",
      "partyOrPartyRole": {
        "@type": "PartyRef",
        "id": "456",
        "href": "https://host:port/partyManagement/v5/party/456",
        "name": "Ross",
        "referredType": "Individual"
      }
    }
  ],
  "contextEntity": {
    "id": "3472",
    "href": "https://host:port/quoteManagement/v5/quote/3472",
    "name": "March 2019 Order",
    "@type": "EntityRef",
    "@referredType": "Quote"
  },
  "contextCharacteristic": [
    {
      "name": "salesModel",
      "valueType": "string",
      "value": "B2C",
      "@type": "StringCharacteristic"
    }
  ],
  "checkProductConfigurationItem": [
    {
      "@type": "CheckProductConfigurationItem",
      "id": "01",
      "state": "approved",
      "contextItem": {
        "name": "Quote item 01",
        "itemId": "01",
        "entityId": "3472",
        "entityHref": "https://host:port/quoteManagement/v5/quote/3472",
        "@type": "ItemRef",
        "@referredType": "QuoteItem"
      },
      "productConfiguration": {
        "@type": "ProductConfiguration",
        "productOffering": {
          "id": "14305",
          "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
          "name": "Mobile Handset",
          "@type": "ProductOfferingRef"
        },
        "configurationAction": [
          {

```



```

        "@type": "ConfigurationAction",
        "action": "add",
        "description": "Add new product",
        "isSelected": true
    },
    ],
    "configurationTerm": [
        {
            "@type": "ConfigurationTerm",
            "name": "12 month contract",
            "isSelectable": true,
            "isSelected": false
        },
        {
            "@type": "ConfigurationTerm",
            "name": "24 month contract",
            "isSelectable": true,
            "isSelected": false
        }
    ],
    "configurationCharacteristic": [
        {
            "@type": "ConfigurationCharacteristic",
            "id": "77",
            "name": "Color",
            "valueType": "string",
            "minCardinality": 1,
            "maxCardinality": 1,
            "isConfigurable": true,
            "isVisible": true,
            "configurationCharacteristicValue": [
                {
                    "@type": "ConfigurationCharacteristicValue",
                    "isSelectable": true,
                    "isSelected": true,
                    "isVisible": true,
                    "characteristicValue": {
                        "name": "Color",
                        "value": "Blue",
                        "@type": "StringCharacteristic"
                    }
                },
                {
                    "@type": "ConfigurationCharacteristicValue",
                    "isSelectable": true,
                    "isSelected": false,
                    "isVisible": true,
                    "characteristicValue": {
                        "name": "Color",
                        "value": "Red",
                        "@type": "StringCharacteristic"
                    }
                }
            ]
        }
    ],
    "configurationPrice": [
        {
            "name": "Blue phone price",
            "priceType": "oneTimeCharge",
            "productOfferingPrice": {
                "id": "1747",
                "href": "https://host:port/tmf-

```

```

api/productCatalogManagement/v5/productOfferingPrice/1747",
    "name": "One time charge for Blue Mobile Handset",
    "@referredType": "ProductOfferingPrice",
    "@type": "ProductOfferingPrice"
  },
  "price": {
    "taxRate": 22,
    "@type": "Price",
    "dutyFreeAmount": {
      "unit": "EUR",
      "value": 100,
      "@type": "Money"
    },
    "taxIncludedAmount": {
      "unit": "EUR",
      "value": 122,
      "@type": "Money"
    }
  }
},
],
"product": {
  "@type": "Product",
  "productOffering": {
    "id": "14305",
    "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
    "name": "Mobile Handset",
    "@type": "ProductOfferingRef"
  },
  "productCharacteristic": [
    {
      "name": "Color",
      "value": "Blue",
      "@type": "StringCharacteristic"
    }
  ],
  "productPrice": [
    {
      "name": "Blue phone price",
      "priceType": "oneTimeCharge",
      "productOfferingPrice": {
        "id": "1747",
        "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
        "name": "One time charge for Blue Mobile Handset",
        "@referredType": "ProductOfferingPrice",
        "@type": "ProductOfferingPrice"
      },
      "price": {
        "taxRate": 22,
        "@type": "Price",
        "dutyFreeAmount": {
          "unit": "EUR",
          "value": 100,
          "@type": "Money"
        },
        "taxIncludedAmount": {
          "unit": "EUR",
          "value": 122,
          "@type": "Money"
        }
      }
    }
  ]
},

```

```
    "@type": "ProductPrice"
  }
}
}
```

QueryProductConfiguration resource

Resource model

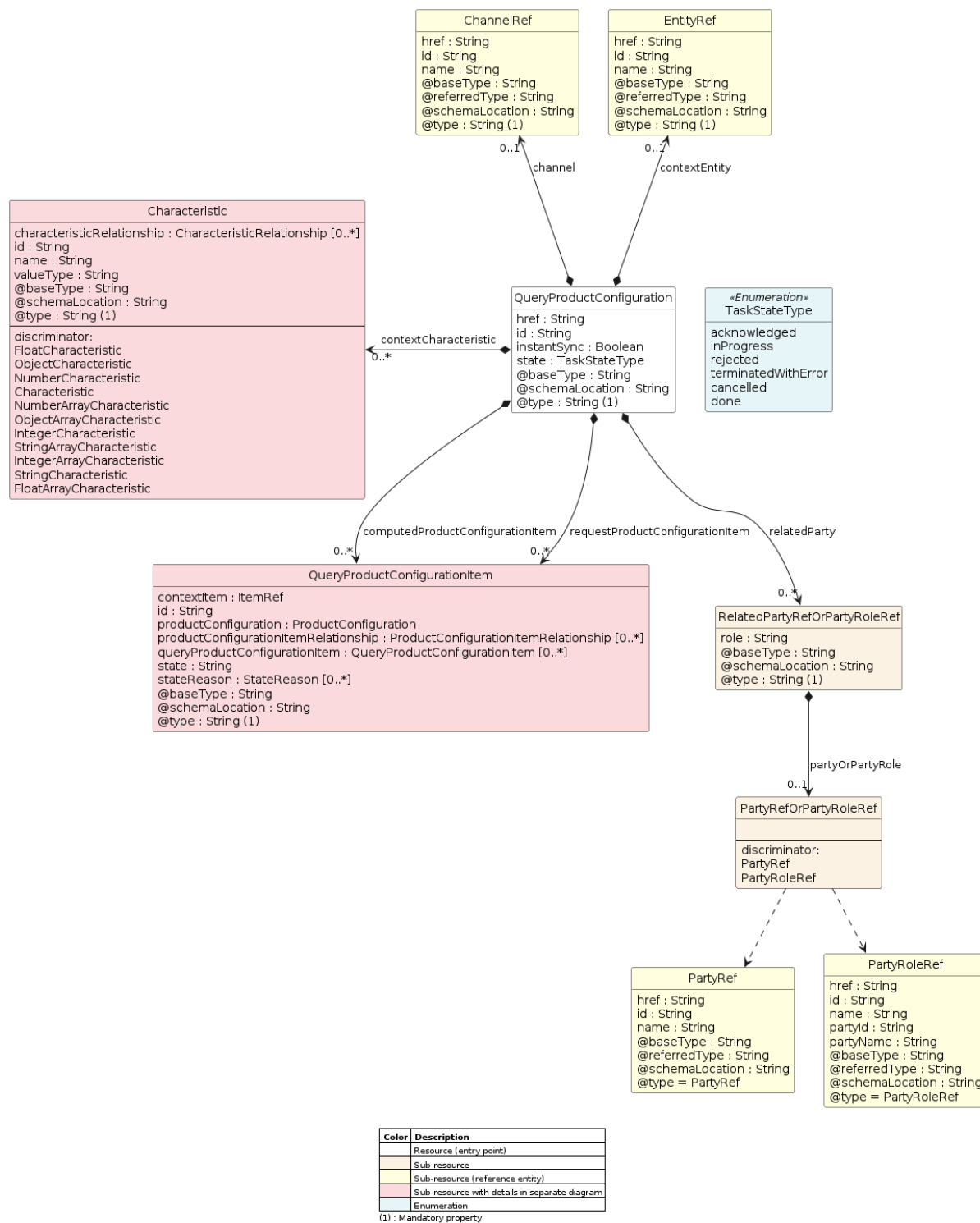


Figure 14 - QueryProductConfiguration

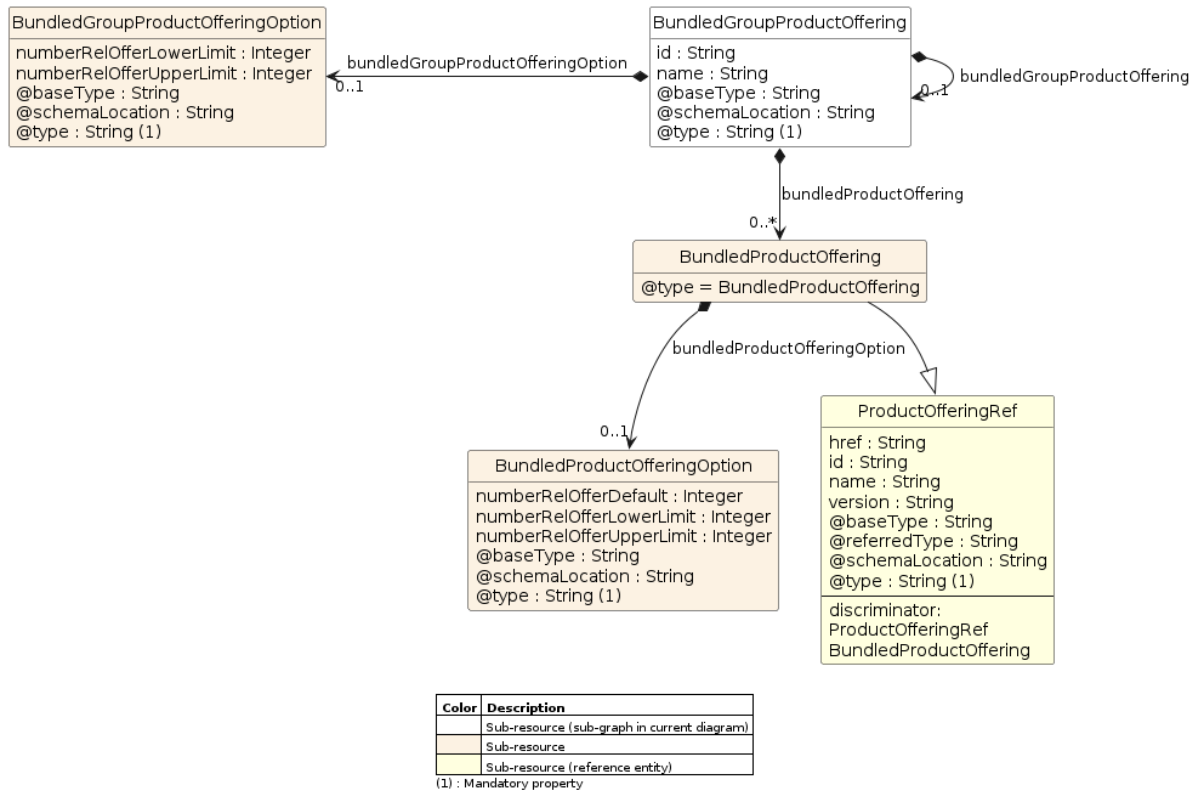


Figure 15 - BundledGroupProductOffering

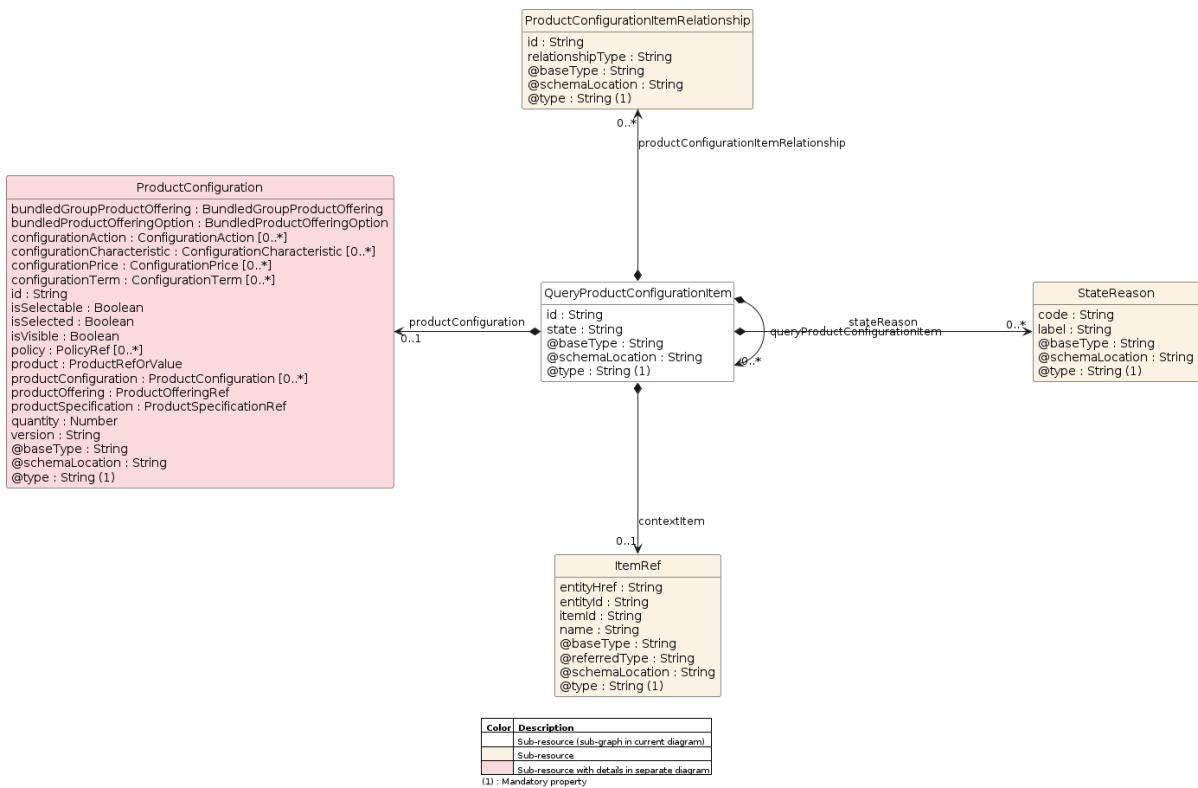


Figure 16 - QueryProductConfigurationItem

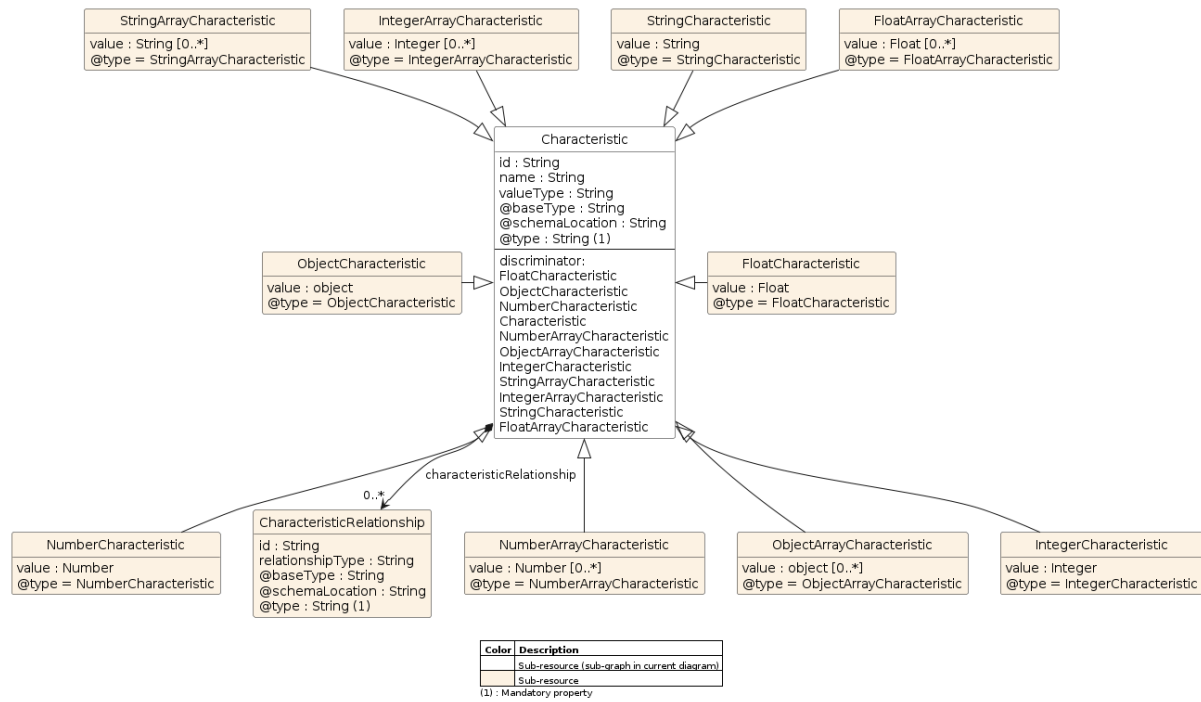


Figure 17 - Characteristic

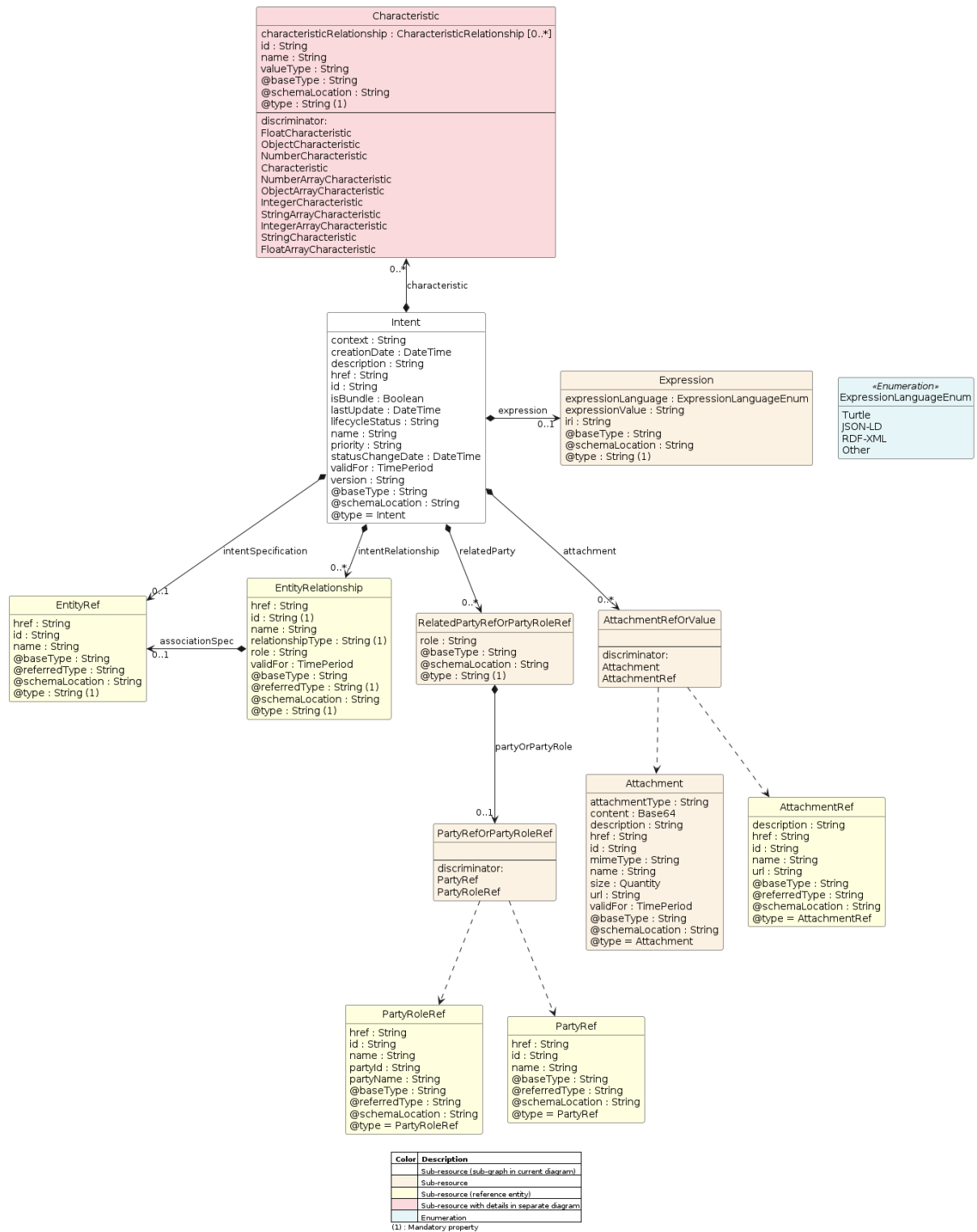


Figure 18 - Intent

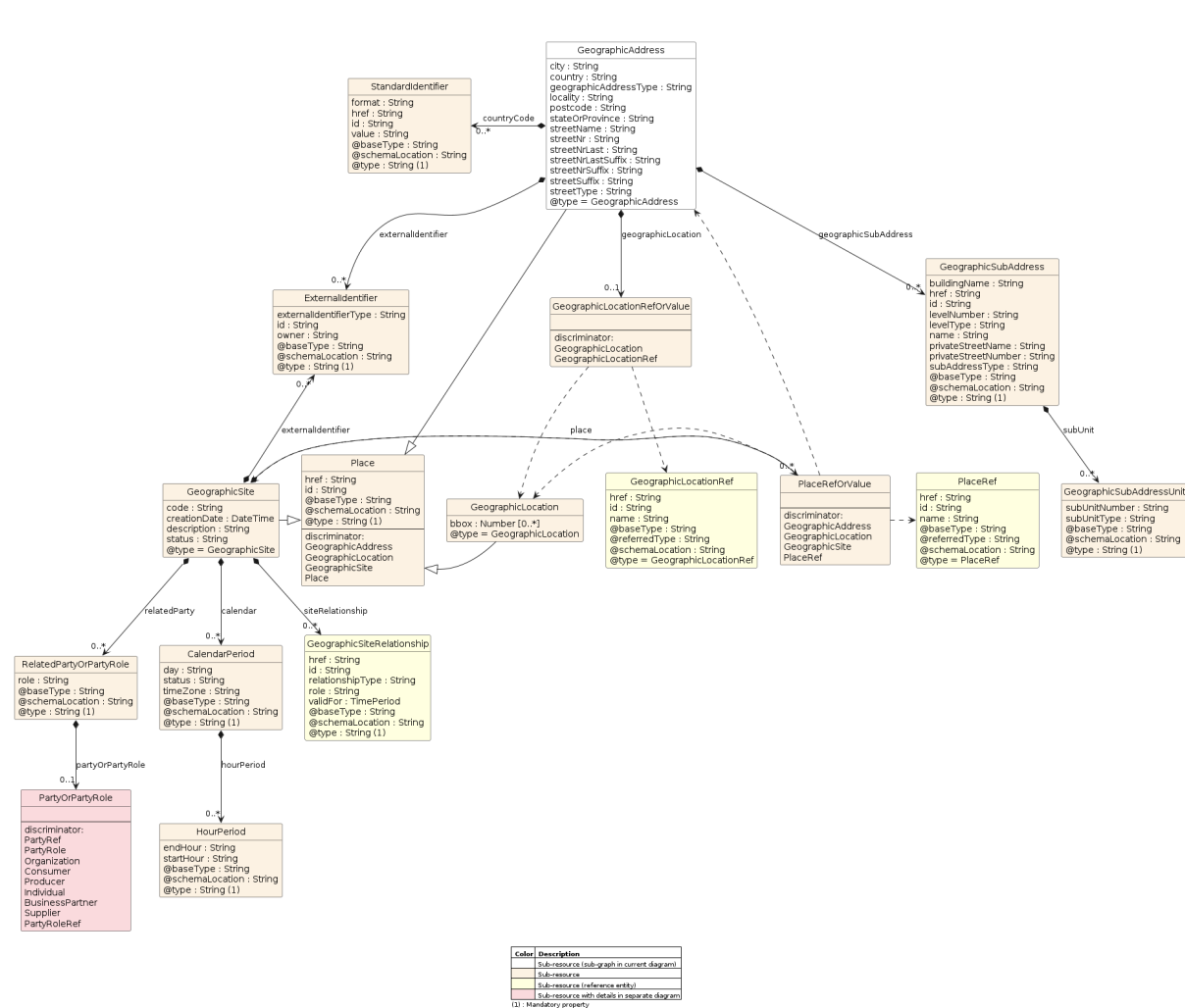


Figure 19 - GeographicAddress

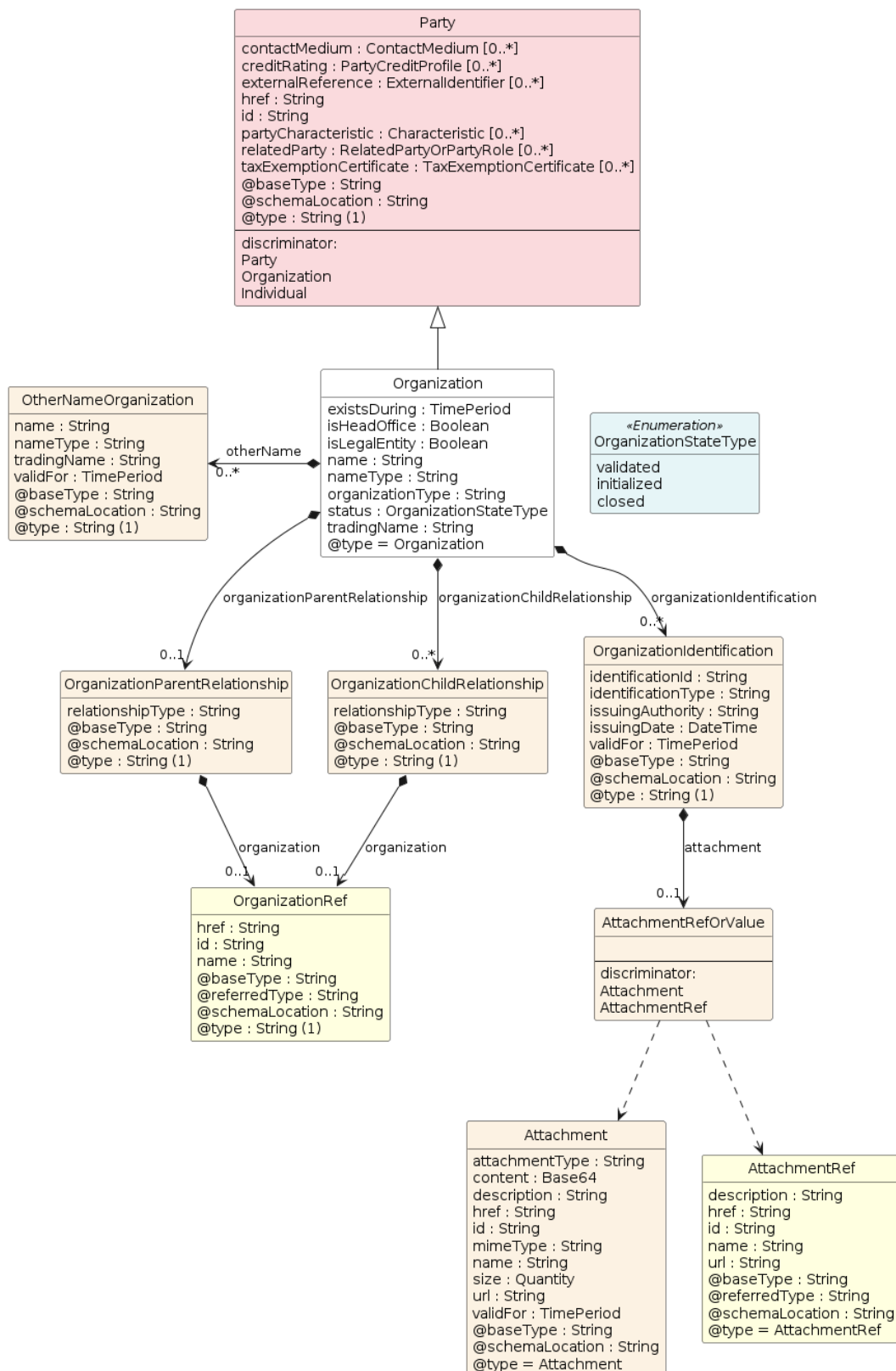


Figure 20 - Organization



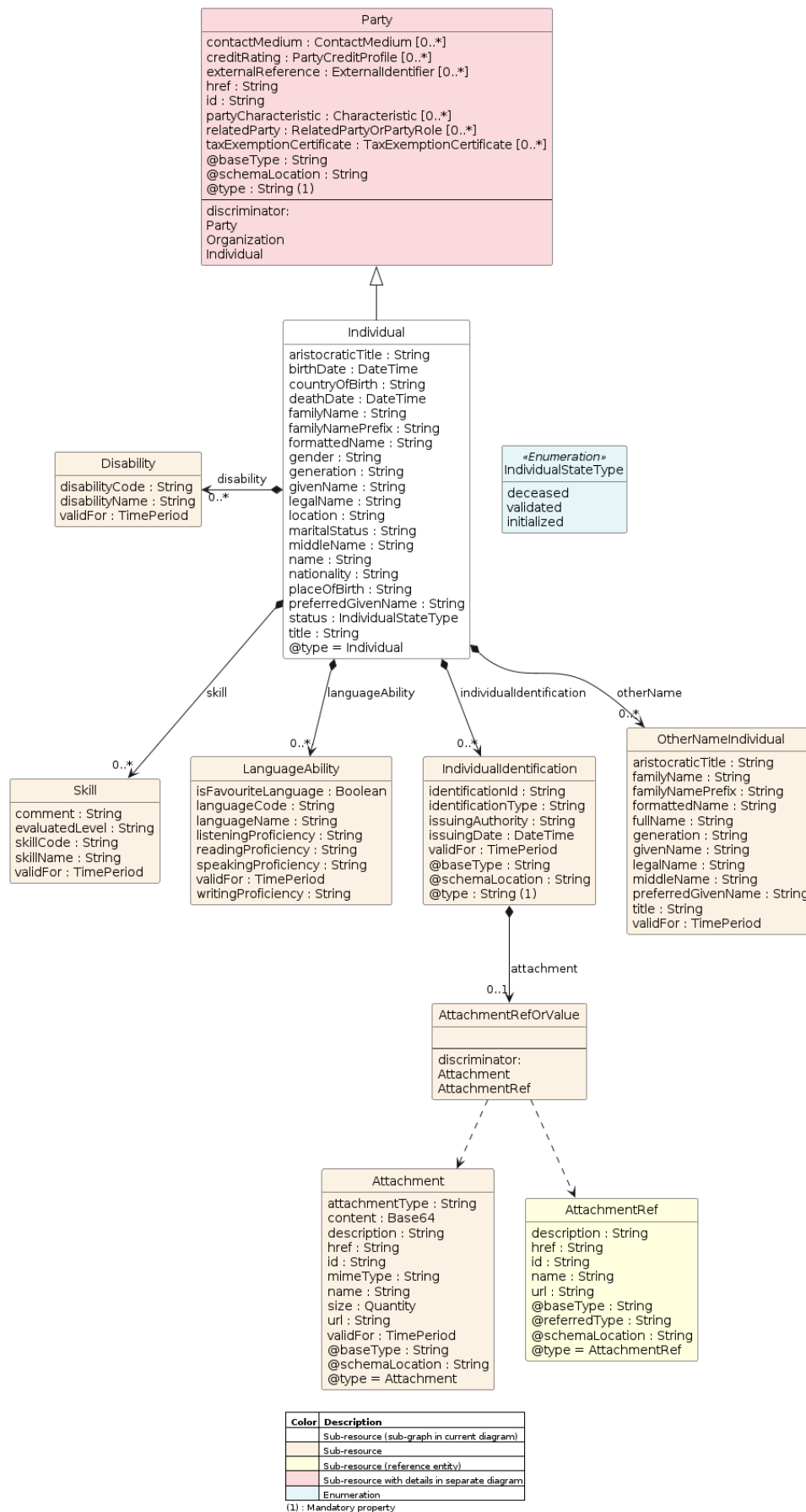


Figure 22 - Individual

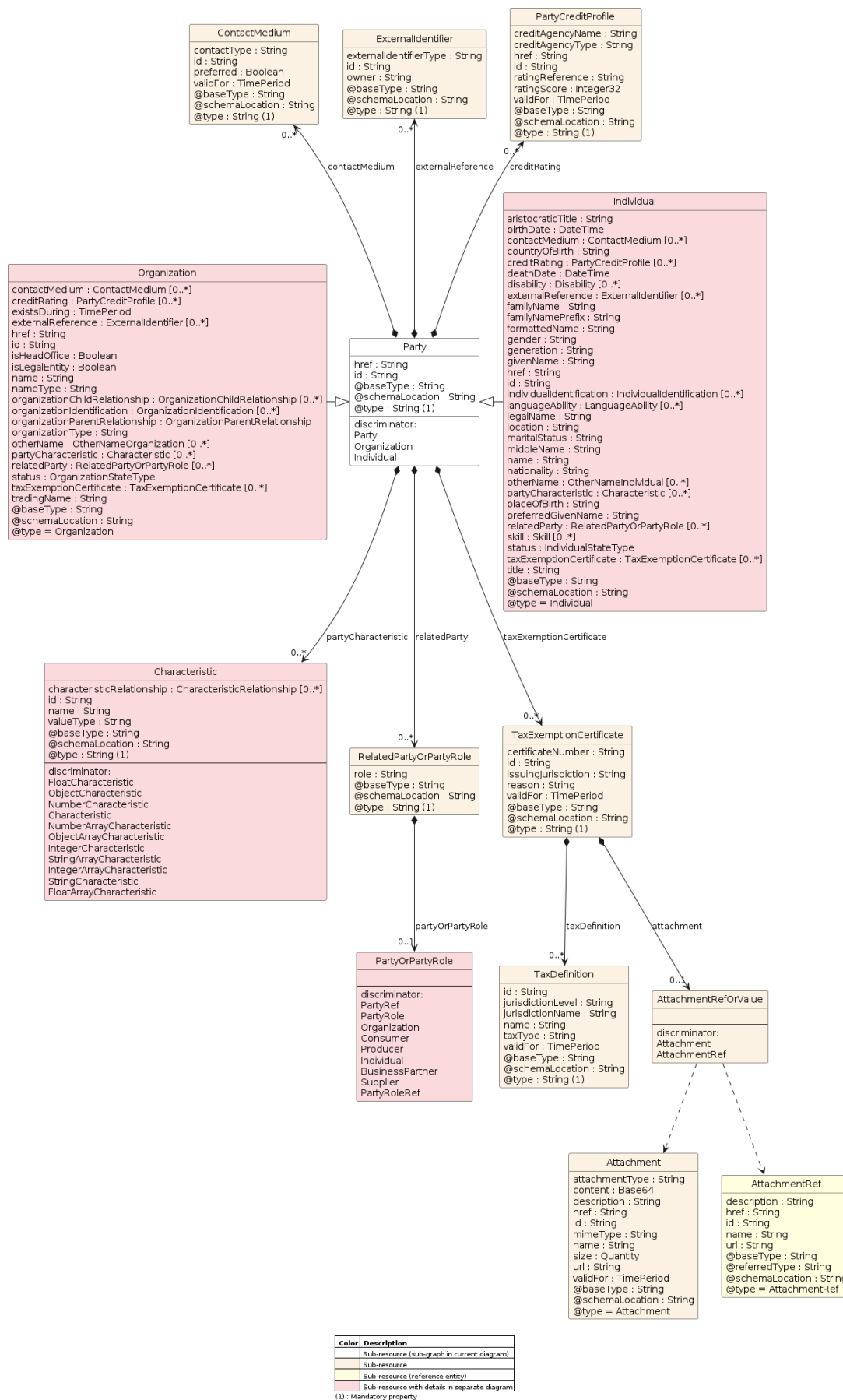


Figure 23 - Party

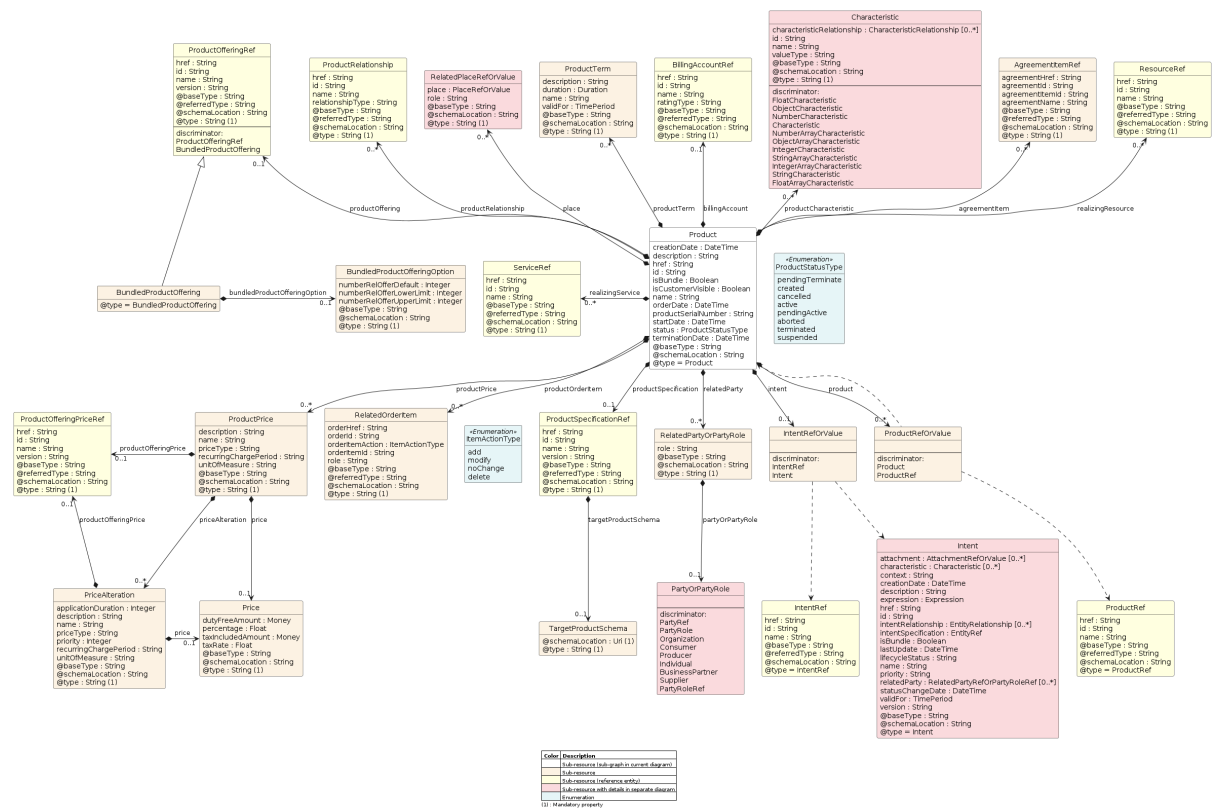


Figure 24 - Product

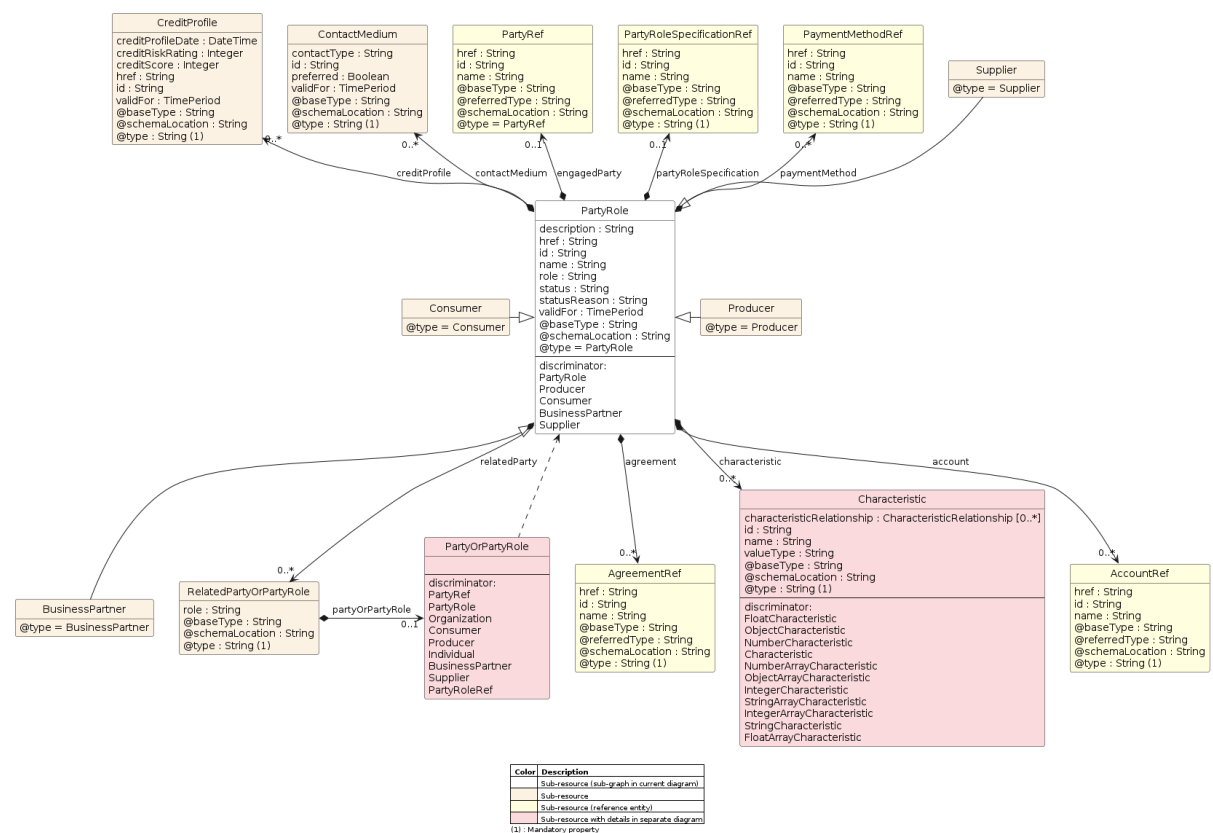


Figure 25 - PartyRole

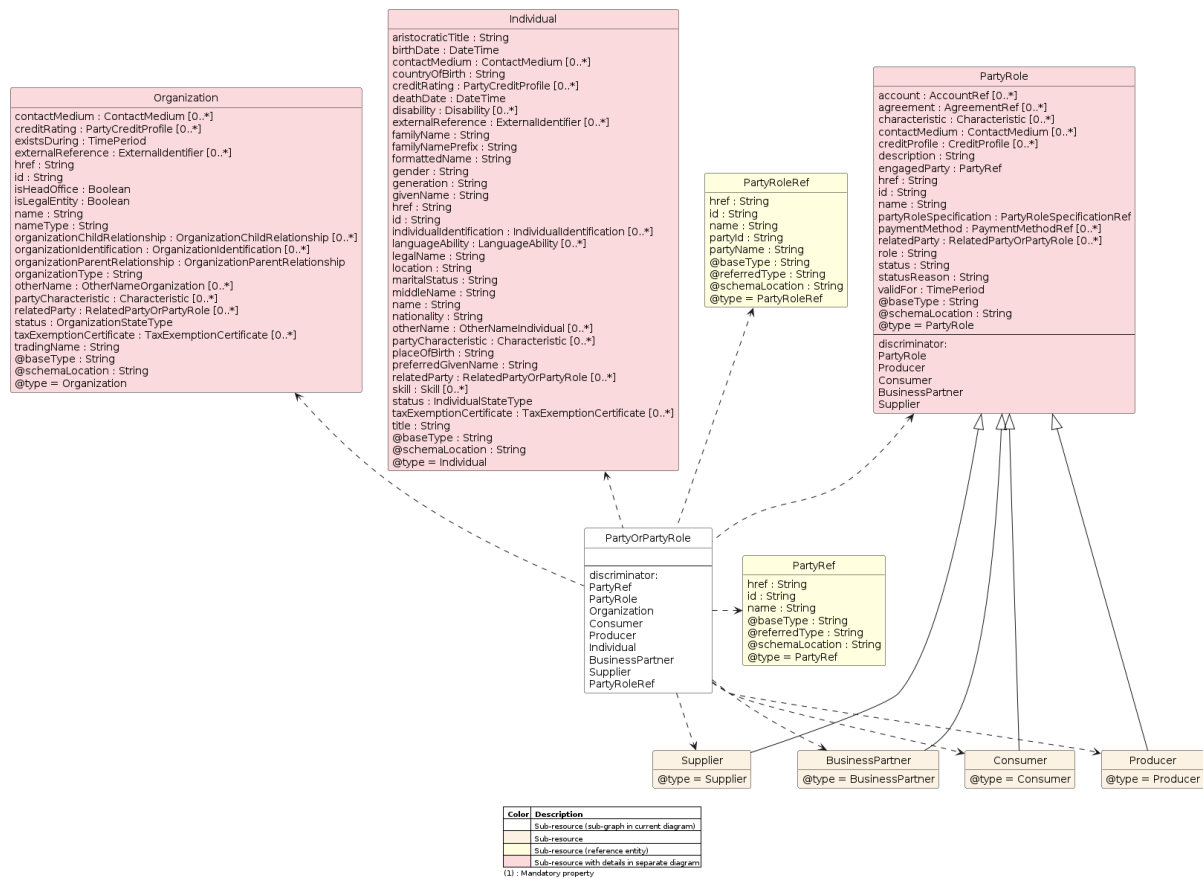


Figure 26 - PartyOrPartyRole

Field descriptions

QueryProductConfiguration fields

channel	A ChannelRef. The channel to which the resource reference to. e.g. channel for selling product offerings, channel for opening a trouble ticket etc..
computedProductConfigurationItem	A QueryProductConfigurationItem. A list of computed product configuration items (the output).
contextCharacteristic	A Characteristic. ContextCharacteristic is an array of characteristics providing additional contextual information required to compute product configurations(s) and are not included in channel and relatedParty.
contextEntity	An EntityRef.
href	A String. Hyperlink reference.
id	A String. Unique identifier.

instantSync	A Boolean. An indicator which when the value is "true" means that requester expects to get configuration result immediately in the response. If the indicator is true then the response code of 200 indicates the operation is successful otherwise a task is created with a response 201.
relatedParty	A RelatedPartyRefOrPartyRoleRef. Party playing a role for this configuration, e.g. a customer, prospect, employee.
requestProductConfigurationItem	A QueryProductConfigurationItem. A list of product configuration items provided as input. These items are used to compute computed product configuration items (the output).
state	A TaskStateType. Possible values for the state of a task.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

AccountRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

AgreementItemRef sub-resource fields

agreementHref	A String. Reference of the related entity.
agreementId	A String. Unique identifier of a related entity.
agreementItemId	A String. Id of an item of a Agreement.
agreementName	A String. Name of the related entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.

@schemaLocation	A String. 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.

AgreementRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

Attachment sub-resource fields

attachmentType	A String. A business characterization of the purpose of the attachment, for example logo, instructionManual, contractCopy.
content	A Base64. The actual contents of the attachment object, if embedded, encoded as base64.
description	A String. A narrative text describing the content of the attachment.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
contentType	A String. A technical characterization of the attachment content format using IETF Mime Types.
name	A String. The name of the attachment.
size	A Quantity. An amount in a given unit.
url	A String. Uniform Resource Locator, is a web page address (a subset of URI).
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.
-------	--

AttachmentRef sub-resource fields

description	A String. A narrative text describing the content of the attachment.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
url	A String. Link to the attachment media/content.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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 sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
ratingType	A String. Indicates whether the account follows a specific payment option such as prepaid or postpaid.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

BundledGroupProductOffering sub-resource fields

bundledGroupProductOffering	A BundledGroupProductOffering. Child groups of product offerings, to enable hierarchical sub-grouping.
bundledGroupProductOfferingOption	A BundledGroupProductOfferingOption.

bundledProductOffering	A BundledProductOffering. Child offerings, from which instances can be created as direct or hierarchically indirect children of the parent offering.
id	A String. Locally unique identifier of the group, useful in case the parent product offering or group includes multiple groups.
name	A String. The name of the group of child offerings. Required to distinguish several choice groups.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

BundledGroupProductOfferingOption sub-resource fields

numberRelOfferLowerLimit	An Integer. The minimum total number of instances of the child offerings directly of hierarchically in the group that should be instantiated.
numberRelOfferUpperLimit	An Integer. The maximum total number of instances of the child offerings directly of hierarchically in the group that should be instantiated.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

BundledProductOffering sub-resource fields

bundledProductOfferingOption	A BundledProductOfferingOption.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
version	A String. Version of the product offering.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.
-------	--

BundledProductOfferingOption sub-resource fields

numberRelOfferDefault	An Integer. Default number of product offerings that should be procured as part of the related BundledProductOffering.
numberRelOfferLowerLimit	An Integer. Lower limit for a product offering that can be procured as part of the related BundledProductOffering.
numberRelOfferUpperLimit	An Integer. Upper limit for a product offering that can be procured as part of the related BundledProductOffering.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

CalendarPeriod sub-resource fields

day	A String. Day where the calendar status applies (e.g.: monday, mon-to-fri, weekdays, weekend, all week, ...).
hourPeriod	A HourPeriod.
status	A String. Indication of the availability of the calendar period (e.g.: available, booked, etc.).
timeZone	A String. Indication of the timezone applicable to the calendar information (e.g.: Paris, GMT+1).
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

ChannelRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.

@schemaLocation	A String. 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 sub-resource fields

characteristicRelationship	A CharacteristicRelationship.
id	A String. Unique identifier of the characteristic.
name	A String. Name of the characteristic.
valueType	A String. Data type of the value of the characteristic.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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 sub-resource fields

id	A String. Unique identifier of the characteristic.
relationshipType	A String. The type of relationship.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

ConfigurationAction sub-resource fields

action	A String. The name of the action.
description	A String. The description of the action (human-readable explanation of what the action does).
isSelected	A Boolean. A flag indicating whether the action is selected in the current product configuration.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

ConfigurationCharacteristic sub-resource fields

configurationCharacteristicRelationship	A ConfigurationCharacteristicRelationship. Relationship to other configuration characteristics, such as dependency (the value that this characteristic can take or may be limited by the value of the related characteristic).
configurationCharacteristicValue	A ConfigurationCharacteristicValue. A list of configuration characteristic values.
description	A String. A narrative that explains the ConfigurationCharacteristic.
id	A String. Unique identifier of the configuration characteristic.
isConfigurable	A Boolean. A flag indicating whether this configuration characteristic may be configured (i.e. value may be set by the end-user). In case of false value, the characteristic value may not be set by the end-user and is preset by the product configurator.
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 configuration characteristic is known and distinguished from other configuration characteristics.
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	A String. 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.

ConfigurationCharacteristicRelationship sub-resource fields

id	A String. Unique identifier of the configuration characteristic.
relationshipType	A String. The type of relationship.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.
-------	--

ConfigurationCharacteristicValue sub-resource fields

characteristicValue	A Characteristic.
isSelectable	A Boolean. A flag indicating whether this configuration characteristic value may be selected by the end-user in the context of the product configuration.
isSelected	A Boolean. A flag indicating whether this configuration characteristic value is selected in the context of the product configuration.
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.
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.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

ConfigurationPrice sub-resource fields

description	A String. Description of the product configuration price.
name	A String. Name of the product configuration price.
price	A Price.
priceAlteration	A PriceAlteration. Alteration (discount, allowance) applied to the product configuration price.
priceType	A String. Indicates if the price is for recurrent or no-recurrent charge.
productOfferingPrice	A ProductOfferingPriceRef.
recurringChargePeriod	A Quantity. An amount in a given unit.

unitOfMeasure	A String. Unit of Measure if price depending on it (Gb, SMS volume, etc..).
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

ConfigurationTerm sub-resource fields

description	A String. Description of the configuration term.
duration	A Duration. A time interval in a given unit of time.
isSelectable	A Boolean. A flag indicating whether this configuration term may be selected by the end-user in the context of the product configuration.
isSelected	A Boolean. A flag indicating whether this configuration term is selected in the context of the product configuration.
name	A String. Name of the configuration term.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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 sub-resource fields

contactType	A String. Type of the contact medium to qualify it like pro email / personal email. This is not used to define the contact medium used.
id	A String. Identifier for this contact medium.
preferred	A Boolean. If true, indicates that is the preferred contact medium.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

CreditProfile sub-resource fields

creditProfileDate	A DateTime. The date the profile was established.
creditRiskRating	An Integer. This is an integer whose value is used to rate the risk.
creditScore	An Integer. A measure of a person or organizations creditworthiness calculated on the basis of a combination of factors such as their income and credit history.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

Disability sub-resource fields

disabilityCode	A String. Code of the disability.
disabilityName	A String. Name of the disability.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.

Duration sub-resource fields

amount	An Integer. Time interval (number of seconds, minutes, hours, etc.).
units	A String. Unit of time (seconds, minutes, hours, etc.).

EntityRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.
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EntityRelationship sub-resource fields

associationSpec	An EntityRef.
href	A String.
id	A String.
name	A String.
relationshipType	A String. Type of relationship such as migration, substitution, dependency, exclusivity.
role	A String. The association role for this entity.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String.
@schemaLocation	A String. A URI to a JSON-Schema file that defines additional attributes and relationships.
@type	A String.

Expression sub-resource fields

expressionLanguage	An ExpressionLanguageEnum. Possible values for the serialized Expression language of an intent or Intent report.
expressionValue	A String. Expression value is the ontology-encoded form of the Intent such as RDF-XML, Turtle, Json-LD,...
iri	A String. Internationalized Resource Identifier of the intent Expression.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

ExternalIdentifier sub-resource fields

externalIdentifierType	A String. Type of the identification, typically would be the type of the entity within the external system.
id	A String. Identification of the entity within the external system.

owner	A String. Name of the external system that owns the entity.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

FloatArrayCharacteristic sub-resource fields

characteristicRelationship	A CharacteristicRelationship.
id	A String. Unique identifier of the characteristic.
name	A String. Name of the characteristic.
value	A Float.
valueType	A String. Data type of the value of the characteristic.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

FloatCharacteristic sub-resource fields

characteristicRelationship	A CharacteristicRelationship.
id	A String. Unique identifier of the characteristic.
name	A String. Name of the characteristic.
value	A Float. Value of the characteristic.
valueType	A String. Data type of the value of the characteristic.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

GeographicAddress sub-resource fields

city	A String. City that the address is in.
country	A String. Country that the address is in.

countryCode	A StandardIdentifier. Country codes are short alphabetic or numeric geographical codes (geocodes) developed to represent countries and dependent areas, for use in data processing and communications. Several different systems have been developed to do this. The term country code frequently refers to ISO 3166-1 alpha-2 or international dialing codes, the E.164 country calling codes.
externalIdentifier	An ExternalIdentifier.
geographicAddressType	A String. Classification of the address, e.g., residential, industrial.
geographicLocation	A GeographicLocationRefOrValue. The polymorphic attributes @type, @schemaLocation & @referredType are related to the GeographicLocation entity and not the GeographicLocationRefOrValue class itself.
geographicSubAddress	A GeographicSubAddress.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
locality	A String. An area of defined or undefined boundaries within a local authority or other legislatively defined area, usually rural or semi rural in nature. [ANZLIC-STREET], or a suburb, a bounded locality within a city, town or shire principally of urban character [ANZLICSTREET].
postcode	A String. Descriptor for a postal delivery area, used to speed and simplify the delivery of mail (also know as zipcode).
stateOrProvince	A String. The State or Province that the address is in.
streetName	A String. Name of the street or other street type.
streetNr	A String. Number identifying a specific property on a public street. It may be combined with streetNrLast for ranged addresses.
streetNrLast	A String. Last number in a range of street numbers allocated to a property.
streetNrLastSuffix	A String. Last street number suffix for a ranged address.
streetNrSuffix	A String. The first street number suffix.
streetSuffix	A String. A modifier denoting a relative direction.
streetType	A String. Alley, avenue, boulevard, brae, crescent, drive, highway, lane, terrace, parade, place, tarn, way, wharf.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

GeographicLocation sub-resource fields

bbox	A Number. A bounding box array that contains the geometry. The axes order follows the axes order of the geometry.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

GeographicLocationRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

GeographicSite sub-resource fields

calendar	A CalendarPeriod.
code	A String. A code that may be used for some addressing schemes eg: [ANSI T1.253-1999].
creationDate	A DateTime. Date and time when the GeographicSite was created.
description	A String. Text describing additional information regarding the site.
externalIdentifier	An ExternalIdentifier.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
place	A PlaceRefOrValue. The polymorphic attributes @type, @schemaLocation & @referredType are related to the Place entity and not the PlaceRefOrValue class itself.
relatedParty	A RelatedPartyOrPartyRole.

siteRelationship	A GeographicSiteRelationship.
status	A String. The condition of the GeographicSite, such as planned, underConstruction, cancelled, active, inactive, former.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

GeographicSiteRelationship sub-resource fields

href	A String. Reference of the related geographic site.
id	A String. Unique identifier of the related site entity within the server.
relationshipType	A String. Type of relationship.
role	A String. Role of the related site in the relationship.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

GeographicSubAddress sub-resource fields

buildingName	A String. Allows for buildings that have well-known names.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
levelNumber	A String. Used where a level type may be repeated e.g. BASEMENT 1, BASEMENT 2.
levelType	A String. Describes level types within a building.
name	A String. Name of the subAddress to identify it with a meaningful identification.
privateStreetName	A String. Private streets internal to a property (e.g. a university) may have internal names that are not recorded by the land title office.
privateStreetNumber	A String. Private streets numbers internal to a private street.
subAddressType	A String. Type of subAddress : it can be a subunit or a private street.

subUnit	A GeographicSubAddressUnit. Representation of a SubUnit. It is used for describing subunit within a subAddress e.g. BERTH, FLAT, PIER, SUITE, SHOP, TOWER, UNIT, WHARF.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

GeographicSubAddressUnit sub-resource fields

subUnitNumber	A String. The discriminator used for the subunit, often just a simple number but may also be a range.
subUnitType	A String. The type of subunit e.g.BERTH, FLAT, PIER, SUITE, SHOP, TOWER, UNIT, WHARF, RACK.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

HourPeriod sub-resource fields

endHour	A String. The time when the status ends applying.
startHour	A String. The time when the status starts applying.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

Individual sub-resource fields

aristocraticTitle	A String. E.g. Baron, Graf, Earl.
birthDate	A DateTime. Birth date.
contactMedium	A ContactMedium. List of means for contacting the party, e.g. mobile phone, email address.
countryOfBirth	A String. Country where the individual was born.
creditRating	A PartyCreditProfile. List of credit profiles and scores for the party, typically received from an external credit broker.

deathDate	A DateTime. Date of death.
disability	A Disability. List of disabilities suffered by the individual.
externalReference	An ExternalIdentifier. List of identifiers of the Party in an external system, for example when party information is imported from a commerce system.
familyName	A String. Contains the non-chosen or inherited name. Also known as last name in the Western context.
familyNamePrefix	A String. Family name prefix.
formattedName	A String. A fully formatted name in one string with all of its pieces in their proper place and all of the necessary punctuation. Useful for specific contexts (Chinese, Japanese, Korean).
gender	A String. Gender.
generation	A String. E.g.. Sr, Jr, III (the third).
givenName	A String. First name of the individual.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
individualIdentification	An IndividualIdentification. List of official identifications issued to the individual, such as passport, driving licence, social security number.
languageAbility	A LanguageAbility. List of national languages known by the individual.
legalName	A String. Legal name or birth name (name one has for official purposes).
location	A String. Temporary current location of the individual (may be used if the individual has approved its sharing).
maritalStatus	A String. Marital status (married, divorced, widow ...).
middleName	A String. Middles name or initial.
name	A String. Full name flatten (first, middle, and last names) - this is the name that is expected to be presented in reference data types such as PartyRef, RelatedParty, etc. that refer to Individual.
nationality	A String. Nationality.
otherName	An OtherNameIndividual. List of other names by which this individual is known.
partyCharacteristic	A Characteristic. List of additional characteristics that a Party can take on.
placeOfBirth	A String. Reference to the place where the individual was born.
preferredGivenName	A String. Contains the chosen name by which the individual prefers to be addressed. Note: This name may be a name other than a given name, such as a nickname.

relatedParty	A RelatedPartyOrPartyRole. List of parties and/or party roles related to this party.
skill	A Skill. List of skills exhibited by the individual.
status	An IndividualStateType. Valid values for the lifecycle state of the individual.
taxExemptionCertificate	A TaxExemptionCertificate. List of tax exemptions granted to the party. For example, a war veteran might have partial exemption from state tax and a full exemption from federal tax.
title	A String. Useful for titles (aristocratic, social,...) Pr, Dr, Sir, ...
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

IndividualIdentification sub-resource fields

attachment	An AttachmentRefOrValue. The polymorphic attributes @type, @schemaLocation & @referredType are related to the Attachment entity and not the AttachmentRefOrValue class itself.
identificationId	A String. Identifier.
identificationType	A String. Identification type (passport, national identity card, drivers license, social security number, birth certificate).
issuingAuthority	A String. Authority which has issued the identifier, such as: social security, town hall.
issuingDate	A DateTime. Date at which the identifier was issued.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

IntegerArrayCharacteristic sub-resource fields

characteristicRelationship	A CharacteristicRelationship.
id	A String. Unique identifier of the characteristic.
name	A String. Name of the characteristic.

value	An Integer.
valueType	A String. Data type of the value of the characteristic.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

IntegerCharacteristic sub-resource fields

characteristicRelationship	A CharacteristicRelationship.
id	A String. Unique identifier of the characteristic.
name	A String. Name of the characteristic.
value	An Integer. Value of the characteristic.
valueType	A String. Data type of the value of the characteristic.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

Intent sub-resource fields

attachment	An AttachmentRefOrValue. Attachments that may be of relevance to this intent, such as picture, document, media.
characteristic	A Characteristic.
context	A String. A string used to give a context to the intent.
creationDate	A DateTime. Date and time of the creation of this REST resource.
description	A String. The description of the intent.
expression	An Expression.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
intentRelationship	An EntityRelationship. A list of intents related to this intent.
intentSpecification	An EntityRef.
isBundle	A Boolean. IsBundle determines whether an intent represents a single intent (false), or a bundle of intents(true).

lastUpdate	A DateTime. Date and time of the last update of this REST resource.
lifecycleStatus	A String. Used to indicate the current lifecycle status of this intent.
name	A String. The name of the intent.
priority	A String. Can be used by intent owner to prioritize intents in an intent management system.
relatedParty	A RelatedPartyRefOrPartyRoleRef.
statusChangeDate	A DateTime. A date time(DateTime). The date that the entity status changed to the current one.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
version	A String. A field that identifies the specific version of an instance of an intent.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

IntentRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

ItemRef sub-resource fields

entityHref	A String. Hypertext Reference of the parent element.
entityId	A String. Unique identifier of the parent element.
itemId	A String. Unique identifier of the considered item.
name	A String. Name of the related entity.

@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

LanguageAbility sub-resource fields

isFavouriteLanguage	A Boolean. A “true” value specifies whether the language is considered by the individual as his favourite one.
languageCode	A String. Language code (RFC 5646).
languageName	A String. Language name.
listeningProficiency	A String. Listening proficiency evaluated for this language.
readingProficiency	A String. Reading proficiency evaluated for this language.
speakingProficiency	A String. Speaking proficiency evaluated for this language.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
writingProficiency	A String. Writing proficiency evaluated for this language.

NumberArrayCharacteristic sub-resource fields

characteristicRelationship	A CharacteristicRelationship.
id	A String. Unique identifier of the characteristic.
name	A String. Name of the characteristic.
value	A Number.
valueType	A String. Data type of the value of the characteristic.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

NumberCharacteristic sub-resource fields

characteristicRelationship	A CharacteristicRelationship.
id	A String. Unique identifier of the characteristic.

name	A String. Name of the characteristic.
value	A Number. Value of the characteristic.
valueType	A String. Data type of the value of the characteristic.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

ObjectArrayCharacteristic sub-resource fields

characteristicRelationship	A CharacteristicRelationship.
id	A String. Unique identifier of the characteristic.
name	A String. Name of the characteristic.
value	An object.
valueType	A String. Data type of the value of the characteristic.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

ObjectCharacteristic sub-resource fields

characteristicRelationship	A CharacteristicRelationship.
id	A String. Unique identifier of the characteristic.
name	A String. Name of the characteristic.
value	An object. Value of the characteristic.
valueType	A String. Data type of the value of the characteristic.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

Organization sub-resource fields

contactMedium	A ContactMedium. List of means for contacting the party, e.g. mobile phone, email address.
creditRating	A PartyCreditProfile. List of credit profiles and scores for the party, typically received from an external credit broker.
existsDuring	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
externalReference	An ExternalIdentifier. List of identifiers of the Party in an external system, for example when party information is imported from a commerce system.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
isHeadOffice	A Boolean. If value is true, the organization is the head office.
isLegalEntity	A Boolean. If value is true, the organization is a legal entity known by a national referential.
name	A String. Organization name (department name for example).
nameType	A String. Type of the name : Co, Inc, Ltd, etc.
organizationChildRelationship	An OrganizationChildRelationship. List of organizations that are contained within this organization. For example if this organization is the Legal Department, the child organizations might include Claims, Courts, Contracts.
organizationIdentification	An OrganizationIdentification. List of official identifiers given to the organization, for example company number in the registry of companies.
organizationParentRelationship	An OrganizationParentRelationship.
organizationType	A String. Type of Organization (company, department...).
otherName	An OtherNameOrganization. List of additional names by which the organization is known.
partyCharacteristic	A Characteristic. List of additional characteristics that a Party can take on.
relatedParty	A RelatedPartyOrPartyRole. List of parties and/or party roles related to this party.
status	An OrganizationStateType. Valid values for the lifecycle state of the organization.
taxExemptionCertificate	A TaxExemptionCertificate. List of tax exemptions granted to the party. For example, a war veteran might have partial exemption from state tax and a full exemption from federal tax.
tradingName	A String. Name that the organization (unit) trades under.
@baseType	A String. When sub-classing, this defines the super-class.

@schemaLocation	A String. 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.

OrganizationChildRelationship sub-resource fields

organization	An OrganizationRef.
relationshipType	A String. Type of the relationship. Could be juridical, hierarchical, geographical, functional for example.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

OrganizationIdentification sub-resource fields

attachment	An AttachmentRefOrValue. The polymorphic attributes @type, @schemaLocation & @referredType are related to the Attachment entity and not the AttachmentRefOrValue class itself.
identificationId	A String. Identifier.
identificationType	A String. Type of identification information used to identify the company in a country or internationally.
issuingAuthority	A String. Authority which has issued the identifier (chamber of commerce...).
issuingDate	A DateTime. Date at which the identifier was issued.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

OrganizationParentRelationship sub-resource fields

organization	An OrganizationRef.
relationshipType	A String. Type of the relationship. Could be juridical, hierarchical, geographical, functional for example.

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

OrganizationRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

OtherNameIndividual sub-resource fields

aristocraticTitle	A String. E.g. Baron, Graf, Earl, etc.
familyName	A String. Contains the non-chosen or inherited name. Also known as last name in the Western context.
familyNamePrefix	A String. Family name prefix.
formattedName	A String. . A fully formatted name in one string with all of its pieces in their proper place and all of the necessary punctuation. Useful for specific contexts (Chinese, Japanese, Korean, etc.).
fullName	A String. Full name flatten (first, middle, and last names).
generation	A String. E.g. Sr, Jr, etc.
givenName	A String. First name.
legalName	A String. Legal name or birth name (name one has for official purposes).
middleName	A String. Middle name or initial.
preferredGivenName	A String. Contains the chosen name by which the person prefers to be addressed. Note: This name may be a name other than a given name, such as a nickname.
title	A String. Use for titles (aristocratic, social, ...): Pr, Dr, Sir,....

validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
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OtherNameOrganization sub-resource fields

name	A String. Organization name (department name for example).
nameType	A String. Co. , Inc. , Ltd. , Pty Ltd. , Plc; , Gmbh.
tradingName	A String. The name that the organization trades under.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

Party sub-resource fields

contactMedium	A ContactMedium. List of means for contacting the party, e.g. mobile phone, email address.
creditRating	A PartyCreditProfile. List of credit profiles and scores for the party, typically received from an external credit broker.
externalReference	An ExternalIdentifier. List of identifiers of the Party in an external system, for example when party information is imported from a commerce system.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
partyCharacteristic	A Characteristic. List of additional characteristics that a Party can take on.
relatedParty	A RelatedPartyOrPartyRole. List of parties and/or party roles related to this party.
taxExemptionCertificate	A TaxExemptionCertificate. List of tax exemptions granted to the party. For example, a war veteran might have partial exemption from state tax and a full exemption from federal tax.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

PartyCreditProfile sub-resource fields

creditAgencyName	A String. Name of the credit agency giving the score.
creditAgencyType	A String. Type of the credit agency giving the score.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
ratingReference	A String. Reference corresponding to the credit rating.
ratingScore	An Integer32. A measure of a party's creditworthiness calculated on the basis of a combination of factors such as their income and credit history.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

PartyRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

PartyRole sub-resource fields

account	An AccountRef. Account reference. A account may be a party account or a financial account.
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agreement	An AgreementRef. 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.
characteristic	A Characteristic. Describes the characteristic of a party role.
contactMedium	A ContactMedium.
creditProfile	A CreditProfile.
description	A String. A description of the PartyRole.
engagedParty	A PartyRef. A Party reference.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. A word, term, or phrase by which the PartyRole is known and distinguished from other PartyRoles. It's the name of the PartyRole unique entity.
partyRoleSpecification	A PartyRoleSpecificationRef. Party role specification reference. A party role specification gives additional details on the part played by a party in a given context.
paymentMethod	A PaymentMethodRef. PaymentMethod reference. A payment method defines a specific mean of payment (e.g direct debit).
relatedParty	A RelatedPartyOrPartyRole.
role	A String. Role played by the engagedParty in this context. As role is defined by partyRoleSpecification, this role attribute can be used to precise the role defined by partyRoleSpecification, or it can be used to define the role in case there is no partyRoleSpecification.
status	A String. Used to track the lifecycle status of the party role.
statusReason	A String. A string providing an explanation on the value of the status lifecycle. For instance if the status is Rejected, statusReason will provide the reason for rejection.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

PartyRoleRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
partyId	A String. The identifier of the engaged party that is linked to the PartyRole object.
partyName	A String. The name of the engaged party that is linked to the PartyRole object.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

PartyRoleSpecificationRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

PaymentMethodRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.
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Place sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

PlaceRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

PolicyRef sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
version	A String.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.
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Price sub-resource fields

dutyFreeAmount	A Money. A base / value business entity used to represent money.
percentage	A Float. Percentage to apply for ProdOfferPriceAlteration.
taxIncludedAmount	A Money. A base / value business entity used to represent money.
taxRate	A Float. Tax rate.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

PriceAlteration sub-resource fields

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.
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 ProductOfferingPriceRef.
recurringChargePeriod	A String. Could be month, week...
unitOfMeasure	A String. Could be minutes, GB...
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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 sub-resource fields

agreementItem	An AgreementItemRef.
billingAccount	A BillingAccountRef.
creationDate	A DateTime. Date and time when the product was created.
description	A String. Is the description of the product. It could be copied from the description of the Product Offering.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
intent	An IntentRefOrValue. Intent Ref (if Intent already exists) or Value (if Intent be created or its details be presented).
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.
name	A String. Name of the product. It could be the same as the name of the product offering.
orderDate	A DateTime. Is the date when the product was ordered.
place	A RelatedPlaceRefOrValue.
product	A ProductRefOrValue. The polymorphic attributes @type, @schemaLocation & @referredType are related to the Product entity and not the ProductRefOrValue class itself.
productCharacteristic	A Characteristic.
productOffering	A ProductOfferingRef.
productOrderItem	A RelatedOrderItem.
productPrice	A ProductPrice.
productRelationship	A ProductRelationship.
productSerialNumber	A String. Is the serial number for the product. This is typically applicable to tangible products e.g. Broadband Router.
productSpecification	A ProductSpecificationRef.
productTerm	A ProductTerm.
realizingResource	A ResourceRef. Resource reference, for when Resource is used by other entities.
realizingService	A ServiceRef. Service reference, for when Service is used by other entities.
relatedParty	A RelatedPartyOrPartyRole.
startDate	A DateTime. Is the date from which the product starts.

status	A ProductStatusType. Possible values for the status of the product.
terminationDate	A DateTime. Is the date when the product was terminated.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

ProductConfiguration sub-resource fields

bundledGroupProductOffering	A BundledGroupProductOffering.
bundledProductOfferingOption	A BundledProductOfferingOption.
configurationAction	A ConfigurationAction. A list of allowed actions or a list of selected actions.
configurationCharacteristic	A ConfigurationCharacteristic. List of characteristics of the product configuration. Each may correspond 1-1 to product/productSpecification characteristics.
configurationPrice	A ConfigurationPrice. List of prices of the product configuration. Prices are computed based on product configuration, selected characteristic values, selected bundled offerings, terms etc.
configurationTerm	A ConfigurationTerm. A list of allowed terms or a list of selected terms.
id	A String. Either an index or a unique identifier for a ProductConfiguration.
isSelectable	A Boolean. A flag indicating whether the Product Configuration (associated with product/productOffering) can be selected - configured by the client.
isSelected	A Boolean. A flag indicating whether the Product Configuration is selected by API client.
isVisible	A Boolean. A flag indicating whether the Product Configuration is visible by API client and presented to the end-user.
policy	A PolicyRef. Relevant policies used to compute the product configuration.
product	A ProductRefOrValue. The polymorphic attributes @type, @schemaLocation & @referredType are related to the Product entity and not the ProductRefOrValue class itself.
productConfiguration	A ProductConfiguration. List of the child product configurations. The list may include product configurations computed based on bundled product specifications.
productOffering	A ProductOfferingRef.

productSpecification	A ProductSpecificationRef.
quantity	A Number. Quantity of identical Product Configuration chosen by API client.
version	A String. Used only in the case of id being a unique identifier.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

ProductConfigurationItemRelationship sub-resource fields

id	A String. Id of the related ProductConfiguration item (must be in the same CheckProductConfiguration or QueryProductConfiguration).
relationshipType	A String. Relationship type as relies on, bundles, etc...
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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 sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
version	A String. Version of the product offering price.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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 sub-resource fields

href	A String. Hyperlink reference.
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id	A String. Unique identifier.
name	A String. Name of the referred entity.
version	A String. Version of the product offering.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

ProductPrice sub-resource fields

description	A String. Description of the Product price.
name	A String. Name of the Product price.
price	A Price.
priceAlteration	A PriceAlteration.
priceType	A String. Indicate if the price is for recurrent or no-recurrent charge.
productOfferingPrice	A ProductOfferingPriceRef.
recurringChargePeriod	A String. Used for recurring charge to indicate period (month, week, etc..).
unitOfMeasure	A String. Unit of Measure if price depending on it (Gb, SMS volume, etc..).
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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 sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.

@schemaLocation	A String. 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.

ProductRelationship sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
relationshipType	A String. Relationship type as relies on, bundles, etc...
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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 sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
targetProductSchema	A TargetProductSchema. 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.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

ProductTerm sub-resource fields

description	A String. Description of the productTerm.
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duration	A Duration. A time interval in a given unit of time.
name	A String. Name of the productTerm.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

QueryProductConfigurationItem sub-resource fields

contextItem	An ItemRef.
id	A String. Identifier of the ProductConfigurationItem (generally it is a sequence number 01, 02, 03,...).
productConfiguration	A ProductConfiguration.
productConfigurationItemRelationship	A ProductConfigurationItemRelationship. ProductConfigurationItemRelationship is an array of product configuration item(s) related to the ProductConfigurationItem from the same CheckProductConfiguration. Relationship may represent a bundle, an add-on etc.
queryProductConfigurationItem	A QueryProductConfigurationItem. ProductConfigurationItem is an arraylist of product configuration items contained in the ProductConfigurationItem.
state	A String. State of the QueryProductConfiguration item (e.g.: accepted, rejected).
stateReason	A StateReason. List of human readable reasons for the current state of the check product configuration computation (e.g.: Configured product is missing a characteristic value 'Bandwidth').
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

RelatedOrderItem sub-resource fields

orderHref	A String. Reference of the related entity.
orderId	A String. Unique identifier of a related Order.

orderItemAction	An ItemActionType. Action to be performed on the entity managed by the item.
orderItemId	A String. Id of an item of a product order.
role	A String. Role played by the Order.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

RelatedPartyOrPartyRole sub-resource fields

partyOrPartyRole	A PartyOrPartyRole.
role	A String. Role played by the related party or party role in the context of the specific entity it is linked to. Such as 'initiator', 'customer', 'salesAgent', 'user'.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

RelatedPartyRefOrPartyRoleRef sub-resource fields

partyOrPartyRole	A PartyRefOrPartyRoleRef.
role	A String. Role played by the related party or party role in the context of the specific entity it is linked to. Such as 'initiator', 'customer', 'salesAgent', 'user'.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

RelatedPlaceRefOrValue sub-resource fields

place	A PlaceRefOrValue. The polymorphic attributes @type, @schemaLocation & @referredType are related to the Place entity and not the PlaceRefOrValue class itself.
role	A String.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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 sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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 sub-resource fields

href	A String. Hyperlink reference.
id	A String. Unique identifier.
name	A String. Name of the referred entity.
@baseType	A String. When sub-classing, this defines the super-class.
@referredType	A String. The actual type of the target instance when needed for disambiguation.
@schemaLocation	A String. 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.

Skill sub-resource fields

comment	A String. A free text comment linked to the evaluation done.
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evaluatedLevel	A String. Level of expertise in a skill evaluated for an individual.
skillCode	A String. Code of the skill.
skillName	A String. Name of the skill, such as Java language.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.

StandardIdentifier sub-resource fields

format	A String. Standard/Regulatory definition identifier. e.g., ISO 3166-1.
href	A String. Hyperlink reference.
id	A String. Unique identifier.
value	A String. The value of the resource in the corresponding standard.e.g., a country code value.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

StateReason sub-resource fields

code	A String. State reason code.
label	A String. State reason label.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

StringArrayCharacteristic sub-resource fields

characteristicRelationship	A CharacteristicRelationship.
id	A String. Unique identifier of the characteristic.
name	A String. Name of the characteristic.
value	A String.
valueType	A String. Data type of the value of the characteristic.
@baseType	A String. When sub-classing, this defines the super-class.

@schemaLocation	A String. 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.

StringCharacteristic sub-resource fields

characteristicRelationship	A CharacteristicRelationship.
id	A String. Unique identifier of the characteristic.
name	A String. Name of the characteristic.
value	A String. Value of the characteristic.
valueType	A String. Data type of the value of the characteristic.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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 sub-resource fields

@schemaLocation	A Uri. This field provides a link to the schema describing the target product.
@type	A String. Class type of the target product.

TaxDefinition sub-resource fields

id	A String. Unique identifier of the tax.
jurisdictionLevel	A String. Level of the jurisdiction that levies the tax.
jurisdictionName	A String. Name of the jurisdiction that levies the tax.
name	A String. Tax name.
taxType	A String. Type of the tax.
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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.

TaxExemptionCertificate sub-resource fields

attachment	An AttachmentRefOrValue. The polymorphic attributes @type, @schemaLocation & @referredType are related to the Attachment entity and not the AttachmentRefOrValue class itself.
certificateNumber	A String. Identifier of a document that shows proof of exemption from taxes for the taxing jurisdiction.
id	A String. Identifier of the tax exemption within list of the exemptions.
issuingJurisdiction	A String. Name of the jurisdiction that issued the exemption.
reason	A String. Reason for the tax exemption.
taxDefinition	A TaxDefinition. A list of taxes that are covered by the exemption, e.g. City Tax, State Tax. The definition would include the exemption (e.g. for a rate exemption 0% would be a full exemption, 5% could be a partial exemption if the actual rate was 10%).
validFor	A TimePeriod. A period of time, either as a deadline (endDateTime only) a startDateTime only, or both.
@baseType	A String. When sub-classing, this defines the super-class.
@schemaLocation	A String. 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(s)

We provide below a JSON representation as example of the 'QueryProductConfiguration' resource object.

```
{
  "@type": "QueryProductConfiguration",
  "href": "https://host:port/tmf-api/productConfiguration/v5/QueryProductConfiguration/789",
  "id": "789",
  "state": "done",
  "channel": {
    "id": "4407",
    "href": "https://host:port/tmf-api/salesChannelManagement/v5/channel/4407",
    "name": "Assisted Channel",
    "@referredType": "SalesChannel",
    "@type": "ChannelRef"
  },
  "relatedParty": [
    {
      "role": "prospect",
      "@type": "RelatedPartyOrPartyRole",
      "partyOrPartyRole": {
        "@type": "PartyRef",
        "id": "456",
        "href": "https://host:port/partyManagement/v5/party/456",

```



```

        "name": "Ross",
        "referredType": "Individual"
    }
},
"contextEntity": {
    "id": "3472",
    "href": "https://host:port/quoteManagement/v5/quote/3472",
    "name": "March 2019 Order",
    "@type": "EntityRef",
    "@referredType": "Quote"
},
"contextCharacteristic": [
    {
        "name": "salesModel",
        "valueType": "string",
        "value": "B2C",
        "@type": "StringCharacteristic"
    }
],
"requestProductConfigurationItem": [
    {
        "@type": "QueryProductConfigurationItem",
        "id": "01",
        "contextItem": {
            "name": "Quote item 01",
            "itemId": "01",
            "entityId": "3472",
            "entityHref": "https://host:port/quoteManagement/v5/quote/3472",
            "@type": "ItemRef",
            "@referredType": "QuoteItem"
        },
        "productConfiguration": {
            "@type": "ProductConfiguration",
            "productOffering": {
                "id": "14305",
                "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
                "name": "Mobile Handset",
                "@type": "ProductOfferingRef"
            }
        }
    }
],
"computedProductConfigurationItem": [
    {
        "@type": "QueryProductConfigurationItem",
        "id": "02",
        "state": "approved",
        "productConfigurationItemRelationship": [
            {
                "id": "01",
                "role": "requestItem"
            }
        ],
        "productConfiguration": [
            {
                "@type": "ProductConfiguration",
                "id": "02",
                "isSelectable": false,
                "isSelected": true,
                "isVisible": true,

```

```

    "productOffering": {
      "id": "14305",
      "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
      "name": "Mobile Handset",
      "@type": "ProductOfferingRef"
    },
    "configurationAction": [
      {
        "@type": "ConfigurationAction",
        "action": "add",
        "description": "Add new product",
        "isSelected": true
      }
    ],
    "configurationTerm": [
      {
        "@type": "ConfigurationTerm",
        "name": "12 month contract",
        "isSelectable": true,
        "isSelected": false
      },
      {
        "@type": "ConfigurationTerm",
        "name": "24 month contract",
        "isSelectable": true,
        "isSelected": false
      }
    ],
    "configurationCharacteristic": [
      {
        "@type": "ConfigurationCharacteristic",
        "id": "77",
        "name": "Color",
        "valueType": "string",
        "minCardinality": 1,
        "maxCardinality": 1,
        "isConfigurable": true,
        "isVisible": true,
        "configurationCharacteristicValue": [
          {
            "@type": "ConfigurationCharacteristicValue",
            "isSelectable": true,
            "isSelected": true,
            "isVisible": true,
            "characteristicValue": {
              "name": "Color",
              "value": "Blue",
              "@type": "StringCharacteristic"
            }
          },
          {
            "@type": "ConfigurationCharacteristicValue",
            "isSelectable": true,
            "isSelected": false,
            "isVisible": true,
            "characteristicValue": {
              "name": "Color",
              "value": "Red",
              "@type": "StringCharacteristic"
            }
          }
        ]
      }
    ]
  },
  "configurationCharacteristic": [
    {
      "@type": "ConfigurationCharacteristic",
      "id": "77",
      "name": "Color",
      "valueType": "string",
      "minCardinality": 1,
      "maxCardinality": 1,
      "isConfigurable": true,
      "isVisible": true,
      "configurationCharacteristicValue": [
        {
          "@type": "ConfigurationCharacteristicValue",
          "isSelectable": true,
          "isSelected": true,
          "isVisible": true,
          "characteristicValue": {
            "name": "Color",
            "value": "Blue",
            "@type": "StringCharacteristic"
          }
        },
        {
          "@type": "ConfigurationCharacteristicValue",
          "isSelectable": true,
          "isSelected": false,
          "isVisible": true,
          "characteristicValue": {
            "name": "Color",
            "value": "Red",
            "@type": "StringCharacteristic"
          }
        }
      ]
    }
  ]
}

```

```

"configurationPrice": [
  {
    "@type": "ConfigurationPrice",
    "name": "Blue phone price",
    "priceType": "oneTimeCharge",
    "productOfferingPrice": {
      "id": "1747",
      "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
      "name": "One time charge for Blue Mobile
Handset",
      "@referredType": "ProductOfferingPrice",
      "@type": "ProductOfferingPrice"
    },
    "price": {
      "taxRate": 22,
      "@type": "Price",
      "dutyFreeAmount": {
        "unit": "EUR",
        "value": 100,
        "@type": "Money"
      },
      "taxIncludedAmount": {
        "unit": "EUR",
        "value": 122,
        "@type": "Money"
      }
    }
  }
]
}

```

Notification Resource Models

8 notifications are defined for this API.

Notifications related to CheckProductConfiguration:

- Check Product Configuration Delete Event
- Check Product Configuration State Change Event
- Check Product Configuration Create Event
- Check Product Configuration Attribute Value Change Event

Notifications related to QueryProductConfiguration:

- Query Product Configuration State Change Event
- Query Product Configuration Attribute Value Change Event
- Query Product Configuration Create Event

- Query Product Configuration Delete Event

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).

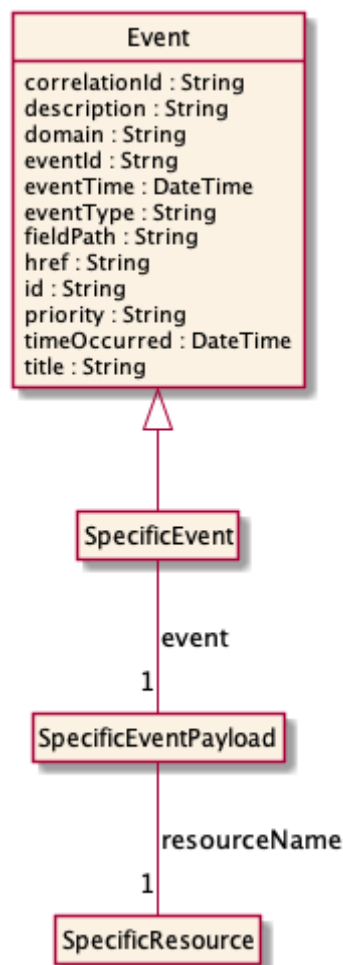


Figure 27 Notification Pattern

Check Product Configuration Delete Event

Message example for CheckProductConfigurationDeleteEvent event

Content-Type: application/json

```

{
  "@type": "CheckProductConfigurationDeleteEvent",
  "@baseType": "Event",
  "correlationId": "1ccd2737-dde9",
  "domain": "Product",
  "title": "CheckProductConfigurationDeleteEvent",
  "description": "CheckProductConfigurationDeleteEvent illustration",

```

```

    "priority": "2",
    "timeOccurred": "2022-11-24T15:02:24.942Z",
    "source": {
      "@type": "ReportingResource",
      "id": "21",
      "name": "APP-422",
      "@referredType": "LogicalResource"
    },
    "reportingSystem": {
      "@type": "ReportingResource",
      "id": "999",
      "name": "APP-28",
      "@referredType": "LogicalResource"
    },
    "eventId": "463a-a791-3572340b22c1",
    "eventTime": "2022-11-24T15:02:28.204Z",
    "eventType": "CheckProductConfigurationDeleteEvent",
    "event": {
      "checkProductConfiguration": {
        "@type": "QueryProductConfiguration",
        "href": "https://host:port/tmf-
api/productConfiguration/v5/QueryProductConfiguration/789",
        "id": "789",
        "state": "done",
        "channel": {
          "id": "4407",
          "href": "https://host:port/tmf-
api/salesChannelManagement/v5/channel/4407",
          "name": "Assisted Channel",
          "@referredType": "SalesChannel",
          "@type": "ChannelRef"
        },
        "relatedParty": [
          {
            "role": "prospect",
            "@type": "RelatedPartyOrPartyRole",
            "partyOrPartyRole": {
              "@type": "PartyRef",
              "id": "456",
              "href": "https://host:port/partyManagement/v5/party/456",
              "name": "Ross",
              "@referredType": "Individual"
            }
          }
        ],
        "contextEntity": {
          "id": "3472",
          "href": "https://host:port/quoteManagement/v5/quote/3472",
          "name": "March 2019 Order",
          "@type": "EntityRef",
          "@referredType": "Quote"
        },
        "contextCharacteristic": [
          {
            "name": "salesModel",
            "valueType": "string",
            "value": "B2C",
            "@type": "StringCharacteristic"
          }
        ],
        "requestProductConfigurationItem": [
          {
            "@type": "QueryProductConfigurationItem",

```

```

        "id": "01",
        "contextItem": {
            "name": "Quote item 01",
            "itemId": "01",
            "entityId": "3472",
            "entityHref":
"https://host:port/quoteManagement/v5/quote/3472",
            "@type": "ItemRef",
            "@referredType": "QuoteItem"
        },
        "productConfiguration": {
            "@type": "ProductConfiguration",
            "productOffering": {
                "id": "14305",
                "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
                "name": "Mobile Handset",
                "@type": "ProductOfferingRef"
            }
        }
    },
    "computedProductConfigurationItem": [
        {
            "@type": "QueryProductConfigurationItem",
            "id": "02",
            "state": "approved",
            "productConfigurationItemRelationship": [
                {
                    "@type": "ProductConfigurationItemRelationship",
                    "id": "01",
                    "role": "requestItem"
                }
            ],
            "productConfiguration": [
                {
                    "@type": "ProductConfiguration",
                    "id": "02",
                    "isSelectable": false,
                    "isSelected": true,
                    "isVisible": true,
                    "productOffering": {
                        "id": "14305",
                        "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
                        "name": "Mobile Handset",
                        "@type": "ProductOfferingRef"
                    },
                    "configurationAction": [
                        {
                            "@type": "ConfigurationAction",
                            "action": "add",
                            "description": "Add new product",
                            "isSelected": true
                        }
                    ],
                    "configurationTerm": [
                        {
                            "@type": "ConfigurationTerm",
                            "name": "12 month contract",
                            "isSelectable": true,
                            "isSelected": false
                        }
                    ]
                }
            ]
        }
    ]
}

```

```

    },
    {
      "@type": "ConfigurationTerm",
      "name": "24 month contract",
      "isSelectable": true,
      "isSelected": false
    }
  ],
  "configurationCharacteristic": [
    {
      "@type": "ConfigurationCharacteristic",
      "id": "77",
      "name": "Color",
      "valueType": "string",
      "minCardinality": 1,
      "maxCardinality": 1,
      "isConfigurable": true,
      "isVisible": true,
      "configurationCharacteristicValue": [
        {
          "@type":
"ConfigurationCharacteristicValue",
          "isSelectable": true,
          "isSelected": true,
          "isVisible": true,
          "characteristicValue": {
            "name": "Color",
            "value": "Blue",
            "@type": "StringCharacteristic"
          }
        },
        {
          "@type":
"ConfigurationCharacteristicValue",
          "isSelectable": true,
          "isSelected": false,
          "isVisible": true,
          "characteristicValue": {
            "name": "Color",
            "value": "Red",
            "@type": "StringCharacteristic"
          }
        }
      ]
    }
  ],
  "configurationPrice": [
    {
      "@type": "ConfigurationPrice",
      "name": "Blue phone price",
      "priceType": "oneTimeCharge",
      "productOfferingPrice": {
        "id": "1747",
        "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
        "name": "One time charge for Blue Mobile
Handset",
        "@referredType": "ProductOfferingPrice",
        "@type": "ProductOfferingPrice"
      },
      "price": {
        "taxRate": 22,
        "@type": "Price",

```

```
    "dutyFreeAmount": {  
      "unit": "EUR",  
      "value": 100,  
      "@type": "Money"  
    },  
    "taxIncludedAmount": {  
      "unit": "EUR",  
      "value": 122,  
      "@type": "Money"  
    }  
  }  
}  
  
]  
}  
]  
}  
]  
}
```

Check Product Configuration State Change Event

Message example for CheckProductConfigurationStateChangeEvent event

```
Content-Type: application/json

{
  "@type": "CheckProductConfigurationStateChangeEvent",
  "@baseType": "Event",
  "correlationId": "1ccd2737-dde9",
  "domain": "Product",
  "title": "CheckProductConfigurationStateChangeEvent",
  "description": "CheckProductConfigurationStateChangeEvent illustration",
  "priority": "2",
  "timeOccurred": "2022-11-24T15:02:24.942Z",
  "source": {
    "@type": "ReportingResource",
    "id": "21",
    "name": "APP-422",
    "@referredType": "LogicalResource"
  },
  "reportingSystem": {
    "@type": "ReportingResource",
    "id": "999",
    "name": "APP-28",
    "@referredType": "LogicalResource"
  },
  "eventId": "463a-a791-3572340b22c1",
  "eventTime": "2022-11-24T15:02:28.204Z",
  "eventType": "CheckProductConfigurationStateChangeEvent",
  "event": {
    "checkProductConfiguration": {
      "@type": "QueryProductConfiguration",
      "href": "https://host:port/tmf-api/productConfiguration/v5/QueryProductConfiguration/789",
      "id": "789",
      "state": "done",
      "channel": {
```



```

        "id": "4407",
        "href": "https://host:port/tmf-
api/salesChannelManagement/v5/channel/4407",
        "name": "Assisted Channel",
        "@referredType": "SalesChannel",
        "@type": "ChannelRef"
    },
    "relatedParty": [
        {
            "role": "prospect",
            "@type": "RelatedPartyOrPartyRole",
            "partyOrPartyRole": {
                "@type": "PartyRef",
                "id": "456",
                "href": "https://host:port/partyManagement/v5/party/456",
                "name": "Ross",
                "@referredType": "Individual"
            }
        }
    ],
    "contextEntity": {
        "id": "3472",
        "href": "https://host:port/quoteManagement/v5/quote/3472",
        "name": "March 2019 Order",
        "@type": "EntityRef",
        "@referredType": "Quote"
    },
    "contextCharacteristic": [
        {
            "name": "salesModel",
            "valueType": "string",
            "value": "B2C",
            "@type": "StringCharacteristic"
        }
    ],
    "requestProductConfigurationItem": [
        {
            "@type": "QueryProductConfigurationItem",
            "id": "01",
            "contextItem": {
                "name": "Quote item 01",
                "itemId": "01",
                "entityId": "3472",
                "entityHref":
"https://host:port/quoteManagement/v5/quote/3472",
                "@type": "ItemRef",
                "@referredType": "QuoteItem"
            },
            "productConfiguration": {
                "@type": "ProductConfiguration",
                "productOffering": {
                    "id": "14305",
                    "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
                    "name": "Mobile Handset",
                    "@type": "ProductOfferingRef"
                }
            }
        }
    ],
    "computedProductConfigurationItem": [
        {

```

```

"@type": "QueryProductConfigurationItem",
"id": "02",
"state": "approved",
"productConfigurationItemRelationship": [
  {
    "@type": "ProductConfigurationItemRelationship",
    "id": "01",
    "role": "requestItem"
  }
],
"productConfiguration": [
  {
    "@type": "ProductConfiguration",
    "id": "02",
    "isSelectable": false,
    "isSelected": true,
    "isVisible": true,
    "productOffering": {
      "id": "14305",
      "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
      "name": "Mobile Handset",
      "@type": "ProductOfferingRef"
    },
    "configurationAction": [
      {
        "@type": "ConfigurationAction",
        "action": "add",
        "description": "Add new product",
        "isSelected": true
      }
    ],
    "configurationTerm": [
      {
        "@type": "ConfigurationTerm",
        "name": "12 month contract",
        "isSelectable": true,
        "isSelected": false
      },
      {
        "@type": "ConfigurationTerm",
        "name": "24 month contract",
        "isSelectable": true,
        "isSelected": false
      }
    ],
    "configurationCharacteristic": [
      {
        "@type": "ConfigurationCharacteristic",
        "id": "77",
        "name": "Color",
        "valueType": "string",
        "minCardinality": 1,
        "maxCardinality": 1,
        "isConfigurable": true,
        "isVisible": true,
        "configurationCharacteristicValue": [
          {
            "@type":
"ConfigurationCharacteristicValue",
            "isSelectable": true,
            "isSelected": true,
            "isVisible": true,

```


Check Product Configuration Create Event

Message example for CheckProductConfigurationCreateEvent event

Content-Type: application/json

```
{
  "@type": "CheckProductConfigurationCreateEvent",
  "@baseType": "Event",
  "correlationId": "1ccd2737-dde9",
  "domain": "Product",
  "title": "CheckProductConfigurationCreateEvent",
  "description": "CheckProductConfigurationCreateEvent illustration",
  "priority": "2",
  "timeOccurred": "2022-11-24T15:02:24.942Z",
  "source": {
    "@type": "ReportingResource",
    "id": "21",
    "name": "APP-422",
    "@referredType": "LogicalResource"
  },
  "reportingSystem": {
    "@type": "ReportingResource",
    "id": "999",
    "name": "APP-28",
    "@referredType": "LogicalResource"
  },
  "eventId": "463a-a791-3572340b22c1",
  "eventTime": "2022-11-24T15:02:28.204Z",
  "eventType": "CheckProductConfigurationCreateEvent",
  "event": {
    "checkProductConfiguration": {
      "@type": "QueryProductConfiguration",
      "href": "https://host:port/tmf-api/productConfiguration/v5/QueryProductConfiguration/789",
      "id": "789",
      "state": "done",
      "channel": {
        "id": "4407",
        "href": "https://host:port/tmf-api/salesChannelManagement/v5/channel/4407",
        "name": "Assisted Channel",
        "@referredType": "SalesChannel",
        "@type": "ChannelRef"
      }
    },
    "relatedParty": [
      {
        "role": "prospect",
        "@type": "RelatedPartyOrPartyRole",
        "partyOrPartyRole": {
          "@type": "PartyRef",
          "id": "456",
          "href": "https://host:port/partyManagement/v5/party/456",
          "name": "Ross",
          "@referredType": "Individual"
        }
      }
    ],
    "contextEntity": {
      "id": "3472",
      "href": "https://host:port/quoteManagement/v5/quote/3472",

```

```

        "name": "March 2019 Order",
        "@type": "EntityRef",
        "@referredType": "Quote"
    },
    "contextCharacteristic": [
        {
            "name": "salesModel",
            "valueType": "string",
            "value": "B2C",
            "@type": "StringCharacteristic"
        }
    ],
    "requestProductConfigurationItem": [
        {
            "@type": "QueryProductConfigurationItem",
            "id": "01",
            "contextItem": {
                "name": "Quote item 01",
                "itemId": "01",
                "entityId": "3472",
                "entityHref":
"https://host:port/quoteManagement/v5/quote/3472",
                "@type": "ItemRef",
                "@referredType": "QuoteItem"
            },
            "productConfiguration": {
                "@type": "ProductConfiguration",
                "productOffering": {
                    "id": "14305",
                    "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
                    "name": "Mobile Handset",
                    "@type": "ProductOfferingRef"
                }
            }
        }
    ],
    "computedProductConfigurationItem": [
        {
            "@type": "QueryProductConfigurationItem",
            "id": "02",
            "state": "approved",
            "productConfigurationItemRelationship": [
                {
                    "@type": "ProductConfigurationItemRelationship",
                    "id": "01",
                    "role": "requestItem"
                }
            ],
            "productConfiguration": [
                {
                    "@type": "ProductConfiguration",
                    "id": "02",
                    "isSelectable": false,
                    "isSelected": true,
                    "isVisible": true,
                    "productOffering": {
                        "id": "14305",
                        "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
                        "name": "Mobile Handset",
                        "@type": "ProductOfferingRef"
                    }
                }
            ]
        }
    ]
}

```

```

    },
    "configurationAction": [
      {
        "@type": "ConfigurationAction",
        "action": "add",
        "description": "Add new product",
        "isSelected": true
      }
    ],
    "configurationTerm": [
      {
        "@type": "ConfigurationTerm",
        "name": "12 month contract",
        "isSelectable": true,
        "isSelected": false
      },
      {
        "@type": "ConfigurationTerm",
        "name": "24 month contract",
        "isSelectable": true,
        "isSelected": false
      }
    ],
    "configurationCharacteristic": [
      {
        "@type": "ConfigurationCharacteristic",
        "id": "77",
        "name": "Color",
        "valueType": "string",
        "minCardinality": 1,
        "maxCardinality": 1,
        "isConfigurable": true,
        "isVisible": true,
        "configurationCharacteristicValue": [
          {
            "@type":
"ConfigurationCharacteristicValue",
            "isSelectable": true,
            "isSelected": true,
            "isVisible": true,
            "characteristicValue": {
              "name": "Color",
              "value": "Blue",
              "@type": "StringCharacteristic"
            }
          },
          {
            "@type":
"ConfigurationCharacteristicValue",
            "isSelectable": true,
            "isSelected": false,
            "isVisible": true,
            "characteristicValue": {
              "name": "Color",
              "value": "Red",
              "@type": "StringCharacteristic"
            }
          }
        ]
      }
    ],
    "configurationPrice": [
      {

```

```

    "@type": "ConfigurationPrice",
    "name": "Blue phone price",
    "priceType": "oneTimeCharge",
    "productOfferingPrice": {
      "id": "1747",
      "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
      "name": "One time charge for Blue Mobile
Handset",

      "@referredType": "ProductOfferingPrice",
      "@type": "ProductOfferingPrice"
    },
    "price": {
      "taxRate": 22,
      "@type": "Price",
      "dutyFreeAmount": {
        "unit": "EUR",
        "value": 100,
        "@type": "Money"
      },
      "taxIncludedAmount": {
        "unit": "EUR",
        "value": 122,
        "@type": "Money"
      }
    }
  }
}
]
}
]
}
}
}
}

```

Check Product Configuration Attribute Value Change Event

Message example for CheckProductConfigurationAttributeValueChangeEvent event

```
Content-Type: application/json

{
  "@type": "CheckProductConfigurationAttributeValueChangeEvent",
  "@baseType": "Event",
  "correlationId": "1ccd2737-dde9",
  "domain": "Product",
  "title": "CheckProductConfigurationAttributeValueChangeEvent",
  "description": "CheckProductConfigurationAttributeValueChangeEvent illustration",
  "priority": "2",
  "timeOccurred": "2022-11-24T15:02:24.942Z",
  "source": {
    "@type": "ReportingResource",
    "id": "21",
    "name": "APP-422",
    "@referredType": "LogicalResource"
  },
  "reportingSystem": {
```

```

    "@type": "ReportingResource",
    "id": "999",
    "name": "APP-28",
    "@referredType": "LogicalResource"
  },
  "eventId": "463a-a791-3572340b22c1",
  "eventTime": "2022-11-24T15:02:28.204Z",
  "eventType": "CheckProductConfigurationAttributeValueChangeEvent",
  "event": {
    "checkProductConfiguration": {
      "@type": "QueryProductConfiguration",
      "href": "https://host:port/tmf-
api/productConfiguration/v5/QueryProductConfiguration/789",
      "id": "789",
      "state": "done",
      "channel": {
        "id": "4407",
        "href": "https://host:port/tmf-
api/salesChannelManagement/v5/channel/4407",
        "name": "Assisted Channel",
        "@referredType": "SalesChannel",
        "@type": "ChannelRef"
      },
    },
    "relatedParty": [
      {
        "role": "prospect",
        "@type": "RelatedPartyOrPartyRole",
        "partyOrPartyRole": {
          "@type": "PartyRef",
          "id": "456",
          "href": "https://host:port/partyManagement/v5/party/456",
          "name": "Ross",
          "@referredType": "Individual"
        }
      }
    ],
    "contextEntity": {
      "id": "3472",
      "href": "https://host:port/quoteManagement/v5/quote/3472",
      "name": "March 2019 Order",
      "@type": "EntityRef",
      "@referredType": "Quote"
    },
    "contextCharacteristic": [
      {
        "name": "salesModel",
        "valueType": "string",
        "value": "B2C",
        "@type": "StringCharacteristic"
      }
    ],
    "requestProductConfigurationItem": [
      {
        "@type": "QueryProductConfigurationItem",
        "id": "01",
        "contextItem": {
          "name": "Quote item 01",
          "itemId": "01",
          "entityId": "3472",
          "entityHref":
"https://host:port/quoteManagement/v5/quote/3472",
          "@type": "ItemRef",
          "@referredType": "QuoteItem"
        }
      }
    ]
  }
}

```



```

    },
    "productConfiguration": {
      "@type": "ProductConfiguration",
      "productOffering": {
        "id": "14305",
        "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
        "name": "Mobile Handset",
        "@type": "ProductOfferingRef"
      }
    }
  ],
  "computedProductConfigurationItem": [
    {
      "@type": "QueryProductConfigurationItem",
      "id": "02",
      "state": "approved",
      "productConfigurationItemRelationship": [
        {
          "@type": "ProductConfigurationItemRelationship",
          "id": "01",
          "role": "requestItem"
        }
      ],
      "productConfiguration": [
        {
          "@type": "ProductConfiguration",
          "id": "02",
          "isSelectable": false,
          "isSelected": true,
          "isVisible": true,
          "productOffering": {
            "id": "14305",
            "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
            "name": "Mobile Handset",
            "@type": "ProductOfferingRef"
          },
          "configurationAction": [
            {
              "@type": "ConfigurationAction",
              "action": "add",
              "description": "Add new product",
              "isSelected": true
            }
          ],
          "configurationTerm": [
            {
              "@type": "ConfigurationTerm",
              "name": "12 month contract",
              "isSelectable": true,
              "isSelected": false
            },
            {
              "@type": "ConfigurationTerm",
              "name": "24 month contract",
              "isSelectable": true,
              "isSelected": false
            }
          ],
          "configurationCharacteristic": [

```

```

    {
      "@type": "ConfigurationCharacteristic",
      "id": "77",
      "name": "Color",
      "valueType": "string",
      "minCardinality": 1,
      "maxCardinality": 1,
      "isConfigurable": true,
      "isVisible": true,
      "configurationCharacteristicValue": [
        {
          "@type":
"ConfigurationCharacteristicValue",
          "isSelectable": true,
          "isSelected": true,
          "isVisible": true,
          "characteristicValue": {
            "name": "Color",
            "value": "Blue",
            "@type": "StringCharacteristic"
          }
        },
        {
          "@type":
"ConfigurationCharacteristicValue",
          "isSelectable": true,
          "isSelected": false,
          "isVisible": true,
          "characteristicValue": {
            "name": "Color",
            "value": "Red",
            "@type": "StringCharacteristic"
          }
        }
      ]
    },
    "configurationPrice": [
      {
        "@type": "ConfigurationPrice",
        "name": "Blue phone price",
        "priceType": "oneTimeCharge",
        "productOfferingPrice": {
          "id": "1747",
          "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
          "name": "One time charge for Blue Mobile
Handset",
          "@referredType": "ProductOfferingPrice",
          "@type": "ProductOfferingPrice"
        },
        "price": {
          "taxRate": 22,
          "@type": "Price",
          "dutyFreeAmount": {
            "unit": "EUR",
            "value": 100,
            "@type": "Money"
          },
          "taxIncludedAmount": {
            "unit": "EUR",
            "value": 122,
            "@type": "Money"
          }
        }
      }
    ]
  }

```

Query Product Configuration State Change Event

Message example for QueryProductConfigurationStateChangeEvent event

Content-Type: application/json

```
{
  "@type": "QueryProductConfigurationStateChangeEvent",
  "@baseType": "Event",
  "correlationId": "1ccd2737-dde9",
  "domain": "Product",
  "title": "QueryProductConfigurationStateChangeEvent",
  "description": "QueryProductConfigurationStateChangeEvent illustration",
  "priority": "2",
  "timeOccurred": "2022-11-24T15:02:24.942Z",
  "source": {
    "@type": "ReportingResource",
    "id": "21",
    "name": "APP-422",
    "@referredType": "LogicalResource"
  },
  "reportingSystem": {
    "@type": "ReportingResource",
    "id": "999",
    "name": "APP-28",
    "@referredType": "LogicalResource"
  },
  "eventId": "463a-a791-3572340b22c1",
  "eventTime": "2022-11-24T15:02:28.204Z",
  "eventType": "QueryProductConfigurationStateChangeEvent",
  "event": {
    "checkProductConfiguration": {
      "@type": "QueryProductConfiguration",
      "href": "https://host:port/tmf-api/productConfiguration/v5/QueryProductConfiguration/789",
      "id": "789",
      "state": "done",
      "channel": {
        "id": "4407",
        "href": "https://host:port/tmf-api/salesChannelManagement/v5/channel/4407",
        "name": "Assisted Channel",
        "@referredType": "SalesChannel",
        "@type": "ChannelRef"
      },
      "relatedParty": [
        {

```

```

        "role": "prospect",
        "@type": "RelatedPartyOrPartyRole",
        "partyOrPartyRole": {
            "@type": "PartyRef",
            "id": "456",
            "href": "https://host:port/partyManagement/v5/party/456",
            "name": "Ross",
            "@referredType": "Individual"
        }
    },
    "contextEntity": {
        "id": "3472",
        "href": "https://host:port/quoteManagement/v5/quote/3472",
        "name": "March 2019 Order",
        "@type": "EntityRef",
        "@referredType": "Quote"
    },
    "contextCharacteristic": [
        {
            "name": "salesModel",
            "valueType": "string",
            "value": "B2C",
            "@type": "StringCharacteristic"
        }
    ],
    "requestProductConfigurationItem": [
        {
            "@type": "QueryProductConfigurationItem",
            "id": "01",
            "contextItem": {
                "name": "Quote item 01",
                "itemId": "01",
                "entityId": "3472",
                "entityHref":
"https://host:port/quoteManagement/v5/quote/3472",
                "@type": "ItemRef",
                "@referredType": "QuoteItem"
            },
            "productConfiguration": {
                "@type": "ProductConfiguration",
                "productOffering": {
                    "id": "14305",
                    "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
                    "name": "Mobile Handset",
                    "@type": "ProductOfferingRef"
                }
            }
        }
    ],
    "computedProductConfigurationItem": [
        {
            "@type": "QueryProductConfigurationItem",
            "id": "02",
            "state": "approved",
            "productConfigurationItemRelationship": [
                {
                    "@type": "ProductConfigurationItemRelationship",
                    "id": "01",
                    "role": "requestItem"
                }
            ]
        }
    ]
}

```

```

    ],
    "productConfiguration": [
      {
        "@type": "ProductConfiguration",
        "id": "02",
        "isSelectable": false,
        "isSelected": true,
        "isVisible": true,
        "productOffering": {
          "id": "14305",
          "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
          "name": "Mobile Handset",
          "@type": "ProductOfferingRef"
        },
        "configurationAction": [
          {
            "@type": "ConfigurationAction",
            "action": "add",
            "description": "Add new product",
            "isSelected": true
          }
        ],
        "configurationTerm": [
          {
            "@type": "ConfigurationTerm",
            "name": "12 month contract",
            "isSelectable": true,
            "isSelected": false
          },
          {
            "@type": "ConfigurationTerm",
            "name": "24 month contract",
            "isSelectable": true,
            "isSelected": false
          }
        ],
        "configurationCharacteristic": [
          {
            "@type": "ConfigurationCharacteristic",
            "id": "77",
            "name": "Color",
            "valueType": "string",
            "minCardinality": 1,
            "maxCardinality": 1,
            "isConfigurable": true,
            "isVisible": true,
            "configurationCharacteristicValue": [
              {
                "@type":
"ConfigurationCharacteristicValue",
                "isSelectable": true,
                "isSelected": true,
                "isVisible": true,
                "characteristicValue": {
                  "name": "Color",
                  "value": "Blue",
                  "@type": "StringCharacteristic"
                }
              },
              {
                "@type":
"ConfigurationCharacteristicValue",

```

```

        "isSelected": true,
        "isSelectable": false,
        "isVisible": true,
        "characteristicValue": {
            "name": "Color",
            "value": "Red",
            "@type": "StringCharacteristic"
        }
    },
    ],
    "configurationPrice": [
        {
            "@type": "ConfigurationPrice",
            "name": "Blue phone price",
            "priceType": "oneTimeCharge",
            "productOfferingPrice": {
                "id": "1747",
                "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
                "name": "One time charge for Blue Mobile
Handset",
                "@referredType": "ProductOfferingPrice",
                "@type": "ProductOfferingPrice"
            },
            "price": {
                "taxRate": 22,
                "@type": "Price",
                "dutyFreeAmount": {
                    "unit": "EUR",
                    "value": 100,
                    "@type": "Money"
                },
                "taxIncludedAmount": {
                    "unit": "EUR",
                    "value": 122,
                    "@type": "Money"
                }
            }
        }
    ]
}
]
}
}
}

```

Query Product Configuration Attribute Value Change Event

Message example for QueryProductConfigurationAttributeValueChangeEvent event

```
Content-Type: application/json

{
  "@type": "QueryProductConfigurationAttributeValueChangeEvent",
  "@baseType": "Event",
```

```

    "correlationId": "1ccd2737-dde9",
    "domain": "Product",
    "title": "QueryProductConfigurationAttributeValueChangeEvent",
    "description": "QueryProductConfigurationAttributeValueChangeEvent
illustration",
    "priority": "2",
    "timeOccurred": "2022-11-24T15:02:24.942Z",
    "source": {
      "@type": "ReportingResource",
      "id": "21",
      "name": "APP-422",
      "@referredType": "LogicalResource"
    },
    "reportingSystem": {
      "@type": "ReportingResource",
      "id": "999",
      "name": "APP-28",
      "@referredType": "LogicalResource"
    },
    "eventId": "463a-a791-3572340b22c1",
    "eventTime": "2022-11-24T15:02:28.204Z",
    "eventType": "QueryProductConfigurationAttributeValueChangeEvent",
    "event": {
      "checkProductConfiguration": {
        "@type": "QueryProductConfiguration",
        "href": "https://host:port/tmf-
api/productConfiguration/v5/QueryProductConfiguration/789",
        "id": "789",
        "state": "done",
        "channel": {
          "id": "4407",
          "href": "https://host:port/tmf-
api/salesChannelManagement/v5/channel/4407",
          "name": "Assisted Channel",
          "@referredType": "SalesChannel",
          "@type": "ChannelRef"
        },
      },
      "relatedParty": [
        {
          "role": "prospect",
          "@type": "RelatedPartyOrPartyRole",
          "partyOrPartyRole": {
            "@type": "PartyRef",
            "id": "456",
            "href": "https://host:port/partyManagement/v5/party/456",
            "name": "Ross",
            "@referredType": "Individual"
          }
        }
      ],
      "contextEntity": {
        "id": "3472",
        "href": "https://host:port/quoteManagement/v5/quote/3472",
        "name": "March 2019 Order",
        "@type": "EntityRef",
        "@referredType": "Quote"
      },
      "contextCharacteristic": [
        {
          "name": "salesModel",
          "valueType": "string",
          "value": "B2C",
          "@type": "StringCharacteristic"
        }
      ]
    }
  }
}

```

```

    }
  ],
  "requestProductConfigurationItem": [
    {
      "@type": "QueryProductConfigurationItem",
      "id": "01",
      "contextItem": {
        "name": "Quote item 01",
        "itemId": "01",
        "entityId": "3472",
        "entityHref":
"https://host:port/quoteManagement/v5/quote/3472",
        "@type": "ItemRef",
        "@referredType": "QuoteItem"
      },
      "productConfiguration": {
        "@type": "ProductConfiguration",
        "productOffering": {
          "id": "14305",
          "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
          "name": "Mobile Handset",
          "@type": "ProductOfferingRef"
        }
      }
    }
  ],
  "computedProductConfigurationItem": [
    {
      "@type": "QueryProductConfigurationItem",
      "id": "02",
      "state": "approved",
      "productConfigurationItemRelationship": [
        {
          "@type": "ProductConfigurationItemRelationship",
          "id": "01",
          "role": "requestItem"
        }
      ],
      "productConfiguration": [
        {
          "@type": "ProductConfiguration",
          "id": "02",
          "isSelectable": false,
          "isSelected": true,
          "isVisible": true,
          "productOffering": {
            "id": "14305",
            "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
            "name": "Mobile Handset",
            "@type": "ProductOfferingRef"
          },
          "configurationAction": [
            {
              "@type": "ConfigurationAction",
              "action": "add",
              "description": "Add new product",
              "isSelected": true
            }
          ],
          "configurationTerm": [

```



```

        {
            "@type": "ConfigurationTerm",
            "name": "12 month contract",
            "isSelectable": true,
            "isSelected": false
        },
        {
            "@type": "ConfigurationTerm",
            "name": "24 month contract",
            "isSelectable": true,
            "isSelected": false
        }
    ],
    "configurationCharacteristic": [
        {
            "@type": "ConfigurationCharacteristic",
            "id": "77",
            "name": "Color",
            "valueType": "string",
            "minCardinality": 1,
            "maxCardinality": 1,
            "isConfigurable": true,
            "isVisible": true,
            "configurationCharacteristicValue": [
                {
                    "@type":
"ConfigurationCharacteristicValue",
                    "isSelectable": true,
                    "isSelected": true,
                    "isVisible": true,
                    "characteristicValue": {
                        "name": "Color",
                        "value": "Blue",
                        "@type": "StringCharacteristic"
                    }
                },
                {
                    "@type":
"ConfigurationCharacteristicValue",
                    "isSelectable": true,
                    "isSelected": false,
                    "isVisible": true,
                    "characteristicValue": {
                        "name": "Color",
                        "value": "Red",
                        "@type": "StringCharacteristic"
                    }
                }
            ]
        }
    ],
    "configurationPrice": [
        {
            "@type": "ConfigurationPrice",
            "name": "Blue phone price",
            "priceType": "oneTimeCharge",
            "productOfferingPrice": {
                "id": "1747",
                "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
                "name": "One time charge for Blue Mobile
Handset",
                "@referredType": "ProductOfferingPrice",

```

```

    },
    "price": {
      "taxRate": 22,
      "@type": "Price",
      "dutyFreeAmount": {
        "unit": "EUR",
        "value": 100,
        "@type": "Money"
      },
      "taxIncludedAmount": {
        "unit": "EUR",
        "value": 122,
        "@type": "Money"
      }
    }
  }
}

```

Query Product Configuration Create Event

Message example for QueryProductConfigurationCreateEvent event

```
Content-Type: application/json

{
  "@type": "QueryProductConfigurationCreateEvent",
  "@baseType": "Event",
  "correlationId": "1ccd2737-dde9",
  "domain": "Product",
  "title": "QueryProductConfigurationCreateEvent",
  "description": "QueryProductConfigurationCreateEvent illustration",
  "priority": "2",
  "timeOccurred": "2022-11-24T15:02:24.942Z",
  "source": {
    "@type": "ReportingResource",
    "id": "21",
    "name": "APP-422",
    "@referredType": "LogicalResource"
  },
  "reportingSystem": {
    "@type": "ReportingResource",
    "id": "999",
    "name": "APP-28",
    "@referredType": "LogicalResource"
  },
  "eventId": "463a-a791-3572340b22c1",
  "eventTime": "2022-11-24T15:02:28.204Z",
  "eventType": "QueryProductConfigurationCreateEvent",
  "event": {
    "queryProductConfiguration": {
      "@type": "QueryProductConfiguration",

```

```

    "href": "https://host:port/tmf-
api/productConfiguration/v5/QueryProductConfiguration/789",
    "id": "789",
    "state": "done",
    "channel": {
      "id": "4407",
      "href": "https://host:port/tmf-
api/salesChannelManagement/v5/channel/4407",
      "name": "Assisted Channel",
      "@referredType": "SalesChannel",
      "@type": "ChannelRef"
    },
    "relatedParty": [
      {
        "role": "prospect",
        "@type": "RelatedPartyOrPartyRole",
        "partyOrPartyRole": {
          "@type": "PartyRef",
          "id": "456",
          "href": "https://host:port/partyManagement/v5/party/456",
          "name": "Ross",
          "@referredType": "Individual"
        }
      }
    ],
    "contextEntity": {
      "id": "3472",
      "href": "https://host:port/quoteManagement/v5/quote/3472",
      "name": "March 2019 Order",
      "@type": "EntityRef",
      "@referredType": "Quote"
    },
    "contextCharacteristic": [
      {
        "name": "salesModel",
        "valueType": "string",
        "value": "B2C",
        "@type": "StringCharacteristic"
      }
    ],
    "requestProductConfigurationItem": [
      {
        "@type": "QueryProductConfigurationItem",
        "id": "01",
        "contextItem": {
          "name": "Quote item 01",
          "itemId": "01",
          "entityId": "3472",
          "entityHref":
"https://host:port/quoteManagement/v5/quote/3472",
          "@type": "ItemRef",
          "@referredType": "QuoteItem"
        },
        "productConfiguration": {
          "@type": "ProductConfiguration",
          "productOffering": {
            "id": "14305",
            "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
            "name": "Mobile Handset",
            "@type": "ProductOfferingRef"
          }
        }
      }
    ]
  }

```

```

    }
  },
  "computedProductConfigurationItem": [
    {
      "@type": "QueryProductConfigurationItem",
      "id": "02",
      "state": "approved",
      "productConfigurationItemRelationship": [
        {
          "@type": "ProductConfigurationItemRelationship",
          "id": "01",
          "role": "requestItem"
        }
      ],
      "productConfiguration": {
        "@type": "ProductConfiguration",
        "id": "02",
        "isSelectable": false,
        "isSelected": true,
        "isVisible": true,
        "productOffering": {
          "id": "14305",
          "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
          "name": "Mobile Handset",
          "@type": "ProductOfferingRef"
        },
        "configurationAction": [
          {
            "@type": "ConfigurationAction",
            "action": "add",
            "description": "Add new product",
            "isSelected": true
          }
        ],
        "configurationTerm": [
          {
            "@type": "ConfigurationTerm",
            "name": "12 month contract",
            "isSelectable": true,
            "isSelected": false
          },
          {
            "@type": "ConfigurationTerm",
            "name": "24 month contract",
            "isSelectable": true,
            "isSelected": false
          }
        ],
        "configurationCharacteristic": [
          {
            "@type": "ConfigurationCharacteristic",
            "id": "77",
            "name": "Color",
            "valueType": "string",
            "minCardinality": 1,
            "maxCardinality": 1,
            "isConfigurable": true,
            "isVisible": true,
            "configurationCharacteristicValue": [
              {
                "@type":

```

```
"ConfigurationCharacteristicValue",
    "isSelectable": true,
    "isSelected": true,
    "isVisible": true,
    "characteristicValue": {
        "name": "Color",
        "value": "Blue",
        "@type": "StringCharacteristic"
    }
},
{
    "@type":
"ConfigurationCharacteristicValue",
    "isSelectable": true,
    "isSelected": false,
    "isVisible": true,
    "characteristicValue": {
        "name": "Color",
        "value": "Red",
        "@type": "StringCharacteristic"
    }
}],
"configurationPrice": [
    {
        "@type": "ConfigurationPrice",
        "name": "Blue phone price",
        "priceType": "oneTimeCharge",
        "productOfferingPrice": {
            "id": "1747",
            "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
            "name": "One time charge for Blue Mobile
Handset",
            "@referredType": "ProductOfferingPrice",
            "@type": "ProductOfferingPrice"
        },
        "price": {
            "taxRate": 22,
            "@type": "Price",
            "dutyFreeAmount": {
                "unit": "EUR",
                "value": 100,
                "@type": "Money"
            },
            "taxIncludedAmount": {
                "unit": "EUR",
                "value": 122,
                "@type": "Money"
            }
        }
    }
]
}
}
```

Query Product Configuration Delete Event

Message example for QueryProductConfigurationDeleteEvent event

```
Content-Type: application/json

{
  "@type": "QueryProductConfigurationDeleteEvent",
  "@baseType": "Event",
  "correlationId": "1ccd2737-dde9",
  "domain": "Product",
  "title": "QueryProductConfigurationDeleteEvent",
  "description": "QueryProductConfigurationDeleteEvent illustration",
  "priority": "2",
  "timeOccurred": "2022-11-24T15:02:24.942Z",
  "source": {
    "@type": "ReportingResource",
    "id": "21",
    "name": "APP-422",
    "@referredType": "LogicalResource"
  },
  "reportingSystem": {
    "@type": "ReportingResource",
    "id": "999",
    "name": "APP-28",
    "@referredType": "LogicalResource"
  },
  "eventId": "463a-a791-3572340b22c1",
  "eventTime": "2022-11-24T15:02:28.204Z",
  "eventType": "QueryProductConfigurationDeleteEvent",
  "event": {
    "queryProductConfiguration": {
      "@type": "QueryProductConfiguration",
      "href": "https://host:port/tmf-api/productConfiguration/v5/QueryProductConfiguration/789",
      "id": "789",
      "state": "done",
      "channel": {
        "id": "4407",
        "href": "https://host:port/tmf-api/salesChannelManagement/v5/channel/4407",
        "name": "Assisted Channel",
        "@referredType": "SalesChannel",
        "@type": "ChannelRef"
      }
    },
    "relatedParty": [
      {
        "role": "prospect",
        "@type": "RelatedPartyOrPartyRole",
        "partyOrPartyRole": {
          "@type": "PartyRef",
          "id": "456",
          "href": "https://host:port/partyManagement/v5/party/456",
          "name": "Ross",
          "@referredType": "Individual"
        }
      }
    ],
    "contextEntity": {
      "id": "3472",
      "href": "https://host:port/quoteManagement/v5/quote/3472",

```

```

        "name": "March 2019 Order",
        "@type": "EntityRef",
        "@referredType": "Quote"
    },
    "contextCharacteristic": [
        {
            "name": "salesModel",
            "valueType": "string",
            "value": "B2C",
            "@type": "StringCharacteristic"
        }
    ],
    "requestProductConfigurationItem": [
        {
            "@type": "QueryProductConfigurationItem",
            "id": "01",
            "contextItem": {
                "name": "Quote item 01",
                "itemId": "01",
                "entityId": "3472",
                "entityHref":
"https://host:port/quoteManagement/v5/quote/3472",
                "@type": "ItemRef",
                "@referredType": "QuoteItem"
            },
            "productConfiguration": {
                "@type": "ProductConfiguration",
                "productOffering": {
                    "id": "14305",
                    "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
                    "name": "Mobile Handset",
                    "@type": "ProductOfferingRef"
                }
            }
        }
    ],
    "computedProductConfigurationItem": [
        {
            "@type": "QueryProductConfigurationItem",
            "id": "02",
            "state": "approved",
            "productConfigurationItemRelationship": [
                {
                    "@type": "ProductConfigurationItemRelationship",
                    "id": "01",
                    "role": "requestItem"
                }
            ],
            "productConfiguration": {
                "@type": "ProductConfiguration",
                "id": "02",
                "isSelectable": false,
                "isSelected": true,
                "isVisible": true,
                "productOffering": {
                    "id": "14305",
                    "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
                    "name": "Mobile Handset",
                    "@type": "ProductOfferingRef"
                }
            }
        }
    ],

```

```

"configurationAction": [
  {
    "@type": "ConfigurationAction",
    "action": "add",
    "description": "Add new product",
    "isSelected": true
  }
],
"configurationTerm": [
  {
    "@type": "ConfigurationTerm",
    "name": "12 month contract",
    "isSelectable": true,
    "isSelected": false
  },
  {
    "@type": "ConfigurationTerm",
    "name": "24 month contract",
    "isSelectable": true,
    "isSelected": false
  }
],
"configurationCharacteristic": [
  {
    "@type": "ConfigurationCharacteristic",
    "id": "77",
    "name": "Color",
    "valueType": "string",
    "minCardinality": 1,
    "maxCardinality": 1,
    "isConfigurable": true,
    "isVisible": true,
    "configurationCharacteristicValue": [
      {
        "@type":
"ConfigurationCharacteristicValue",
        "isSelectable": true,
        "isSelected": true,
        "isVisible": true,
        "characteristicValue": {
          "name": "Color",
          "value": "Blue",
          "@type": "StringCharacteristic"
        }
      },
      {
        "@type":
"ConfigurationCharacteristicValue",
        "isSelectable": true,
        "isSelected": false,
        "isVisible": true,
        "characteristicValue": {
          "name": "Color",
          "value": "Red",
          "@type": "StringCharacteristic"
        }
      }
    ],
    "configurationPrice": [
      {
        "@type": "ConfigurationPrice",
        "name": "Blue phone price",
        "priceType": "oneTimeCharge",

```



```
    "productOfferingPrice": {
      "id": "1747",
      "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
      "name": "One time charge for Blue Mobile
Handset",
      "@referredType": "ProductOfferingPrice",
      "@type": "ProductOfferingPrice"
    },
    "price": {
      "taxRate": 22,
      "@type": "Price",
      "dutyFreeAmount": {
        "unit": "EUR",
        "value": 100,
        "@type": "Money"
      },
      "taxIncludedAmount": {
        "unit": "EUR",
        "value": 122,
        "@type": "Money"
      }
    }
  }
}
]
```

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 CheckProductConfiguration

List or find CheckProductConfiguration objects

GET /checkProductConfiguration?fields=...

Description

This operation list CheckProductConfiguration 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 CheckProductConfiguration resources.

Request

```
GET /checkProductConfiguration
Content-Type: application/json
```

Response

200

```
[
  {
    "@type": "CheckProductConfiguration",
    "href": "https://mycsp.com:8080/tmf-
api/productConfiguration/v5/CheckProductConfiguration/456",
    "id": "456",
    "state": "done",
    "channel": {
      "id": "4407",
      "href": "https://host:port/tmf-
api/salesChannelManagement/v5/channel/4407",
      "name": "Assisted Channel",
      "@referredType": "SalesChannel",
      "@type": "ChannelRef"
    },
    "relatedParty": [
      {
        "role": "prospect",
        "@type": "RelatedPartyRefOrPartyRoleRef",
        "partyOrPartyRole": {
          "@type": "PartyRef",
          "id": "456",
          "href": "https://host:port/partyManagement/v5/party/456",
          "name": "Ross",
          "@referredType": "Individual"
        }
      }
    ],
    "contextEntity": {
      "id": "3472",
      "href": "https://host:port/quoteManagement/v5/quote/3472",
      "name": "March 2019 Order",
      "@type": "EntityRef",
      "@referredType": "Quote"
    },
    "contextCharacteristic": [
      {
        "name": "salesModel",
        "valueType": "string",
        "value": "B2C",
        "@type": "StringCharacteristic"
      }
    ],
    "checkProductConfigurationItem": [
      {
        "@type": "CheckProductConfigurationItem",
        "id": "01",
        "state": "approved",
        "contextItem": {
          "name": "Quote item 01",
          "itemId": "01",
          "entityId": "3472",
          "entityHref": "https://host:port/quoteManagement/v5/quote/3472",
          "@type": "ItemRef",
          "@referredType": "QuoteItem"
        },
        "productConfiguration": {
          "@type": "ProductConfiguration",
          "productOffering": {
```

```

        "id": "14305",
        "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
        "name": "Mobile Handset",
        "@type": "ProductOfferingRef"
    },
    "configurationAction": [
        {
            "@type": "ConfigurationAction",
            "action": "add",
            "description": "Add new product",
            "isSelected": true
        }
    ],
    "configurationTerm": [
        {
            "@type": "ConfigurationTerm",
            "name": "12 month contract",
            "isSelectable": true,
            "isSelected": false
        },
        {
            "@type": "ConfigurationTerm",
            "name": "24 month contract",
            "isSelectable": true,
            "isSelected": false
        }
    ],
    "configurationCharacteristic": [
        {
            "@type": "ConfigurationCharacteristic",
            "id": "77",
            "name": "Color",
            "valueType": "string",
            "minCardinality": 1,
            "maxCardinality": 1,
            "isConfigurable": true,
            "isVisible": true,
            "configurationCharacteristicValue": [
                {
                    "@type": "ConfigurationCharacteristicValue",
                    "isSelectable": true,
                    "isSelected": true,
                    "isVisible": true,
                    "characteristicValue": {
                        "name": "Color",
                        "value": "Blue",
                        "@type": "StringCharacteristic"
                    }
                },
                {
                    "@type": "ConfigurationCharacteristicValue",
                    "isSelectable": true,
                    "isSelected": false,
                    "isVisible": true,
                    "characteristicValue": {
                        "name": "Color",
                        "value": "Red",
                        "@type": "StringCharacteristic"
                    }
                }
            ]
        }
    ]
}

```

```

    ],
    "configurationPrice": [
      {
        "@type": "ConfigurationPrice",
        "name": "Blue phone price",
        "priceType": "oneTimeCharge",
        "productOfferingPrice": {
          "id": "1747",
          "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
          "name": "One time charge for Blue Mobile Handset",
          "@referredType": "ProductOfferingPrice",
          "@type": "ProductOfferingPrice"
        },
        "price": {
          "taxRate": 22,
          "@type": "Price",
          "dutyFreeAmount": {
            "unit": "EUR",
            "value": 100,
            "@type": "Money"
          },
          "taxIncludedAmount": {
            "unit": "EUR",
            "value": 122,
            "@type": "Money"
          }
        }
      }
    ],
    "product": {
      "@type": "Product",
      "productOffering": {
        "id": "14305",
        "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
        "name": "Mobile Handset",
        "@type": "ProductOfferingRef"
      },
      "productCharacteristic": [
        {
          "name": "Color",
          "value": "Blue",
          "@type": "StringCharacteristic"
        }
      ],
      "productPrice": [
        {
          "name": "Blue phone price",
          "priceType": "oneTimeCharge",
          "productOfferingPrice": {
            "id": "1747",
            "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
            "name": "One time charge for Blue Mobile
Handset",
            "@referredType": "ProductOfferingPrice",
            "@type": "ProductOfferingPrice"
          },
          "price": {
            "taxRate": 22,
            "@type": "Price",
            "dutyFreeAmount": {

```

```

        "unit": "EUR",
        "value": 100,
        "@type": "Money"
      },
      "taxIncludedAmount": {
        "unit": "EUR",
        "value": 122,
        "@type": "Money"
      }
    },
    "@type": "ProductPrice"
  }
]

```

Retrieves a CheckProductConfiguration by ID

GET /checkProductConfiguration/{id}?fields=...

Description

This operation retrieves a CheckProductConfiguration entity. Attribute selection is enabled for all first level attributes. Filtering may be available depending on the compliance level supported by an implementation.

Usage samples

This is an example of simple CheckProductConfiguration.

Request

```

GET /checkProductConfiguration/456
Content-Type: application/json

```

Response

```

200

{
  "@type": "CheckProductConfiguration",
  "href": "https://mycsp.com:8080/tmf-api/productConfiguration/v5/CheckProductConfiguration/456",
  "id": "456",
  "state": "done",
  "channel": {
    "id": "4407",
    "href": "https://host:port/tmf-api/salesChannelManagement/v5/channel/4407",
    "name": "Assisted Channel",
    "@REFERREDType": "SalesChannel",

```

```

      "@type": "ChannelRef"
    },
    "relatedParty": [
      {
        "role": "prospect",
        "@type": "RelatedPartyRefOrPartyRoleRef",
        "partyOrPartyRole": {
          "@type": "PartyRef",
          "id": "456",
          "href": "https://host:port/partyManagement/v5/party/456",
          "name": "Ross",
          "@referredType": "Individual"
        }
      }
    ],
    "contextEntity": {
      "id": "3472",
      "href": "https://host:port/quoteManagement/v5/quote/3472",
      "name": "March 2019 Order",
      "@type": "EntityRef",
      "@referredType": "Quote"
    },
    "contextCharacteristic": [
      {
        "name": "salesModel",
        "valueType": "string",
        "value": "B2C",
        "@type": "StringCharacteristic"
      }
    ],
    "checkProductConfigurationItem": [
      {
        "@type": "CheckProductConfigurationItem",
        "id": "01",
        "state": "approved",
        "contextItem": {
          "name": "Quote item 01",
          "itemId": "01",
          "entityId": "3472",
          "entityHref": "https://host:port/quoteManagement/v5/quote/3472",
          "@type": "ItemRef",
          "@referredType": "QuoteItem"
        }
      },
      "productConfiguration": {
        "@type": "ProductConfiguration",
        "productOffering": {
          "id": "14305",
          "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
          "name": "Mobile Handset",
          "@type": "ProductOfferingRef"
        },
        "configurationAction": [
          {
            "@type": "ConfigurationAction",
            "action": "add",
            "description": "Add new product",
            "isSelected": true
          }
        ],
        "configurationTerm": [
          {

```

```

        "@type": "ConfigurationTerm",
        "name": "12 month contract",
        "isSelectable": true,
        "isSelected": false
    },
    {
        "@type": "ConfigurationTerm",
        "name": "24 month contract",
        "isSelectable": true,
        "isSelected": false
    }
],
"configurationCharacteristic": [
    {
        "@type": "ConfigurationCharacteristic",
        "id": "77",
        "name": "Color",
        "valueType": "string",
        "minCardinality": 1,
        "maxCardinality": 1,
        "isConfigurable": true,
        "isVisible": true,
        "configurationCharacteristicValue": [
            {
                "@type": "ConfigurationCharacteristicValue",
                "isSelectable": true,
                "isSelected": true,
                "isVisible": true,
                "characteristicValue": {
                    "name": "Color",
                    "value": "Blue",
                    "@type": "StringCharacteristic"
                }
            },
            {
                "@type": "ConfigurationCharacteristicValue",
                "isSelectable": true,
                "isSelected": false,
                "isVisible": true,
                "characteristicValue": {
                    "name": "Color",
                    "value": "Red",
                    "@type": "StringCharacteristic"
                }
            }
        ]
    }
],
"configurationPrice": [
    {
        "@type": "ConfigurationPrice",
        "name": "Blue phone price",
        "priceType": "oneTimeCharge",
        "productOfferingPrice": {
            "id": "1747",
            "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
            "name": "One time charge for Blue Mobile Handset",
            "@referredType": "ProductOfferingPrice",
            "@type": "ProductOfferingPrice"
        },
        "price": {
            "taxRate": 22,

```



```

        "@type": "Price",
        "dutyFreeAmount": {
            "unit": "EUR",
            "value": 100,
            "@type": "Money"
        },
        "taxIncludedAmount": {
            "unit": "EUR",
            "value": 122,
            "@type": "Money"
        }
    },
    ],
    "product": {
        "@type": "Product",
        "productOffering": {
            "id": "14305",
            "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
            "name": "Mobile Handset",
            "@type": "ProductOfferingRef"
        },
        "productCharacteristic": [
            {
                "name": "Color",
                "value": "Blue",
                "@type": "StringCharacteristic"
            }
        ],
        "productPrice": [
            {
                "name": "Blue phone price",
                "priceType": "oneTimeCharge",
                "productOfferingPrice": {
                    "id": "1747",
                    "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
                    "name": "One time charge for Blue Mobile Handset",
                    "@referredType": "ProductOfferingPrice",
                    "@type": "ProductOfferingPrice"
                },
                "price": {
                    "taxRate": 22,
                    "@type": "Price",
                    "dutyFreeAmount": {
                        "unit": "EUR",
                        "value": 100,
                        "@type": "Money"
                    },
                    "taxIncludedAmount": {
                        "unit": "EUR",
                        "value": 122,
                        "@type": "Money"
                    }
                },
                "@type": "ProductPrice"
            }
        ]
    }
}
]
}

```

```
}
```

Creates a CheckProductConfiguration

POST /checkProductConfiguration?fields=...

Description

This operation creates a CheckProductConfiguration entity.

Mandatory Attributes

Mandatory Attributes	Rule
checkProductConfigurationItem	
checkProductConfigurationItem.@type	
checkProductConfigurationItem.id	
@type	

Usage samples

An example of a simple CheckProductConfiguration for configuring a new product (mobile handset).

Request

```
POST /checkProductConfiguration
Content-Type: application/json

{
  "@type": "CheckProductConfiguration",
  "instantSync": true,
  "channel": {
    "id": "4407",
    "href": "https://host:port/tmf-api/salesChannelManagement/v5/channel/4407",
    "name": "Assisted Channel",
    "@referredType": "SalesChannel",
    "@type": "ChannelRef"
  },
  "relatedParty": [
    {
      "role": "prospect",
      "@type": "RelatedPartyRefOrPartyRoleRef",
      "partyOrPartyRole": {
        "@type": "PartyRef",
        "id": "456",
        "href": "https://host:port/partyManagement/v5/party/456",
        "name": "Ross",
        "referredType": "Individual"
      }
    }
  ],
  "contextEntity": {
```

```

        "id": "3472",
        "href": "https://host:port/quoteManagement/v5/quote/3472",
        "name": "March 2019 Order",
        "@type": "EntityRef",
        "@referredType": "Quote"
    },
    "contextCharacteristic": [
        {
            "name": "salesModel",
            "valueType": "string",
            "value": "B2C",
            "@type": "StringCharacteristic"
        }
    ],
    "checkProductConfigurationItem": [
        {
            "@type": "CheckProductConfigurationItem",
            "id": "01",
            "contextItem": {
                "name": "Quote item 01",
                "itemId": "01",
                "entityId": "3472",
                "entityHref": "https://host:port/quoteManagement/v5/quote/3472",
                "@type": "ItemRef",
                "@referredType": "QuoteItem"
            },
            "productConfiguration": {
                "@type": "ProductConfiguration",
                "productOffering": {
                    "id": "14305",
                    "href": "https://host:port/productCatalogManagement/v5/productOffering/14305",
                    "name": "Mobile Handset",
                    "@type": "ProductOfferingRef"
                },
                "configurationAction": [
                    {
                        "@type": "ConfigurationAction",
                        "action": "add",
                        "description": "Add new product",
                        "isSelected": true
                    }
                ],
                "configurationTerm": [
                    {
                        "@type": "ConfigurationTerm",
                        "name": "12 month contract",
                        "isSelectable": true,
                        "isSelected": false
                    },
                    {
                        "@type": "ConfigurationTerm",
                        "name": "24 month contract",
                        "isSelectable": true,
                        "isSelected": false
                    }
                ],
                "configurationCharacteristic": [
                    {
                        "@type": "ConfigurationCharacteristic",
                        "id": "77",
                        "name": "Color",

```

```

"valueType": "string",
"minCardinality": 1,
"maxCardinality": 1,
"isConfigurable": true,
"isVisible": true,
"configurationCharacteristicValue": [
  {
    "@type": "ConfigurationCharacteristicValue",
    "isSelectable": true,
    "isSelected": true,
    "isVisible": true,
    "characteristicValue": {
      "name": "Color",
      "value": "Blue",
      "@type": "StringCharacteristic"
    }
  },
  {
    "@type": "ConfigurationCharacteristicValue",
    "isSelectable": true,
    "isSelected": false,
    "isVisible": true,
    "characteristicValue": {
      "name": "Color",
      "value": "Red",
      "@type": "StringCharacteristic"
    }
  }
],
"configurationPrice": [
  {
    "@type": "ConfigurationPrice",
    "name": "Blue phone price",
    "priceType": "oneTimeCharge",
    "productOfferingPrice": {
      "id": "1747",
      "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
      "name": "One time charge for Blue Mobile
Handset",
      "@referredType": "ProductOfferingPrice",
      "@type": "ProductOfferingPrice"
    },
    "price": {
      "taxRate": 22,
      "@type": "Price",
      "dutyFreeAmount": {
        "unit": "EUR",
        "value": 100,
        "@type": "Money"
      },
      "taxIncludedAmount": {
        "unit": "EUR",
        "value": 122,
        "@type": "Money"
      }
    }
  }
]
},
"product": {
  "@type": "Product",

```

```

        "status": "created",
        "productOffering": {
            "id": "14305",
            "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
            "name": "Mobile Handset",
            "@type": "ProductOfferingRef"
        },
        "productCharacteristic": [
            {
                "name": "Color",
                "value": "Blue",
                "@type": "StringCharacteristic"
            }
        ],
        "productPrice": [
            {
                "name": "Blue phone price",
                "priceType": "oneTimeCharge",
                "productOfferingPrice": {
                    "id": "1747",
                    "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
                    "name": "One time charge for Blue Mobile Handset",
                    "@referredType": "ProductOfferingPrice",
                    "@type": "ProductOfferingPrice"
                },
                "price": {
                    "taxRate": 22,
                    "@type": "Price",
                    "dutyFreeAmount": {
                        "unit": "EUR",
                        "value": 100,
                        "@type": "Money"
                    },
                    "taxIncludedAmount": {
                        "unit": "EUR",
                        "value": 122,
                        "@type": "Money"
                    }
                },
                "@type": "ProductPrice"
            }
        ]
    }
}

```

Response

```

200

{
    "@type": "CheckProductConfiguration",
    "href": "https://mycsp.com:8080/tmf-
api/productConfiguration/v5/CheckProductConfiguration/456",
    "id": "456",
    "state": "done",

```

```

"channel": {
  "id": "4407",
  "href": "https://host:port/tmf-api/salesChannelManagement/v5/channel/4407",
  "name": "Assisted Channel",
  "@referredType": "SalesChannel",
  "@type": "ChannelRef"
},
"relatedParty": [
  {
    "role": "prospect",
    "@type": "RelatedPartyRefOrPartyRoleRef",
    "partyOrPartyRole": {
      "@type": "PartyRef",
      "id": "456",
      "href": "https://host:port/partyManagement/v5/party/456",
      "name": "Ross",
      "@referredType": "Individual"
    }
  }
],
"contextEntity": {
  "id": "3472",
  "href": "https://host:port/quoteManagement/v5/quote/3472",
  "name": "March 2019 Order",
  "@type": "EntityRef",
  "@referredType": "Quote"
},
"contextCharacteristic": [
  {
    "name": "salesModel",
    "valueType": "string",
    "value": "B2C",
    "@type": "StringCharacteristic"
  }
],
"checkProductConfigurationItem": [
  {
    "@type": "CheckProductConfigurationItem",
    "id": "01",
    "state": "approved",
    "contextItem": {
      "name": "Quote item 01",
      "itemId": "01",
      "entityId": "3472",
      "entityHref": "https://host:port/quoteManagement/v5/quote/3472",
      "@type": "ItemRef",
      "@referredType": "QuoteItem"
    },
    "productConfiguration": {
      "@type": "ProductConfiguration",
      "productOffering": {
        "id": "14305",
        "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
        "name": "Mobile Handset",
        "@type": "ProductOfferingRef"
      },
      "configurationAction": [
        {
          "@type": "ConfigurationAction",
          "action": "add",
          "description": "Add new product",

```

```

        "isSelected": true
      }
    ],
    "configurationTerm": [
      {
        "@type": "ConfigurationTerm",
        "name": "12 month contract",
        "isSelectable": true,
        "isSelected": false
      },
      {
        "@type": "ConfigurationTerm",
        "name": "24 month contract",
        "isSelectable": true,
        "isSelected": false
      }
    ],
    "configurationCharacteristic": [
      {
        "@type": "ConfigurationCharacteristic",
        "id": "77",
        "name": "Color",
        "valueType": "string",
        "minCardinality": 1,
        "maxCardinality": 1,
        "isConfigurable": true,
        "isVisible": true,
        "configurationCharacteristicValue": [
          {
            "@type": "ConfigurationCharacteristicValue",
            "isSelectable": true,
            "isSelected": true,
            "isVisible": true,
            "characteristicValue": {
              "name": "Color",
              "value": "Blue",
              "@type": "StringCharacteristic"
            }
          },
          {
            "@type": "ConfigurationCharacteristicValue",
            "isSelectable": true,
            "isSelected": false,
            "isVisible": true,
            "characteristicValue": {
              "name": "Color",
              "value": "Red",
              "@type": "StringCharacteristic"
            }
          }
        ]
      }
    ]
  },
  "configurationPrice": [
    {
      "@type": "ConfigurationPrice",
      "name": "Blue phone price",
      "priceType": "oneTimeCharge",
      "productOfferingPrice": {
        "id": "1747",
        "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
        "name": "One time charge for Blue Mobile Handset",

```

```

        "@referredType": "ProductOfferingPrice",
        "@type": "ProductOfferingPrice"
    },
    "price": {
        "taxRate": 22,
        "@type": "Price",
        "dutyFreeAmount": {
            "unit": "EUR",
            "value": 100,
            "@type": "Money"
        },
        "taxIncludedAmount": {
            "unit": "EUR",
            "value": 122,
            "@type": "Money"
        }
    },
    "product": {
        "@type": "Product",
        "status": "created",
        "productOffering": {
            "id": "14305",
            "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
            "name": "Mobile Handset",
            "@type": "ProductOfferingRef"
        },
        "productCharacteristic": [
            {
                "name": "Color",
                "value": "Blue",
                "@type": "StringCharacteristic"
            }
        ],
        "productPrice": [
            {
                "name": "Blue phone price",
                "priceType": "oneTimeCharge",
                "productOfferingPrice": {
                    "id": "1747",
                    "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
                    "name": "One time charge for Blue Mobile Handset",
                    "@referredType": "ProductOfferingPrice",
                    "@type": "ProductOfferingPrice"
                },
                "price": {
                    "taxRate": 22,
                    "@type": "Price",
                    "dutyFreeAmount": {
                        "unit": "EUR",
                        "value": 100,
                        "@type": "Money"
                    },
                    "taxIncludedAmount": {
                        "unit": "EUR",
                        "value": 122,
                        "@type": "Money"
                    }
                }
            }
        ],
        "@type": "ProductPrice"
    }
}

```



```

    }
  ]
}

```

An example of a simple CheckProductConfiguration for configuring a new product (mobile handset) where configuration is rejected due to a missing mandatory characteristic (Color).

Request

```

POST /checkProductConfiguration
Content-Type: application/json

{
  "@type": "CheckProductConfiguration",
  "instantSync": true,
  "channel": {
    "id": "4407",
    "href": "https://host:port/tmf-api/salesChannelManagement/v5/channel/4407",
    "name": "Assisted Channel",
    "@referredType": "SalesChannel",
    "@type": "ChannelRef"
  },
  "relatedParty": [
    {
      "role": "prospect",
      "@type": "RelatedPartyRefOrPartyRoleRef",
      "partyOrPartyRole": {
        "@type": "PartyRef",
        "id": "456",
        "href": "https://host:port/partyManagement/v5/party/456",
        "name": "Ross",
        "referredType": "Individual"
      }
    }
  ],
  "contextEntity": {
    "id": "3472",
    "href": "https://host:port/quoteManagement/v5/quote/3472",
    "name": "March 2019 Order",
    "@type": "EntityRef",
    "@referredType": "Quote"
  },
  "contextCharacteristic": [
    {
      "name": "salesModel",
      "valueType": "string",
      "value": "B2C",
      "@type": "StringCharacteristic"
    }
  ],
  "checkProductConfigurationItem": [
    {
      "@type": "CheckProductConfigurationItem",
      "id": "01",
      "contextItem": {

```

```

        "name": "Quote item 01",
        "itemId": "01",
        "entityId": "3472",
        "entityHref": "https://host:port/quoteManagement/v5/quote/3472",
        "@type": "ItemRef",
        "@referredType": "QuoteItem"
    },
    "productConfiguration": {
        "@type": "ProductConfiguration",
        "productOffering": {
            "id": "14305",
            "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
            "name": "Mobile Handset",
            "@type": "ProductOfferingRef"
        },
        "configurationAction": [
            {
                "@type": "ConfigurationAction",
                "action": "add",
                "description": "Add new product",
                "isSelected": true
            }
        ],
        "configurationTerm": [
            {
                "@type": "ConfigurationTerm",
                "name": "12 month contract",
                "isSelectable": true,
                "isSelected": false
            },
            {
                "@type": "ConfigurationTerm",
                "name": "24 month contract",
                "isSelectable": true,
                "isSelected": false
            }
        ],
        "configurationCharacteristic": [
            {
                "@type": "ConfigurationCharacteristic",
                "id": "77",
                "name": "Color",
                "valueType": "string",
                "minCardinality": 1,
                "maxCardinality": 1,
                "isConfigurable": true,
                "isVisible": true,
                "configurationCharacteristicValue": [
                    {
                        "@type": "ConfigurationCharacteristicValue",
                        "isSelectable": true,
                        "isSelected": true,
                        "isVisible": true,
                        "characteristicValue": {
                            "name": "Color",
                            "value": "Blue",
                            "@type": "StringCharacteristic"
                        }
                    }
                ],
                "@type": "ConfigurationCharacteristicValue",

```

```

        "isSelectable": true,
        "isSelected": false,
        "isVisible": true,
        "characteristicValue": {
            "name": "Color",
            "value": "Red",
            "@type": "StringCharacteristic"
        }
    },
    ],
    "configurationPrice": [
        {
            "@type": "ConfigurationPrice",
            "name": "Blue phone price",
            "priceType": "oneTimeCharge",
            "productOfferingPrice": {
                "id": "1747",
                "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
                "name": "One time charge for Blue Mobile
Handset",
                "@referredType": "ProductOfferingPrice",
                "@type": "ProductOfferingPrice"
            },
            "price": {
                "taxRate": 22,
                "@type": "Price",
                "dutyFreeAmount": {
                    "unit": "EUR",
                    "value": 100,
                    "@type": "Money"
                },
                "taxIncludedAmount": {
                    "unit": "EUR",
                    "value": 122,
                    "@type": "Money"
                }
            }
        }
    ]
},
    ],
    "product": {
        "@type": "Product",
        "status": "created",
        "productOffering": {
            "id": "14305",
            "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
            "name": "Mobile Handset",
            "@type": "ProductOfferingRef"
        },
        "productPrice": [
            {
                "name": "Blue phone price",
                "priceType": "oneTimeCharge",
                "productOfferingPrice": {
                    "id": "1747",
                    "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
                    "name": "One time charge for Blue Mobile Handset",
                    "@referredType": "ProductOfferingPrice",
                    "@type": "ProductOfferingPrice"
                }
            }
        ]
    }
}

```

```

    },
    "price": {
      "taxRate": 22,
      "@type": "Price",
      "dutyFreeAmount": {
        "unit": "EUR",
        "value": 100,
        "@type": "Money"
      },
      "taxIncludedAmount": {
        "unit": "EUR",
        "value": 122,
        "@type": "Money"
      }
    },
    "@type": "ProductPrice"
  }
]
}

```

Response

```

200

{
  "@type": "CheckProductConfiguration",
  "href": "https://mycsp.com:8080/tmf-api/productConfiguration/v5/CheckProductConfiguration/456",
  "id": "456",
  "state": "done",
  "channel": {
    "id": "4407",
    "href": "https://host:port/tmf-api/salesChannelManagement/v5/channel/4407",
    "name": "Assisted Channel",
    "@REFERREDType": "SalesChannel",
    "@type": "ChannelRef"
  },
  "relatedParty": [
    {
      "role": "prospect",
      "@type": "RelatedPartyRefOrPartyRoleRef",
      "partyOrPartyRole": {
        "@type": "PartyRef",
        "id": "456",
        "href": "https://host:port/partyManagement/v5/party/456",
        "name": "Ross",
        "@REFERREDType": "Individual"
      }
    }
  ],
  "contextEntity": {
    "id": "3472",
    "href": "https://host:port/quoteManagement/v5/quote/3472",
    "name": "March 2019 Order",
    "@type": "EntityRef",
    "@REFERREDType": "Quote"
  }
}

```

```

    },
    "contextCharacteristic": [
      {
        "name": "salesModel",
        "valueType": "string",
        "value": "B2C",
        "@type": "StringCharacteristic"
      }
    ],
    "checkProductConfigurationItem": [
      {
        "@type": "CheckProductConfigurationItem",
        "id": "01",
        "state": "rejected",
        "stateReason": [
          {
            "code": "123",
            "label": "Configured product is missing characteristic 'Color'",
            "@type": "StateReason"
          }
        ]
      }
    ],
    "contextItem": {
      "name": "Quote item 01",
      "itemId": "01",
      "entityId": "3472",
      "entityHref": "https://host:port/quoteManagement/v5/quote/3472",
      "@type": "ItemRef",
      "@referredType": "QuoteItem"
    },
    "productConfiguration": {
      "@type": "ProductConfiguration",
      "productOffering": {
        "id": "14305",
        "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
        "name": "Mobile Handset",
        "@type": "ProductOfferingRef"
      }
    },
    "configurationAction": [
      {
        "@type": "ConfigurationAction",
        "action": "add",
        "description": "Add new product",
        "isSelected": true
      }
    ],
    "configurationTerm": [
      {
        "@type": "ConfigurationTerm",
        "name": "12 month contract",
        "isSelectable": true,
        "isSelected": false
      },
      {
        "@type": "ConfigurationTerm",
        "name": "24 month contract",
        "isSelectable": true,
        "isSelected": false
      }
    ],
    "configurationCharacteristic": [
      {

```

```

        "@type": "ConfigurationCharacteristic",
        "id": "77",
        "name": "Color",
        "valueType": "string",
        "minCardinality": 1,
        "maxCardinality": 1,
        "isConfigurable": true,
        "isVisible": true,
        "configurationCharacteristicValue": [
            {
                "@type": "ConfigurationCharacteristicValue",
                "isSelectable": true,
                "isSelected": true,
                "isVisible": true,
                "characteristicValue": {
                    "name": "Color",
                    "value": "Blue",
                    "@type": "StringCharacteristic"
                }
            },
            {
                "@type": "ConfigurationCharacteristicValue",
                "isSelectable": true,
                "isSelected": false,
                "isVisible": true,
                "characteristicValue": {
                    "name": "Color",
                    "value": "Red",
                    "@type": "StringCharacteristic"
                }
            }
        ]
    },
    "configurationPrice": [
        {
            "@type": "ConfigurationPrice",
            "name": "Blue phone price",
            "priceType": "oneTimeCharge",
            "productOfferingPrice": {
                "id": "1747",
                "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
                "name": "One time charge for Blue Mobile Handset",
                "@referredType": "ProductOfferingPrice",
                "@type": "ProductOfferingPrice"
            },
            "price": {
                "taxRate": 22,
                "@type": "Price",
                "dutyFreeAmount": {
                    "unit": "EUR",
                    "value": 100,
                    "@type": "Money"
                },
                "taxIncludedAmount": {
                    "unit": "EUR",
                    "value": 122,
                    "@type": "Money"
                }
            }
        }
    ]
}

```

```

    "product": {
      "@type": "Product",
      "status": "created",
      "productOffering": {
        "id": "14305",
        "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
        "name": "Mobile Handset",
        "@type": "ProductOfferingRef"
      },
      "productPrice": [
        {
          "name": "Blue phone price",
          "priceType": "oneTimeCharge",
          "productOfferingPrice": {
            "id": "1747",
            "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
            "name": "One time charge for Blue Mobile Handset",
            "@referredType": "ProductOfferingPrice",
            "@type": "ProductOfferingPrice"
          },
          "price": {
            "taxRate": 22,
            "@type": "Price",
            "dutyFreeAmount": {
              "unit": "EUR",
              "value": 100,
              "@type": "Money"
            },
            "taxIncludedAmount": {
              "unit": "EUR",
              "value": 122,
              "@type": "Money"
            }
          },
          "@type": "ProductPrice"
        }
      ]
    }
  }
}

```

Operations on QueryProductConfiguration

Retrieves a QueryProductConfiguration by ID

GET /queryProductConfiguration/{id}?fields=...

Description

This operation retrieves a QueryProductConfiguration entity. Attribute selection is enabled for all first level attributes. Filtering may be available depending on the compliance level supported by an implementation.

Usage samples

This is an example of simple QueryProductConfiguration.

Request

```
GET /queryProductConfiguration/789
Content-Type: application/json
```

Response

```
200

{
  "@type": "QueryProductConfiguration",
  "href": "https://host:port/tmf-api/productConfiguration/v5/QueryProductConfiguration/789",
  "id": "789",
  "state": "done",
  "channel": {
    "id": "4407",
    "href": "https://host:port/tmf-api/salesChannelManagement/v5/channel/4407",
    "name": "Assisted Channel",
    "@referredType": "SalesChannel",
    "@type": "ChannelRef"
  },
  "relatedParty": [
    {
      "role": "prospect",
      "@type": "RelatedPartyRefOrPartyRoleRef",
      "partyOrPartyRole": {
        "@type": "PartyRef",
        "id": "456",
        "href": "https://host:port/partyManagement/v5/party/456",
        "name": "Ross",
        "@referredType": "Individual"
      }
    }
  ],
  "contextEntity": {
    "id": "3472",
    "href": "https://host:port/quoteManagement/v5/quote/3472",
    "name": "March 2019 Order",
    "@type": "EntityRef",
    "@referredType": "Quote"
  },
  "contextCharacteristic": [
    {
      "name": "salesModel",
      "valueType": "string",
      "value": "B2C",
      "@type": "StringCharacteristic"
    }
  ],
  "requestProductConfigurationItem": [
    {
      "@type": "QueryProductConfigurationItem",
      "id": "01",
      "contextItem": {
        "name": "Quote item 01",

```



```

        "itemId": "01",
        "entityId": "3472",
        "entityHref": "https://host:port/quoteManagement/v5/quote/3472",
        "@type": "ItemRef",
        "@referredType": "QuoteItem"
    },
    "productConfiguration": {
        "@type": "ProductConfiguration",
        "productOffering": {
            "id": "14305",
            "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
            "name": "Mobile Handset",
            "@type": "ProductOfferingRef"
        }
    }
},
],
"computedProductConfigurationItem": [
    {
        "@type": "QueryProductConfigurationItem",
        "id": "02",
        "state": "approved",
        "productConfigurationItemRelationship": [
            {
                "@type": "ProductConfigurationItemRelationship",
                "id": "01",
                "role": "requestItem"
            }
        ],
        "productConfiguration": {
            "@type": "ProductConfiguration",
            "id": "02",
            "isSelectable": false,
            "isSelected": true,
            "isVisible": true,
            "productOffering": {
                "id": "14305",
                "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
                "name": "Mobile Handset",
                "@type": "ProductOfferingRef"
            }
        },
        "configurationAction": [
            {
                "@type": "ConfigurationAction",
                "action": "add",
                "description": "Add new product",
                "isSelected": true
            }
        ],
        "configurationTerm": [
            {
                "@type": "ConfigurationTerm",
                "name": "12 month contract",
                "isSelectable": true,
                "isSelected": false
            },
            {
                "@type": "ConfigurationTerm",
                "name": "24 month contract",
                "isSelectable": true,

```

```

        "isSelected": false
      }
    ],
    "configurationCharacteristic": [
      {
        "@type": "ConfigurationCharacteristic",
        "id": "77",
        "name": "Color",
        "valueType": "String",
        "minCardinality": 1,
        "maxCardinality": 1,
        "isConfigurable": true,
        "isVisible": true,
        "configurationCharacteristicValue": [
          {
            "@type": "ConfigurationCharacteristicValue",
            "isSelectable": true,
            "isSelected": true,
            "isVisible": true,
            "characteristicValue": {
              "name": "Color",
              "value": "Blue",
              "@type": "StringCharacteristic"
            }
          },
          {
            "@type": "ConfigurationCharacteristicValue",
            "isSelectable": true,
            "isSelected": false,
            "isVisible": true,
            "characteristicValue": {
              "name": "Color",
              "value": "Red",
              "@type": "StringCharacteristic"
            }
          }
        ]
      },
      {
        "@type": "ConfigurationPrice",
        "name": "Blue phone price",
        "priceType": "oneTimeCharge",
        "productOfferingPrice": {
          "id": "1747",
          "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
          "name": "One time charge for Blue Mobile
Handset",
          "@referredType": "ProductOfferingPrice",
          "@type": "ProductOfferingPrice"
        },
        "price": {
          "taxRate": 22,
          "@type": "Price",
          "dutyFreeAmount": {
            "unit": "EUR",
            "value": 100,
            "@type": "Money"
          },
          "taxIncludedAmount": {
            "unit": "EUR",
            "value": 122,
            "@type": "Money"
          }
        }
      }
    ]
  }
}

```

List or find QueryProductConfiguration objects

GET /queryProductConfiguration?fields=...

Description

This operation list QueryProductConfiguration 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 QueryProductConfiguration resources.

Request

```
GET /queryProductConfiguration
Content-Type: application/json
```

Response

```

200
[
  {
    "@type": "QueryProductConfiguration",
    "href": "https://host:port/tmf-
api/productConfiguration/v5/QueryProductConfiguration/789",
    "id": "789",
    "state": "done",
    "channel": {
      "id": "4407",
      "href": "https://host:port/tmf-
api/salesChannelManagement/v5/channel/4407",
      "name": "Assisted Channel",
      "@referredType": "SalesChannel",
      "@type": "ChannelRef"
    },
    "relatedParty": [
      {
        "role": "prospect",
        "@type": "RelatedPartyRefOrPartyRoleRef",
        "partyOrPartyRole": {

```

```

        "@type": "PartyRef",
        "id": "456",
        "href": "https://host:port/partyManagement/v5/party/456",
        "name": "Ross",
        "@referredType": "Individual"
    }
},
"contextEntity": {
    "id": "3472",
    "href": "https://host:port/quoteManagement/v5/quote/3472",
    "name": "March 2019 Order",
    "@type": "EntityRef",
    "@referredType": "Quote"
},
"contextCharacteristic": [
    {
        "name": "salesModel",
        "valueType": "string",
        "value": "B2C",
        "@type": "StringCharacteristic"
    }
],
"requestProductConfigurationItem": [
    {
        "@type": "QueryProductConfigurationItem",
        "id": "01",
        "contextItem": {
            "name": "Quote item 01",
            "itemId": "01",
            "entityId": "3472",
            "entityHref": "https://host:port/quoteManagement/v5/quote/3472",
            "@type": "ItemRef",
            "@referredType": "QuoteItem"
        },
        "productConfiguration": {
            "@type": "ProductConfiguration",
            "productOffering": {
                "id": "14305",
                "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
                "name": "Mobile Handset",
                "@type": "ProductOfferingRef"
            }
        }
    }
],
"computedProductConfigurationItem": [
    {
        "@type": "QueryProductConfigurationItem",
        "id": "02",
        "state": "approved",
        "productConfigurationItemRelationship": [
            {
                "@type": "ProductConfigurationItemRelationship",
                "id": "01",
                "role": "requestItem"
            }
        ],
        "productConfiguration": {
            "@type": "ProductConfiguration",
            "id": "02",

```

```

        "isSelectable": false,
        "isSelected": true,
        "isVisible": true,
        "productOffering": {
            "id": "14305",
            "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
            "name": "Mobile Handset",
            "@type": "ProductOfferingRef"
        },
        "configurationAction": [
            {
                "@type": "ConfigurationAction",
                "action": "add",
                "description": "Add new product",
                "isSelected": true
            }
        ],
        "configurationTerm": [
            {
                "@type": "ConfigurationTerm",
                "name": "12 month contract",
                "isSelectable": true,
                "isSelected": false
            },
            {
                "@type": "ConfigurationTerm",
                "name": "24 month contract",
                "isSelectable": true,
                "isSelected": false
            }
        ],
        "configurationCharacteristic": [
            {
                "@type": "ConfigurationCharacteristic",
                "id": "77",
                "name": "Color",
                "valueType": "string",
                "minCardinality": 1,
                "maxCardinality": 1,
                "isConfigurable": true,
                "isVisible": true,
                "configurationCharacteristicValue": [
                    {
                        "@type": "ConfigurationCharacteristicValue",
                        "isSelectable": true,
                        "isSelected": true,
                        "isVisible": true,
                        "characteristicValue": {
                            "name": "Color",
                            "value": "Blue",
                            "@type": "StringCharacteristic"
                        }
                    },
                    {
                        "@type": "ConfigurationCharacteristicValue",
                        "isSelectable": true,
                        "isSelected": false,
                        "isVisible": true,
                        "characteristicValue": {
                            "name": "Color",
                            "value": "Red",
                            "@type": "StringCharacteristic"
                        }
                    }
                ]
            }
        ]
    }

```

```

    }
  },
  "configurationPrice": [
    {
      "@type": "ConfigurationPrice",
      "name": "Blue phone price",
      "priceType": "oneTimeCharge",
      "productOfferingPrice": {
        "id": "1747",
        "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
        "name": "One time charge for Blue Mobile
Handset",
        "@referredType": "ProductOfferingPrice",
        "@type": "ProductOfferingPrice"
      },
      "price": {
        "taxRate": 22,
        "@type": "Price",
        "dutyFreeAmount": {
          "unit": "EUR",
          "value": 100,
          "@type": "Money"
        },
        "taxIncludedAmount": {
          "unit": "EUR",
          "value": 122,
          "@type": "Money"
        }
      }
    }
  ]
}
]

```

Creates a QueryProductConfiguration

POST /queryProductConfiguration?fields=...

Description

This operation creates a QueryProductConfiguration entity.

Mandatory Attributes

Mandatory Attributes	Rule
requestProductConfigurationItem	
requestProductConfigurationItem.@type	

Mandatory Attributes	Rule
requestProductConfigurationItem.id	
@type	

Usage samples

An example of creating QueryProductConfiguration for configuring a new product.

Request

```
POST /queryProductConfiguration
Content-Type: application/json

{
  "@type": "QueryProductConfiguration",
  "instantSync": true,
  "channel": {
    "id": "4407",
    "href": "https://host:port/tmf-api/salesChannelManagement/v5/channel/4407",
    "name": "Assisted Channel",
    "@referredType": "SalesChannel",
    "@type": "ChannelRef"
  },
  "relatedParty": [
    {
      "role": "prospect",
      "@type": "RelatedPartyRefOrPartyRoleRef",
      "partyOrPartyRole": {
        "@type": "PartyRef",
        "id": "456",
        "href": "https://host:port/partyManagement/v5/party/456",
        "name": "Ross",
        "@referredType": "Individual"
      }
    }
  ],
  "contextEntity": {
    "id": "3472",
    "href": "https://host:port/quoteManagement/v5/quote/3472",
    "name": "March 2019 Order",
    "@type": "EntityRef",
    "@referredType": "Quote"
  },
  "contextCharacteristic": [
    {
      "name": "salesModel",
      "valueType": "string",
      "value": "B2C",
      "@type": "StringCharacteristic"
    }
  ],
  "requestProductConfigurationItem": [
    {
      "@type": "QueryProductConfigurationItem",
      "id": "01",
      "contextItem": {
        "name": "Quote item 01",

```

```

        "itemId": "01",
        "entityId": "3472",
        "entityHref": "https://host:port/quoteManagement/v5/quote/3472",
        "@type": "ItemRef",
        "@referredType": "QuoteItem"
    },
    "productConfiguration": {
        "@type": "ProductConfiguration",
        "productOffering": {
            "id": "14305",
            "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
            "name": "Mobile Handset",
            "@type": "ProductOfferingRef"
        },
        "configurationAction": [
            {
                "@type": "ConfigurationAction",
                "action": "add",
                "description": "Add new product",
                "isSelected": true
            }
        ]
    }
}

```

Response

```

200

{
    "@type": "QueryProductConfiguration",
    "href": "https://host:port/tmf-
api/productConfiguration/v5/QueryProductConfiguration/789",
    "id": "789",
    "state": "done",
    "channel": {
        "id": "4407",
        "href": "https://host:port/tmf-api/salesChannelManagement/v5/channel/4407",
        "name": "Assisted Channel",
        "@referredType": "SalesChannel",
        "@type": "ChannelRef"
    },
    "relatedParty": [
        {
            "role": "prospect",
            "@type": "RelatedPartyRefOrPartyRoleRef",
            "partyOrPartyRole": {
                "@type": "PartyRef",
                "id": "456",
                "href": "https://host:port/partyManagement/v5/party/456",
                "name": "Ross",
                "@referredType": "Individual"
            }
        }
    ],
    "contextEntity": {

```



```

    "id": "3472",
    "href": "https://host:port/quoteManagement/v5/quote/3472",
    "name": "March 2019 Order",
    "@type": "EntityRef",
    "@referredType": "Quote"
  },
  "contextCharacteristic": [
    {
      "name": "salesModel",
      "valueType": "string",
      "value": "B2C",
      "@type": "StringCharacteristic"
    }
  ],
  "requestProductConfigurationItem": [
    {
      "@type": "QueryProductConfigurationItem",
      "id": "01",
      "contextItem": {
        "name": "Quote item 01",
        "itemId": "01",
        "entityId": "3472",
        "entityHref": "https://host:port/quoteManagement/v5/quote/3472",
        "@type": "ItemRef",
        "@referredType": "QuoteItem"
      },
      "productConfiguration": {
        "@type": "ProductConfiguration",
        "productOffering": {
          "id": "14305",
          "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
          "name": "Mobile Handset",
          "@type": "ProductOfferingRef"
        }
      }
    }
  ],
  "computedProductConfigurationItem": [
    {
      "@type": "QueryProductConfigurationItem",
      "id": "02",
      "state": "approved",
      "productConfigurationItemRelationship": [
        {
          "@type": "ProductConfigurationItemRelationship",
          "id": "01",
          "role": "requestItem"
        }
      ],
      "productConfiguration": {
        "@type": "ProductConfiguration",
        "id": "02",
        "isSelectable": false,
        "isSelected": true,
        "isVisible": true,
        "productOffering": {
          "id": "14305",
          "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
          "name": "Mobile Handset",
          "@type": "ProductOfferingRef"
        }
      }
    }
  ]
}

```

```

    },
    "configurationAction": [
      {
        "@type": "ConfigurationAction",
        "action": "add",
        "description": "Add new product",
        "isSelected": true
      }
    ],
    "configurationTerm": [
      {
        "@type": "ConfigurationTerm",
        "name": "12 month contract",
        "isSelectable": true,
        "isSelected": false
      },
      {
        "@type": "ConfigurationTerm",
        "name": "24 month contract",
        "isSelectable": true,
        "isSelected": false
      }
    ],
    "configurationCharacteristic": [
      {
        "@type": "ConfigurationCharacteristic",
        "id": "77",
        "name": "Color",
        "valueType": "string",
        "minCardinality": 1,
        "maxCardinality": 1,
        "isConfigurable": true,
        "isVisible": true,
        "configurationCharacteristicValue": [
          {
            "@type": "ConfigurationCharacteristicValue",
            "isSelectable": true,
            "isSelected": true,
            "isVisible": true,
            "characteristicValue": {
              "name": "Color",
              "value": "Blue",
              "@type": "StringCharacteristic"
            }
          },
          {
            "@type": "ConfigurationCharacteristicValue",
            "isSelectable": true,
            "isSelected": false,
            "isVisible": true,
            "characteristicValue": {
              "name": "Color",
              "value": "Red",
              "@type": "StringCharacteristic"
            }
          }
        ]
      }
    ],
    "configurationPrice": [
      {
        "@type": "ConfigurationPrice",
        "name": "Blue phone price",
        "priceType": "oneTimeCharge",
        "productOfferingPrice": {

```

```

    "id": "1747",
    "href": "https://host:port/tmf-  
api/productCatalogManagement/v5/productOfferingPrice/1747",  
    "name": "One time charge for Blue Mobile  
Handset",  
  
    "@referredType": "ProductOfferingPrice",  
    "@type": "ProductOfferingPrice"  
},  
    "price": {  
        "taxRate": 22,  
        "@type": "Price",  
        "dutyFreeAmount": {  
            "unit": "EUR",  
            "value": 100,  
            "@type": "Money"  
        },  
        "taxIncludedAmount": {  
            "unit": "EUR",  
            "value": 122,  
            "@type": "Money"  
        }  
    }  
}  
]  
}  
]  
}  
]`
```

An example of creating QueryProductConfiguration for configuring a new product with non default characteristic value. The example illustrates price change when changing the 'Color' characteristic from 'Blue' to 'Red'.

Request

```
POST /queryProductConfiguration
Content-Type: application/json

{
  "@type": "QueryProductConfiguration",
  "instantSync": true,
  "channel": {
    "id": "4407",
    "href": "https://host:port/tmf-api/salesChannelManagement/v5/channel/4407",
    "name": "Assisted Channel",
    "@referredType": "SalesChannel",
    "@type": "ChannelRef"
  },
  "relatedParty": [
    {
      "role": "prospect",
      "@type": "RelatedPartyRefOrPartyRoleRef",
      "partyOrPartyRole": {
        "@type": "PartyRef",
        "id": "456",
        "href": "https://host:port/partyManagement/v5/party/456",
        "name": "Ross",

```



```

        "configurationCharacteristic": [
          {
            "@type": "ConfigurationCharacteristic",
            "id": "77",
            "name": "Color",
            "valueType": "string",
            "minCardinality": 1,
            "maxCardinality": 1,
            "isConfigurable": true,
            "isVisible": true,
            "configurationCharacteristicValue": [
              {
                "@type": "ConfigurationCharacteristicValue",
                "isSelectable": true,
                "isSelected": false,
                "isVisible": true,
                "characteristicValue": {
                  "name": "Color",
                  "value": "Blue",
                  "@type": "StringCharacteristic"
                }
              },
              {
                "@type": "ConfigurationCharacteristicValue",
                "isSelectable": true,
                "isSelected": true,
                "isVisible": true,
                "characteristicValue": {
                  "name": "Color",
                  "value": "Red",
                  "@type": "StringCharacteristic"
                }
              }
            ]
          }
        ]
      }
    ]
  }
}

```

Response

```

200

{
  "@type": "QueryProductConfiguration",
  "href": "https://host:port/tmf-api/productConfiguration/v5/QueryProductConfiguration/789",
  "id": "789",
  "state": "done",
  "channel": {
    "id": "4407",
    "href": "https://host:port/tmf-api/salesChannelManagement/v5/channel/4407",
    "name": "Assisted Channel",
    "@referredType": "SalesChannel",
    "@type": "ChannelRef"
  },
  "relatedParty": [
    {

```

```

        "role": "prospect",
        "@type": "RelatedPartyRefOrPartyRoleRef",
        "partyOrPartyRole": {
            "@type": "PartyRef",
            "id": "456",
            "href": "https://host:port/partyManagement/v5/party/456",
            "name": "Ross",
            "@referredType": "Individual"
        }
    },
    ],
    "contextEntity": {
        "id": "3472",
        "href": "https://host:port/quoteManagement/v5/quote/3472",
        "name": "March 2019 Order",
        "@type": "EntityRef",
        "@referredType": "Quote"
    },
    ],
    "contextCharacteristic": [
        {
            "name": "salesModel",
            "valueType": "string",
            "value": "B2C",
            "@type": "StringCharacteristic"
        }
    ],
    ],
    "requestProductConfigurationItem": [
        {
            "@type": "QueryProductConfigurationItem",
            "id": "01",
            "contextItem": {
                "name": "Quote item 01",
                "itemId": "01",
                "entityId": "3472",
                "entityHref": "https://host:port/quoteManagement/v5/quote/3472",
                "@type": "ItemRef",
                "@referredType": "QuoteItem"
            },
        },
        "productConfiguration": {
            "@type": "ProductConfiguration",
            "productOffering": {
                "id": "14305",
                "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
                "name": "Mobile Handset",
                "@type": "ProductOfferingRef"
            },
            "configurationAction": [
                {
                    "@type": "ConfigurationAction",
                    "action": "add",
                    "description": "Add new product",
                    "isSelected": true
                }
            ],
            "configurationTerm": [
                {
                    "@type": "ConfigurationTerm",
                    "name": "12 month contract",
                    "isSelectable": true,
                    "isSelected": false
                }
            ],
        },
    ],

```

```

        {
            "@type": "ConfigurationTerm",
            "name": "24 month contract",
            "isSelectable": true,
            "isSelected": false
        }
    ],
    "configurationCharacteristic": [
        {
            "@type": "ConfigurationCharacteristic",
            "id": "77",
            "name": "Color",
            "valueType": "string",
            "minCardinality": 1,
            "maxCardinality": 1,
            "isConfigurable": true,
            "isVisible": true,
            "configurationCharacteristicValue": [
                {
                    "@type": "ConfigurationCharacteristicValue",
                    "isSelectable": true,
                    "isSelected": false,
                    "isVisible": true,
                    "characteristicValue": {
                        "name": "Color",
                        "value": "Blue",
                        "@type": "StringCharacteristic"
                    }
                },
                {
                    "@type": "ConfigurationCharacteristicValue",
                    "isSelectable": true,
                    "isSelected": true,
                    "isVisible": true,
                    "characteristicValue": {
                        "name": "Color",
                        "value": "Red",
                        "@type": "StringCharacteristic"
                    }
                }
            ]
        }
    ]
},
],
"computedProductConfigurationItem": [
    {
        "@type": "QueryProductConfigurationItem",
        "id": "02",
        "state": "approved",
        "productConfigurationItemRelationship": [
            {
                "@type": "ProductConfigurationItemRelationship",
                "id": "01",
                "role": "requestItem"
            }
        ],
        "productConfiguration": {
            "@type": "ProductConfiguration",
            "id": "02",
            "isSelectable": false,
            "isSelected": true,

```

```

        "isVisible": true,
        "productOffering": {
            "id": "14305",
            "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
            "name": "Mobile Handset",
            "@type": "ProductOfferingRef"
        },
        "configurationAction": [
            {
                "@type": "ConfigurationAction",
                "action": "add",
                "description": "Add new product",
                "isSelected": true
            }
        ],
        "configurationTerm": [
            {
                "@type": "ConfigurationTerm",
                "name": "12 month contract",
                "isSelectable": true,
                "isSelected": false
            },
            {
                "@type": "ConfigurationTerm",
                "name": "24 month contract",
                "isSelectable": true,
                "isSelected": false
            }
        ],
        "configurationCharacteristic": [
            {
                "@type": "ConfigurationCharacteristic",
                "id": "77",
                "name": "Color",
                "valueType": "string",
                "minCardinality": 1,
                "maxCardinality": 1,
                "isConfigurable": true,
                "isVisible": true,
                "configurationCharacteristicValue": [
                    {
                        "@type": "ConfigurationCharacteristicValue",
                        "isSelectable": true,
                        "isSelected": false,
                        "isVisible": true,
                        "characteristicValue": {
                            "name": "Color",
                            "value": "Blue",
                            "@type": "StringCharacteristic"
                        }
                    },
                    {
                        "@type": "ConfigurationCharacteristicValue",
                        "isSelectable": true,
                        "isSelected": true,
                        "isVisible": true,
                        "characteristicValue": {
                            "name": "Color",
                            "value": "Red",
                            "@type": "StringCharacteristic"
                        }
                    }
                ]
            }
        ]
    }

```



```

    ]
  },
  "configurationPrice": [
    {
      "@type": "ConfigurationPrice",
      "name": "Blue phone price",
      "priceType": "oneTimeCharge",
      "productOfferingPrice": {
        "id": "1747",
        "href": "https://host:port/tmf-api/productCatalogManagement/v5/productOfferingPrice/1747",
        "name": "One time charge for Red Mobile Handset",
        "@referredType": "ProductOfferingPrice",
        "@type": "ProductOfferingPrice"
      },
      "price": {
        "taxRate": 22,
        "@type": "Price",
        "dutyFreeAmount": {
          "unit": "EUR",
          "value": 110,
          "@type": "Money"
        },
        "taxIncludedAmount": {
          "unit": "EUR",
          "value": 134.2,
          "@type": "Money"
        }
      }
    }
  ]
}

```

An example of creating QueryProductConfiguration to retrieve valid actions for existing product.

Request

```

POST /queryProductConfiguration
Content-Type: application/json

{
  "@type": "QueryProductConfiguration",
  "instantSync": true,
  "channel": {
    "id": "4407",
    "href": "https://host:port/tmf-api/salesChannelManagement/v5/channel/4407",
    "name": "Assisted Channel",
    "@referredType": "SalesChannel",
    "@type": "ChannelRef"
  },
  "relatedParty": [
    {
      "role": "prospect",
      "@type": "RelatedPartyRefOrPartyRoleRef",
      "partyOrPartyRole": {
        "@type": "PartyRef",

```

```

        "id": "456",
        "href": "https://host:port/partyManagement/v5/party/456",
        "name": "Ross",
        "@referredType": "Individual"
      }
    ],
    "contextEntity": {
      "id": "3472",
      "href": "https://host:port/quoteManagement/v5/quote/3472",
      "name": "March 2019 Order",
      "@type": "EntityRef",
      "@referredType": "Quote"
    },
    "contextCharacteristic": [
      {
        "name": "salesModel",
        "valueType": "string",
        "value": "B2C",
        "@type": "StringCharacteristic"
      }
    ],
    "requestProductConfigurationItem": [
      {
        "@type": "QueryProductConfigurationItem",
        "id": "01",
        "contextItem": {
          "name": "Quote item 01",
          "itemId": "01",
          "entityId": "3472",
          "entityHref": "https://host:port/quoteManagement/v5/quote/3472",
          "@type": "ItemRef",
          "@referredType": "QuoteItem"
        },
        "productConfiguration": {
          "@type": "ProductConfiguration",
          "product": {
            "@type": "ProductRef",
            "@referredType": "Product",
            "id": "pr1"
          }
        }
      }
    ]
  }
}

```

Response

```

200

{
  "@type": "QueryProductConfiguration",
  "href": "https://mycsp.com:8080/tmf-api/productConfiguration/v5/CheckProductConfiguration/456",
  "id": "456",
  "channel": {
    "id": "4407",
    "href": "https://host:port/tmf-api/salesChannelManagement/v5/channel/4407",
    "name": "Assisted Channel",

```

```

    "@referredType": "SalesChannel",
    "@type": "ChannelRef"
  },
  "relatedParty": [
    {
      "role": "prospect",
      "@type": "RelatedPartyRefOrPartyRoleRef",
      "partyOrPartyRole": {
        "@type": "PartyRef",
        "id": "456",
        "href": "https://host:port/partyManagement/v5/party/456",
        "name": "Ross",
        "@referredType": "Individual"
      }
    }
  ],
  "requestProductConfigurationItem": [
    {
      "@type": "QueryProductConfigurationItem",
      "id": "01",
      "productConfiguration": {
        "@type": "ProductConfiguration",
        "product": {
          "@type": "ProductRef",
          "@referredType": "Product",
          "id": "pr1"
        }
      }
    }
  ],
  "computedProductConfigurationItem": [
    {
      "@type": "QueryProductConfigurationItem",
      "id": "02",
      "state": "approved",
      "productConfigurationItemRelationship": [
        {
          "@type": "ProductConfigurationItemRelationship",
          "id": "01",
          "role": "requestItem"
        }
      ],
      "productConfiguration": {
        "@type": "ProductConfiguration",
        "id": "02",
        "isSelectable": false,
        "isSelected": true,
        "isVisible": true,
        "product": {
          "@type": "ProductRef",
          "@referredType": "Product",
          "id": "pr1"
        }
      },
      "configurationAction": [
        {
          "@type": "ConfigurationAction",
          "action": "terminate",
          "description": "Terminate product",
          "isSelected": false
        },
        {
          "@type": "ConfigurationAction",
          "action": "Change bandwidth",

```

```

        "description": "Change bandwidth",
        "isSelected": false
      }
    ]
  }
}

```

An example of creating QueryProductConfiguration to retrieve configuration options after selecting action for existing product.

Request

```

POST /queryProductConfiguration
Content-Type: application/json

{
  "@type": "QueryProductConfiguration",
  "instantSync": true,
  "channel": {
    "id": "4407",
    "href": "https://host:port/tmf-api/salesChannelManagement/v5/channel/4407",
    "name": "Assisted Channel",
    "@referredType": "SalesChannel",
    "@type": "ChannelRef"
  },
  "relatedParty": [
    {
      "role": "prospect",
      "@type": "RelatedPartyRefOrPartyRoleRef",
      "partyOrPartyRole": {
        "@type": "PartyRef",
        "id": "456",
        "href": "https://host:port/partyManagement/v5/party/456",
        "name": "Ross",
        "@referredType": "Individual"
      }
    }
  ],
  "contextEntity": {
    "id": "3472",
    "href": "https://host:port/quoteManagement/v5/quote/3472",
    "name": "March 2019 Order",
    "@type": "EntityRef",
    "@referredType": "Quote"
  },
  "contextCharacteristic": [
    {
      "name": "salesModel",
      "valueType": "string",
      "value": "B2C",
      "@type": "StringCharacteristic"
    }
  ],
  "requestProductConfigurationItem": [
    {
      "@type": "QueryProductConfigurationItem",
      "id": "01",

```

```

    "contextItem": {
      "name": "Quote item 01",
      "itemId": "01",
      "entityId": "3472",
      "entityHref": "https://host:port/quoteManagement/v5/quote/3472",
      "@type": "ItemRef",
      "@referredType": "QuoteItem"
    },
    "productConfiguration": {
      "@type": "ProductConfiguration",
      "product": {
        "@type": "ProductRef",
        "@referredType": "Product",
        "id": "pr1"
      },
      "configurationAction": [
        {
          "@type": "ConfigurationAction",
          "action": "terminate",
          "description": "Terminate product",
          "isSelected": false
        },
        {
          "@type": "ConfigurationAction",
          "action": "Change bandwidth",
          "description": "Change bandwidth",
          "isSelected": true
        }
      ]
    }
  }
}

```

Response

```

200

{
  "@type": "QueryProductConfiguration",
  "href": "https://mycsp.com:8080/tmf-api/productConfiguration/v5/CheckProductConfiguration/456",
  "id": "456",
  "channel": {
    "id": "4407",
    "href": "https://host:port/tmf-api/salesChannelManagement/v5/channel/4407",
    "name": "Assisted Channel",
    "@referredType": "SalesChannel",
    "@type": "ChannelRef"
  },
  "relatedParty": [
    {
      "role": "prospect",
      "@type": "RelatedPartyRefOrPartyRoleRef",
      "partyOrPartyRole": {
        "@type": "PartyRef",
        "id": "456",
        "href": "https://host:port/partyManagement/v5/party/456",
        "name": "Ross",

```

```

        "@referredType": "Individual"
    }
  },
  ],
  "contextEntity": {
    "id": "3472",
    "href": "https://host:port/quoteManagement/v5/quote/3472",
    "name": "March 2019 Order",
    "@type": "EntityRef",
    "@referredType": "Quote"
  },
  "contextCharacteristic": [
    {
      "name": "salesModel",
      "valueType": "string",
      "value": "B2C",
      "@type": "StringCharacteristic"
    }
  ],
  "requestProductConfigurationItem": [
    {
      "@type": "QueryProductConfigurationItem",
      "id": "01",
      "contextItem": {
        "name": "Quote item 01",
        "itemId": "01",
        "entityId": "3472",
        "entityHref": "https://host:port/quoteManagement/v5/quote/3472",
        "@type": "ItemRef",
        "@referredType": "QuoteItem"
      },
      "productConfiguration": {
        "@type": "ProductConfiguration",
        "product": {
          "@type": "Product",
          "productOffering": {
            "id": "14305",
            "href":
"https://host:port/productCatalogManagement/v5/productOffering/14305",
            "name": "Internet",
            "@type": "ProductOfferingRef"
          },
          "productCharacteristic": [
            {
              "name": "Bandwidth",
              "value": "Fast",
              "@type": "StringCharacteristic"
            }
          ],
          "productPrice": [
            {
              "name": "Fast internet price",
              "priceType": "oneTimeCharge",
              "productOfferingPrice": {
                "id": "1747",
                "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
                "name": "Recurring charge for Fast Internet",
                "@referredType": "ProductOfferingPrice",
                "@type": "ProductOfferingPrice"
              },
              "price": {

```

```

        "taxRate": 22,
        "@type": "Price",
        "dutyFreeAmount": {
            "unit": "EUR",
            "value": 100,
            "@type": "Money"
        },
        "taxIncludedAmount": {
            "unit": "EUR",
            "value": 122,
            "@type": "Money"
        }
    },
    "@type": "ProductPrice"
}
]
},
"configurationAction": [
    {
        "@type": "ConfigurationAction",
        "action": "terminate",
        "description": "Terminate product",
        "isSelected": false
    },
    {
        "@type": "ConfigurationAction",
        "action": "Change bandwidth",
        "description": "Change bandwidth",
        "isSelected": true
    }
]
}
],
"computedProductConfigurationItem": [
    {
        "@type": "QueryProductConfigurationItem",
        "id": "02",
        "state": "approved",
        "productConfigurationItemRelationship": [
            {
                "@type": "ProductConfigurationItemRelationship",
                "id": "01",
                "role": "requestItem"
            }
        ],
        "productConfiguration": {
            "@type": "ProductConfiguration",
            "id": "02",
            "isSelectable": false,
            "isSelected": true,
            "isVisible": true,
            "product": {
                "@type": "ProductRef",
                "@referredType": "Product",
                "id": "pr1"
            },
            "configurationAction": [
                {
                    "@type": "ConfigurationAction",
                    "action": "terminate",
                    "description": "Terminate product",
                    "isSelected": false
                }
            ]
        }
    }
]

```

```

    },
    {
      "@type": "ConfigurationAction",
      "action": "Change bandwidth",
      "description": "Change bandwidth",
      "isSelected": true
    }
  ],
  "configurationCharacteristic": [
    {
      "@type": "ConfigurationCharacteristic",
      "id": "77",
      "name": "Bandwidth",
      "valueType": "string",
      "minCardinality": 1,
      "maxCardinality": 1,
      "isConfigurable": true,
      "isVisible": true,
      "configurationCharacteristicValue": [
        {
          "@type": "ConfigurationCharacteristicValue",
          "isSelectable": true,
          "isSelected": true,
          "isVisible": true,
          "characteristicValue": {
            "name": "Bandwidth",
            "value": "Fast",
            "@type": "StringCharacteristic"
          }
        },
        {
          "@type": "ConfigurationCharacteristicValue",
          "isSelectable": true,
          "isSelected": false,
          "isVisible": true,
          "characteristicValue": {
            "name": "Bandwidth",
            "value": "SuperFast",
            "@type": "StringCharacteristic"
          }
        }
      ]
    }
  ]
},
"configurationPrice": [
  {
    "@type": "ConfigurationPrice",
    "name": "Fast internet price",
    "priceType": "recurringCharge",
    "productOfferingPrice": {
      "id": "1747",
      "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/1747",
      "name": "Recurring charge for Fast Internet",
      "@referredType": "ProductOfferingPrice",
      "@type": "ProductOfferingPrice"
    },
    "price": {
      "taxRate": 22,
      "@type": "Price",
      "dutyFreeAmount": {
        "unit": "EUR",
        "value": 100,

```



```

        "@type": "Money"
      },
      "taxIncludedAmount": {
        "unit": "EUR",
        "value": 122,
        "@type": "Money"
      }
    }
  ]
}

```

An example of creating QueryProductConfiguration for configuring new product as specified by the use-case 003 in IG1228.

Request

```

POST /queryProductConfiguration
Content-Type: application/json

{
  "@type": "QueryProductConfiguration",
  "instantSync": true,
  "channel": {
    "id": "01",
    "href": "https://host:port/tmf-api/salesChannelManagement/v5/channel/01",
    "name": "Customer portal",
    "@referredType": "SalesChannel",
    "@type": "ChannelRef"
  },
  "relatedParty": [
    {
      "role": "customer",
      "@type": "RelatedPartyOrPartyRole",
      "partyOrPartyRole": {
        "@type": "PartyRef",
        "id": "10000008",
        "href": "https://host:port/partyManagement/v5/party/10000008",
        "name": "Sandy Smith",
        "referredType": "Individual"
      }
    }
  ],
  "contextCharacteristic": [
    {
      "name": "salesModel",
      "valueType": "string",
      "value": "B2C",
      "@type": "StringCharacteristic"
    }
  ],
  "requestProductConfigurationItem": [
    {
      "@type": "QueryProductConfigurationItem",
      "id": "01",
      "productConfiguration": {

```

```

        "@type": "ProductConfiguration",
        "productOffering": {
            "id": "fc1",
            "href":
"https://host:port/productCatalogManagement/v5/productOffering/fc1",
            "name": "Fiber contract",
            "@type": "ProductOfferingRef"
        },
        "configurationAction": [
            {
                "@type": "ConfigurationAction",
                "action": "add",
                "description": "Add new product",
                "isSelected": true
            }
        ]
    }
}

```

Response

```

200

{
    "@type": "QueryProductConfiguration",
    "href": "https://host:port/tmf-
api/productConfiguration/v5/QueryProductConfiguration/1024",
    "id": "1024",
    "state": "done",
    "channel": {
        "id": "01",
        "href": "https://host:port/tmf-api/salesChannelManagement/v5/channel/01",
        "name": "Customer portal",
        "@referredType": "SalesChannel",
        "@type": "ChannelRef"
    },
    "relatedParty": [
        {
            "role": "customer",
            "@type": "RelatedPartyOrPartyRole",
            "partyOrPartyRole": {
                "@type": "PartyRef",
                "id": "100000008",
                "href": "https://host:port/partyManagement/v5/party/100000008",
                "name": "Sandy Smith",
                "referredType": "Individual"
            }
        }
    ],
    "contextCharacteristic": [
        {
            "name": "salesModel",
            "valueType": "string",
            "value": "B2C",
            "@type": "StringCharacteristic"
        }
    ],
    "requestProductConfigurationItem": [

```

```

    {
      "@type": "QueryProductConfigurationItem",
      "id": "01",
      "productConfiguration": {
        "@type": "ProductConfiguration",
        "productOffering": {
          "id": "fc1",
          "href":
"https://host:port/productCatalogManagement/v5/productOffering/fc1",
          "name": "Fiber contract",
          "@type": "ProductOfferingRef"
        },
        "configurationAction": [
          {
            "@type": "ConfigurationAction",
            "action": "add",
            "description": "Add new product",
            "isSelected": true
          }
        ]
      }
    },
    "computedProductConfigurationItem": [
      {
        "@type": "QueryProductConfigurationItem",
        "id": "02",
        "state": "approved",
        "productConfigurationItemRelationship": [
          {
            "@type": "ProductConfigurationItemRelationship",
            "id": "01",
            "role": "requestItem"
          }
        ],
        "productConfiguration": {
          "@type": "ProductConfiguration",
          "id": "02",
          "isSelectable": true,
          "isSelected": true,
          "isVisible": true,
          "productOffering": {
            "id": "fc1",
            "href":
"https://host:port/productCatalogManagement/v5/productOffering/fc1",
            "name": "Fiber contract",
            "@type": "ProductOfferingRef"
          },
          "configurationAction": [
            {
              "@type": "ConfigurationAction",
              "action": "add",
              "description": "Add new product",
              "isSelected": true
            }
          ],
          "configurationPrice": [
            {
              "@type": "ConfigurationPrice",
              "name": "Welcome discount 5€ for 10 months",
              "priceType": "recurringDiscount",
              "productOfferingPrice": {
                "id": "popFc1",

```

```

        "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/popFc1",
        "name": "Welcome discount 5€ for 10 months",
        "@referredType": "ProductOfferingPrice",
        "@type": "ProductOfferingPrice"
    },
    "price": {
        "taxRate": 22,
        "@type": "Price",
        "dutyFreeAmount": {
            "unit": "EUR",
            "value": 5,
            "@type": "Money"
        },
        "taxIncludedAmount": {
            "unit": "EUR",
            "value": 6.10,
            "@type": "Money"
        },
        "applicationDuration": {
            "amount": 10,
            "units": "month"
        }
    }
}
    ],
    "queryProductConfigurationItem": [
        {
            "@type": "QueryProductConfigurationItem",
            "id": "03",
            "state": "approved",
            "productConfiguration": {
                "@type": "ProductConfiguration",
                "id": "03",
                "isSelectable": true,
                "isSelected": true,
                "isVisible": true,
                "productOffering": {
                    "id": "fa1",
                    "href":
"https://host:port/productCatalogManagement/v5/productOffering/fa1",
                    "name": "Fiber access",
                    "@type": "ProductOfferingRef"
                },
                "configurationAction": [
                    {
                        "@type": "ConfigurationAction",
                        "action": "add",
                        "description": "Add new product",
                        "isSelected": true
                    }
                ],
                "configurationPrice": [
                    {
                        "@type": "ConfigurationPrice",
                        "name": "Fiber access monthly fee",
                        "priceType": "recurringCharge",
                        "productOfferingPrice": {
                            "id": "popFc1",
                            "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/popFa1",

```

```

        "name": "Fiber access monthly fee",
        "@referredType": "ProductOfferingPrice",
        "@type": "ProductOfferingPrice"
    },
    "price": {
        "taxRate": 22,
        "@type": "Price",
        "dutyFreeAmount": {
            "unit": "EUR",
            "value": 10,
            "@type": "Money"
        },
        "taxIncludedAmount": {
            "unit": "EUR",
            "value": 12.20,
            "@type": "Money"
        },
        "unitOfMeasure": {
            "amount": "1",
            "units": "month"
        }
    }
}
],
"configurationCharacteristic": [
    {
        "@type": "ConfigurationCharacteristic",
        "id": "cc1",
        "name": "Speed",
        "valueType": "string",
        "minCardinality": 1,
        "maxCardinality": 1,
        "isConfigurable": true,
        "isVisible": true,
        "configurationCharacteristicValue": [
            {
                "@type":
"ConfigurationCharacteristicValue",
                "isSelectable": true,
                "isSelected": true,
                "isVisible": true,
                "characteristicValue": {
                    "name": "Speed",
                    "value": "100M/100M",
                    "@type": "StringCharacteristic"
                }
            },
            {
                "@type":
"ConfigurationCharacteristicValue",
                "isSelectable": true,
                "isSelected": false,
                "isVisible": true,
                "characteristicValue": {
                    "name": "Speed",
                    "value": "1G/1G",
                    "@type": "StringCharacteristic"
                }
            }
        ]
    }
]
}

```

```

    },
    {
      "@type": "QueryProductConfigurationItem",
      "id": "04",
      "state": "approved",
      "productConfiguration": {
        "@type": "ProductConfiguration",
        "id": "04",
        "isSelectable": false,
        "isSelected": true,
        "isVisible": true,
        "productOffering": {
          "id": "co1",
          "href":
"https://host:port/productCatalogManagement/v5/productOffering/co1",
          "name": "Connectivity",
          "@type": "ProductOfferingRef"
        },
        "configurationAction": [
          {
            "@type": "ConfigurationAction",
            "action": "add",
            "description": "Add new product",
            "isSelected": true
          }
        ]
      }
    },
    {
      "@type": "QueryProductConfigurationItem",
      "id": "05",
      "state": "approved",
      "productConfiguration": {
        "@type": "ProductConfiguration",
        "id": "05",
        "isSelectable": true,
        "isSelected": false,
        "isVisible": true,
        "productOffering": {
          "id": "co1",
          "href":
"https://host:port/productCatalogManagement/v5/productOffering/tv1",
          "name": "TV channel",
          "@type": "ProductOfferingRef"
        },
        "configurationAction": [
          {
            "@type": "ConfigurationAction",
            "action": "add",
            "description": "Add new product",
            "isSelected": false
          }
        ],
        "configurationCharacteristic": [
          {
            "@type": "ConfigurationCharacteristic",
            "id": "cc2",
            "name": "value",
            "valueType": "string",
            "minCardinality": 1,
            "maxCardinality": 1,
            "isConfigurable": true,
            "isVisible": true,

```

```

        "configurationCharacteristicValue": [
            {
                "@type":
"ConfigurationCharacteristicValue",
                "isSelectable": true,
                "isSelected": true,
                "isVisible": true,
                "characteristicValue": {
                    "name": "value",
                    "value": "Basic",
                    "@type": "StringCharacteristic"
                }
            },
            {
                "@type":
"ConfigurationCharacteristicValue",
                "isSelectable": true,
                "isSelected": false,
                "isVisible": true,
                "characteristicValue": {
                    "name": "value",
                    "value": "Extra",
                    "@type": "StringCharacteristic"
                }
            }
        ]
    },
    "configurationPrice": [
        {
            "@type": "ConfigurationPrice",
            "name": "TV channel (basic) monthly fee",
            "priceType": "recurringCharge",
            "productOfferingPrice": {
                "id": "popFc1",
                "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/popTv1",
                "name": "TV channel (basic) monthly fee",
                "@referredType": "ProductOfferingPrice",
                "@type": "ProductOfferingPrice"
            },
            "price": {
                "taxRate": 22,
                "@type": "Price",
                "dutyFreeAmount": {
                    "unit": "EUR",
                    "value": 5,
                    "@type": "Money"
                },
                "taxIncludedAmount": {
                    "unit": "EUR",
                    "value": 6.10,
                    "@type": "Money"
                },
                "unitOfMeasure": {
                    "amount": "1",
                    "units": "month"
                }
            }
        }
    ]
}

```

```

{
  "@type": "QueryProductConfigurationItem",
  "id": "06",
  "state": "approved",
  "productConfiguration": {
    "@type": "ProductConfiguration",
    "id": "06",
    "isSelectable": true,
    "isSelected": false,
    "isVisible": true,
    "productOffering": {
      "id": "box1",
      "href":
"https://host:port/productCatalogManagement/v5/productOffering/box1",
      "name": "Box 1",
      "@type": "ProductOfferingRef"
    },
    "configurationAction": [
      {
        "@type": "ConfigurationAction",
        "action": "add",
        "description": "Add new product",
        "isSelected": false
      }
    ],
    "bundledGroupProductOffering": {
      "@type": "BundledGroupProductOffering",
      "id": "boxGrp1",
      "name": "Box",
      "bundledGroupProductOfferingOption": {
        "@type": "BundledGroupProductOfferingOption",
        "numberRelOfferLowerLimit": 1,
        "numberRelOfferUpperLimit": 1
      }
    },
    "configurationPrice": [
      {
        "@type": "ConfigurationPrice",
        "name": "Box 1 monthly fee (standard option)",
        "priceType": "recurringCharge",
        "productOfferingPrice": {
          "id": "popBox1",
          "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/popBox1",
          "name": "Box 1 monthly fee (standard option)",
          "@referredType": "ProductOfferingPrice",
          "@type": "ProductOfferingPrice"
        },
        "price": {
          "taxRate": 22,
          "@type": "Price",
          "dutyFreeAmount": {
            "unit": "EUR",
            "value": 4,
            "@type": "Money"
          },
          "taxIncludedAmount": {
            "unit": "EUR",
            "value": 4.88,
            "@type": "Money"
          }
        },
        "unitOfMeasure": {

```



```

        "amount": "1",
        "units": "month"
    }
}
},
"configurationCharacteristic": [
    {
        "@type": "ConfigurationCharacteristic",
        "id": "cc3",
        "name": "Color",
        "valueType": "string",
        "minCardinality": 1,
        "maxCardinality": 1,
        "isConfigurable": true,
        "isVisible": true,
        "configurationCharacteristicValue": [
            {
                "@type":
"ConfigurationCharacteristicValue",
                "isSelectable": true,
                "isSelected": true,
                "isVisible": true,
                "characteristicValue": {
                    "name": "Color",
                    "value": "Strawberry Red",
                    "@type": "StringCharacteristic"
                }
            },
            {
                "@type":
"ConfigurationCharacteristicValue",
                "isSelectable": true,
                "isSelected": false,
                "isVisible": true,
                "characteristicValue": {
                    "name": "Color",
                    "value": "Apple Green",
                    "@type": "StringCharacteristic"
                }
            }
        ]
    },
    {
        "@type": "ConfigurationCharacteristic",
        "id": "cc4",
        "name": "Storage",
        "valueType": "string",
        "minCardinality": 1,
        "maxCardinality": 1,
        "isConfigurable": true,
        "isVisible": true,
        "configurationCharacteristicValue": [
            {
                "@type":
"ConfigurationCharacteristicValue",
                "isSelectable": true,
                "isSelected": true,
                "isVisible": true,
                "characteristicValue": {
                    "name": "Storage",
                    "value": "Standard",

```

```

        "@type": "StringCharacteristic"
      }
    },
    {
      "@type":
"ConfigurationCharacteristicValue",
      "isSelectable": true,
      "isSelected": false,
      "isVisible": true,
      "characteristicValue": {
        "name": "Storage",
        "value": "Maxi",
        "@type": "StringCharacteristic"
      }
    }
  ]
}
},
{
  "@type": "QueryProductConfigurationItem",
  "id": "07",
  "state": "approved",
  "productConfiguration": {
    "@type": "ProductConfiguration",
    "id": "07",
    "isSelectable": true,
    "isSelected": false,
    "isVisible": true,
    "productOffering": {
      "id": "box2",
      "href":
"https://host:port/productCatalogManagement/v5/productOffering/box2",
      "name": "Box 2",
      "@type": "ProductOfferingRef"
    },
    "configurationAction": [
      {
        "@type": "ConfigurationAction",
        "action": "add",
        "description": "Add new product",
        "isSelected": false
      }
    ],
    "bundledGroupProductOffering": {
      "@type": "BundledGroupProductOffering",
      "id": "boxGrp1",
      "name": "Box",
      "bundledGroupProductOfferingOption": {
        "@type": "BundledGroupProductOfferingOption",
        "numberRelOfferLowerLimit": 1,
        "numberRelOfferUpperLimit": 1
      }
    },
    "configurationPrice": [
      {
        "@type": "ConfigurationPrice",
        "name": "Box 2 monthly fee",
        "priceType": "recurringCharge",
        "productOfferingPrice": {
          "id": "popBox2",
          "href": "https://host:port/tmf-

```

```

api/productCatalogManagement/v5/productOfferingPrice/popBox2",
    "name": "Box 2 monthly fee",
    "@referredType": "ProductOfferingPrice",
    "@type": "ProductOfferingPrice"
  },
  "price": {
    "taxRate": 22,
    "@type": "Price",
    "dutyFreeAmount": {
      "unit": "EUR",
      "value": 7,
      "@type": "Money"
    },
    "taxIncludedAmount": {
      "unit": "EUR",
      "value": 8.54,
      "@type": "Money"
    },
    "unitOfMeasure": {
      "amount": "1",
      "units": "month"
    }
  }
}
]
}
{
  "@type": "QueryProductConfigurationItem",
  "id": "8",
  "state": "approved",
  "productConfiguration": {
    "@type": "ProductConfiguration",
    "id": "8",
    "isSelectable": true,
    "isSelected": false,
    "isVisible": true,
    "productOffering": {
      "id": "ship1",
      "href":
"https://host:port/productCatalogManagement/v5/productOffering/ship1",
      "name": "Box shipping",
      "@type": "ProductOfferingRef"
    },
    "configurationAction": [
      {
        "@type": "ConfigurationAction",
        "action": "add",
        "description": "Add new product",
        "isSelected": false
      }
    ],
    "configurationCharacteristic": [
      {
        "@type": "ConfigurationCharacteristic",
        "id": "cc5",
        "name": "Shipping",
        "valueType": "string",
        "minCardinality": 1,
        "maxCardinality": 1,
        "isConfigurable": true,
        "isVisible": true,
        "configurationCharacteristicValue": [

```

```

        {
            "@type":
"ConfigurationCharacteristicValue",
            "isSelectable": true,
            "isSelected": true,
            "isVisible": true,
            "characteristicValue": {
                "name": "Shipping",
                "value": "Standard",
                "@type": "StringCharacteristic"
            }
        },
        {
            "@type":
"ConfigurationCharacteristicValue",
            "isSelectable": true,
            "isSelected": false,
            "isVisible": true,
            "characteristicValue": {
                "name": "Shipping",
                "value": "Express",
                "@type": "StringCharacteristic"
            }
        }
    ],
    "configurationPrice": [
        {
            "@type": "ConfigurationPrice",
            "name": "Standard box shipping",
            "priceType": "oneTimeCharge",
            "productOfferingPrice": {
                "id": "popShipBox1",
                "href": "https://host:port/tmf-
api/productCatalogManagement/v5/productOfferingPrice/popShipBox1",
                "name": "Standard box shipping",
                "@referredType": "ProductOfferingPrice",
                "@type": "ProductOfferingPrice"
            },
            "price": {
                "taxRate": 22,
                "@type": "Price",
                "dutyFreeAmount": {
                    "unit": "EUR",
                    "value": 0,
                    "@type": "Money"
                },
                "taxIncludedAmount": {
                    "unit": "EUR",
                    "value": 0,
                    "@type": "Money"
                }
            }
        }
    ]
}

```

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": ""
}
```

```
}
```

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.

Acknowledgements

Release History

Release Number	Date	Release led by:	Description

Contributors to Document

Contributor	Company
Ludovic Robert	Orange
Olivier Arnaud	Orange
Anh Tuan Nguyen	Orange
Boštjan Keber	Marand
Danijel Zečević	Marand
Jacob Avraham	Amdocs
Jonathan Goldberg	Amdocs