PSI Interface Control Document

PSI-ICD

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1 Document Meta Information

1.1 Document Change Record

Changes to this document are tracked electronically. No signature is required by the authors. The following information can prove the integrity of the document and reveal any change.

Figure 1.1: DCR QR-Code.

1.2 Documents

1.2.1 Reference Documents

Acronym	Reference	Title	Version
PSI-DL	PSI-DL	PSI Document List	1.0.0
PSI-ICD	PSI-ICD	Interface Control Document	1.0.0
PSI-TAD	PSI-TAD	Terms, Abbreviations and Definitions	1.0.0

Table 1.1: Reference Documents.

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2 Introduction

The Pooling & Sharing Interfaces Definitions (PSID) project is an ESA co-funded effort to define a common standard for the interfaces of Pooling & Sharing Systems (PSS) for Satellite Communication (SatCom) services. A PSS is a digital platform for matchmaking SatCom users' demands (both commercial and institutional) with SatCom providers' offers. Bringing together multiple SatCom providers in one platform makes the market transparent, thus allowing users to get an overview of the market and to compare different offers efficiently. Additionally, a PSS assists users with little knowledge about the SatCom domain defining their requirements on the SatCom services. Those two aspect combined allow for fast access to the services and an efficient usage of the available capacities. To accomplish this, a PSS steps in between the usual processes of finding a provider/supplier, requesting an offer, and ordering the desired products or services, either as a service broker or by pooling products and services from different providers and offering them as an intermediary or distributor. Subsequently, the PSS can be used to monitor the services and manage multiple missions in a single application.

Eventually, a PSS can also be used as (or manage) a community hub, i.e., a number of end users or customers with similar interest that *share* their common resources and utilize a commonly obtained *pool* of SatCom capacities. This strategy increases the efficient usage of scarce resources further.

There are already different approaches on PSSs, that might lead to an unnecessary fragmentation of the market. Therefore, a common standard for the interfaces of a PSS is required to allow the interaction between those different PSSs and reduce the effort of SatCom providers to offer their product and services via multiple PSSs to maximize their reach.

Such a standard needs to take care of the different interfaces involved in the aforementioned processes, i.e.,

1. an interface between PSS and resource providers (satellite operators, service providers, or other PSSs),
2. an interface between the PSS and users, and
3. an interface between PSS and its own governance.

The goal of this project is to mainly define aspect 1 and to develop a software mock-up as needed to validate the various interfaces developed.

The PSI standard derives from the existing industry-standard "Open Digital Framework" of **TM Forum** alliance[1]. The "Open Digital Framework" is a reference framework for delivering online Information, Communications and Entertainment services to the telecom world. It empowers market participants to compete and cooperate. One of PSI's goals is to make this existing standard fit for the world of satellite communication.

The consortium for this project consists of the service & technology providers SES Techcom and CGI, as well as of the SatCom operators SES, Hellas Sat, Hispasat, Hisdesat, and LuxGovSat, and Inmarsat being both a service & technology provider and a SatCom operator.

[1] See https://www.tmforum.org/resources/reference/gb991-tm-forums-core-concepts-and-principles-v22-0-0/

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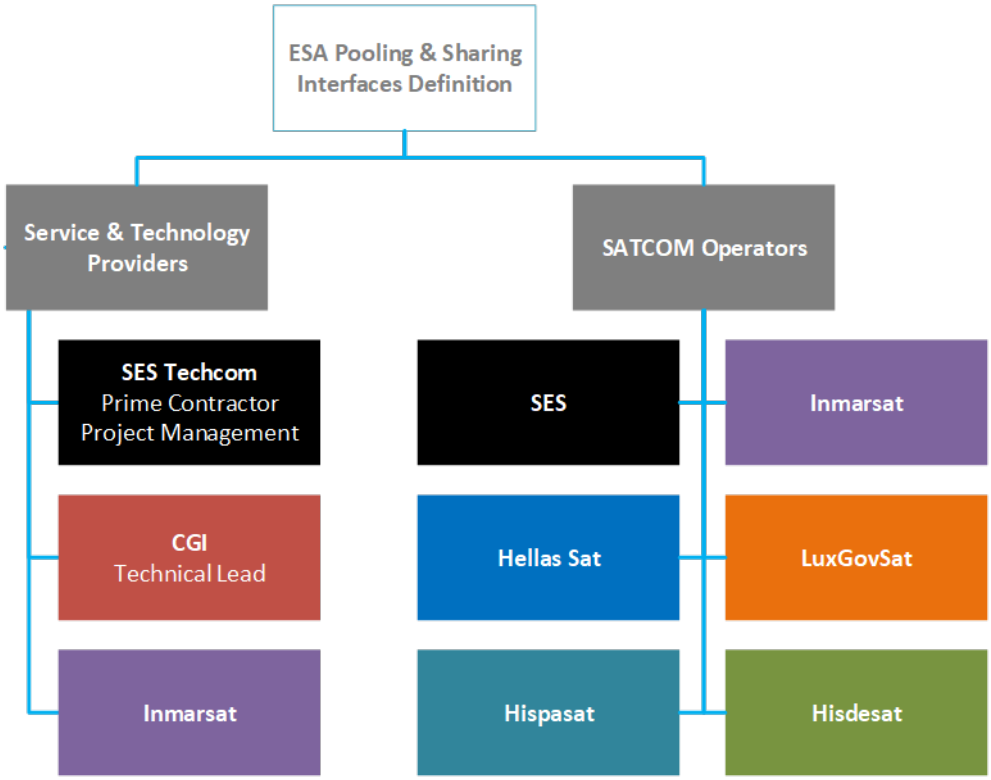

Figure 2.1: The PSI consortium.

2.1 Scope of Document

This document is the Interface Control Document of the Pooling & Sharing Interface (PSI). It contains the description of the interfaces between a PSS and a provider or two PSS, which are based on TM Forum OpenAPIs.

The following sections heavily refer to terms, abbreviations and definitions defined in the [PSI-TAD].

2.1.1 Compiled Document

NOTE: THIS IS A COMPILED DOCUMENT [2]

This document has been compiled/generated from external sources and is not being written as-is. Therefore, any changes made within this compiled version of the document will be lost upon recompilation!

To make (permanent) changes, edit the respective sources directly or contact the PSID team.

2.1.2 Signature

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[2] Document compiled on 2024-04-19 12:46.

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2.2 Release Notes

2.2.1 PSI First Release Note - Version 1.0.0

2.2.1.1 Introduction

Welcome to the inaugural release of the Pooling and Sharing Interface API! This marks the beginning of an exciting journey. Below, you'll find details about the features, enhancements, and other important aspects of this release.

2.2.1.2 Key Highlights

- The PSI Standard provides a unified interface for satellite communication providers, enabling seamless integration and collaboration between various operators and systems.
- Version 1.0 includes essential features that have been developed in response to feedback from our consortium members and external observers.
  - TM Forum compatible catalog and inventory APIs
  - Inquiry API for distributed matchmaking between customer requirements and resource provider's products
  - Order process compliant with TM Forum
  - Distributed event handling
- This release focuses on raising awareness of the PSI Standard and gathering valuable user feedback to inform future enhancements.

2.2.1.3 What's New

- **PSI001 - Customer Inquiry Management API**: The Customer Inquiry Management API is wrapping the Catalog Management APIs to provide results based on an inquiry send by the customer. The Customer Inquiry Management API takes care of the handling of inquiries sent by a customer and responded by a PSS or provider.

  The PSS may provide different ways for the customer to create an inquiry, depending on the expertise of the user. These can range from just selecting from templates with commonly used product types, optionally customizing the characteristics or even the manual definition of the communication needs.

  Included REST APIs: * `customerInquiry`: Customer Inquiry API

- **PSI620 - Product Catalog Management API**: Based on TMF620 - Product Catalog Management API (Version 4.1.0).

  The Product Catalog Management API provides a standardized solution for rapidly adding partners' products to an existing Catalog. It brings the capability for Service Providers to directly feed partners systems with the technical description of the products they propose to them.

  The Product Catalog Management API provides the operation for the maintenance of product specifications available in the PSS, brought in by providers. A provider wants to utilize a PSS to offer their products to the users of the PSS. The products implement a product specification (describing general characteristics of the product), and they bundle one or more services and/or on-site resources. Therefore, a provider needs to be

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able to register(create) product specifications to the PSS, modify, remove or view them. Another PSS needs to be able to view the product specifications as well.

The TM Forum API is extended by Product Template REST API.

Included REST APIs: * `/productOffering`: Product Offering API * `/productSpecification`: Product Specification API * `/productTemplate`: Product Template API

- **PSI620 - Trouble Ticket Management API**: Based on TMF621 - Trouble Ticket Management API (Version 4.0.0).

  The Trouble Ticket API provides a standardized client interface to Trouble Ticket Management Systems for creating, tracking and managing trouble tickets as a result of an issue or problem identified by a customer or another system. Examples of Trouble Ticket API originators (clients) include CRM applications, network management or fault management systems, or other Trouble Ticket management systems (e.g. B2B).

  The Trouble Ticket API provides the operation for tracking incident reports, complaints and other requests of customers and providers. They can be processed either by a PSS helpdesk operator if they concern the functionality of the PSS itself, or by the provider if they affect a SATCOM service. Most likely, the actual implementation is outsourced to an existing ticket system or the CRM.

  Included REST APIs: * `/troubleTicket`: Trouble Ticket API

- **PSI622 - Product Ordering Management API**: Based on TMF622 - Product Ordering Management API (Version 4.0.0).

  The Product Ordering API provides a standardized mechanism for placing a product order with all the necessary order parameters. The API consists of a simple set of operations that interact with CRM/Order Negotiation systems consistently. A product order is created based on a product offer that is defined in a catalog. The product offer identifies the product or set of products that are available to a customer, and includes characteristics such as pricing, product options and market. This API provides a task based resource to request order cancellation.

  The product order references the product offer and identifies any specific requests made by the customer.

  Included REST APIs: * `productOrder`: Product Order API

- **PSI632 - Party Management API**: Based on TMF632 - Party Management API (Version 4.0.0).

  The party API provides standardized mechanism for party management such as creation, update, retrieval, deletion and notification of events. A Party can be an individual or an organization that has any kind of relation with the enterprise. A Party is created to record individual or organization information before the assignment of any role. For example, within the context of a split billing mechanism, Party API allows creation of the individual or organization that will play the role of 3rd payer for a given offer and, then, allows consultation or update of their information.

  Included REST APIs: * `individual`: Individual API * `organization`: Organization API

- **PSI633 - Service Catalog Management API**: Based on TMF633 - Service Catalog Management API (Version 4.0.0).

  The Service Catalog Management API allows the management of the entire lifecycle of the service catalog elements.

  The TM Forum API is extended by Service Template REST API.

  Included REST APIs: * `/serviceSpecification`: Service Specification API * `/serviceTemplate`: Service Template API

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- **PSI634 - Resource Catalog Management API** Based on TMF634 - Resource Catalog Management API (Version 4.1.0).

  The Resource Catalog Management API allows the management of the entire lifecycle of the Resource Catalog elements and the consultation of resource catalog elements during several processes such as ordering process.

  The TM Forum API is extended by Resource Template REST API.

  Included REST APIs: * `/resourceSpecification`: Resource Specification API * `/resourceTemplate`: Resource Template API

- **PSI637 - Product Inventory Management API**: Based on TMF637 - Product Inventory Management API (Version 4.0.0).

  The Product Inventory Management API provides standardized mechanism for product inventory management such as creation, update and retrieval of the representation of a product in the inventory. It also allows the notification of events related to product lifecycle.

  Included REST APIs: * `/product`: Product Inventory API

- **PSI638 - Service Inventory Management API**: Based on TMF638 - Service Inventory Management API (Version 4.0.0).

  The Service Inventory Management API provides standardized mechanism for service inventory management such as creation, update and retrieval of the representation of a service in the inventory. It also allows the notification of events related to service lifecycle.

  Included REST APIs: * `/service`: Service Inventory API

- **PSI639 - Resource Inventory Management API**: Based on TMF639 - Resource Inventory Management API (Version 4.0.0).

  The Resource Inventory Management API provides standardized mechanism for resource inventory management such as creation, update and retrieval of the representation of a resource in the inventory. It also allows the notification of events related to resource lifecycle.

  Included REST APIs: * `/resource`: Resource Inventory API

- **PSI657 - Service Quality Management API** Based on TMF657 Service Quality Management API (Version 4.0.0).

  The Service Quality Management API provides standardized mechanism for managing service level objectives (SLO) and service level specifications (SLS), which in turn are used to define service level agreements (SLAs) and declare monitoring of services and resources on provider side.

  Included REST APIs: * `serviceLevelObjective`: Service Level Objective API * `serviceLevelSpecification`: Service Level Specification API

- **PSI667 - Document Management API**: Based on TMF667 Document Management API (Version 4.0.0).

  The Document Management API provides the operations to synchronize documents and document versions across systems, i.e., between providers, customers and PSS. It also provides operations for uploading documents as well as for viewing of documents online. For example, a product offering of a provider is accompanied by a Service Level Agreement that should be shared with the customer via REST API, or when an order is concluded, an interface is required for sending the invoice.

  Included REST APIs: * `document`: Document Management API * `attachment`: Attachment Management API

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- **PSI678 - Customer Bill Management API**: Based on TMF678 - Customer Bill Management API (Version 4.0.0).

  The Customer Bill Management API allows operations to find and retrieve one or several customer bills (also called invoices) produced for a customer also allows operations to find and retrieve the details of applied customer billing rates presented on a customer bill.

  It takes care of bills (invoices) produced for a customer for placed orders in the PSS. A customer bill or invoice is a document produced at the end of a regular back office process at the provider side which runs according to a bill cycle definition. The customer bill contains information about the total amount due to be paid by a customer for the ordered product(s) during the billing period, the due date for the payment, and other information like the order and attachment references.

  Included REST APIs: * `customerBill`: Customer Bill Management API

- **Stock Management API**: Based on TMF687 - Stock Management API (Version 4.1.0).

  The Stock Management API provides standardized mechanism for product stock management such as creation, update and retrieval of the representation of a product stock, reserve product stock, check or query product stock or adjust product stock. It also allows the notification of events related to them.

  The Stock Management API provides the operations to wrap the inventories to allow a PSS (on behalf of a customer) to check the availability of a provider's product. There are more operations that are performed internally on the provider side, which are not covered by the PSI but may be implemented consistently with TM Forum.

  Included REST APIs: * `checkProductStock`: Stock Check API

- **PSI688 - Event Management API**:

  Based on TMF688 - Event Management API (Version 4.0.0).

  The Event Management API provides a standardized client interface to the enterprise event management system for creating, managing and receiving service related events to (indicatively) drive automation workflows, notify other service providers for service outages and SLA violations, trigger Trouble Ticket creation, and enable more complex orchestration scenarios between management systems. The Event Management API can also be used to convey business level Events in support of other processes.

  Some processes between a PSS and a provider (or PSS and PSS), such as customer inquiries and orders, can take longer time to complete. For example, when a customer inquiry is created, the provider may require significant time to process and respond with an adequate product offering. Or, when a product order is placed by a customer, it can take hours to days for its state to change, e.g. from *inProgress* to *completed*.

  Inside a PSS (or a sophisticated provider system) the anticipated approach to propagate such state changes are message queues. A direct connection between these, although possible, would result in a strong coupling of the systems and major implications by the interface definition on the internal implementations. In order to avoid this, the Event Management defines how to exchange the information using REST.

  Note that this does not enforce the use of message queues. All named operations and endpoints can also be implemented in a monolithic application.

  Included REST APIs: * `hub`: Event Hub API * `listener`: Event Listener API

2.2.1.4 Known Limitations

1. Standardized JSON Schemas for resources, services, and products (including space assets and user terminals) are not available in the first release of PSI due do contractual obligations. They will be made available in the next release.

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2. The Service Quality Management is rather basic. There is an ongoing effort to align this set of APIs with the results of a TM Forum Catalyst project. More information will follow in one of the next releases.
3. The Inquiry Management API implies the existence of a Mission Management Service. However, the available API implements only the outgoing interface. A full set of APIs to implement such a service are subject to an upcoming release.

2.2.2 Feedback and Contributions

We value your feedback! If you encounter any issues or have suggestions, please reach out. Additionally, we welcome contributions from the community.

2.3 High-Level Connection

This document describes the interfaces any PSS and any provider system must implement to enable communication between them. Unless specified otherwise, all interfaces are implemented RESTful, which includes the following properties:

- **Connection Type:** ad-hoc
- **Protocol:** HTTP(S)
- **Content Type:** JSON

Each of the following sections describe the available endpoints and operations, including the parameters, and request bodies. Wherever a named class is referenced see the Data-Transfer-Objects section for details. All information is also available as OpenAPI Specifications[3] in annex I of this document. These files can be used to generate server and client code[4] in a programming language of choice.

Every interface is implemented by a server and a client. There is no clear distinction between a PSS and a provider system in this document, since both can implement each side depending on the use-case. Especially the broker-type PSS will often receive data from one party (e.g. the customer) as a server and forward it to another (e.g. the provider) as a client. The PSI mock-up is a sample implementation of the endpoints described in the ICD.

It is up to the implementor to decide how the endpoints will be implemented internally on their side. For recommended guidelines and design patterns when implementing TM Forum's REST APIs, use the TMF630 REST API Design Guidelines 4.2.0[5] document as a reference. Filtering, for instance, is an optional function that is not required to be implemented for the GET endpoints returning lists of objects. Therefore, it is not part of the parameters listed in the respective endpoint sections of the ICD. If an implementor of the server side decides to develop it, *Part One* of the REST API Design Guidelines describes the recommendations for querying resources with attribute filtering, while *Part Six* describes advanced collection filtering using JSON Path. Client implementors are advised to clarify which filters are available on the server side.

[3] https://swagger.io/resources/open-api/
[4] https://swagger.io/tools/swagger-codegen/
[5] https://www.tmforum.org/resources/specification/tmf630-rest-api-design-guidelines-4-2-0/

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2.4 Security Considerations

The PSID is designed to be as implementation-agnostic as possible, so it can be used as a building block for any PSS or client (user, provider and governance). Therefore, it must also be integrated in the overall security solution of the implementing system and can not establish strong requirements on those aspects. The following subsections will provide an overview of interface-related security aspects the implementor must consider, as well as some guidance on available solutions.

2.4.1 Transport Encryption

As stated in the introduction, all data is exchanged with TLS encryption using HTTPS. It is strongly recommended using the latest version (which is 1.3 at the time of writing) and to disable older versions via the server configuration to prevent downgrade attacks. The recommendation also applies to internal subsystems, even if they are not using PSI directly. Each party can decide whether to use a well-known certification authority or to arrange a custom Public-Key-Infrastructure (PKI). In the latter case, the root keys of the PKI have to be exchanged beforehand to establish the connection.

For extended security, the implementation can introduce additional encryption layers. Most notably, classified systems will most likely require a VPN connection. The soft- or hardware solution for the connection is to be agreed beforehand.

The above-mentioned measures are implemented on the transport layer and therefore transparent to the application. But this implies that the data is only encrypted on the network between one system and another. It is quite common though to use middleboxes like reverse-proxies and load-balancers, which will decrypt and re-encrypt the data for transmission to the next system. For highest security, the parties can agree to use the JSON Web Encryption (JWE, RFC 7516) technology. It enables the encryption of the message body (e.g. an inquiry), so it can only be decrypted by the target subsystem.

2.4.2 Authentication

Authentication is the process of validating the identity of a communication partner. This can be between two systems (PSS-to-Provider, PSS-to-PSS) or between a natural person and a system. Setting up the authentication for the first time is part of the accreditation process.

Since all data exchange is based on HTTPS, the server is always authenticated via the SSL certificate. As described above, the authenticity is checked either via a well-known certification authority or via a custom PKI. Additionally, it is possible to use certificate pinning (RFC 7469) to prevent man-in-the-middle attacks.

There are many standardized authentication methods available for clients. Selecting the right one depends on the security needs and structure of the implementation. There may also be differences made for authentication of other systems and natural persons.

For machine-to-machine communication, each implementation is expected to have a configuration of allowed hosts (e.g. `api.example.com:8081`) and their respective authentication scheme and credentials. Depending on the operational requirements, this may be offered as a self-service UI or restricted to the system operators (e.g. for security reasons or complexity concerns). When calling an endpoint, the respective authentication can be selected and applied automatically.

The recommended authentication method is the OAuth 2.0 protocol, which is also favoured by the REST API Design Guidelines of TM Forum. It separates the authentication provider from the rest of the system and allows authenticating systems and natural persons alike. The credentials to authenticate the client can be classic combinations

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of username and password, a second-factor, or certificate-based like the server authentication. Either way they are sent to the authentication provider before the first request, which then verifies the identity and creates an access token. The token is stored in a server-side session (using a short-lived cookie in the client browser) or returned to the client for further use as an HTTP-Header (useful for machine-to-machine communication).

2.4.3 Authorization and Data Visibility

Authorization is closely related to the above described authentication: It is the process of determining whether the authenticated entity has access to a source. Because of the close relation, it is not possible to define this without implying an authorization method. This chapter describes two aspects, which have to be considered by the server implementation.

First, it has to check the permissions of the client to access any given endpoint. For example, there are endpoints that are only allowed to be called by the system governance (see [PSI-TOD]). Consequently, any request by other parties must be prohibited, and a 403 status code must be returned as described in the [PSI-ICD]. The most common concept for this is role based access control (RBAC).

If the client is allowed to access the endpoint, the server must also check if the client is allowed to perform the given operation on the requested data. This could be implemented by using an access control list (ACL). As long as not stated otherwise, every party is only allowed to read and update entities they previously created themselves. The owner will extend this access as side effects to other actions:

- As part of resource accreditation, the resource is made visible to SATCOM users.
- When an order is created, the party information of the customer is made visible to the provider.

The system might also provide further internal processes to make data *writable* by other parties, e.g. for other persons in the same organization or a mission expert that supports the customer in the process of service acquisition. These permission checks are mandatory for the overall entity, but can also be performed on single attributes if required.

The Event API needs special attention in this regard. The implementation must assure that no published events are leaked to third parties. Also, it shall ensure that received events are processed under the same conditions as above.

2.4.4 Other Security Aspects

There are other security aspects that should be considered by all systems independently of the PSI. The following (incomplete) list is indicating some well-known ones, that could be part of the accreditation process if deemed relevant for the governance:

- Securing data-at-rest (e.g. in databases) from unauthorized access and data loss
- Denial-of-Service attacks
- Brute-Force attacks
- Replay attacks
- Physical security

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2.5 Types and Characteristics

The PSS defines a set of supported types for resources, services and products in consultation with the providers. It provides them in a JSON Schema file that is made available through the API itself or can be exchanged offline. Each type then defines *characteristics* that describe the exact nature of it.

Product types are also the fundament of the matchmaking: The customer specifies a set of inquired characteristics and the PSS will find products that satisfy them. The result can be a single service or resource, that satisfies all requirements, or a more or less complex combination of such, depending on the capabilities of the algorithm. If partial matches are allowed, services that only partially match the inquired features are included into the results.

Both sides, PSS and Provider, may introduce additional characteristics, e.g. as part of the development of new or enhanced products. In any case, no assumptions shall be made on the support of those by the other side: If the PSS adds support for a new characteristic, it has to define a sensible, neutral default value that is applied to all specifications that do not contain the new characteristic. No provider shall be penalized in the matchmaking for not defining it, unless the user explicitly requests the new characteristic. If a provider sends a new characteristic, the PSS may decide to ignore it, or to accept and visualize it as-is for the customer without further handling.

The following subsections describe the set of resource, service and product types that were analysed in the course of the project. While these are not part of the standard per se, it is sensible for most systems to support them.

2.5.1 Examples

The following examples show different scenarios of how features and characteristics can be used in three phases of the service lifecycle:

1. The customer inquiry,
2. the response with matching specifications from the catalog and
3. the actual service implementation which is stored in the inventory.

They are structured according to the “Commission Implementing Decision (EU) 2023/1054”, which defines the service portfolio of the Union Space Programme, and covers the service layers L0 - L2.

2.5.1.1 Raw Bandwidth (L0)

Inquiry:

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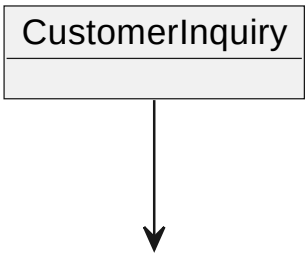

InquiredProduct: Bandwidth at Location XY	
targetEntityType	BandwidthProduct
servicePeriod	07/2023 to 08/2023
frequencyBand	C
allocatedBandwidth	>= 5 Mhz
uplinkFrequencyStart	4 Ghz
uplinkFrequencyEnd	8 Ghz
uplinkGeometry	{ "type": "...", "coordinates": [...] }
downlinkFrequencyStart	4 Ghz
downlinkFrequencyEnd	8 Ghz
downlinkGeometry	{ "type": "...", "coordinates": [...] }

Figure 2.2: Example Inquiry for Raw Bandwidth

Results:

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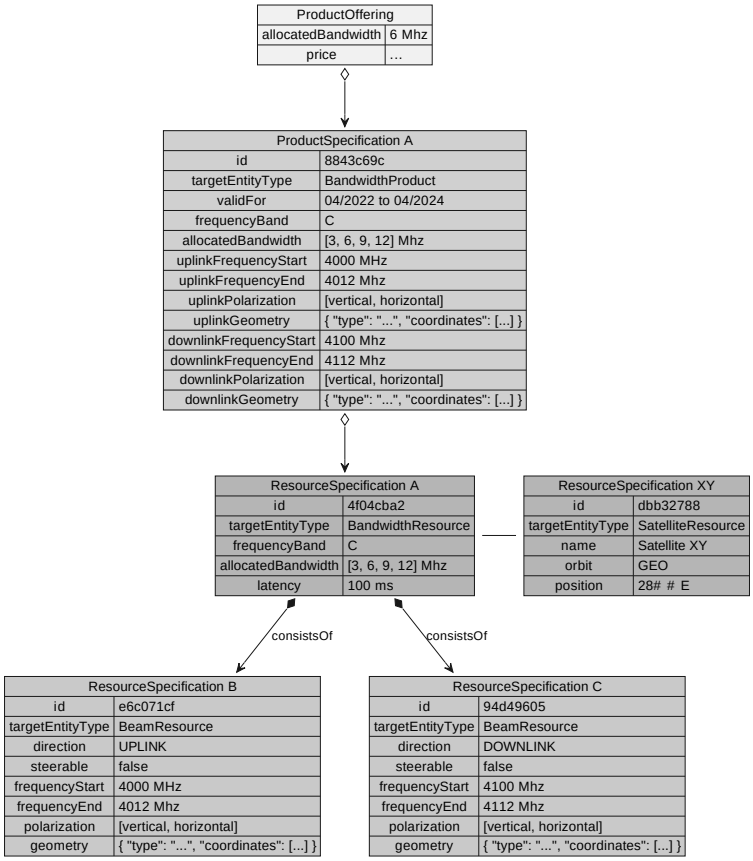

Figure 2.3: Example Results for Raw Bandwidth

Implementation:

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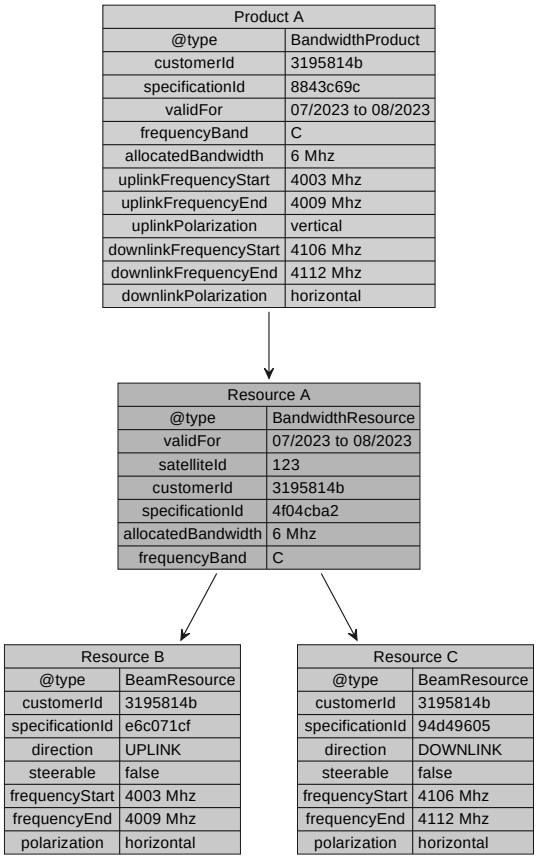

Figure 2.4: Example Inventory for Raw Bandwidth

Note that the geometry is deliberately not copied to the resource instances in this example. Since the beams are not steerable, copying this information would most probably not add any value. The implementation may choose to do so if justified, e.g. to track the actual configuration of steerable beams.

2.5.1.2 Anchoring Capacity (L1)

Inquiry:

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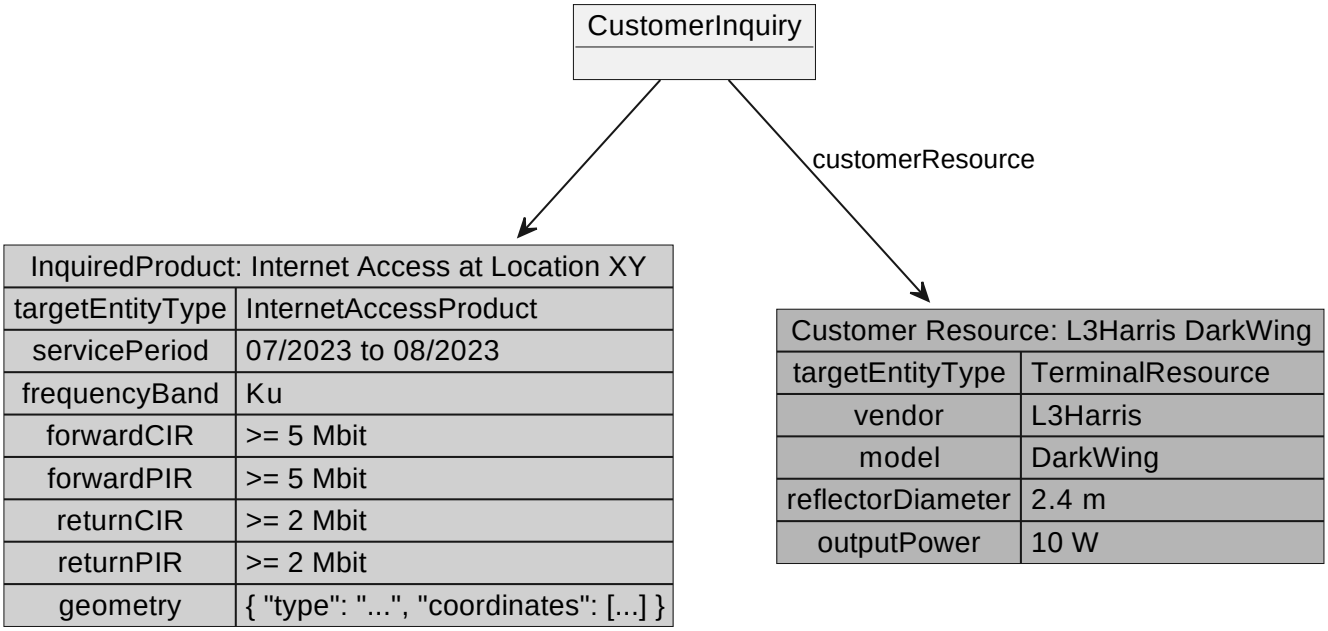

Figure 2.5: Example Inquiry for Anchoring Capacity

Results:

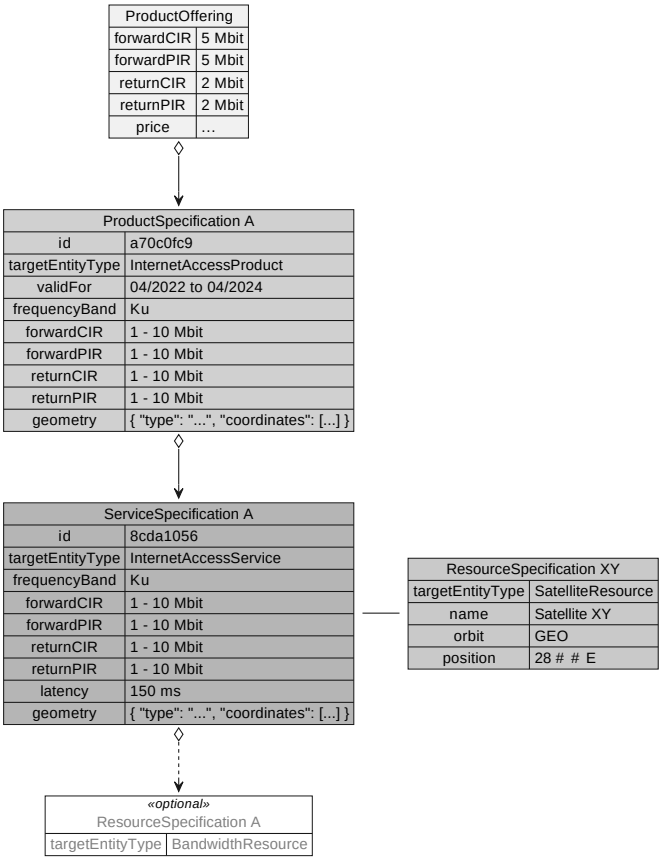

Figure 2.6: Example Results for Anchoring Capacity

Implementation:

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Product A	
@type	InternetAccessProduct
validFor	07/2023 to 08/2023
customerId	3195814b
specificationId	a70c0fc9
frequencyBand	Ku
forwardCIR	5 Mbit
forwardPIR	5 Mbit
returnCIR	2 Mbit
returnPIR	2 Mbit

Service A	
@type	InternetAccessService
validFor	07/2023 to 08/2023
customerId	3195814b
specificationId	8cda1056
frequencyBand	Ku
forwardCIR	5 Mbit
forwardPIR	5 Mbit
returnCIR	2 Mbit
returnPIR	2 Mbit

Figure 2.7: Example Inventory for Anchoring Capacity

2.5.1.3 End-to-End Service (L2)

Inquiry:

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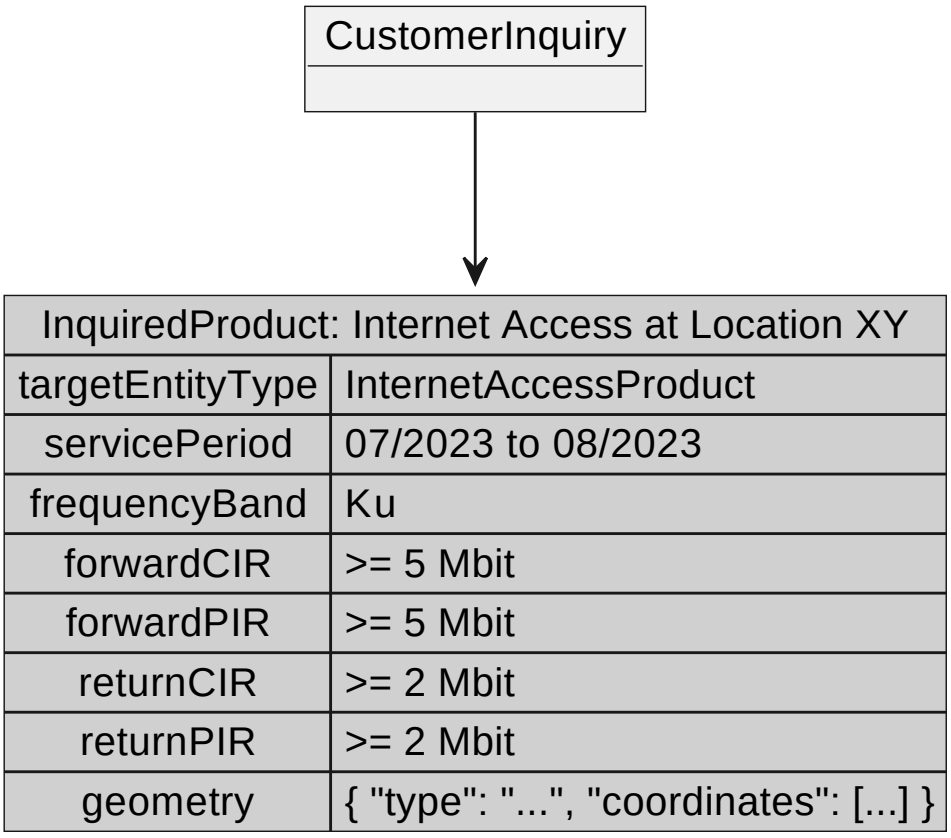

Figure 2.8: Example Inquiry for End-to-End Service

Results:

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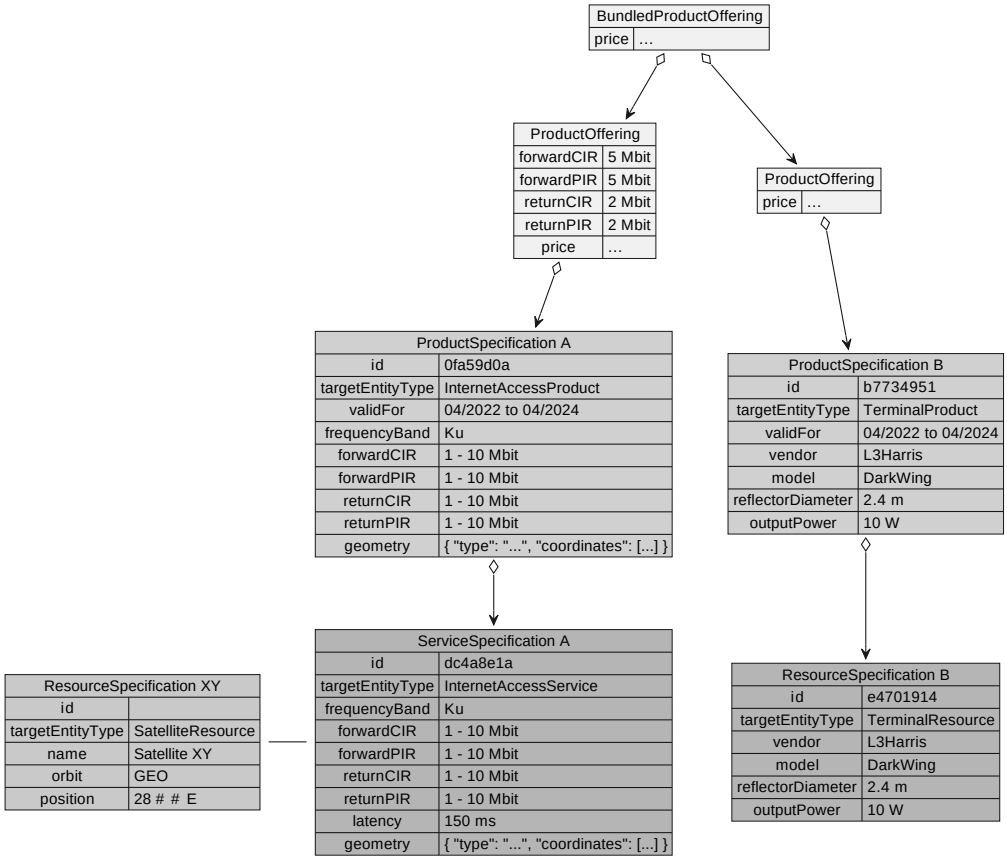

Figure 2.9: Example Results for End-to-End Service

Implementation:

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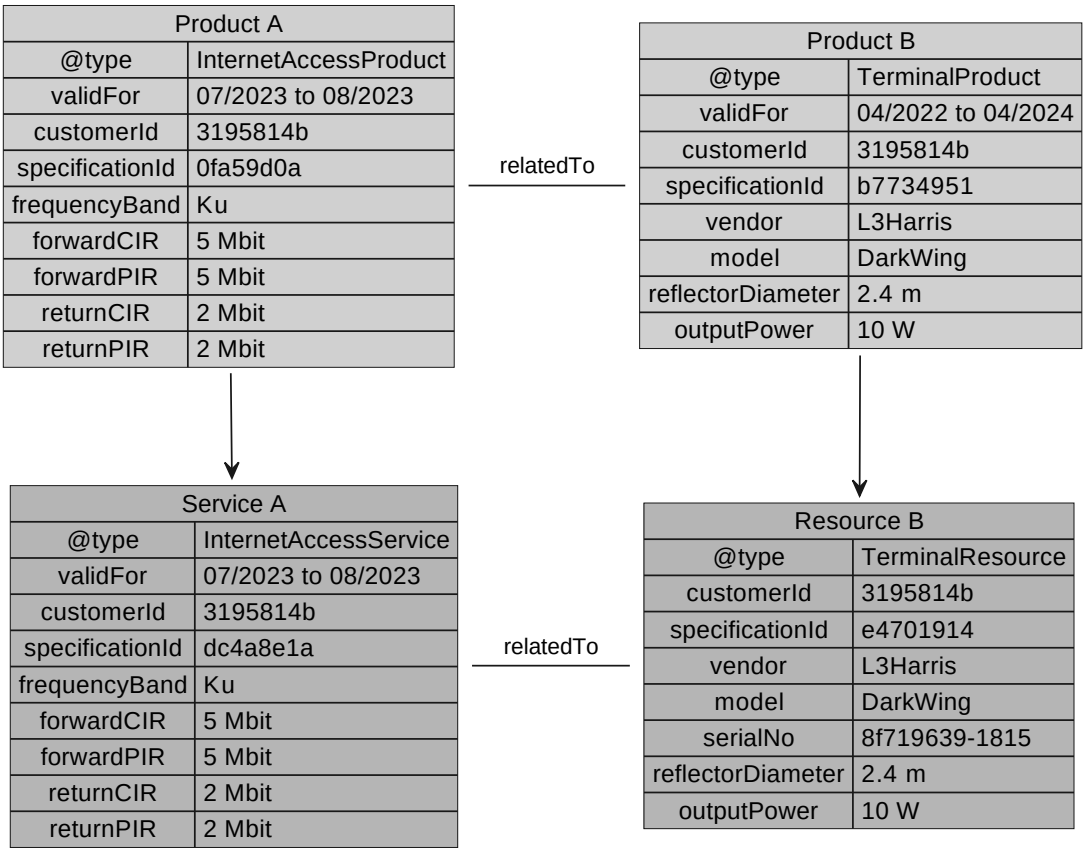

Figure 2.10: Example Inventory for End-to-End Service

2.5.1.4 Multi-Product Request

An inquiry can contain multiple product requests at the same time. This can be used to either request different services that may be cheaper when bought as a package, or to describe varying communication needs in the course of a mission. The following example combines both cases: the mission starts with only one end-to-end service with low information rate, then increases it and adds additional raw bandwidth.

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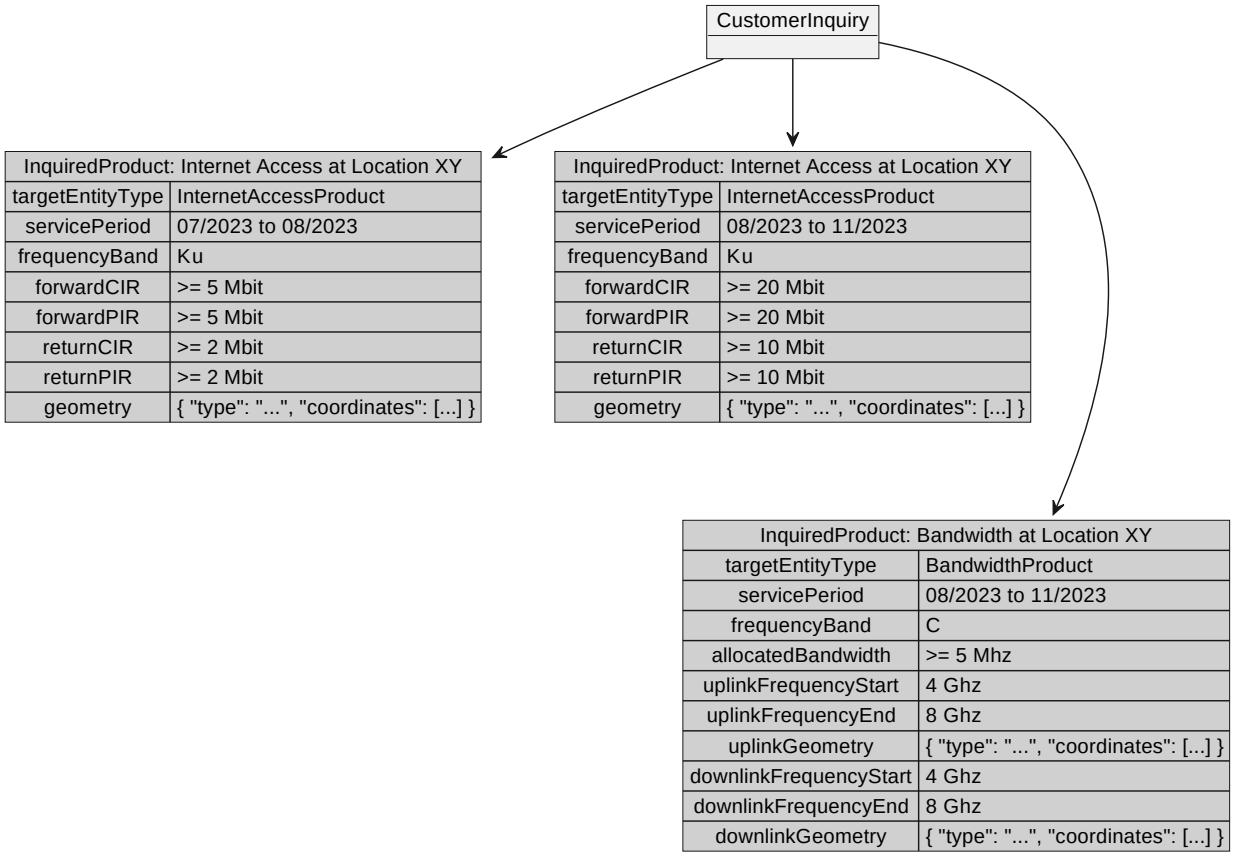

Figure 2.11: Example Of A Customer Inquiry of Internet Access / Bandwidth

The result of this inquiry is a combination of the results above and therefore not shown. Depending on the capabilities of the matchmaking, the internet access can be fulfilled by just one provider that is able to upgrade the active service, or it could offer two services possibly by different providers. The `BandwidthProduct` result is likely to be independent, but could also be bundled with the other two.

2.5.2 JSON Schemas

The following example demonstrates the structure of a JSON Schema. Apart from the identifier and description, the main content is the list of properties. Each one is defined by its name and type, and can be further qualified with value constraints and whether they are required. Lastly, they typically share all basic properties with the underlying entity, which is the `Service` in this case.

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JSON Schema: InternetAccessService			
$schema	http://json-schema.org/draft-07/schema#		
$id	InternetAccessService.schema.json		
title	InternetAccessService		
description	Describes a service that provides internet access via satellites.		
allOf	$ref	Service.schema.json#Service	
properties	frequencyBand	type	string
		enum	P
			L
			S
			C
			X
			KA
			MILKA
			KU
	forwardCIR	type	integer
		default	0
		description	Measured in kbsp
	forwardPIR	type	integer
		description	Measured in kbsp
	returnCIR	type	integer
		default	0
		description	Measured in kbsp
	returnPIR	type	integer
		description	Measured in kbsp
	latency	type	integer
		description	Measured in ms
	geometry	type	object
		$ref	https://geojson.org/schema/FeatureCollection.json
required	frequencyBand		
	forwardPIR		
	returnPIR		

Figure 2.12: JSON Schema for InternetAccessService

More example schemas (including space assets and user terminals) are not available in the first release of PSI due to contractual obligations. It will be made available in the next release.

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3 REST APIs

3.1 attachment (/documentManagement)

Attachment Management API

3.1.1 GET /document/{documentId}/attachment

Absolute Path: /documentManagement/v1/document/{documentId}/attachment

Summary: List or find Attachment objects

3.1.1.1 Parameters

Name	Type	Required	Description
documentId	string	Yes	The identifier of the Document.
fields	string	No	Comma-separated properties to be provided in response.

Table 3.1: Parameters of GET document/{documentId}/attachment.

3.1.1.2 Responses

Code	Description	Content
200	Success	Attachment
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.2: Responses of GET document/{documentId}/attachment.

3.1.1.3 TOD Reference

TOD-01-03-10-View_All_Attachments

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3.1.2 POST /document/{documentId}/attachment

Absolute Path: /documentManagement/v1/document/{documentId}/attachment

Summary: Creates an Attachment

3.1.2.1 Parameters

Name	Type	Required	Description
documentId	string	Yes	The identifier of the Document.

Table 3.3: Parameters of POST document/{documentId}/attachment.

3.1.2.2 Request Body

Content Type	Reference
multipart/form-data	Attachment_Create
application/json;charset=utf-8	Attachment_Create

Table 3.4: Request Body of POST document/{documentId}/attachment.

3.1.2.3 Responses

Code	Description	Content
201	Created	Attachment
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.5: Responses of POST document/{documentId}/attachment.

3.1.2.4 TOD Reference

TOD-01-03-06-Create_Attachment

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3.1.3 GET /document/{documentId}/attachment/{attachmentId}

Absolute Path: /documentManagement/v1/document/{documentId}/attachment/{attachmentId}

Summary: Retrieves an Attachment by ID

3.1.3.1 Parameters

Name	Type	Required	Description
documentId	string	Yes	The identifier of the Document.
attachmentId	string	Yes	The identifier of the Attachment.
fields	string	No	Comma-separated properties to provide in response.

Table 3.6: Parameters of GET document/{documentId}/attachment/{attachmentId}.

3.1.3.2 Responses

Code	Description	Content
200	Success	Attachment
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.7: Responses of GET document/{documentId}/attachment/{attachmentId}.

3.1.3.3 TOD Reference

TOD-01-03-09-View_Attachment

3.1.4 DELETE /document/{documentId}/attachment/{attachmentId}

Absolute Path: /documentManagement/v1/document/{documentId}/attachment/{attachmentId}

Summary: Deletes an Attachment

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3.1.4.1 Parameters

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Name	Type	Required	Description
documentId	string	Yes	Identifier of the document.
attachmentId	string	Yes	Identifier of the attachment.

Table 3.8: Parameters of DELETE document/{documentId}/attachment/{attachmentId}.

3.1.4.2 Responses

Code	Description	Content
204	Deleted	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.9: Responses of DELETE document/{documentId}/attachment/{attachmentId}.

3.1.4.3 TOD Reference

TOD-01-03-08-Remove_Attachment

3.1.5 PATCH /document/{documentId}/attachment/{attachmentId}

Absolute Path: /documentManagement/v1/document/{documentId}/attachment/{attachmentId}

Summary: Updates an Attachment

3.1.5.1 Parameters

Name	Type	Required	Description
documentId	string	Yes	The identifier of the document.
attachmentId	string	Yes	The identifier of the attachment.

Table 3.10: Parameters of PATCH document/{documentId}/attachment/{attachmentId}.

3.1.5.2 Request Body

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Content Type	Reference
multipart/form-data	Attachment_Update
application/json;charset=utf-8	Attachment_Update

Table 3.11: Request Body of PATCH document/{documentId}/attachment/{attachmentId}.

3.1.5.3 Responses

Code	Description	Content
200	Updated	Attachment
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.12: Responses of PATCH document/{documentId}/attachment/{attachmentId}.

3.1.5.4 TOD Reference

TOD-01-03-07-Update_Attachment

3.1.6 GET /document/{documentId}/attachment/{attachmentId}/content

Absolute Path: /documentManagement/v1/document/{documentId}/attachment/{attachmentId}/content

Summary: Retrieves an Attachment content by ID

3.1.6.1 Parameters

Name	Type	Required	Description
documentId	string	Yes	The identifier of the Document.
attachmentId	string	Yes	The identifier of the Attachment.

Table 3.13: Parameters of GET document/{documentId}/attachment/{attachmentId}/content.

3.1.6.2 Responses

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Code	Description	Content
200	Success	binary
302	Found	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.14: Responses of GET document/{documentId}/attachment/{attachmentId}/content.

3.1.6.3 TOD Reference

TOD-01-03-11-Fetch_Attachment_Content

3.1.7 PUT /document/{documentId}/attachment/{attachmentId}/content

Absolute Path: /documentManagement/v1/document/{documentId}/attachment/{attachmentId}/content

Summary: Updates the content of an Attachment

3.1.7.1 Parameters

Name	Type	Required	Description
documentId	string	Yes	Identifier of the Document
attachmentId	string	Yes	Identifier of the Attachment

Table 3.15: Parameters of PUT document/{documentId}/attachment/{attachmentId}/content.

3.1.7.2 Request Body

Content Type	Reference
/	binary

Table 3.16: Request Body of PUT document/{documentId}/attachment/{attachmentId}/content.

3.1.7.3 Responses

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Code	Description	Content
200	Updated	Attachment
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.17: Responses of PUT document/{documentId}/attachment/{attachmentId}/content.

3.1.7.4 TOD Reference

TOD-01-03-12-Update_Attachment_Content

3.2 checkProductStock (/stock)

Stock Check API

3.2.1 POST /checkProductStock

Absolute Path: /stock/v1/checkProductStock

Summary: Creates a CheckProductStock

3.2.1.1 Request Body

Content Type	Reference
application/json;charset=utf-8	CheckProductStock_Create

Table 3.18: Request Body of POST checkProductStock.

3.2.1.2 Responses

Code	Description	Content
200	Sucess	CheckProductStock
201	Created	CheckProductStock
400	Bad Request	Error

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Code	Description	Content
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.19: Responses of POST checkProductStock.

3.2.1.3 TOD Reference

TOD-05-04-01-Check_Product_Stock

3.2.2 GET /checkProductStock/{id}

Absolute Path: /stock/v1/checkProductStock/{id}

Summary: Retrieves a CheckProductStock by ID

3.2.2.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the CheckProductStock
fields	string	No	Comma-separated properties to provide in response

Table 3.20: Parameters of GET checkProductStock/{id}.

3.2.2.2 Responses

Code	Description	Content
200	Success	CheckProductStock
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

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Code	Description	Content

Table 3.21: Responses of GET checkProductStock/{id}.

3.2.2.3 TOD Reference

TOD-05-04-01-Check_Product_Stock

3.3 customerBill (/customerBillManagement)

Customer Bill Management API

3.3.1 GET /customerBill

Absolute Path: /customerBillManagement/v1/customerBill

Summary: List or find CustomerBill objects

3.3.1.1 Parameters

Name	Type	Required	Description
fields	string	No	Comma-separated properties to be provided in response
offset	integer	No	Requested index for start of resources to be provided in response
limit	integer	No	Requested number of resources to be provided in response

Table 3.22: Parameters of GET customerBill.

3.3.1.2 Responses

Code	Description	Content
200	Success	CustomerBill
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error

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Code	Description	Content
500	Internal Server Error	Error

Table 3.23: Responses of GET customerBill.

3.3.1.3 TOD Reference

TOD-03-03-04-View_All_Customer_Bills

3.3.2 POST /customerBill

Absolute Path: /customerBillManagement/v1/customerBill

Summary: Creates a CustomerBill

3.3.2.1 Request Body

Content Type	Reference
application/json;charset=utf-8	CustomerBill_Create

Table 3.24: Request Body of POST customerBill.

3.3.2.2 Responses

Code	Description	Content
201	Created	CustomerBill
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.25: Responses of POST customerBill.

3.3.2.3 TOD Reference

TOD-03-03-01-Create_Customer_Bill

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3.3.3 GET /customerBill/{id}

Absolute Path: /customerBillManagement/v1/customerBill/{id}

Summary: Retrieves a CustomerBill by ID

3.3.3.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the CustomerBill
fields	string	No	Comma-separated properties to provide in response

Table 3.26: Parameters of GET customerBill/{id}.

3.3.3.2 Responses

Code	Description	Content
200	Success	CustomerBill
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.27: Responses of GET customerBill/{id}.

3.3.3.3 TOD Reference

TOD-03-03-03-View_Customer_Bill

3.3.4 DELETE /customerBill/{id}

Absolute Path: /customerBillManagement/v1/customerBill/{id}

Summary: Withdraw a CustomerBill

3.3.4.1 Parameters

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Name	Type	Required	Description
id	string	Yes	The identifier of the CustomerBill.

Table 3.28: Parameters of DELETE customerBill/{id}.

3.3.4.2 Responses

Code	Description	Content
204	Deleted	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.29: Responses of DELETE customerBill/{id}.

3.3.4.3 TOD Reference

TOD-03-03-05-Withdraw_Customer_Bill

3.3.5 PATCH /customerBill/{id}

Absolute Path: /customerBillManagement/v1/customerBill/{id}

Summary: Updates partially a CustomerBill

3.3.5.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the CustomerBill

Table 3.30: Parameters of PATCH customerBill/{id}.

3.3.5.2 Request Body

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Content Type	Reference
application/json;charset=utf-8	CustomerBill_Update

Table 3.31: Request Body of PATCH customerBill/{id}.

3.3.5.3 Responses

Code	Description	Content
200	Updated	CustomerBill
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.32: Responses of PATCH customerBill/{id}.

3.3.5.4 TOD Reference

TOD-03-03-02-Update_Customer_Bill

3.4 customerInquiry (/customerInquiry)

Customer Inquiry API

3.4.1 POST /customerInquiry

Absolute Path: /customerInquiry/v1/customerInquiry

Summary: Creates a CustomerInquiry

3.4.1.1 Request Body

Content Type	Reference
application/json	CustomerInquiry_Create

Table 3.33: Request Body of POST customerInquiry.

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3.4.1.2 Responses

Code	Description	Content
202	Accepted	CustomerInquiry
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.34: Responses of POST customerInquiry.

3.4.1.3 TOD Reference

TOD-03-01-01-Create_Customer_Inquiry

3.4.2 GET /customerInquiry/{id}

Absolute Path: /customerInquiry/v1/customerInquiry/{id}

Summary: Retrieves a CustomerInquiry

3.4.2.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the CustomerInquiry

Table 3.35: Parameters of GET customerInquiry/{id}.

3.4.2.2 Responses

Code	Description	Content
200	OK	CustomerInquiry
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error

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Code	Description	Content
409	Conflict	Error
500	Internal Server Error	Error

Table 3.36: Responses of GET customerInquiry/{id}.

3.4.2.3 TOD Reference

TOD-03-01-02-View_Customer_Inquiry

3.4.3 DELETE /customerInquiry/{id}

Absolute Path: /customerInquiry/v1/customerInquiry/{id}

Summary: Cancels a CustomerInquiry

3.4.3.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the CustomerInquiry

Table 3.37: Parameters of DELETE customerInquiry/{id}.

3.4.3.2 Responses

Code	Description	Content
204	Deleted	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.38: Responses of DELETE customerInquiry/{id}.

3.4.3.3 TOD Reference

TOD-03-01-05-Cancel_Customer_Inquiry

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3.4.4 PATCH /customerInquiry/{id}

Absolute Path: /customerInquiry/v1/customerInquiry/{id}

Summary: Updates partially a CustomerInquiry

3.4.4.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the CustomerInquiry

Table 3.39: Parameters of PATCH customerInquiry/{id}.

3.4.4.2 Request Body

Content Type	Reference
application/json	CustomerInquiry_Update

Table 3.40: Request Body of PATCH customerInquiry/{id}.

3.4.4.3 Responses

Code	Description	Content
202	Update Accepted	CustomerInquiry
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.41: Responses of PATCH customerInquiry/{id}.

3.4.4.4 TOD Reference

TOD-03-01-04-Update_Customer_Inquiry

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3.4.5 GET /customerInquiry/{id}/results

Absolute Path: /customerInquiry/v1/customerInquiry/{id}/results

Summary: Retrieves the InquiryResults matching the CustomerInquiry

3.4.5.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the CustomerInquiry
fields	string	No	Comma-separated properties to be provided in response
offset	integer	No	Requested index for start of resources to be provided in response
limit	integer	No	Requested number of resources to be provided in response

Table 3.42: Parameters of GET customerInquiry/{id}/results.

3.4.5.2 Responses

Code	Description	Content
200	Success	InquiryResult
204	No content can be provided, because the inquiry is not yet processed.	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.43: Responses of GET customerInquiry/{id}/results.

3.4.5.3 TOD Reference

TOD-03-01-03-View_Inquiry_Results

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3.5 document (/documentManagement)

Document Management API

3.5.1 GET /document

Absolute Path: /documentManagement/v1/document

Summary: List or find Document objects

3.5.1.1 Parameters

Name	Type	Required	Description
fields	string	No	Comma-separated properties to be provided in response
offset	integer	No	Requested index for start of resources to be provided in response
limit	integer	No	Requested number of resources to be provided in response

Table 3.44: Parameters of GET document.

3.5.1.2 Responses

Code	Description	Content
200	Success	Document
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.45: Responses of GET document.

3.5.1.3 TOD Reference

TOD-01-03-05-View_All_Documents

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3.5.2 POST /document

Absolute Path: /documentManagement/v1/document

Summary: Creates a Document

3.5.2.1 Request Body

Content Type	Reference
application/json;charset=utf-8	Document_Create

Table 3.46: Request Body of POST document.

3.5.2.2 Responses

Code	Description	Content
201	Created	Document
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.47: Responses of POST document.

3.5.2.3 TOD Reference

TOD-01-03-01-Create_Document

3.5.3 GET /document/{id}

Absolute Path: /documentManagement/v1/document/{id}

Summary: Retrieves a Document by ID

3.5.3.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the Document

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Name	Type	Required	Description
fields	string	No	Comma-separated properties to provide in response

Table 3.48: Parameters of GET document/{id}.

3.5.3.2 Responses

Code	Description	Content
200	Success	Document
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.49: Responses of GET document/{id}.

3.5.3.3 TOD Reference

TOD-01-03-04-View_Document

3.5.4 DELETE /document/{id}

Absolute Path: /documentManagement/v1/document/{id}

Summary: Deletes a Document

3.5.4.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the Document

Table 3.50: Parameters of DELETE document/{id}.

3.5.4.2 Responses

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Code	Description	Content
204	Deleted	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.51: Responses of DELETE document/{id}.

3.5.4.3 TOD Reference

TOD-01-03-03-Remove_Document

3.5.5 PATCH /document/{id}

Absolute Path: /documentManagement/v1/document/{id}

Summary: Updates partially a Document

3.5.5.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the Document

Table 3.52: Parameters of PATCH document/{id}.

3.5.5.2 Request Body

Content Type	Reference
application/json;charset=utf-8	Document_Update

Table 3.53: Request Body of PATCH document/{id}.

3.5.5.3 Responses

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Code	Description	Content
200	Updated	Document
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.54: Responses of PATCH document/{id}.

3.5.5.4 TOD Reference

TOD-01-03-02-Update_Document

3.6 hub (/eventManagement)

Event Hub API

3.6.1 GET /topic

Absolute Path: /eventManagement/v1/topic

Summary: List or find Topic objects

3.6.1.1 Parameters

Name	Type	Required	Description
fields	string	No	Comma-separated properties to be provided in response
offset	integer	No	Requested index for start of resources to be provided in response
limit	integer	No	Requested number of resources to be provided in response

Table 3.55: Parameters of GET topic.

3.6.1.2 Responses

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Code	Description	Content
200	Success	Topic
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.56: Responses of GET topic.

3.6.1.3 TOD Reference

TOD-01-02-01-View_Event_Topics

3.6.2 GET /topic/{topicId}/hub

Absolute Path: /eventManagement/v1/topic/{topicId}/hub

Summary: List or find Hub subscription objects

3.6.2.1 Parameters

Name	Type	Required	Description
topicId	string	Yes	Identifier of the parent Topic entity
fields	string	No	Comma-separated properties to be provided in response
offset	integer	No	Requested index for start of resources to be provided in response
limit	integer	No	Requested number of resources to be provided in response

Table 3.57: Parameters of GET topic/{topicId}/hub.

3.6.2.2 Responses

Code	Description	Content
200	Success	HubSubscription

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Code	Description	Content
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.58: Responses of GET topic/{topicId}/hub.

3.6.3 POST /topic/{topicId}/hub

Absolute Path: /eventManagement/v1/topic/{topicId}/hub

Summary: Register listener to a Hub

3.6.3.1 Parameters

Name	Type	Required	Description
topicId	string	Yes	Identifier of the parent Topic entity

Table 3.59: Parameters of POST topic/{topicId}/hub.

3.6.3.2 Request Body

Content Type	Reference
application/json;charset=utf-8	HubSubscription_Create

Table 3.60: Request Body of POST topic/{topicId}/hub.

3.6.3.3 Responses

Code	Description	Content
201	Created	HubSubscription
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error

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Code	Description	Content
409	Conflict	Error
500	Internal Server Error	Error

Table 3.61: Responses of POST topic/{topicId}/hub.

3.6.3.4 TOD Reference

TOD-01-02-02-Register_Event_Callback

3.6.4 DELETE /topic/{topicId}/hub/{id}

Absolute Path: /eventManagement/v1/topic/{topicId}/hub/{id}

Summary: Unregister listener from a Hub

3.6.4.1 Parameters

Name	Type	Required	Description
topicId	string	Yes	Identifier of the parent Topic entity
id	string	Yes	Identifier of the Hub

Table 3.62: Parameters of DELETE topic/{topicId}/hub/{id}.

3.6.4.2 Responses

Code	Description	Content
204	Deleted	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.63: Responses of DELETE topic/{topicId}/hub/{id}.

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3.6.4.3 TOD Reference

TOD-01-02-04-Deregister_Event_Callback

3.7 individual (/partyManagement)

Individual API

3.7.1 GET /individual

Absolute Path: /partyManagement/v1/individual

Summary: List or find Individual objects

3.7.1.1 Parameters

Name	Type	Required	Description
fields	string	No	Comma-separated properties to be provided in response
offset	integer	No	Requested index for start of resources to be provided in response
limit	integer	No	Requested number of resources to be provided in response

Table 3.64: Parameters of GET individual.

3.7.1.2 Responses

Code	Description	Content
200	Success	Individual
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.65: Responses of GET individual.

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3.7.1.3 TOD Reference

TOD-01-01-05-View_All_Party_Profiles

3.7.2 POST /individual

Absolute Path: /partyManagement/v1/individual

Summary: Creates a Individual

3.7.2.1 Request Body

Content Type	Reference
application/json;charset=utf-8	Individual_Create

Table 3.66: Request Body of POST individual.

3.7.2.2 Responses

Code	Description	Content
201	Created	Individual
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.67: Responses of POST individual.

3.7.2.3 TOD Reference

TOD-01-01-01-Create_Party_Profile

3.7.3 GET /individual/{id}

Absolute Path: /partyManagement/v1/individual/{id}

Summary: Retrieves a Individual by ID

3.7.3.1 Parameters

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Name	Type	Required	Description
id	string	Yes	Identifier of the Individual
fields	string	No	Comma-separated properties to provide in response

Table 3.68: Parameters of GET individual/{id}.

3.7.3.2 Responses

Code	Description	Content
200	Success	Individual
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.69: Responses of GET individual/{id}.

3.7.3.3 TOD Reference

TOD-01-01-04-View_Party_Profile

3.7.4 DELETE /individual/{id}

Absolute Path: /partyManagement/v1/individual/{id}

Summary: Deletes a Individual

3.7.4.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the Individual

Table 3.70: Parameters of DELETE individual/{id}.

3.7.4.2 Responses

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Code	Description	Content
204	Deleted	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.71: Responses of DELETE individual/{id}.

3.7.4.3 TOD Reference

TOD-01-01-03-Remove_Party_Profile

3.7.5 PATCH /individual/{id}

Absolute Path: /partyManagement/v1/individual/{id}

Summary: Updates partially a Individual

3.7.5.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the Individual

Table 3.72: Parameters of PATCH individual/{id}.

3.7.5.2 Request Body

Content Type	Reference
application/json;charset=utf-8	Individual_Update

Table 3.73: Request Body of PATCH individual/{id}.

3.7.5.3 Responses

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Code	Description	Content
200	Updated	Individual
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.74: Responses of PATCH individual/{id}.

3.7.5.4 TOD Reference

TOD-01-01-02-Update_Party_Profile

3.8 listener (/eventManagement)

Event Listener API

3.8.1 GET /topic/{topicId}/event

Absolute Path: /eventManagement/v1/topic/{topicId}/event

Summary: List or find Event objects

3.8.1.1 Parameters

Name	Type	Required	Description
topicId	string	Yes	Identifier of the parent Topic entity
fields	string	No	Comma-separated properties to be provided in response
offset	integer	No	Requested index for start of resources to be provided in response
limit	integer	No	Requested number of resources to be provided in response

Table 3.75: Parameters of GET topic/{topicId}/event.

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3.8.1.2 Responses

Code	Description	Content
200	Success	Event
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.76: Responses of GET topic/{topicId}/event.

3.8.2 POST /topic/{topicId}/event

Absolute Path: /eventManagement/v1/topic/{topicId}/event

Summary: Creates a Event

3.8.2.1 Parameters

Name	Type	Required	Description
topicId	string	Yes	Identifier of the parent Topic entity

Table 3.77: Parameters of POST topic/{topicId}/event.

3.8.2.2 Request Body

Content Type	Reference
application/json;charset=utf-8	Event_Create

Table 3.78: Request Body of POST topic/{topicId}/event.

3.8.2.3 Responses

Code	Description	Content
201	Created	Event
400	Bad Request	Error

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Code	Description	Content
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.79: Responses of POST topic/{topicId}/event.

3.8.2.4 TOD Reference

TOD-01-02-03-Dispatch_Event

3.9 organization (/partyManagement)

Organization API

3.9.1 GET /organization

Absolute Path: /partyManagement/v1/organization

Summary: List or find Organization objects

3.9.1.1 Parameters

Name	Type	Required	Description
fields	string	No	Comma-separated properties to be provided in response
offset	integer	No	Requested index for start of resources to be provided in response
limit	integer	No	Requested number of resources to be provided in response

Table 3.80: Parameters of GET organization.

3.9.1.2 Responses

Code	Description	Content
200	Success	Organization
400	Bad Request	Error

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Code	Description	Content
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.81: Responses of GET organization.

3.9.1.3 TOD Reference

TOD-01-01-05-View_All_Party_Profiles

3.9.2 POST /organization

Absolute Path: /partyManagement/v1/organization

Summary: Creates a Organization

3.9.2.1 Request Body

Content Type	Reference
application/json;charset=utf-8	Organization_Create

Table 3.82: Request Body of POST organization.

3.9.2.2 Responses

Code	Description	Content
201	Created	Organization
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.83: Responses of POST organization.

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3.9.2.3 TOD Reference

TOD-01-01-01-Create_Party_Profile

3.9.3 GET /organization/{id}

Absolute Path: /partyManagement/v1/organization/{id}

Summary: Retrieves a Organization by ID

3.9.3.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the Organization
fields	string	No	Comma-separated properties to provide in response

Table 3.84: Parameters of GET organization/{id}.

3.9.3.2 Responses

Code	Description	Content
200	Success	Organization
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.85: Responses of GET organization/{id}.

3.9.3.3 TOD Reference

TOD-01-01-04-View_Party_Profile

3.9.4 DELETE /organization/{id}

Absolute Path: /partyManagement/v1/organization/{id}

Summary: Deletes a Organization

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3.9.4.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the Organization

Table 3.86: Parameters of DELETE organization/{id}.

3.9.4.2 Responses

Code	Description	Content
204	Deleted	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.87: Responses of DELETE organization/{id}.

3.9.4.3 TOD Reference

TOD-01-01-03-Remove_Party_Profile

3.9.5 PATCH /organization/{id}

Absolute Path: /partyManagement/v1/organization/{id}

Summary: Updates partially a Organization

3.9.5.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the Organization

Table 3.88: Parameters of PATCH organization/{id}.

3.9.5.2 Request Body

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Content Type	Reference
application/json;charset=utf-8	Organization_Update

Table 3.89: Request Body of PATCH organization/{id}.

3.9.5.3 Responses

Code	Description	Content
200	Updated	Organization
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.90: Responses of PATCH organization/{id}.

3.9.5.4 TOD Reference

TOD-01-01-02-Update_Party_Profile

3.10 product (/productInventory)

Product Inventory API

3.10.1 GET /product

Absolute Path: /productInventory/v1/product

Summary: List or find Product objects

3.10.1.1 Parameters

Name	Type	Required	Description
fields	string	No	Comma-separated properties to be provided in response
offset	integer	No	Requested index for start of resources to be provided in response

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Name	Type	Required	Description
limit	integer	No	Requested number of resources to be provided in response

Table 3.91: Parameters of GET product.

3.10.1.2 Responses

Code	Description	Content
200	Success	Product
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.92: Responses of GET product.

3.10.1.3 TOD Reference

TOD-05-03-05-View_All_Products

3.10.2 POST /product

Absolute Path: /productInventory/v1/product

Summary: Creates a Product

3.10.2.1 Request Body

Content Type	Reference
application/json;charset=utf-8	Product_Create

Table 3.93: Request Body of POST product.

3.10.2.2 Responses

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Code	Description	Content
201	Created	Product
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.94: Responses of POST product.

3.10.2.3 TOD Reference

TOD-05-03-01-Create_Product

3.10.3 GET /product/{id}

Absolute Path: /productInventory/v1/product/{id}

Summary: Retrieves a Product by ID

3.10.3.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the Product
fields	string	No	Comma-separated properties to provide in response

Table 3.95: Parameters of GET product/{id}.

3.10.3.2 Responses

Code	Description	Content
200	Success	Product
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error

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Code	Description	Content
409	Conflict	Error
500	Internal Server Error	Error

Table 3.96: Responses of GET product/{id}.

3.10.3.3 TOD Reference

TOD-05-03-04-View_Product

3.10.4 DELETE /product/{id}

Absolute Path: /productInventory/v1/product/{id}

Summary: Deletes a Product

3.10.4.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the Product

Table 3.97: Parameters of DELETE product/{id}.

3.10.4.2 Responses

Code	Description	Content
204	Deleted	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.98: Responses of DELETE product/{id}.

3.10.4.3 TOD Reference

TOD-05-03-03-Remove_Product

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3.10.5 PATCH /product/{id}

Absolute Path: /productInventory/v1/product/{id}

Summary: Updates partially a Product

3.10.5.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the Product

Table 3.99: Parameters of PATCH product/{id}.

3.10.5.2 Request Body

Content Type	Reference
application/json;charset=utf-8	Product_Update

Table 3.100: Request Body of PATCH product/{id}.

3.10.5.3 Responses

Code	Description	Content
200	Updated	Product
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.101: Responses of PATCH product/{id}.

3.10.5.4 TOD Reference

TOD-05-03-02-Update_Product

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3.11 productOffering (/productCatalog)

Product Offering API

3.11.1 GET /productOffering

Absolute Path: /productCatalog/v1/productOffering

Summary: List or find ProductOffering objects

3.11.1.1 Parameters

Name	Type	Required	Description
fields	string	No	Comma-separated properties to be provided in response
offset	integer	No	Requested index for start of resources to be provided in response
limit	integer	No	Requested number of resources to be provided in response

Table 3.102: Parameters of GET productOffering.

3.11.1.2 Responses

Code	Description	Content
200	Success	ProductOffering
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.103: Responses of GET productOffering.

3.11.1.3 TOD Reference

TOD-02-04-05-View_All_Product_Offerings

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3.11.2 POST /productOffering

Absolute Path: /productCatalog/v1/productOffering

Summary: Creates a ProductOffering

3.11.2.1 Request Body

Content Type	Reference
application/json;charset=utf-8	ProductOffering_Create

Table 3.104: Request Body of POST productOffering.

3.11.2.2 Responses

Code	Description	Content
201	Created	ProductOffering
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.105: Responses of POST productOffering.

3.11.2.3 TOD Reference

TOD-02-04-01-Create_Product_Offering

3.11.3 GET /productOffering/{id}

Absolute Path: /productCatalog/v1/productOffering/{id}

Summary: Retrieves a ProductOffering by ID

3.11.3.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the ProductOffering

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Name	Type	Required	Description
fields	string	No	Comma-separated properties to provide in response

Table 3.106: Parameters of GET productOffering/{id}.

3.11.3.2 Responses

Code	Description	Content
200	Success	ProductOffering
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.107: Responses of GET productOffering/{id}.

3.11.3.3 TOD Reference

TOD-02-04-04-View_Product_Offering

3.11.4 DELETE /productOffering/{id}

Absolute Path: /productCatalog/v1/productOffering/{id}

Summary: Deletes a ProductOffering

3.11.4.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the ProductOffering

Table 3.108: Parameters of DELETE productOffering/{id}.

3.11.4.2 Responses

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Code	Description	Content
204	Deleted	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.109: Responses of DELETE productOffering/{id}.

3.11.4.3 TOD Reference

TOD-02-04-03-Remove_Product_Offering

3.11.5 PATCH /productOffering/{id}

Absolute Path: /productCatalog/v1/productOffering/{id}

Summary: Updates partially a ProductOffering

3.11.5.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the ProductOffering

Table 3.110: Parameters of PATCH productOffering/{id}.

3.11.5.2 Request Body

Content Type	Reference
application/json;charset=utf-8	ProductOffering_Update

Table 3.111: Request Body of PATCH productOffering/{id}.

3.11.5.3 Responses

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Code	Description	Content
200	Updated	ProductOffering
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.112: Responses of PATCH productOffering/{id}.

3.11.5.4 TOD Reference

TOD-02-04-02-Update_Product_Offering

3.12 productOrder (/productOrdering)

Product Order API

3.12.1 GET /productOrder

Absolute Path: /productOrdering/v1/productOrder

Summary: List or find ProductOrder objects

3.12.1.1 Parameters

Name	Type	Required	Description
fields	string	No	Comma-separated properties to be provided in response
offset	integer	No	Requested index for start of resources to be provided in response
limit	integer	No	Requested number of resources to be provided in response

Table 3.113: Parameters of GET productOrder.

3.12.1.2 Responses

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Code	Description	Content
200	Success	ProductOrder
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.114: Responses of GET productOrder.

3.12.1.3 TOD Reference

TOD-03-02-04-View_All_Product_Orders

3.12.2 POST /productOrder

Absolute Path: /productOrdering/v1/productOrder

Summary: Creates a ProductOrder

3.12.2.1 Request Body

Content Type	Reference
application/json;charset=utf-8	ProductOrder_Create

Table 3.115: Request Body of POST productOrder.

3.12.2.2 Responses

Code	Description	Content
201	Created	ProductOrder
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error
409	Conflict	Error

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Code	Description	Content
500	Internal Server Error	Error

Table 3.116: Responses of POST productOrder.

3.12.2.3 TOD Reference

TOD-03-02-01-Create_Product_Order

3.12.3 GET /productOrder/{id}

Absolute Path: /productOrdering/v1/productOrder/{id}

Summary: Retrieves a ProductOrder by ID

3.12.3.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the ProductOrder
fields	string	No	Comma-separated properties to provide in response

Table 3.117: Parameters of GET productOrder/{id}.

3.12.3.2 Responses

Code	Description	Content
200	Success	ProductOrder
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.118: Responses of GET productOrder/{id}.

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3.12.3.3 TOD Reference

TOD-03-02-03-View_Product_Order

3.12.4 DELETE /productOrder/{id}

Absolute Path: /productOrdering/v1/productOrder/{id}

Summary: Deletes a ProductOrder

3.12.4.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the ProductOrder

Table 3.119: Parameters of DELETE productOrder/{id}.

3.12.4.2 Responses

Code	Description	Content
204	Deleted	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.120: Responses of DELETE productOrder/{id}.

3.12.5 PATCH /productOrder/{id}

Absolute Path: /productOrdering/v1/productOrder/{id}

Summary: Updates partially a ProductOrder

3.12.5.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the ProductOrder

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Name	Type	Required	Description

Table 3.121: Parameters of PATCH productOrder/{id}.

3.12.5.2 Request Body

Content Type	Reference
application/json;charset=utf-8	ProductOrder_Update

Table 3.122: Request Body of PATCH productOrder/{id}.

3.12.5.3 Responses

Code	Description	Content
200	Updated	ProductOrder
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.123: Responses of PATCH productOrder/{id}.

3.12.5.4 TOD Reference

TOD-03-02-02-Update_Product_Order

3.13 productSpecification (/productCatalog)

Product Specification API

3.13.1 GET /productSpecification

Absolute Path: /productCatalog/v1/productSpecification

Summary: List or find ProductSpecification objects

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3.13.1.1 Parameters

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Name	Type	Required	Description
fields	string	No	Comma-separated properties to be provided in response
offset	integer	No	Requested index for start of resources to be provided in response
limit	integer	No	Requested number of resources to be provided in response

Table 3.124: Parameters of GET productSpecification.

3.13.1.2 Responses

Code	Description	Content
200	Success	ProductSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.125: Responses of GET productSpecification.

3.13.1.3 TOD Reference

TOD-02-03-05-View_All_Product_Specifications

3.13.2 POST /productSpecification

Absolute Path: /productCatalog/v1/productSpecification

Summary: Creates a ProductSpecification

3.13.2.1 Request Body

Content Type	Reference
application/json;charset=utf-8	ProductSpecification_Create

Table 3.126: Request Body of POST productSpecification.

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3.13.2.2 Responses

Code	Description	Content
201	Created	ProductSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.127: Responses of POST productSpecification.

3.13.2.3 TOD Reference

TOD-02-03-01-Create_Product_Specification

3.13.3 GET /productSpecification/{id}

Absolute Path: /productCatalog/v1/productSpecification/{id}

Summary: Retrieves a ProductSpecification by ID

3.13.3.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the ProductSpecification
fields	string	No	Comma-separated properties to provide in response

Table 3.128: Parameters of GET productSpecification/{id}.

3.13.3.2 Responses

Code	Description	Content
200	Success	ProductSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error

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Code	Description	Content
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.129: Responses of GET productSpecification/{id}.

3.13.3.3 TOD Reference

TOD-02-03-04-View_Product_Specification

3.13.4 DELETE /productSpecification/{id}

Absolute Path: /productCatalog/v1/productSpecification/{id}

Summary: Deletes a ProductSpecification

3.13.4.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the ProductSpecification

Table 3.130: Parameters of DELETE productSpecification/{id}.

3.13.4.2 Responses

Code	Description	Content
204	Deleted	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.131: Responses of DELETE productSpecification/{id}.

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3.13.4.3 TOD Reference

TOD-02-03-03-Remove_Product_Specification

3.13.5 PATCH /productSpecification/{id}

Absolute Path: /productCatalog/v1/productSpecification/{id}

Summary: Updates partially a ProductSpecification

3.13.5.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the ProductSpecification

Table 3.132: Parameters of PATCH productSpecification/{id}.

3.13.5.2 Request Body

Content Type	Reference
application/json;charset=utf-8	ProductSpecification_Update

Table 3.133: Request Body of PATCH productSpecification/{id}.

3.13.5.3 Responses

Code	Description	Content
200	Updated	ProductSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.134: Responses of PATCH productSpecification/{id}.

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3.13.5.4 TOD Reference

TOD-02-03-02-Update_Product_Specification

3.14 productTemplate (/productCatalog)

Product Template API

3.14.1 GET /productTemplate

Absolute Path: /productCatalog/v1/productTemplate

Summary: List or find ProductTemplate objects

3.14.1.1 Parameters

Name	Type	Required	Description
fields	string	No	Comma-separated properties to be provided in response.
offset	integer	No	Requested index for start of resources to be provided in response.
limit	integer	No	Requested number of resources to be provided in response.

Table 3.135: Parameters of GET productTemplate.

3.14.1.2 Responses

Code	Description	Content
200	Success	ProductSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.136: Responses of GET productTemplate.

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3.14.1.3 TOD Reference

TOD-04-03-05-View_All_Product_Templates

3.14.2 POST /productTemplate

Absolute Path: /productCatalog/v1/productTemplate

Summary: Creates a ProductTemplate

3.14.2.1 Request Body

Content Type	Reference
application/json;charset=utf-8	ProductSpecification_Create

Table 3.137: Request Body of POST productTemplate.

3.14.2.2 Responses

Code	Description	Content
201	Created	ProductSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.138: Responses of POST productTemplate.

3.14.2.3 TOD Reference

TOD-04-03-01-Create_Product_Template

3.14.3 GET /productTemplate/{id}

Absolute Path: /productCatalog/v1/productTemplate/{id}

Summary: Retrieves a ProductTemplate by ID.

3.14.3.1 Parameters

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Name	Type	Required	Description
id	string	Yes	The identifier of the ProductTemplate.
fields	string	No	Comma-separated properties to provide in response.

Table 3.139: Parameters of GET productTemplate/{id}.

3.14.3.2 Responses

Code	Description	Content
200	Success	ProductSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.140: Responses of GET productTemplate/{id}.

3.14.3.3 TOD Reference

TOD-04-03-04-View_Product_Template

3.14.4 DELETE /productTemplate/{id}

Absolute Path: /productCatalog/v1/productTemplate/{id}

Summary: Deletes a ProductTemplate

3.14.4.1 Parameters

Name	Type	Required	Description
id	string	Yes	The identifier of the ProductTemplate

Table 3.141: Parameters of DELETE productTemplate/{id}.

3.14.4.2 Responses

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Code	Description	Content
204	Deleted	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.142: Responses of DELETE productTemplate/{id}.

3.14.4.3 TOD Reference

TOD-04-03-03-Remove_Product_Template

3.14.5 PATCH /productTemplate/{id}

Absolute Path: /productCatalog/v1/productTemplate/{id}

Summary: Updates partially a ProductTemplate

3.14.5.1 Parameters

Name	Type	Required	Description
id	string	Yes	The identifier of the ProductTemplate

Table 3.143: Parameters of PATCH productTemplate/{id}.

3.14.5.2 Request Body

Content Type	Reference
application/json;charset=utf-8	ProductSpecification_Update

Table 3.144: Request Body of PATCH productTemplate/{id}.

3.14.5.3 Responses

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Code	Description	Content
200	Updated	ProductSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.145: Responses of PATCH productTemplate/{id}.

3.14.5.4 TOD Reference

TOD-04-03-02-Update_Product_Template

3.15 resource (/resourceInventory)

Resource Inventory API

3.15.1 GET /resource

Absolute Path: /resourceInventory/v1/resource

Summary: List or find Resource objects

3.15.1.1 Parameters

Name	Type	Required	Description
fields	string	No	Comma-separated properties to be provided in response
offset	integer	No	Requested index for start of resources to be provided in response
limit	integer	No	Requested number of resources to be provided in response

Table 3.146: Parameters of GET resource.

3.15.1.2 Responses

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Code	Description	Content
200	Success	Resource
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.147: Responses of GET resource.

3.15.1.3 TOD Reference

TOD-05-01-05-View_All_Resources

3.15.2 POST /resource

Absolute Path: /resourceInventory/v1/resource

Summary: Creates a Resource

3.15.2.1 Request Body

Content Type	Reference
application/json;charset=utf-8	Resource_Create

Table 3.148: Request Body of POST resource.

3.15.2.2 Responses

Code	Description	Content
201	Created	Resource
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error
409	Conflict	Error

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Code	Description	Content
500	Internal Server Error	Error

Table 3.149: Responses of POST resource.

3.15.2.3 TOD Reference

TOD-05-01-01-Create_Resource

3.15.3 GET /resource/{id}

Absolute Path: /resourceInventory/v1/resource/{id}

Summary: Retrieves a Resource by ID

3.15.3.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the Resource
fields	string	No	Comma-separated properties to provide in response

Table 3.150: Parameters of GET resource/{id}.

3.15.3.2 Responses

Code	Description	Content
200	Success	Resource
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.151: Responses of GET resource/{id}.

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3.15.3.3 TOD Reference

TOD-05-01-04-View_Resource

3.15.4 DELETE /resource/{id}

Absolute Path: /resourceInventory/v1/resource/{id}

Summary: Deletes a Resource

3.15.4.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the Resource

Table 3.152: Parameters of DELETE resource/{id}.

3.15.4.2 Responses

Code	Description	Content
204	Deleted	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.153: Responses of DELETE resource/{id}.

3.15.4.3 TOD Reference

TOD-05-01-03-Remove_Resource

3.15.5 PATCH /resource/{id}

Absolute Path: /resourceInventory/v1/resource/{id}

Summary: Updates partially a Resource

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3.15.5.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the Resource

Table 3.154: Parameters of PATCH resource/{id}.

3.15.5.2 Request Body

Content Type	Reference
application/json;charset=utf-8	Resource_Update

Table 3.155: Request Body of PATCH resource/{id}.

3.15.5.3 Responses

Code	Description	Content
200	Updated	Resource
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.156: Responses of PATCH resource/{id}.

3.15.5.4 TOD Reference

TOD-05-01-02-Update_Resource

3.16 resourceSpecification (/resourceCatalog)

Resource Specification API

3.16.1 GET /resourceSpecification

Absolute Path: /resourceCatalog/v1/resourceSpecification

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Summary: List or find ResourceSpecification objects

3.16.1.1 Parameters

Name	Type	Required	Description
fields	string	No	Comma-separated properties to be provided in response
offset	integer	No	Requested index for start of resources to be provided in response
limit	integer	No	Requested number of resources to be provided in response

Table 3.157: Parameters of GET resourceSpecification.

3.16.1.2 Responses

Code	Description	Content
200	Success	ResourceSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.158: Responses of GET resourceSpecification.

3.16.1.3 TOD Reference

TOD-02-01-05-View_All_Resource_Specifications

3.16.2 POST /resourceSpecification

Absolute Path: /resourceCatalog/v1/resourceSpecification

Summary: Creates a ResourceSpecification

3.16.2.1 Request Body

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Content Type	Reference
application/json;charset=utf-8	ResourceSpecification_Create

Table 3.159: Request Body of POST resourceSpecification.

3.16.2.2 Responses

Code	Description	Content
201	Created	ResourceSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.160: Responses of POST resourceSpecification.

3.16.2.3 TOD Reference

TOD-02-01-01-Create_Resource_Specification

3.16.3 GET /resourceSpecification/{id}

Absolute Path: /resourceCatalog/v1/resourceSpecification/{id}

Summary: Retrieves a ResourceSpecification by ID

3.16.3.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the ResourceSpecification
fields	string	No	Comma-separated properties to provide in response

Table 3.161: Parameters of GET resourceSpecification/{id}.

3.16.3.2 Responses

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Code	Description	Content
200	Success	ResourceSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.162: Responses of GET resourceSpecification/{id}.

3.16.3.3 TOD Reference

TOD-02-01-04-View_Resource_Specification

3.16.4 DELETE /resourceSpecification/{id}

Absolute Path: /resourceCatalog/v1/resourceSpecification/{id}

Summary: Deletes a ResourceSpecification

3.16.4.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the ResourceSpecification

Table 3.163: Parameters of DELETE resourceSpecification/{id}.

3.16.4.2 Responses

Code	Description	Content
204	Deleted	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error

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Code	Description	Content
409	Conflict	Error
500	Internal Server Error	Error

Table 3.164: Responses of DELETE resourceSpecification/{id}.

3.16.4.3 TOD Reference

TOD-02-01-03-Remove_Resource_Specification

3.16.5 PATCH /resourceSpecification/{id}

Absolute Path: /resourceCatalog/v1/resourceSpecification/{id}

Summary: Updates partially a ResourceSpecification

3.16.5.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the ResourceSpecification

Table 3.165: Parameters of PATCH resourceSpecification/{id}.

3.16.5.2 Request Body

Content Type	Reference
application/json;charset=utf-8	ResourceSpecification_Update

Table 3.166: Request Body of PATCH resourceSpecification/{id}.

3.16.5.3 Responses

Code	Description	Content
200	Updated	ResourceSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error

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Code	Description	Content
409	Conflict	Error
500	Internal Server Error	Error

Table 3.167: Responses of PATCH resourceSpecification/{id}.

3.16.5.4 TOD Reference

TOD-02-01-02-Update_Resource_Specification

3.17 resourceTemplate (/resourceCatalog)

Resource Template API

3.17.1 GET /resourceTemplate

Absolute Path: /resourceCatalog/v1/resourceTemplate

Summary: List or find ResourceTemplate objects

3.17.1.1 Parameters

Name	Type	Required	Description
fields	string	No	Comma-separated properties to be provided in response.
offset	integer	No	The requested index for start of resources to be provided in response.
limit	integer	No	The requested number of resources to be provided in response.

Table 3.168: Parameters of GET resourceTemplate.

3.17.1.2 Responses

Code	Description	Content
200	Success	ResourceSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error

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Code	Description	Content
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.169: Responses of GET resourceTemplate.

3.17.1.3 TOD Reference

TOD-04-01-05-View_All_Resource_Templates

3.17.2 POST /resourceTemplate

Absolute Path: /resourceCatalog/v1/resourceTemplate

Summary: Creates a ResourceTemplate

3.17.2.1 Request Body

Content Type	Reference
application/json;charset=utf-8	ResourceSpecification_Create

Table 3.170: Request Body of POST resourceTemplate.

3.17.2.2 Responses

Code	Description	Content
201	Created	ResourceSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.171: Responses of POST resourceTemplate.

3.17.2.3 TOD Reference

TOD-04-01-01-Create_Resource_Template

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3.17.3 GET /resourceTemplate/{id}

Absolute Path: /resourceCatalog/v1/resourceTemplate/{id}

Summary: Retrieves a ResourceTemplate by ID

3.17.3.1 Parameters

Name	Type	Required	Description
id	string	Yes	The identifier of the ResourceTemplate.
fields	string	No	Comma-separated properties to provide in response.

Table 3.172: Parameters of GET resourceTemplate/{id}.

3.17.3.2 Responses

Code	Description	Content
200	Success	ResourceSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.173: Responses of GET resourceTemplate/{id}.

3.17.3.3 TOD Reference

TOD-04-01-04-View_Resource_Template

3.17.4 DELETE /resourceTemplate/{id}

Absolute Path: /resourceCatalog/v1/resourceTemplate/{id}

Summary: Deletes a ResourceTemplate

3.17.4.1 Parameters

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Name	Type	Required	Description
id	string	Yes	The identifier of the ResourceTemplate.

Table 3.174: Parameters of DELETE resourceTemplate/{id}.

3.17.4.2 Responses

Code	Description	Content
204	Deleted	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.175: Responses of DELETE resourceTemplate/{id}.

3.17.4.3 TOD Reference

TOD-04-01-03-Remove_Resource_Template

3.17.5 PATCH /resourceTemplate/{id}

Absolute Path: /resourceCatalog/v1/resourceTemplate/{id}

Summary: Updates partially a ResourceTemplate

3.17.5.1 Parameters

Name	Type	Required	Description
id	string	Yes	The identifier of the ResourceTemplate.

Table 3.176: Parameters of PATCH resourceTemplate/{id}.

3.17.5.2 Request Body

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Content Type	Reference
application/json;charset=utf-8	ResourceSpecification_Update

Table 3.177: Request Body of PATCH resourceTemplate/{id}.

3.17.5.3 Responses

Code	Description	Content
200	Updated	ResourceSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.178: Responses of PATCH resourceTemplate/{id}.

3.17.5.4 TOD Reference

TOD-04-01-02-Update_Resource_Template

3.18 service (/serviceInventory)

Service Inventory API

3.18.1 GET /service

Absolute Path: /serviceInventory/v1/service

Summary: List or find Service objects

3.18.1.1 Parameters

Name	Type	Required	Description
fields	string	No	Comma-separated properties to be provided in response
offset	integer	No	Requested index for start of resources to be provided in response

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Name	Type	Required	Description
limit	integer	No	Requested number of resources to be provided in response

Table 3.179: Parameters of GET service.

3.18.1.2 Responses

Code	Description	Content
200	Success	Service
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.180: Responses of GET service.

3.18.1.3 TOD Reference

TOD-05-02-05-View_All_Services

3.18.2 POST /service

Absolute Path: /serviceInventory/v1/service

Summary: Creates a Service

3.18.2.1 Request Body

Content Type	Reference
application/json;charset=utf-8	Service_Create

Table 3.181: Request Body of POST service.

3.18.2.2 Responses

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Code	Description	Content
201	Created	Service
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.182: Responses of POST service.

3.18.2.3 TOD Reference

TOD-05-02-01-Create_Service

3.18.3 GET /service/{id}

Absolute Path: /serviceInventory/v1/service/{id}

Summary: Retrieves a Service by ID

3.18.3.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the Service
fields	string	No	Comma-separated properties to provide in response

Table 3.183: Parameters of GET service/{id}.

3.18.3.2 Responses

Code	Description	Content
200	Success	Service
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error

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Code	Description	Content
409	Conflict	Error
500	Internal Server Error	Error

Table 3.184: Responses of GET service/{id}.

3.18.3.3 TOD Reference

TOD-05-02-04-View_Service

3.18.4 DELETE /service/{id}

Absolute Path: /serviceInventory/v1/service/{id}

Summary: Deletes a Service

3.18.4.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the Service

Table 3.185: Parameters of DELETE service/{id}.

3.18.4.2 Responses

Code	Description	Content
204	Deleted	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.186: Responses of DELETE service/{id}.

3.18.4.3 TOD Reference

TOD-05-02-03-Remove_Service

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3.18.5 PATCH /service/{id}

Absolute Path: /serviceInventory/v1/service/{id}

Summary: Updates partially a Service

3.18.5.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the Service

Table 3.187: Parameters of PATCH service/{id}.

3.18.5.2 Request Body

Content Type	Reference
application/json;charset=utf-8	Service_Update

Table 3.188: Request Body of PATCH service/{id}.

3.18.5.3 Responses

Code	Description	Content
200	Updated	Service
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.189: Responses of PATCH service/{id}.

3.18.5.4 TOD Reference

TOD-05-02-02-Update_Service

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3.19 serviceLevelObjective (/serviceQuality)

Service Level Objective API

3.19.1 GET /serviceLevelObjective

Absolute Path: /serviceQuality/v1/serviceLevelObjective

Summary: List or find ServiceLevelObjective objects

3.19.1.1 Parameters

Name	Type	Required	Description
fields	string	No	Comma-separated properties to be provided in response
offset	integer	No	Requested index for start of resources to be provided in response
limit	integer	No	Requested number of resources to be provided in response

Table 3.190: Parameters of GET serviceLevelObjective.

3.19.1.2 Responses

Code	Description	Content
200	Success	ServiceLevelObjective
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.191: Responses of GET serviceLevelObjective.

3.19.1.3 TOD Reference

TOD-06-01-05-View_All_Service_Level_Objective

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3.19.2 POST /serviceLevelObjective

Absolute Path: /serviceQuality/v1/serviceLevelObjective

Summary: Creates a ServiceLevelObjective

3.19.2.1 Request Body

Content Type	Reference
application/json;charset=utf-8	ServiceLevelObjective_Create

Table 3.192: Request Body of POST serviceLevelObjective.

3.19.2.2 Responses

Code	Description	Content
201	Created	ServiceLevelObjective
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.193: Responses of POST serviceLevelObjective.

3.19.2.3 TOD Reference

TOD-06-01-01-Create_Service_Level_Objective

3.19.3 GET /serviceLevelObjective/{id}

Absolute Path: /serviceQuality/v1/serviceLevelObjective/{id}

Summary: Retrieves a ServiceLevelObjective by ID

3.19.3.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the ServiceLevelObjective

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Name	Type	Required	Description
fields	string	No	Comma-separated properties to provide in response

Table 3.194: Parameters of GET serviceLevelObjective/{id}.

3.19.3.2 Responses

Code	Description	Content
200	Success	ServiceLevelObjective
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.195: Responses of GET serviceLevelObjective/{id}.

3.19.3.3 TOD Reference

TOD-06-01-04-View_Service_Level_Objective

3.19.4 DELETE /serviceLevelObjective/{id}

Absolute Path: /serviceQuality/v1/serviceLevelObjective/{id}

Summary: Deletes a ServiceLevelObjective

3.19.4.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the ServiceLevelObjective

Table 3.196: Parameters of DELETE serviceLevelObjective/{id}.

3.19.4.2 Responses

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Code	Description	Content
204	Deleted	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.197: Responses of DELETE serviceLevelObjective/{id}.

3.19.4.3 TOD Reference

TOD-06-01-03-Remove_Service_Level_Objective

3.19.5 PATCH /serviceLevelObjective/{id}

Absolute Path: /serviceQuality/v1/serviceLevelObjective/{id}

Summary: Updates partially a ServiceLevelObjective

3.19.5.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the ServiceLevelObjective

Table 3.198: Parameters of PATCH serviceLevelObjective/{id}.

3.19.5.2 Request Body

Content Type	Reference
application/json;charset=utf-8	ServiceLevelObjective_Update

Table 3.199: Request Body of PATCH serviceLevelObjective/{id}.

3.19.5.3 Responses

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Code	Description	Content
200	Updated	ServiceLevelObjective
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.200: Responses of PATCH serviceLevelObjective/{id}.

3.19.5.4 TOD Reference

TOD-06-01-02-Update_Service_Level_Objective

3.20 serviceLevelSpecification (/serviceQuality)

Service Level Specification API

3.20.1 GET /serviceLevelSpecification

Absolute Path: /serviceQuality/v1/serviceLevelSpecification

Summary: List or find ServiceLevelSpecification objects

3.20.1.1 Parameters

Name	Type	Required	Description
fields	string	No	Comma-separated properties to be provided in response
offset	integer	No	Requested index for start of resources to be provided in response
limit	integer	No	Requested number of resources to be provided in response

Table 3.201: Parameters of GET serviceLevelSpecification.

3.20.1.2 Responses

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Code	Description	Content
200	Success	ServiceLevelSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.202: Responses of GET serviceLevelSpecification.

3.20.1.3 TOD Reference

TOD-06-02-05-View_All_Service_Level_Specification

3.20.2 POST /serviceLevelSpecification

Absolute Path: /serviceQuality/v1/serviceLevelSpecification

Summary: Creates a ServiceLevelSpecification

3.20.2.1 Request Body

Content Type	Reference
application/json;charset=utf-8	ServiceLevelSpecification_Create

Table 3.203: Request Body of POST serviceLevelSpecification.

3.20.2.2 Responses

Code	Description	Content
201	Created	ServiceLevelSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error
409	Conflict	Error

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Code	Description	Content
500	Internal Server Error	Error

Table 3.204: Responses of POST serviceLevelSpecification.

3.20.2.3 TOD Reference

TOD-06-02-01-Create_Service_Level_Specification

3.20.3 GET /serviceLevelSpecification/{id}

Absolute Path: /serviceQuality/v1/serviceLevelSpecification/{id}

Summary: Retrieves a ServiceLevelSpecification by ID

3.20.3.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the ServiceLevelSpecification
fields	string	No	Comma-separated properties to provide in response

Table 3.205: Parameters of GET serviceLevelSpecification/{id}.

3.20.3.2 Responses

Code	Description	Content
200	Success	ServiceLevelSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.206: Responses of GET serviceLevelSpecification/{id}.

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3.20.3.3 TOD Reference

TOD-06-02-04-View_Service_Level_Specification

3.20.4 DELETE /serviceLevelSpecification/{id}

Absolute Path: /serviceQuality/v1/serviceLevelSpecification/{id}

Summary: Deletes a ServiceLevelSpecification

3.20.4.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the ServiceLevelSpecification

Table 3.207: Parameters of DELETE serviceLevelSpecification/{id}.

3.20.4.2 Responses

Code	Description	Content
204	Deleted	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.208: Responses of DELETE serviceLevelSpecification/{id}.

3.20.4.3 TOD Reference

TOD-06-02-03-Remove_Service_Level_Specification

3.20.5 PATCH /serviceLevelSpecification/{id}

Absolute Path: /serviceQuality/v1/serviceLevelSpecification/{id}

Summary: Updates partially a ServiceLevelSpecification

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3.20.5.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the ServiceLevelSpecification

Table 3.209: Parameters of PATCH serviceLevelSpecification/{id}.

3.20.5.2 Request Body

Content Type	Reference
application/json;charset=utf-8	ServiceLevelSpecification_Update

Table 3.210: Request Body of PATCH serviceLevelSpecification/{id}.

3.20.5.3 Responses

Code	Description	Content
200	Updated	ServiceLevelSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.211: Responses of PATCH serviceLevelSpecification/{id}.

3.20.5.4 TOD Reference

TOD-06-02-02-Update_Service_Level_Specification

3.21 serviceSpecification (/serviceCatalog)

Service Specification API

3.21.1 GET /serviceSpecification

Absolute Path: /serviceCatalog/v1/serviceSpecification

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Summary: List or find ServiceSpecification objects

3.21.1.1 Parameters

Name	Type	Required	Description
fields	string	No	Comma-separated properties to be provided in response
offset	integer	No	Requested index for start of resources to be provided in response
limit	integer	No	Requested number of resources to be provided in response

Table 3.212: Parameters of GET serviceSpecification.

3.21.1.2 Responses

Code	Description	Content
200	Success	ServiceSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.213: Responses of GET serviceSpecification.

3.21.1.3 TOD Reference

TOD-02-02-05-View_All_Service_Specifications

3.21.2 POST /serviceSpecification

Absolute Path: /serviceCatalog/v1/serviceSpecification

Summary: Creates a ServiceSpecification

3.21.2.1 Request Body

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Content Type	Reference
application/json;charset=utf-8	ServiceSpecification_Create

Table 3.214: Request Body of POST serviceSpecification.

3.21.2.2 Responses

Code	Description	Content
201	Created	ServiceSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.215: Responses of POST serviceSpecification.

3.21.2.3 TOD Reference

TOD-02-02-01-Create_Service_Specification

3.21.3 GET /serviceSpecification/{id}

Absolute Path: /serviceCatalog/v1/serviceSpecification/{id}

Summary: Retrieves a ServiceSpecification by ID

3.21.3.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the ServiceSpecification
fields	string	No	Comma-separated properties to provide in response

Table 3.216: Parameters of GET serviceSpecification/{id}.

3.21.3.2 Responses

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Code	Description	Content
200	Success	ServiceSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.217: Responses of GET serviceSpecification/{id}.

3.21.3.3 TOD Reference

TOD-02-02-04-View_Service_Specification

3.21.4 DELETE /serviceSpecification/{id}

Absolute Path: /serviceCatalog/v1/serviceSpecification/{id}

Summary: Deletes a ServiceSpecification

3.21.4.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the ServiceSpecification

Table 3.218: Parameters of DELETE serviceSpecification/{id}.

3.21.4.2 Responses

Code	Description	Content
204	Deleted	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error

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Code	Description	Content
409	Conflict	Error
500	Internal Server Error	Error

Table 3.219: Responses of DELETE serviceSpecification/{id}.

3.21.4.3 TOD Reference

TOD-02-02-03-Remove_Service_Specification

3.21.5 PATCH /serviceSpecification/{id}

Absolute Path: /serviceCatalog/v1/serviceSpecification/{id}

Summary: Updates partially a ServiceSpecification

3.21.5.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the ServiceSpecification

Table 3.220: Parameters of PATCH serviceSpecification/{id}.

3.21.5.2 Request Body

Content Type	Reference
application/json;charset=utf-8	ServiceSpecification_Update

Table 3.221: Request Body of PATCH serviceSpecification/{id}.

3.21.5.3 Responses

Code	Description	Content
200	Updated	ServiceSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error

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Code	Description	Content
409	Conflict	Error
500	Internal Server Error	Error

Table 3.222: Responses of PATCH serviceSpecification/{id}.

3.21.5.4 TOD Reference

TOD-02-02-02-Update_Service_Specification

3.22 serviceTemplate (/serviceCatalog)

Service Template API

3.22.1 GET /serviceTemplate

Absolute Path: /serviceCatalog/v1/serviceTemplate

Summary: List or find ServiceTemplate objects

3.22.1.1 Parameters

Name	Type	Required	Description
fields	string	No	Comma-separated properties to be provided in response.
offset	integer	No	The requested index for start of resources to be provided in response.
limit	integer	No	The requested number of resources to be provided in response.

Table 3.223: Parameters of GET serviceTemplate.

3.22.1.2 Responses

Code	Description	Content
200	Success	ServiceSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error

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Code	Description	Content
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.224: Responses of GET serviceTemplate.

3.22.1.3 TOD Reference

TOD-04-02-05-View_All_Service_Templates

3.22.2 POST /serviceTemplate

Absolute Path: /serviceCatalog/v1/serviceTemplate

Summary: Creates a ServiceTemplate

3.22.2.1 Request Body

Content Type	Reference
application/json;charset=utf-8	ServiceSpecification_Create

Table 3.225: Request Body of POST serviceTemplate.

3.22.2.2 Responses

Code	Description	Content
201	Created	ServiceSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.226: Responses of POST serviceTemplate.

3.22.2.3 TOD Reference

TOD-04-02-01-Create_Service_Template

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3.22.3 GET /serviceTemplate/{id}

Absolute Path: /serviceCatalog/v1/serviceTemplate/{id}

Summary: Retrieves a ServiceTemplate by ID

3.22.3.1 Parameters

Name	Type	Required	Description
id	string	Yes	The identifier of the ServiceTemplate.
fields	string	No	Comma-separated properties to provide in response.

Table 3.227: Parameters of GET serviceTemplate/{id}.

3.22.3.2 Responses

Code	Description	Content
200	Success	ServiceSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.228: Responses of GET serviceTemplate/{id}.

3.22.3.3 TOD Reference

TOD-04-02-04-View_Service_Template

3.22.4 DELETE /serviceTemplate/{id}

Absolute Path: /serviceCatalog/v1/serviceTemplate/{id}

Summary: Deletes a ServiceTemplate

3.22.4.1 Parameters

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Name	Type	Required	Description
id	string	Yes	The identifier of the ServiceTemplate.

Table 3.229: Parameters of DELETE serviceTemplate/{id}.

3.22.4.2 Responses

Code	Description	Content
204	Deleted	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.230: Responses of DELETE serviceTemplate/{id}.

3.22.4.3 TOD Reference

TOD-04-02-03-Remove_Service_Template

3.22.5 PATCH /serviceTemplate/{id}

Absolute Path: /serviceCatalog/v1/serviceTemplate/{id}

Summary: Updates partially a ServiceTemplate

3.22.5.1 Parameters

Name	Type	Required	Description
id	string	Yes	The identifier of the ServiceTemplate.

Table 3.231: Parameters of PATCH serviceTemplate/{id}.

3.22.5.2 Request Body

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Content Type	Reference
application/json;charset=utf-8	ServiceSpecification_Update

Table 3.232: Request Body of PATCH serviceTemplate/{id}.

3.22.5.3 Responses

Code	Description	Content
200	Updated	ServiceSpecification
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.233: Responses of PATCH serviceTemplate/{id}.

3.22.5.4 TOD Reference

TOD-04-02-02-Update_Service_Template

3.23 troubleTicket (/troubleTicket)

Trouble Ticket API

3.23.1 GET /troubleTicket

Absolute Path: /troubleTicket/v1/troubleTicket

Summary: List or find TroubleTicket objects

3.23.1.1 Parameters

Name	Type	Required	Description
fields	string	No	Comma-separated properties to be provided in response
offset	integer	No	Requested index for start of resources to be provided in response

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Name	Type	Required	Description
limit	integer	No	Requested number of resources to be provided in response

Table 3.234: Parameters of GET troubleTicket.

3.23.1.2 Responses

Code	Description	Content
200	Success	TroubleTicket
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.235: Responses of GET troubleTicket.

3.23.1.3 TOD Reference

TOD-01-04-05-View_All_Trouble_Tickets

3.23.2 POST /troubleTicket

Absolute Path: /troubleTicket/v1/troubleTicket

Summary: Creates a TroubleTicket

3.23.2.1 Request Body

Content Type	Reference
application/json;charset=utf-8	TroubleTicket_Create

Table 3.236: Request Body of POST troubleTicket.

3.23.2.2 Responses

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Code	Description	Content
201	Created	TroubleTicket
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.237: Responses of POST troubleTicket.

3.23.2.3 TOD Reference

TOD-01-04-01-Create_Trouble_Ticket

3.23.3 GET /troubleTicket/{id}

Absolute Path: /troubleTicket/v1/troubleTicket/{id}

Summary: Retrieves a TroubleTicket by ID

3.23.3.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the TroubleTicket
fields	string	No	Comma-separated properties to provide in response

Table 3.238: Parameters of GET troubleTicket/{id}.

3.23.3.2 Responses

Code	Description	Content
200	Success	TroubleTicket
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error

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Code	Description	Content
409	Conflict	Error
500	Internal Server Error	Error

Table 3.239: Responses of GET troubleTicket/{id}.

3.23.3.3 TOD Reference

TOD-01-04-04-View_Trouble_Ticket

3.23.4 DELETE /troubleTicket/{id}

Absolute Path: /troubleTicket/v1/troubleTicket/{id}

Summary: Deletes a TroubleTicket

3.23.4.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the TroubleTicket

Table 3.240: Parameters of DELETE troubleTicket/{id}.

3.23.4.2 Responses

Code	Description	Content
204	Deleted	N/A
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.241: Responses of DELETE troubleTicket/{id}.

3.23.4.3 TOD Reference

TOD-01-04-03-Remove_Trouble_Ticket

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3.23.5 PATCH /troubleTicket/{id}

Absolute Path: /troubleTicket/v1/troubleTicket/{id}

Summary: Updates partially a TroubleTicket

3.23.5.1 Parameters

Name	Type	Required	Description
id	string	Yes	Identifier of the TroubleTicket

Table 3.242: Parameters of PATCH troubleTicket/{id}.

3.23.5.2 Request Body

Content Type	Reference
application/json;charset=utf-8	TroubleTicket_Update

Table 3.243: Request Body of PATCH troubleTicket/{id}.

3.23.5.3 Responses

Code	Description	Content
200	Updated	TroubleTicket
400	Bad Request	Error
401	Unauthorized	Error
403	Forbidden	Error
404	Not Found	Error
405	Method Not allowed	Error
409	Conflict	Error
500	Internal Server Error	Error

Table 3.244: Responses of PATCH troubleTicket/{id}.

3.23.5.4 TOD Reference

TOD-01-04-02-Update_Trouble_Ticket

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4 Data-Transfer-Objects

The following sections describe all DTOs used in the APIs described above. Most entities can make use of polymorphism using the `@type` and `@baseType` attributes. An implementation may omit these fields if only the base type is used, i.e. no subtypes exist. This is the case for essentially all inner types, e.g. characteristics and references. In references, the attribute `@referredType` can be used to hint the type of the target entity.

4.1 AgreementItemRef

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

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
agreementItemId	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.1: Fields of AgreementItemRef.

4.2 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.

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

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Field	Type	Format	Required

Table 4.2: Fields of AgreementRef.

4.3 AlternateProductStock

AlternateProductStock is used to log and execute Alternate about product stock availability

Field	Type	Format	Required
id	string	N/A	No
alternateAvailabilityDate	string	date-time	No
alternatePlace	PlaceRefOrValue	N/A	No
alternateProduct	ProductRefOrValue	N/A	No
alternateQuantity	Quantity	N/A	No
alternateStock	ProductStockRef	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.3: Fields of AlternateProductStock.

4.4 ApplicableTimePeriod

The period of time for which Capacity or CapacityDemand applies.

Field	Type	Format	Required
dayOfWeek	string	N/A	No
fromToDateTime	TimePeriod	N/A	No
rangeInterval	string	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	N/A	No
\@type	string	N/A	No

Table 4.4: Fields of ApplicableTimePeriod.

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4.5 AppliedPayment

The applied payment is the result of lettering process. It enables to assign automatically or manually part of incoming payment amount to a bill.

Field	Type	Format	Required
appliedAmount	Money	N/A	No
payment	PaymentRef	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.5: Fields of AppliedPayment.

4.6 AppointmentRef

Refers an appointment, such as a Customer presentation or internal meeting or site visit

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
description	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.6: Fields of AppointmentRef.

4.7 AssociationSpecificationRef

reference to an AssociationSpecification object

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
\@baseType	string	N/A	No

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Field	Type	Format	Required
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.7: Fields of AssociationSpecificationRef.

4.8 Attachment

Complements the description of an element (for instance a product) through video, pictures...

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
description	string	N/A	No
attachmentType	string	N/A	No
mimeType	string	N/A	No
url	string	uri	No
size	Quantity	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.8: Fields of Attachment.

4.9 AttachmentOrDocumentRef

Reference to an attachment or a document. A document comprises of multiple attachments, while a single attachment has uri, mimeType, size, etc.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
description	string	N/A	No

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Field	Type	Format	Required
attachmentType	string	N/A	No
mimeType	string	N/A	No
url	string	uri	No
size	Quantity	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.9: Fields of AttachmentOrDocumentRef.

4.10 AttachmentRef

Attachment reference. An attachment complements the description of an element (for instance a product) through video, pictures

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
description	string	N/A	No
url	string	uri	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.10: Fields of AttachmentRef.

4.11 Attachment_Create

Complements the description of an element (for instance a product) through video, pictures...

Field	Type	Format	Required
name	string	N/A	No

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Field	Type	Format	Required
description	string	N/A	No
attachmentType	string	N/A	No
content	string	binary	No
mimeType	string	N/A	No
url	string	uri	No
size	Quantity	N/A	No
validFor	TimePeriod	N/A	No

Table 4.11: Fields of Attachment_Create.

4.12 Attachment_Update

Complements the description of an element (for instance a product) through video, pictures...

Field	Type	Format	Required
name	string	N/A	No
description	string	N/A	No
attachmentType	string	N/A	No
content	string	binary	No
mimeType	string	N/A	No
url	string	uri	No
size	Quantity	N/A	No
validFor	TimePeriod	N/A	No

Table 4.12: Fields of Attachment_Update.

4.13 AvailabilityResultType

Possible values of the availability result check for CheckProductStockItem.

Field	Type	Format	Required
AvailabilityResultType	string	oneOf[available, notAvailable, alternate]	No

Table 4.13: Fields of AvailabilityResultType.

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4.14 BillCycleRef

....

Field	Type	Format	Required
id	string	N/A	Yes
href	string	N/A	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.14: Fields of BillCycleRef.

4.15 BillingAccountRef

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

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
ratingType	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.15: Fields of BillingAccountRef.

4.16 BundledGroupProductOffering

Defines a group between a parent product offering and multiple child offerings, allowing (for example) choosing a minimum of 2 and a maximum of 6 offerings from within the list of child offerings. And optionally specifying offerings that would be selected by default. For example facilitate the choice of between 2 and 7 channel packs from a list, and cause certain items to be selected by default.

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Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
lifecycleStatus	string	N/A	No
bundledGroupProductOfferingOption	BundledGroupProductOfferingOption	N/A	No
bundledGroupProductOffering	array	BundledGroupProductOffering	No
bundledProductOffering	array	BundledProductOffering	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.16: Fields of BundledGroupProductOffering.

4.17 BundledGroupProductOfferingOption

A set of numbers that specifies the lower and upper limits for a ProductOfferingGroup that can be procured as part of the related BundledGroupProductOffering. Values can range from 0 to unbounded

Field	Type	Format	Required
numberRelOfferLowerLimit	integer	N/A	No
numberRelOfferUpperLimit	integer	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.17: Fields of BundledGroupProductOfferingOption.

4.18 BundledProductOffering

A type of ProductOffering that belongs to a grouping of ProductOfferings made available to the market. It inherits of all attributes of ProductOffering.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No

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Field	Type	Format	Required
lifecycleStatus	string	N/A	No
bundledProductOfferingOption	BundledProductOfferingOption	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.18: Fields of BundledProductOffering.

4.19 BundledProductOfferingOption

A set of numbers that specifies the lower and upper limits for a ProductOffering that can be procured as part of the related BundledProductOffering. Values can range from 0 to unbounded

Field	Type	Format	Required
numberRelOfferDefault	integer	N/A	No
numberRelOfferLowerLimit	integer	N/A	No
numberRelOfferUpperLimit	integer	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.19: Fields of BundledProductOfferingOption.

4.20 BundledProductSpecification

A type of ProductSpecification that belongs to a grouping of ProductSpecifications made available to the market. It inherits of all attributes of ProductSpecification.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
lifecycleStatus	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

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Field	Type	Format	Required

Table 4.20: Fields of BundledProductSpecification.

4.21 CategoryRef

The category for grouping recommendations

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
version	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.21: Fields of CategoryRef.

4.22 ChannelRef

The channel to which the resource reference to. e.g. channel for selling product offerings, channel for opening a trouble ticket etc..

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.22: Fields of ChannelRef.

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4.23 Characteristic

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

Field	Type	Format	Required
id	string	N/A	No
name	string	N/A	Yes
valueType	string	N/A	No
characteristicRelationship	array	CharacteristicRelationship	No
value	any	N/A	Yes
unitOfMeasure	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.23: Fields of Characteristic.

4.24 CharacteristicRelationship

Another Characteristic that is related to the current Characteristic;

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
relationshipType	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.24: Fields of CharacteristicRelationship.

4.25 CharacteristicSpecification

This class defines a characteristic specification.

Field	Type	Format	Required
id	string	N/A	No
name	string	N/A	No

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Field	Type	Format	Required
description	string	N/A	No
configurable	boolean	N/A	No
extensible	boolean	N/A	No
isUnique	boolean	N/A	No
maxCardinality	integer	N/A	No
minCardinality	integer	N/A	No
regex	string	N/A	No
valueType	string	N/A	No
charSpecRelationship	array	CharacteristicSpecificationRelationship	No
characteristicValueSpecification	array	CharacteristicValueSpecification	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@valueSchemaLocation	string	N/A	No

Table 4.25: Fields of CharacteristicSpecification.

4.26 CharacteristicSpecificationRelationship

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

Field	Type	Format	Required
name	string	N/A	No
characteristicSpecificationId	string	N/A	No
parentSpecificationHref	string	uri	No
parentSpecificationId	string	N/A	No
relationshipType	string	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.26: Fields of CharacteristicSpecificationRelationship.

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4.27 CharacteristicValuePrecedence

Possible values for the precedence of a characteristic value.

Field	Type	Format	Required
CharacteristicValuePrecedence	string	oneOf[preferred, minimum, maximum, alternative]	No

Table 4.27: Fields of CharacteristicValuePrecedence.

4.28 CharacteristicValueSpecification

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

Field	Type	Format	Required
isDefault	boolean	N/A	No
rangeInterval	string	N/A	No
regex	string	N/A	No
unitOfMeasure	string	N/A	No
valueFrom	integer	N/A	No
valueTo	integer	N/A	No
valueType	string	N/A	No
validFor	TimePeriod	N/A	No
value	any	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.28: Fields of CharacteristicValueSpecification.

4.29 CheckProductStock

CheckProductStock is used to log and execute check about product stock availability

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
completedCheckProductStock-Date	string	date-time	No

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Field	Type	Format	Required
creationDate	string	date-time	No
instantSyncCheck	boolean	N/A	No
provideAlternative	boolean	N/A	No
requestedCheckProductStock-Date	string	date-time	No
checkProductStockItem	array	CheckProductStockItem	No
place	PlaceRefOrValue	N/A	No
relatedParty	array	RelatedParty	No
state	TaskStateType	N/A	No
requestedAvailability	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.29: Fields of CheckProductStock.

4.30 CheckProductStockItem

CheckProductStockItem is used to log and execute query about one product (or configured product) stock availability

Field	Type	Format	Required
id	string	N/A	Yes
availabilityResult	AvailabilityResultType	N/A	No
provideAlternative	boolean	N/A	No
alternate	array	AlternateProductStock	No
checkedProductStock	ProductStock	N/A	Yes
requestedQuantity	Quantity	N/A	Yes
state	TaskStateType	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.30: Fields of CheckProductStockItem.

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4.31 CheckProductStock_Create

CheckProductStock is used to log and execute check about product stock availability Skipped properties: id,href

Field	Type	Format	Required
instantSyncCheck	boolean	N/A	No
provideAlternative	boolean	N/A	No
requestedCheckProductStock-Date	string	date-time	No
checkProductStockItem	array	CheckProductStockItem	Yes
place	PlaceRefOrValue	N/A	No
relatedParty	array	RelatedParty	No
requestedAvailability	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.31: Fields of CheckProductStock_Create.

4.32 ConstraintRef

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

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
version	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.32: Fields of ConstraintRef.

4.33 ContactMedium

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

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Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
mediumType	string	N/A	No
preferred	boolean	N/A	No
characteristic	MediumCharacteristic	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.33: Fields of ContactMedium.

4.34 CustomerBill

The customer bill. Can be a regular recurring bill or an extra bill on demand by the customer or the csp.

Field	Type	Format	Required
id	string	N/A	No
href	string	N/A	No
billDate	string	date-time	No
billNo	string	N/A	No
category	string	N/A	No
lastUpdate	string	date-time	No
nextBillDate	string	date-time	No
paymentDueDate	string	date-time	No
amountDue	Money	N/A	No
appliedPayment	array	AppliedPayment	No
billCycle	BillCycleRef	N/A	No
billDocument	array	AttachmentOrDocumentRef	No
billingAccount	BillingAccountRef	N/A	No
billingPeriod	TimePeriod	N/A	No
financialAccount	FinancialAccountRef	N/A	No
paymentMethod	PaymentMethodRef	N/A	No
relatedParty	array	RelatedParty	No

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Field	Type	Format	Required
remainingAmount	Money	N/A	No
runType	CustomerBillRunType	N/A	No
state	CustomerBillStateType	N/A	No
taxExcludedAmount	Money	N/A	No
taxIncludedAmount	Money	N/A	No
taxItem	array	TaxItem	No
productOrder	ProductOrderRef	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.34: Fields of CustomerBill.

4.35 CustomerBillRef

Bill reference.

Field	Type	Format	Required
id	string	N/A	Yes
href	string	N/A	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.35: Fields of CustomerBillRef.

4.36 CustomerBillRunType

Recommended Enumeration Type (not formal forced in standard): Valid values for the runType of a bill. The bill could be produced in a regular bill cycle ‘onCycle’. Otherwise the bill is produced on a request (e.g. customer request). This could be indicated by ‘offCycle’

Field	Type	Format	Required
CustomerBillRunType	string	oneOf[onCycle, offCycle]	No

Table 4.36: Fields of CustomerBillRunType.

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4.37 CustomerBillStateType

Recommended Enumeration Type (not formal forced in standard): Valid values for the lifecycle state of the bill: new = 'bill is ready to validate or to sent', validated = 'bill is checked (manual / automatic)', sent = 'bill is sent with the channel defined in the billingaccount', settled = 'bill is payed', partiallySettled = 'bill is partially payed', onHold = 'bill will not be in further processing until open issues connected to the bill are solved'

Field	Type	Format	Required
CustomerBillStateType	string	oneOf[new, onHold, validated, sent, settled, partiallyPaid, withdrawn]	No

Table 4.37: Fields of CustomerBillStateType.

4.38 CustomerBill_Create

The customer bill to be created. Can be a regular recurring bill or an extra bill on demand by the customer or the csp.

Field	Type	Format	Required
billDate	string	date-time	No
billNo	string	N/A	No
category	string	N/A	No
lastUpdate	string	date-time	No
nextBillDate	string	date-time	No
paymentDueDate	string	date-time	No
amountDue	Money	N/A	No
appliedPayment	array	AppliedPayment	No
billCycle	BillCycleRef	N/A	No
billDocument	array	AttachmentOrDocumentRef	No
billingAccount	BillingAccountRef	N/A	No
billingPeriod	TimePeriod	N/A	No
financialAccount	FinancialAccountRef	N/A	No
paymentMethod	PaymentMethodRef	N/A	No
relatedParty	array	RelatedParty	No
remainingAmount	Money	N/A	No
runType	CustomerBillRunType	N/A	No
state	CustomerBillStateType	N/A	No
taxExcludedAmount	Money	N/A	No

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Field	Type	Format	Required
taxIncludedAmount	Money	N/A	No
taxItem	array	TaxItem	No
productOrder	ProductOrderRef	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.38: Fields of CustomerBill_Create.

4.39 CustomerBill_Update

The customer bill. Can be a regular recurring bill or an extra bill on demand by the customer or the csp. Skipped properties: id,href,amountDue,appliedPayment,billDate,billDocument,billNo,billingAccount,billingPeriod,category,financialAccoun

Field	Type	Format	Required
billCycle	BillCycleRef	N/A	No
state	CustomerBillStateType	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.39: Fields of CustomerBill_Update.

4.40 CustomerCharacteristic

A characteristic describing the customer. Used to scope results of a CustomerInquiry.

Field	Type	Format	Required
name	string	N/A	Yes
description	string	N/A	No
valueType	string	N/A	No
value	string	N/A	No

Table 4.40: Fields of CustomerCharacteristic.

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4.41 CustomerInquiry

A request for information (resources, services, products and offerings) from a Customer.

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
state	InquiryStateType	N/A	Yes
responseTime	ResponseTime	N/A	Yes
customerProfile	array	CustomerCharacteristic	No
bundlesOnly	boolean	N/A	No
customerResource	array	ResourceSpecification	No
inquiredProduct	array	InquiredProduct	No
inquiredProvider	array	InquiredProvider	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.41: Fields of CustomerInquiry.

4.42 CustomerInquiry_Create

A request for information (resources, services, products and offerings) from a Customer. Skipped properties: id,href,state,responseTime

Field	Type	Format	Required
customerProfile	array	CustomerCharacteristic	No
bundlesOnly	boolean	N/A	No
customerResource	array	ResourceSpecification	No
inquiredProduct	array	InquiredProduct	No
inquiredProvider	array	InquiredProvider	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.42: Fields of CustomerInquiry_Create.

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4.43 CustomerInquiry_Update

An update request of a customer inquiry that allows to change the inquired providers.

Field	Type	Format	Required
inquiredProvider	array	InquiredProvider	No

Table 4.43: Fields of CustomerInquiry_Update.

4.44 Disability

Lack or inadequate strength or ability.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
disabilityCode	string	N/A	No
disabilityName	string	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.44: Fields of Disability.

4.45 Document

Document is a tangible output from an activity

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
description	string	N/A	No
creationDate	string	date-time	No
documentType	string	N/A	No
lastUpdate	string	date-time	No
lifecycleState	string	N/A	No

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Field	Type	Format	Required
version	string	N/A	No
attachment	array	Attachment	No
characteristic	array	Characteristic	No
documentRelationship	array	DocumentRef	No
relatedEntity	RelatedEntity	N/A	No
relatedParty	array	RelatedParty	No

Table 4.45: Fields of Document.

4.46 DocumentRef

Reference to a document. A document contains metadata for the associated attachments.

Field	Type	Format	Required
id	string	N/A	Yes
href	string	N/A	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.46: Fields of DocumentRef.

4.47 Document_Create

Document is a tangible output from an activity Skipped properties: id,href

Field	Type	Format	Required
name	string	N/A	No
description	string	N/A	No
creationDate	string	date-time	No
documentType	string	N/A	No
lastUpdate	string	date-time	No
lifecycleState	string	N/A	No
version	string	N/A	No

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Field	Type	Format	Required
characteristic	array	Characteristic	No
documentRelationship	array	DocumentRef	No
relatedEntity	RelatedEntity	N/A	No
relatedParty	array	RelatedParty	No

Table 4.47: Fields of Document_Create.

4.48 Document_Update

Document is a tangible output from an activity Skipped properties: id,href

Field	Type	Format	Required
name	string	N/A	No
description	string	N/A	No
creationDate	string	date-time	No
documentType	string	N/A	No
lastUpdate	string	date-time	No
lifecycleState	string	N/A	No
version	string	N/A	No
characteristic	array	Characteristic	No
documentRelationship	array	DocumentRef	No
relatedEntity	RelatedEntity	N/A	No
relatedParty	array	RelatedParty	No

Table 4.48: Fields of Document_Update.

4.49 Duration

A time interval in a given unit of time

Field	Type	Format	Required
amount	integer	N/A	No
units	string	N/A	No

Table 4.49: Fields of Duration.

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4.50 EntityRef

Entity reference schema to be use for all entityRef class.

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.50: Fields of EntityRef.

4.51 EntitySpecificationRelationship

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

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
relationshipType	string	N/A	Yes
role	string	N/A	No
associationSpec	AssociationSpecificationRef	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.51: Fields of EntitySpecificationRelationship.

4.52 EntityValue

Base entity value schema for use in TMForum Open-APIs

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Field	Type	Format	Required
id	string	N/A	No
href	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.52: Fields of EntityValue.

4.53 Error

Used when an API throws an Error, typically with a HTTP error response-code (3xx, 4xx, 5xx)

Field	Type	Format	Required
code	string	N/A	Yes
reason	string	N/A	Yes
message	string	N/A	No
status	string	N/A	No
referenceError	string	uri	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.53: Fields of Error.

4.54 Event

event with common attributes.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
description	string	N/A	No
correlationId	string	N/A	No
domain	string	N/A	No
eventId	string	N/A	No
eventTime	string	date-time	No

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Field	Type	Format	Required
eventType	string	N/A	No
priority	string	N/A	No
timeOccurred	string	date-time	No
title	string	N/A	No
analyticCharacteristic	array	Characteristic	No
event	object	N/A	No
relatedParty	array	RelatedParty	No
reportingSystem	EntityRef	N/A	No
source	EntityRef	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.54: Fields of Event.

4.55 Event_Create

event with common attributes. Skipped properties: id,href

Field	Type	Format	Required
description	string	N/A	No
correlationId	string	N/A	No
domain	string	N/A	No
eventId	string	N/A	No
eventTime	string	date-time	No
eventType	string	N/A	No
priority	string	N/A	No
timeOccurred	string	date-time	No
title	string	N/A	No
analyticCharacteristic	array	Characteristic	No
event	object	N/A	No
relatedParty	array	RelatedParty	No
reportingSystem	EntityRef	N/A	No
source	EntityRef	N/A	No

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Field	Type	Format	Required
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.55: Fields of Event_Create.

4.56 Extensible

Base Extensible schema for use in TMForum Open-APIs

Field	Type	Format	Required
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.56: Fields of Extensible.

4.57 ExternalReference

External reference of the individual or reference in other system

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
externalReferenceType	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.57: Fields of ExternalReference.

4.58 Feature

Configuration feature.

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Field	Type	Format	Required
id	string	N/A	No
name	string	N/A	Yes
isBundle	boolean	N/A	No
isEnabled	boolean	N/A	No
constraint	array	ConstraintRef	No
featureCharacteristic	array	Characteristic	Yes
featureRelationship	array	FeatureRelationship	No

Table 4.58: Fields of Feature.

4.59 FeatureRelationship

Configuration feature

Field	Type	Format	Required
id	string	N/A	No
name	string	N/A	Yes
relationshipType	string	N/A	Yes
validFor	TimePeriod	N/A	No

Table 4.59: Fields of FeatureRelationship.

4.60 FeatureSpecification

Specification for resource, service or product features

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
isBundle	boolean	N/A	No
isEnabled	boolean	N/A	No
version	string	N/A	No
constraint	array	ConstraintRef	No
featureSpecCharacteristic	array	FeatureSpecificationCharacteristic	No
featureSpecRelationship	array	FeatureSpecificationRelationship	No

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Field	Type	Format	Required
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.60: Fields of FeatureSpecification.

4.61 FeatureSpecificationCharacteristic

Configuration feature characteristic specification.

Field	Type	Format	Required
id	string	N/A	No
name	string	N/A	Yes
description	string	N/A	No
configurable	boolean	N/A	No
extensible	boolean	N/A	No
isUnique	boolean	N/A	No
maxCardinality	integer	N/A	No
minCardinality	integer	N/A	No
regex	string	N/A	No
valueType	string	N/A	No
featureSpecCharRelationship	array	FeatureSpecificationCharacteristicRelationship	No
featureSpecCharacteristicValue	array	CharacteristicValueSpecification	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@valueSchemaLocation	string	N/A	No

Table 4.61: Fields of FeatureSpecificationCharacteristic.

4.62 FeatureSpecificationCharacteristicRelationship

An aggregation, migration, substitution, dependency or exclusivity relationship between/among FeatureSpecificationCharacteristics.

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Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
characteristicId	string	N/A	No
featureId	string	N/A	No
relationshipType	string	N/A	No
resourceSpecificationHref	string	uri	No
resourceSpecificationId	string	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.62: Fields of FeatureSpecificationCharacteristicRelationship.

4.63 FeatureSpecificationRelationship

Relationship between feature specifications

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	Yes
parentSpecificationHref	string	uri	No
parentSpecificationId	string	N/A	No
relationshipType	string	N/A	Yes
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.63: Fields of FeatureSpecificationRelationship.

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4.64 FinancialAccountRef

AccountReceivable reference. An account of money owed by a party to another entity in exchange for goods or services that have been delivered or used. An account receivable aggregates the amounts of one or more party accounts (billing or settlement) owned by a given party.

Field	Type	Format	Required
id	string	N/A	Yes
href	string	N/A	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.64: Fields of FinancialAccountRef.

4.65 GeoJson

GeoJson

Field	Type	Format	Required
type	string	oneOf[“Feature”, “FeatureCollection”]	Yes

Table 4.65: Fields of GeoJson.

4.66 GeoJsonFeature

GeoJSon Feature

Field	Type	Format	Required
geometry	Geometry	N/A	No
properties	any	N/A	No
type	string	“Feature”	Yes

Table 4.66: Fields of GeoJsonFeature.

4.67 GeoJsonFeatureCollection

The GeoJSon FeatureCollection.

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Field	Type	Format	Required
features	array	GeoJsonFeature	No
type	string	“FeatureCollection”	Yes

Table 4.67: Fields of GeoJsonFeatureCollection.

4.68 Geometry

GeoJson geometry

Field	Type	Format	Required
type	string	oneOf[“Point”, “Polygon”]	Yes

Table 4.68: Fields of Geometry.

4.69 HubSubscription

A Hub is used to subscribe to an event notification

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
callback	string	uri	Yes
query	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.69: Fields of HubSubscription.

4.70 HubSubscription_Create

A Hub is used to subscribe to an event notification Skipped properties: id,href

Field	Type	Format	Required
callback	string	uri	Yes
query	string	N/A	No
\@baseType	string	N/A	No

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Field	Type	Format	Required
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.70: Fields of HubSubscription_Create.

4.71 Individual

Individual represents a single human being (a man, woman or child). The individual can be a customer, an employee or any other person that the organization needs to store information about.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
aristocraticTitle	string	N/A	No
birthDate	string	date-time	No
countryOfBirth	string	N/A	No
deathDate	string	date-time	No
familyName	string	N/A	No
familyNamePrefix	string	N/A	No
formattedName	string	N/A	No
fullName	string	N/A	No
gender	string	N/A	No
generation	string	N/A	No
givenName	string	N/A	No
legalName	string	N/A	No
location	string	N/A	No
maritalStatus	string	N/A	No
middleName	string	N/A	No
nationality	string	N/A	No
placeOfBirth	string	N/A	No
preferredGivenName	string	N/A	No
title	string	N/A	No
contactMedium	array	ContactMedium	No
creditRating	array	PartyCreditProfile	No
disability	array	Disability	No

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Field	Type	Format	Required
externalReference	array	ExternalReference	No
individualIdentification	array	IndividualIdentification	No
languageAbility	array	LanguageAbility	No
otherName	array	OtherNameIndividual	No
partyCharacteristic	array	Characteristic	No
relatedParty	array	RelatedParty	No
skill	array	Skill	No
status	IndividualStateType	N/A	No
taxExemptionCertificate	array	TaxExemptionCertificate	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.71: Fields of Individual.

4.72 IndividualIdentification

Represents our registration of information used as proof of identity by an individual (passport, national identity card, drivers license, social security number, birth certificate)

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
identificationId	string	N/A	No
identificationType	string	N/A	No
issuingAuthority	string	N/A	No
issuingDate	string	date-time	No
attachment	AttachmentOrDocumentRef	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.72: Fields of IndividualIdentification.

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4.73 IndividualStateType

Valid values for the lifecycle state of the individual

Field	Type	Format	Required
IndividualStateType	string	oneOf[initialized, validated, deceased]	No

Table 4.73: Fields of IndividualStateType.

4.74 Individual_Create

Individual represents a single human being (a man, woman or child). The individual can be a customer, an employee or any other person that the organization needs to store information about. Skipped properties: id,href

Field	Type	Format	Required
aristocraticTitle	string	N/A	No
birthDate	string	date-time	No
countryOfBirth	string	N/A	No
deathDate	string	date-time	No
familyName	string	N/A	Yes
familyNamePrefix	string	N/A	No
formattedName	string	N/A	No
fullName	string	N/A	No
gender	string	N/A	No
generation	string	N/A	No
givenName	string	N/A	Yes
legalName	string	N/A	No
location	string	N/A	No
maritalStatus	string	N/A	No
middleName	string	N/A	No
nationality	string	N/A	No
placeOfBirth	string	N/A	No
preferredGivenName	string	N/A	No
title	string	N/A	No
contactMedium	array	ContactMedium	No
creditRating	array	PartyCreditProfile	No
disability	array	Disability	No

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Field	Type	Format	Required
externalReference	array	ExternalReference	No
individualIdentification	array	IndividualIdentification	No
languageAbility	array	LanguageAbility	No
otherName	array	OtherNameIndividual	No
partyCharacteristic	array	Characteristic	No
relatedParty	array	RelatedParty	No
skill	array	Skill	No
status	IndividualStateType	N/A	No
taxExemptionCertificate	array	TaxExemptionCertificate	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.74: Fields of Individual_Create.

4.75 Individual_Update

Individual represents a single human being (a man, woman or child). The individual can be a customer, an employee or any other person that the organization needs to store information about. Skipped properties: id,href

Field	Type	Format	Required
aristocraticTitle	string	N/A	No
birthDate	string	date-time	No
countryOfBirth	string	N/A	No
deathDate	string	date-time	No
familyName	string	N/A	No
familyNamePrefix	string	N/A	No
formattedName	string	N/A	No
fullName	string	N/A	No
gender	string	N/A	No
generation	string	N/A	No
givenName	string	N/A	No
legalName	string	N/A	No
location	string	N/A	No
maritalStatus	string	N/A	No

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Field	Type	Format	Required
middleName	string	N/A	No
nationality	string	N/A	No
placeOfBirth	string	N/A	No
preferredGivenName	string	N/A	No
title	string	N/A	No
contactMedium	array	ContactMedium	No
creditRating	array	PartyCreditProfile	No
disability	array	Disability	No
externalReference	array	ExternalReference	No
individualIdentification	array	IndividualIdentification	No
languageAbility	array	LanguageAbility	No
otherName	array	OtherNameIndividual	No
partyCharacteristic	array	Characteristic	No
relatedParty	array	RelatedParty	No
skill	array	Skill	No
status	IndividualStateType	N/A	No
taxExemptionCertificate	array	TaxExemptionCertificate	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.75: Fields of Individual_Update.

4.76 InquiredCharacteristicValueSpecification

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

Field	Type	Format	Required
precedence	CharacteristicValuePrecedence	N/A	No
unitOfMeasure	string	N/A	No
valueType	string	N/A	No
value	object	N/A	No

Table 4.76: Fields of InquiredCharacteristicValueSpecification.

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4.77 InquiredProduct

A product inquired by the customer.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
targetProductSchema	TargetProductSchema	N/A	No
servicePeriod	TimePeriod	N/A	No
inquiredProductCharacteristic	array	InquiredProductCharacteristic	No
estimatedUsage	array	UsageEstimation	No

Table 4.77: Fields of InquiredProduct.

4.78 InquiredProductCharacteristic

A characteristic quality or distinctive feature of an InquiredProduct. The characteristic can take a discrete value, such as color, can take a range of values, (for example, sensitivity of 100-240 mV), or can be derived from a formula (for example, usage time (hrs) = 30 - talk time *3).

Field	Type	Format	Required
id	string	N/A	Yes
name	string	N/A	No
priority	number	N/A	No
valueType	string	N/A	No
inquiredProductCharacteristic-Value	array	InquiredCharacteristicValueSpecification	Yes

Table 4.78: Fields of InquiredProductCharacteristic.

4.79 InquiredProvider

A provider to which the customer inquiry will be sent.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No

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Field	Type	Format	Required
state	InquiryStateType	N/A	No
actualResponseTime	string	date-time	No

Table 4.79: Fields of InquiredProvider.

4.80 InquiryResult

A ranked result of an inquiry. Must contain at least one ProductSpecification, optionally complemented by an offering.

Field	Type	Format	Required
id	string	N/A	Yes
priority	number	N/A	No
note	array	Note	No
productSpecification	array	ProductSpecification	Yes
product	array	Product	No
productOffering	array	ProductOffering	No

Table 4.80: Fields of InquiryResult.

4.81 InquiryStateType

Possible values for the state of the customer inquiry

Field	Type	Format	Required
InquiryStateType	string	oneOf[pending, inProgress, cancelled, completed]	No

Table 4.81: Fields of InquiryStateType.

4.82 KeyIndicator

KeyIndicators are defined in terms of parameters and metrics, thresholds, and tolerances associated with the parameters.

Field	Type	Format	Required
id	string	N/A	No
href	string	N/A	No
name	string	N/A	No

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Field	Type	Format	Required
category	string	N/A	No
isBundled	boolean	N/A	No
transformationAlgorithmOfKQI	string	N/A	No
indicatorType	string	oneOf[KQI, KPI]	No
validFor	TimePeriod	N/A	No
keyIndicatorRelationship	array	KeyIndicatorRelationship	No
relatedEntity	array	RelatedEntity	No
\@baseType	string	N/A	No
\@schemaLocation	string	N/A	No
\@type	string	N/A	No

Table 4.82: Fields of KeyIndicator.

4.83 KeyIndicatorRelationship

A uni-directionmal relationship from this entity to a target entity instance.

Field	Type	Format	Required
id	string	N/A	No
href	string	N/A	No
name	string	N/A	No
relationshipType	string	N/A	No
role	string	N/A	No
validFor	TimePeriod	N/A	No
associationSpec	EntityRef	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	N/A	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.83: Fields of KeyIndicatorRelationship.

4.84 LanguageAbility

Ability of an individual to understand or converse in a language.

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Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
isFavouriteLanguage	boolean	N/A	No
languageCode	string	N/A	No
languageName	string	N/A	No
listeningProficiency	string	N/A	No
readingProficiency	string	N/A	No
speakingProficiency	string	N/A	No
writingProficiency	string	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.84: Fields of LanguageAbility.

4.85 LogicalResource

Logic resource is a type of resource that describes the common set of attributes shared by all concrete logical resources (e.g. TPE, MSISDN, IP Addresses) in the inventory.

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	Yes
name	string	N/A	No
description	string	N/A	No
category	string	N/A	No
endOperatingDate	string	date-time	No
resourceVersion	string	N/A	No
startOperatingDate	string	date-time	No
value	string	N/A	No
activationFeature	array	Feature	No
administrativeState	ResourceAdministrativeStateType	N/A	No
attachment	array	AttachmentOrDocumentRef	No
note	array	Note	No

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Field	Type	Format	Required
operationalState	ResourceOperationalStateType	N/A	No
place	RelatedPlaceRefOrValue	N/A	No
relatedParty	array	RelatedParty	No
resourceCharacteristic	array	Characteristic	No
resourceRelationship	array	ResourceRelationship	No
resourceSpecification	ResourceSpecificationRef	N/A	No
resourceStatus	ResourceStatusType	N/A	No
usageState	ResourceUsageStateType	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.85: Fields of LogicalResource.

4.86 LogicalResourceSpecification

This is an example of a derived class of ResourceSpecification, and is used to define the invariant characteristics and behavior (attributes, methods, constraints, and relationships) of a LogicalResource.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
description	string	N/A	No
category	string	N/A	No
isBundle	boolean	N/A	No
lastUpdate	string	date-time	No
lifecycleStatus	string	N/A	No
version	string	N/A	No
attachment	array	AttachmentOrDocumentRef	No
featureSpecification	array	FeatureSpecification	No
relatedParty	array	RelatedParty	No
resourceSpecCharacteristic	array	ResourceSpecificationCharacteristic	No
resourceSpecRelationship	array	ResourceSpecificationRelationship	No
targetResourceSchema	TargetResourceSchema	N/A	No

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Field	Type	Format	Required
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	“LogicalResourceSpecification”	Yes

Table 4.86: Fields of LogicalResourceSpecification.

4.87 MarketSegmentRef

provides references to the corresponding market segment as target of product offerings. A market segment is grouping of Parties, GeographicAreas, SalesChannels, and so forth.

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.87: Fields of MarketSegmentRef.

4.88 MediumCharacteristic

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

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
city	string	N/A	No
contactType	string	N/A	No
country	string	N/A	No
emailAddress	string	N/A	No
faxNumber	string	N/A	No
phoneNumber	string	N/A	No

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Field	Type	Format	Required
postCode	string	N/A	No
socialNetworkId	string	N/A	No
stateOrProvince	string	N/A	No
street1	string	N/A	No
street2	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.88: Fields of MediumCharacteristic.

4.89 Money

A base / value business entity used to represent money

Field	Type	Format	Required
unit	string	N/A	No
value	number	float	No

Table 4.89: Fields of Money.

4.90 Note

Extra information about a given entity

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
author	string	N/A	No
date	string	date-time	No
text	string	N/A	Yes
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.90: Fields of Note.

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4.91 OrderItemActionType

action to be performed on the product

Field	Type	Format	Required
OrderItemActionType	string	oneOf[add, modify, delete, noChange]	No

Table 4.91: Fields of OrderItemActionType.

4.92 OrderItemRelationship

Field	Type	Format	Required
id	string	N/A	No
relationshipType	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.92: Fields of OrderItemRelationship.

4.93 OrderPrice

An amount, usually of money, that represents the actual price paid by the Customer for this item or this order

Field	Type	Format	Required
name	string	N/A	No
description	string	N/A	No
priceType	string	N/A	No
recurringChargePeriod	string	N/A	No
unitOfMeasure	string	N/A	No
billingAccount	BillingAccountRef	N/A	No
price	Price	N/A	No
priceAlteration	array	PriceAlteration	No
productOfferingPrice	ProductOfferingPriceRef	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

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Field	Type	Format	Required

Table 4.93: Fields of OrderPrice.

4.94 OrderTerm

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

Field	Type	Format	Required
name	string	N/A	No
description	string	N/A	No
duration	Quantity	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.94: Fields of OrderTerm.

4.95 Organization

Organization represents a group of people identified by shared interests or purpose. Examples include business, department and enterprise. Because of the complex nature of many businesses, both organizations and organization units are represented by the same data.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
isHeadOffice	boolean	N/A	No
isLegalEntity	boolean	N/A	No
nameType	string	N/A	No
organizationType	string	N/A	No
tradingName	string	N/A	No
contactMedium	array	ContactMedium	No
creditRating	array	PartyCreditProfile	No
existsDuring	TimePeriod	N/A	No
externalReference	array	ExternalReference	No

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Field	Type	Format	Required
organizationChildRelationship	array	OrganizationChildRelationship	No
organizationIdentification	array	OrganizationIdentification	No
organizationParentRelationship	OrganizationParentRelationship	N/A	No
otherName	array	OtherNameOrganization	No
partyCharacteristic	array	Characteristic	No
relatedParty	array	RelatedParty	No
status	OrganizationStateType	N/A	No
taxExemptionCertificate	array	TaxExemptionCertificate	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.95: Fields of Organization.

4.96 OrganizationChildRelationship

Child references of an organization in a structure of organizations.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
relationshipType	string	N/A	No
organization	OrganizationRef	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.96: Fields of OrganizationChildRelationship.

4.97 OrganizationIdentification

Represents our registration of information used as proof of identity by an organization

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No

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Field	Type	Format	Required
identificationId	string	N/A	No
identificationType	string	N/A	No
issuingAuthority	string	N/A	No
issuingDate	string	date-time	No
attachment	AttachmentOrDocumentRef	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.97: Fields of OrganizationIdentification.

4.98 OrganizationParentRelationship

Parent references of an organization in a structure of organizations.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
relationshipType	string	N/A	No
organization	OrganizationRef	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.98: Fields of OrganizationParentRelationship.

4.99 OrganizationRef

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No

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Field	Type	Format	Required
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.99: Fields of OrganizationRef.

4.100 OrganizationStateType

Valid values for the lifecycle state of the organization

Field	Type	Format	Required
OrganizationStateType	string	oneOf[initialized, validated, closed]	No

Table 4.100: Fields of OrganizationStateType.

4.101 Organization_Create

Organization represents a group of people identified by shared interests or purpose. Examples include business, department and enterprise. Because of the complex nature of many businesses, both organizations and organization units are represented by the same data. Skipped properties: id,href

Field	Type	Format	Required
name	string	N/A	No
isHeadOffice	boolean	N/A	No
isLegalEntity	boolean	N/A	No
nameType	string	N/A	No
organizationType	string	N/A	No
tradingName	string	N/A	Yes
contactMedium	array	ContactMedium	No
creditRating	array	PartyCreditProfile	No
existsDuring	TimePeriod	N/A	No
externalReference	array	ExternalReference	No
organizationChildRelationship	array	OrganizationChildRelationship	No
organizationIdentification	array	OrganizationIdentification	No
organizationParentRelationship	OrganizationParentRelationship	N/A	No
otherName	array	OtherNameOrganization	No
partyCharacteristic	array	Characteristic	No
relatedParty	array	RelatedParty	No

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Field	Type	Format	Required
status	OrganizationStateType	N/A	No
taxExemptionCertificate	array	TaxExemptionCertificate	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.101: Fields of Organization_Create.

4.102 Organization_Update

Organization represents a group of people identified by shared interests or purpose. Examples include business, department and enterprise. Because of the complex nature of many businesses, both organizations and organization units are represented by the same data. Skipped properties: id,href

Field	Type	Format	Required
name	string	N/A	No
isHeadOffice	boolean	N/A	No
isLegalEntity	boolean	N/A	No
nameType	string	N/A	No
organizationType	string	N/A	No
tradingName	string	N/A	No
contactMedium	array	ContactMedium	No
creditRating	array	PartyCreditProfile	No
existsDuring	TimePeriod	N/A	No
externalReference	array	ExternalReference	No
organizationChildRelationship	array	OrganizationChildRelationship	No
organizationIdentification	array	OrganizationIdentification	No
organizationParentRelationship	OrganizationParentRelationship	N/A	No
otherName	array	OtherNameOrganization	No
partyCharacteristic	array	Characteristic	No
relatedParty	array	RelatedParty	No
status	OrganizationStateType	N/A	No
taxExemptionCertificate	array	TaxExemptionCertificate	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No

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Field	Type	Format	Required
\@type	string	N/A	No

Table 4.102: Fields of Organization_Update.

4.103 OtherNameIndividual

Keeps track of other names, for example the old name of a woman before marriage or an artist name.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
aristocraticTitle	string	N/A	No
familyName	string	N/A	No
familyNamePrefix	string	N/A	No
formattedName	string	N/A	No
fullName	string	N/A	No
generation	string	N/A	No
givenName	string	N/A	No
legalName	string	N/A	No
middleName	string	N/A	No
preferredGivenName	string	N/A	No
title	string	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.103: Fields of OtherNameIndividual.

4.104 OtherNameOrganization

Keeps track of other names, for example the old name of an organization.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No

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Field	Type	Format	Required
name	string	N/A	No
nameType	string	N/A	No
tradingName	string	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.104: Fields of OtherNameOrganization.

4.105 POPAlteration

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

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
description	string	N/A	No
priceType	string	N/A	Yes
priority	integer	N/A	No
recurringChargePeriod	string	N/A	No
applicationDuration	Duration	N/A	No
price	ProductPriceValue	N/A	Yes
unitOfMeasure	Quantity	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.105: Fields of POPAlteration.

4.106 PartyCreditProfile

An individual might be evaluated for its worthiness and this evaluation might be based on a credit rating given by a credit agency.

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Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
creditAgencyName	string	N/A	No
creditAgencyType	string	N/A	No
ratingReference	string	N/A	No
ratingScore	integer	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.106: Fields of PartyCreditProfile.

4.107 PaymentMethodRef

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

Field	Type	Format	Required
id	string	N/A	Yes
href	string	N/A	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.107: Fields of PaymentMethodRef.

4.108 PaymentRef

If an immediate payment has been done at the product order submission, the payment information are captured and stored (as a reference) in the order.

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No

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Field	Type	Format	Required
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.108: Fields of PaymentRef.

4.109 PhysicalResource

Physical resource is a type of resource that describes the common set of attributes shared by all concrete physical resources (e.g. EQUIPMENT) in the inventory.

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	Yes
name	string	N/A	No
description	string	N/A	No
category	string	N/A	No
endOperatingDate	string	date-time	No
manufactureDate	string	date-time	No
powerState	string	N/A	No
resourceVersion	string	N/A	No
serialNumber	string	N/A	No
startOperatingDate	string	date-time	No
versionNumber	string	N/A	No
activationFeature	array	Feature	No
administrativeState	ResourceAdministrativeStateType	N/A	No
attachment	array	AttachmentOrDocumentRef	No
note	array	Note	No
operationalState	ResourceOperationalStateType	N/A	No
place	RelatedPlaceRefOrValue	N/A	No
relatedParty	array	RelatedParty	No
resourceCharacteristic	array	Characteristic	No
resourceRelationship	array	ResourceRelationship	No

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Field	Type	Format	Required
resourceSpecification	ResourceSpecificationRef	N/A	No
resourceStatus	ResourceStatusType	N/A	No
usageState	ResourceUsageStateType	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.109: Fields of PhysicalResource.

4.110 PhysicalResourceSpecification

This is an example of a derived class of ResourceSpecification, and is used to define the invariant characteristics and behavior (attributes, methods, constraints, and relationships) of a PhysicalResource.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
description	string	N/A	No
model	string	N/A	No
part	string	N/A	No
sku	string	N/A	No
vendor	string	N/A	No
category	string	N/A	No
isBundle	boolean	N/A	No
lastUpdate	string	date-time	No
lifecycleStatus	string	N/A	No
version	string	N/A	No
attachment	array	AttachmentOrDocumentRef	No
featureSpecification	array	FeatureSpecification	No
relatedParty	array	RelatedParty	No
resourceSpecCharacteristic	array	ResourceSpecificationCharacteristic	No
resourceSpecRelationship	array	ResourceSpecificationRelationship	No
targetResourceSchema	TargetResourceSchema	N/A	No
validFor	TimePeriod	N/A	No

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Field	Type	Format	Required
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	“PhysicalResourceSpecification”	Yes

Table 4.110: Fields of PhysicalResourceSpecification.

4.111 Place

Place reference. Place defines the places where the products are sold or delivered.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.111: Fields of Place.

4.112 PlaceRef

Place reference. PlaceRef defines the placeRefs where the products are sold or delivered.

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.112: Fields of PlaceRef.

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4.113 PlaceRefOrValue

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

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.113: Fields of PlaceRefOrValue.

4.114 Point

GeoJSon geometry

Field	Type	Format	Required
coordinates	Point2D	N/A	No
type	string	“Point”	Yes

Table 4.114: Fields of Point.

4.115 Point2D

Field	Type	Format	Required
N/A	array	number	No

Table 4.115: Fields of Point2D.

4.116 Polygon

GeoJSon geometry

Field	Type	Format	Required
coordinates	array	Point2D	No

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Field	Type	Format	Required
type	string	“Polygon”	Yes

Table 4.116: Fields of Polygon.

4.117 PrescribedAction

Contains information on a prescribed action that should be applied.

Field	Type	Format	Required
id	string	N/A	No
href	string	N/A	No
name	string	N/A	No
description	string	N/A	No
actionType	string	oneOf[ProcessFlow, Task, Notification]	No
input	any	N/A	No
output	any	N/A	No
headers	any	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	N/A	No
\@type	string	N/A	No

Table 4.117: Fields of PrescribedAction.

4.118 Price

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

Field	Type	Format	Required
percentage	number	float	No
taxRate	number	float	No
dutyFreeAmount	Money	N/A	No
taxIncludedAmount	Money	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.118: Fields of Price.

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4.119 PriceAlteration

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

Field	Type	Format	Required
name	string	N/A	No
description	string	N/A	No
applicationDuration	integer	N/A	No
priceType	string	N/A	Yes
priority	integer	N/A	No
recurringChargePeriod	string	N/A	No
unitOfMeasure	string	N/A	No
price	Price	N/A	Yes
productOfferingPrice	ProductOfferingPriceRef	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.119: Fields of PriceAlteration.

4.120 Product

A product offering procured by a customer or other interested party playing a party role. A product is realized as one or more service(s) and / or resource(s).

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
description	string	N/A	No
isBundle	boolean	N/A	No
isCustomerVisible	boolean	N/A	No
orderDate	string	date-time	No
productSerialNumber	string	N/A	No
startDate	string	date-time	No
terminationDate	string	date-time	No
agreement	array	AgreementItemRef	No

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Field	Type	Format	Required
billingAccount	BillingAccountRef	N/A	No
place	array	RelatedPlaceRefOrValue	No
product	array	ProductRefOrValue	No
productCharacteristic	array	Characteristic	No
productOffering	ProductOfferingRef	N/A	No
productOrderItem	array	RelatedProductOrderItem	No
productPrice	array	ProductPrice	No
productRelationship	array	ProductRelationship	No
productSpecification	ProductSpecificationRef	N/A	No
productTerm	array	ProductTerm	No
realizingResource	array	ResourceRef	No
realizingService	array	ServiceRef	No
relatedParty	array	RelatedParty	No
status	ProductStatusType	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.120: Fields of Product.

4.121 ProductOffering

Represents entities that are orderable from the provider of the catalog, this resource includes pricing information.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
description	string	N/A	No
isBundle	boolean	N/A	No
isSellable	boolean	N/A	No
lastUpdate	string	date-time	No
lifecycleStatus	string	N/A	No
statusReason	string	N/A	No

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Field	Type	Format	Required
version	string	N/A	No
agreement	array	AgreementRef	No
attachment	array	AttachmentOrDocumentRef	No
bundledProductOffering	array	BundledProductOffering	No
category	array	CategoryRef	No
channel	array	ChannelRef	No
marketSegment	array	MarketSegmentRef	No
place	array	PlaceRef	No
prodSpecCharValueUse	array	ProductSpecificationCharacteristicValueUse	No
productOfferingPrice	array	ProductOfferingPriceRefOrValue	No
productOfferingRelationship	array	ProductOfferingRelationship	No
productOfferingTerm	array	ProductOfferingTerm	No
productSpecification	ProductSpecificationRef	N/A	No
resourceCandidate	ResourceCandidateRef	N/A	No
serviceCandidate	ServiceCandidateRef	N/A	No
serviceLevelAgreement	SLARef	N/A	No
validFor	TimePeriod	N/A	No
accessProbability	integer	N/A	No
bundledGroupProductOffering	array	BundledGroupProductOffering	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.121: Fields of ProductOffering.

4.122 ProductOfferingPriceRef

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

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
\@baseType	string	N/A	No

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Field	Type	Format	Required
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.122: Fields of ProductOfferingPriceRef.

4.123 ProductOfferingPriceRefOrValue

A new product offering price being created by value or a reference to an existing product offering price that alreasy created. The polymorphic attributes @type, @schemaLocation & @referredType are related to the product offering price and not to this ReforValue structure

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
description	string	N/A	No
lastUpdate	string	date-time	No
lifecycleStatus	string	N/A	No
priceType	string	N/A	No
recurringChargePeriod	string	N/A	No
recurringChargePeriodLength	integer	N/A	No
version	string	N/A	No
constraint	array	ConstraintRef	No
price	ProductPriceValue	N/A	No
priceAlteration	array	POPAlteration	No
unitOfMeasure	Quantity	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.123: Fields of ProductOfferingPriceRefOrValue.

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4.124 ProductOfferingQualificationItemRef

It's a productOfferingQualification item that has been executed previously.

Field	Type	Format	Required
id	string	N/A	Yes
productOfferingQualificationHref	string	N/A	No
productOfferingQualificationId	string	N/A	Yes
productOfferingQualification-Name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.124: Fields of ProductOfferingQualificationItemRef.

4.125 ProductOfferingQualificationRef

It's a productOfferingQualification that has been executed previously

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.125: Fields of ProductOfferingQualificationRef.

4.126 ProductOfferingRef

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

Field	Type	Format	Required
id	string	N/A	Yes

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Field	Type	Format	Required
href	string	uri	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.126: Fields of ProductOfferingRef.

4.127 ProductOfferingRelationship

A relationship between two product Offerings.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
relationshipType	string	N/A	No
role	string	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.127: Fields of ProductOfferingRelationship.

4.128 ProductOfferingTerm

A condition under which a ProductOffering is made available to Customers. For instance, a productOffering can be offered with multiple commitment periods.

Field	Type	Format	Required
name	string	N/A	No
description	string	N/A	No
duration	Duration	N/A	No

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Field	Type	Format	Required
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.128: Fields of ProductOfferingTerm.

4.129 ProductOffering_Create

Represents entities that are orderable from the provider of the catalog, this resource includes pricing information. Skipped properties: id,href

Field	Type	Format	Required
name	string	N/A	Yes
description	string	N/A	No
isBundle	boolean	N/A	No
isSellable	boolean	N/A	No
lastUpdate	string	date-time	No
lifecycleStatus	string	N/A	No
statusReason	string	N/A	No
version	string	N/A	No
agreement	array	AgreementRef	No
attachment	array	AttachmentOrDocumentRef	No
bundledProductOffering	array	BundledProductOffering	No
category	array	CategoryRef	No
channel	array	ChannelRef	No
marketSegment	array	MarketSegmentRef	No
place	array	PlaceRef	No
prodSpecCharValueUse	array	ProductSpecificationCharacteristicValueUse	No
productOfferingPrice	array	ProductOfferingPriceRefOrValue	No
productOfferingRelationship	array	ProductOfferingRelationship	No
productOfferingTerm	array	ProductOfferingTerm	No
productSpecification	ProductSpecificationRef	N/A	No
resourceCandidate	ResourceCandidateRef	N/A	No
serviceCandidate	ServiceCandidateRef	N/A	No

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Field	Type	Format	Required
serviceLevelAgreement	SLARef	N/A	No
validFor	TimePeriod	N/A	No
accessProbability	integer	N/A	No
bundledGroupProductOffering	array	BundledGroupProductOffering	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.129: Fields of ProductOffering_Create.

4.130 ProductOffering_Update

Represents entities that are orderable from the provider of the catalog, this resource includes pricing information. Skipped properties: id,href,lastUpdate,@type,@baseType

Field	Type	Format	Required
name	string	N/A	No
description	string	N/A	No
isBundle	boolean	N/A	No
isSellable	boolean	N/A	No
lifecycleStatus	string	N/A	No
statusReason	string	N/A	No
version	string	N/A	No
agreement	array	AgreementRef	No
attachment	array	AttachmentOrDocumentRef	No
bundledProductOffering	array	BundledProductOffering	No
category	array	CategoryRef	No
channel	array	ChannelRef	No
marketSegment	array	MarketSegmentRef	No
place	array	PlaceRef	No
prodSpecCharValueUse	array	ProductSpecificationCharacteristicValueUse	No
productOfferingPrice	array	ProductOfferingPriceRefOrValue	No
productOfferingRelationship	array	ProductOfferingRelationship	No
productOfferingTerm	array	ProductOfferingTerm	No
productSpecification	ProductSpecificationRef	N/A	No

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Field	Type	Format	Required
resourceCandidate	ResourceCandidateRef	N/A	No
serviceCandidate	ServiceCandidateRef	N/A	No
serviceLevelAgreement	SLARef	N/A	No
validFor	TimePeriod	N/A	No
accessProbability	integer	N/A	No
bundledGroupProductOffering	array	BundledGroupProductOffering	No
\@schemaLocation	string	uri	No

Table 4.130: Fields of ProductOffering_Update.

4.131 ProductOrder

A Product Order is a type of order which can be used to place an order between a customer and a service provider or between a service provider and a partner and vice versa,

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
description	string	N/A	No
cancellationDate	string	date-time	No
cancellationReason	string	N/A	No
category	string	N/A	No
completionDate	string	date-time	No
expectedCompletionDate	string	date-time	No
externalId	string	N/A	No
notificationContact	string	N/A	No
orderDate	string	date-time	No
priority	string	N/A	No
requestedCompletionDate	string	date-time	No
requestedStartDate	string	date-time	No
agreement	array	AgreementRef	No
billingAccount	BillingAccountRef	N/A	No
channel	array	RelatedChannel	No
note	array	Note	No
orderTotalPrice	array	OrderPrice	No

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Field	Type	Format	Required
payment	array	PaymentRef	No
productOfferingQualification	array	ProductOfferingQualificationRef	No
productOrderItem	array	ProductOrderItem	Yes
quote	array	QuoteRef	No
relatedParty	array	RelatedParty	No
state	ProductOrderStateType	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.131: Fields of ProductOrder.

4.132 ProductOrderItem

An identified part of the order. A product order is decomposed into one or more order items.

Field	Type	Format	Required
id	string	N/A	Yes
quantity	integer	N/A	No
action	OrderItemActionType	N/A	Yes
appointment	AppointmentRef	N/A	No
billingAccount	BillingAccountRef	N/A	No
itemPrice	array	OrderPrice	No
itemTerm	array	OrderTerm	No
itemTotalPrice	array	OrderPrice	No
payment	array	PaymentRef	No
product	ProductRefOrValue	N/A	No
productOffering	ProductOfferingRef	N/A	No
productOfferingQualificationItem	ProductOfferingQualificationItemRef	N/A	No
productOrderItem	array	ProductOrderItem	No
productOrderItemRelationship	array	OrderItemRelationship	No
qualification	array	ProductOfferingQualificationRef	No
quoteItem	QuoteItemRef	N/A	No
state	ProductOrderItemStateType	N/A	No

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Field	Type	Format	Required
requestedStartDate	string	date-time	No
requestedEndDate	string	date-time	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.132: Fields of ProductOrderItem.

4.133 ProductOrderItemStateType

Possible values for the state of the product order item

Field	Type	Format	Required
ProductOrderItemStateType	string	oneOf[acknowledged, rejected, pending, held, inProgress, cancelled, completed, failed, assessingCancellation, pendingCancellation]	No

Table 4.133: Fields of ProductOrderItemStateType.

4.134 ProductOrderRef

ProductOrder reference.

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.134: Fields of ProductOrderRef.

4.135 ProductOrderStateType

Possible values for the state of the order

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Field	Type	Format	Required
ProductOrderStateType	string	oneOf[acknowledged, rejected, pending, held, inProgress, cancelled, completed, failed, partial, assessingCancellation, pendingCancellation]	No

Table 4.135: Fields of ProductOrderStateType.

4.136 ProductOrder_Create

A Product Order is a type of order which can be used to place an order between a customer and a service provider or between a service provider and a partner and vice versa, Skipped properties: id,href,completionDate,orderDate,state,expecte

Field	Type	Format	Required
description	string	N/A	No
cancellationDate	string	date-time	No
cancellationReason	string	N/A	No
category	string	N/A	No
externalId	string	N/A	No
notificationContact	string	N/A	No
priority	string	N/A	No
requestedCompletionDate	string	date-time	No
requestedStartDate	string	date-time	No
agreement	array	AgreementRef	No
billingAccount	BillingAccountRef	N/A	No
channel	array	RelatedChannel	No
note	array	Note	No
orderTotalPrice	array	OrderPrice	No
payment	array	PaymentRef	No
productOfferingQualification	array	ProductOfferingQualificationRef	No
productOrderItem	array	ProductOrderItem	Yes
quote	array	QuoteRef	No
relatedParty	array	RelatedParty	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.136: Fields of ProductOrder_Create.

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4.137 ProductOrder_Update

A Product Order is a type of order which can be used to place an order between a customer and a service provider or between a service provider and a partner and vice versa, Skipped properties: id,href,orderDate

Field	Type	Format	Required
description	string	N/A	No
cancellationDate	string	date-time	No
cancellationReason	string	N/A	No
category	string	N/A	No
completionDate	string	date-time	No
expectedCompletionDate	string	date-time	No
externalId	string	N/A	No
notificationContact	string	N/A	No
priority	string	N/A	No
requestedCompletionDate	string	date-time	No
requestedStartDate	string	date-time	No
agreement	array	AgreementRef	No
billingAccount	BillingAccountRef	N/A	No
channel	array	RelatedChannel	No
note	array	Note	No
orderTotalPrice	array	OrderPrice	No
payment	array	PaymentRef	No
productOfferingQualification	array	ProductOfferingQualificationRef	No
productOrderItem	array	ProductOrderItem	No
quote	array	QuoteRef	No
relatedParty	array	RelatedParty	No
state	ProductOrderStateType	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.137: Fields of ProductOrder_Update.

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4.138 ProductPrice

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

Field	Type	Format	Required
name	string	N/A	No
description	string	N/A	No
priceType	string	N/A	Yes
recurringChargePeriod	string	N/A	No
unitOfMeasure	string	N/A	No
billingAccount	BillingAccountRef	N/A	No
price	Price	N/A	Yes
productOfferingPrice	ProductOfferingPriceRef	N/A	No
productPriceAlteration	array	PriceAlteration	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.138: Fields of ProductPrice.

4.139 ProductPriceValue

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

Field	Type	Format	Required
percentage	number	float	No
taxCategory	string	N/A	No
taxRate	number	float	No
dutyFreeAmount	Money	N/A	No
taxIncludedAmount	Money	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.139: Fields of ProductPriceValue.

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4.140 ProductRef

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.140: Fields of ProductRef.

4.141 ProductRefOrValue

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

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
description	string	N/A	No
isBundle	boolean	N/A	No
isCustomerVisible	boolean	N/A	No
orderDate	string	date-time	No
productSerialNumber	string	N/A	No
startDate	string	date-time	No
terminationDate	string	date-time	No
agreement	array	AgreementItemRef	No
billingAccount	BillingAccountRef	N/A	No
place	array	RelatedPlaceRefOrValue	No
product	array	ProductRefOrValue	No
productCharacteristic	array	Characteristic	No
productOffering	ProductOfferingRef	N/A	No
productOrderItem	array	RelatedProductOrderItem	No

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Field	Type	Format	Required
productPrice	array	ProductPrice	No
productRelationship	array	ProductRelationship	No
productSpecification	ProductSpecificationRef	N/A	No
productTerm	array	ProductTerm	No
realizingResource	array	ResourceRef	No
realizingService	array	ServiceRef	No
relatedParty	array	RelatedParty	No
status	ProductStatusType	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.141: Fields of ProductRefOrValue.

4.142 ProductRelationship

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

Field	Type	Format	Required
relationshipType	string	N/A	Yes
product	ProductRefOrValue	N/A	Yes
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.142: Fields of ProductRelationship.

4.143 ProductSpecification

Is a detailed description of a tangible or intangible object made available externally in the form of a ProductOffering to customers or other parties playing a party role.

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Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
description	string	N/A	No
brand	string	N/A	No
isBundle	boolean	N/A	No
lastUpdate	string	date-time	No
lifecycleStatus	string	N/A	No
productNumber	string	N/A	No
version	string	N/A	No
attachment	array	AttachmentOrDocumentRef	No
bundledProductSpecification	array	BundledProductSpecification	No
productSpecCharacteristic	array	ProductSpecificationCharacteristic	No
productSpecificationRelationship	array	ProductSpecificationRelationship	No
relatedParty	array	RelatedParty	No
resourceSpecification	array	ResourceSpecificationRef	No
serviceSpecification	array	ServiceSpecificationRef	No
targetProductSchema	TargetProductSchema	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.143: Fields of ProductSpecification.

4.144 ProductSpecificationCharacteristic

A characteristic quality or distinctive feature of a ProductSpecification. The characteristic can be take on a discrete value, such as color, can take on a range of values, (for example, sensitivity of 100-240 mV), or can be derived from a formula (for example, usage time (hrs) = 30 - talk time *3). Certain characteristics, such as color, may be configured during the ordering or some other process.

Field	Type	Format	Required
id	string	N/A	No
name	string	N/A	No

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Field	Type	Format	Required
description	string	N/A	No
configurable	boolean	N/A	No
extensible	boolean	N/A	No
isUnique	boolean	N/A	No
maxCardinality	integer	N/A	No
minCardinality	integer	N/A	No
regex	string	N/A	No
valueType	string	N/A	No
productSpecCharRelationship	array	ProductSpecificationCharacteristicRelationship	No
productSpecCharacteristicValue	array	CharacteristicValueSpecification	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@valueSchemaLocation	string	N/A	No

Table 4.144: Fields of ProductSpecificationCharacteristic.

4.145 ProductSpecificationCharacteristicRelationship

An aggregation, migration, substitution, dependency or exclusivity relationship between/among productSpecificationCharacteristics.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
charSpecSeq	integer	N/A	No
relationshipType	string	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.145: Fields of ProductSpecificationCharacteristicRelationship.

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4.146 ProductSpecificationCharacteristicValueUse

A use of the ProductSpecificationCharacteristicValue by a ProductOffering to which additional properties (attributes) apply or override the properties of similar properties contained in ProductSpecificationCharacteristicValue. It should be noted that characteristics which their value(s) addressed by this object must exist in corresponding product specification. The available characteristic values for a ProductSpecificationCharacteristic in a Product specification can be modified at the ProductOffering level. For example, a characteristic 'Color' might have values White, Blue, Green, and Red. But, the list of values can be restricted to e.g. White and Blue in an associated product offering. It should be noted that the list of values in 'ProductSpecificationCharacteristicValueUse' is a strict subset of the list of values as defined in the corresponding product specification characteristics.

Field	Type	Format	Required
id	string	N/A	No
name	string	N/A	No
description	string	N/A	No
maxCardinality	integer	N/A	No
minCardinality	integer	N/A	No
valueType	string	N/A	No
productSpecCharacteristicValue	array	CharacteristicValueSpecification	No
productSpecification	ProductSpecificationRef	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.146: Fields of ProductSpecificationCharacteristicValueUse.

4.147 ProductSpecificationRef

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

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
version	string	N/A	No
targetProductSchema	TargetProductSchema	N/A	No
\@baseType	string	N/A	No

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Field	Type	Format	Required
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.147: Fields of ProductSpecificationRef.

4.148 ProductSpecificationRelationship

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

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
relationshipType	string	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.148: Fields of ProductSpecificationRelationship.

4.149 ProductSpecification_Create

Is a detailed description of a tangible or intangible object made available externally in the form of a ProductOffering to customers or other parties playing a party role. Skipped properties: id,href

Field	Type	Format	Required
name	string	N/A	Yes
description	string	N/A	No
brand	string	N/A	No
isBundle	boolean	N/A	No
lastUpdate	string	date-time	No
lifecycleStatus	string	N/A	No
productNumber	string	N/A	No

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Field	Type	Format	Required
version	string	N/A	No
attachment	array	AttachmentOrDocumentRef	No
bundledProductSpecification	array	BundledProductSpecification	No
productSpecCharacteristic	array	ProductSpecificationCharacteristic	No
productSpecificationRelationship	array	ProductSpecificationRelationship	No
relatedParty	array	RelatedParty	No
resourceSpecification	array	ResourceSpecificationRef	No
serviceSpecification	array	ServiceSpecificationRef	No
targetProductSchema	TargetProductSchema	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.149: Fields of ProductSpecification_Create.

4.150 ProductSpecification_Update

Is a detailed description of a tangible or intangible object made available externally in the form of a ProductOffering to customers or other parties playing a party role. Skipped properties: id,href,lastUpdate,@type,@baseType

Field	Type	Format	Required
name	string	N/A	No
description	string	N/A	No
brand	string	N/A	No
isBundle	boolean	N/A	No
lifecycleStatus	string	N/A	No
productNumber	string	N/A	No
version	string	N/A	No
attachment	array	AttachmentOrDocumentRef	No
bundledProductSpecification	array	BundledProductSpecification	No
productSpecCharacteristic	array	ProductSpecificationCharacteristic	No
productSpecificationRelationship	array	ProductSpecificationRelationship	No
relatedParty	array	RelatedParty	No
resourceSpecification	array	ResourceSpecificationRef	No

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Field	Type	Format	Required
serviceSpecification	array	ServiceSpecificationRef	No
targetProductSchema	TargetProductSchema	N/A	No
validFor	TimePeriod	N/A	No
\@schemaLocation	string	uri	No

Table 4.150: Fields of ProductSpecification_Update.

4.151 ProductStatusType

Possible values for the status of the product

Field	Type	Format	Required
ProductStatusType	string	oneOf[created, pendingActive, cancelled, active, pendingTerminate, terminated, suspended, aborted]	No

Table 4.151: Fields of ProductStatusType.

4.152 ProductStock

ProductStock is a base class for defining a product (or configured product with values characteristic) stock level.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
description	string	N/A	No
creationDate	string	date-time	No
lastInventoryDate	string	date-time	No
lastUpdate	string	date-time	No
replenishmentDate	string	date-time	No
stockLevelCategory	string	N/A	No
channel	array	ChannelRef	No
marketSegment	array	MarketSegmentRef	No
maxStockLevel	Quantity	N/A	No
minStockLevel	Quantity	N/A	No

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Field	Type	Format	Required
place	RelatedPlaceRefOrValue	N/A	No
productStockLevel	Quantity	N/A	No
productStockRelationship	array	ProductStockRelationship	No
productStockStatusType	ProductStockStatusType	N/A	No
productStockUsageType	ProductStockUsageType	N/A	No
relatedParty	array	RelatedParty	No
reorderQuantity	Quantity	N/A	No
resource	array	ResourceRef	No
stockLevelAlert	Quantity	N/A	No
stockedProduct	ProductRefOrValue	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.152: Fields of ProductStock.

4.153 ProductStockRef

ProductStockRef is a reference to a product stock

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.153: Fields of ProductStockRef.

4.154 ProductStockRelationship

Linked product stock with a type relationship.

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Field	Type	Format	Required
relationshipType	string	N/A	Yes
stockLevel	ProductStockRef	N/A	Yes
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.154: Fields of ProductStockRelationship.

4.155 ProductStockStatusType

Possible values for the status of the stock level

Field	Type	Format	Required
ProductStockStatusType	string	oneOf[reserved, available, unavailable, unknown]	No

Table 4.155: Fields of ProductStockStatusType.

4.156 ProductStockUsageType

Possible values for the usage of the stock level - This is illustrative

Field	Type	Format	Required
ProductStockUsageType	string	oneOf[inTransit, onDisplay, damaged, returned, replenishmentInProgress, inShop]	No

Table 4.156: Fields of ProductStockUsageType.

4.157 ProductTerm

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

Field	Type	Format	Required
name	string	N/A	No
description	string	N/A	No
duration	Quantity	N/A	No
validFor	TimePeriod	N/A	No

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Field	Type	Format	Required
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.157: Fields of ProductTerm.

4.158 Product_Create

A product offering procured by a customer or other interested party playing a party role. A product is realized as one or more service(s) and / or resource(s). Skipped properties: id,href

Field	Type	Format	Required
name	string	N/A	No
description	string	N/A	No
isBundle	boolean	N/A	No
isCustomerVisible	boolean	N/A	No
orderDate	string	date-time	No
productSerialNumber	string	N/A	No
startDate	string	date-time	No
terminationDate	string	date-time	No
agreement	array	AgreementItemRef	No
billingAccount	BillingAccountRef	N/A	No
place	array	RelatedPlaceRefOrValue	No
product	array	ProductRefOrValue	No
productCharacteristic	array	Characteristic	No
productOffering	ProductOfferingRef	N/A	No
productOrderItem	array	RelatedProductOrderItem	No
productPrice	array	ProductPrice	No
productRelationship	array	ProductRelationship	No
productSpecification	ProductSpecificationRef	N/A	No
productTerm	array	ProductTerm	No
realizingResource	array	ResourceRef	No
realizingService	array	ServiceRef	No
relatedParty	array	RelatedParty	No
status	ProductStatusType	N/A	Yes

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Field	Type	Format	Required
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.158: Fields of Product_Create.

4.159 Product_Update

A product offering procured by a customer or other interested party playing a party role. A product is realized as one or more service(s) and / or resource(s). Skipped properties: id,href

Field	Type	Format	Required
name	string	N/A	No
description	string	N/A	No
isBundle	boolean	N/A	No
isCustomerVisible	boolean	N/A	No
orderDate	string	date-time	No
productSerialNumber	string	N/A	No
startDate	string	date-time	No
terminationDate	string	date-time	No
agreement	array	AgreementItemRef	No
billingAccount	BillingAccountRef	N/A	No
place	array	RelatedPlaceRefOrValue	No
product	array	ProductRefOrValue	No
productCharacteristic	array	Characteristic	No
productOffering	ProductOfferingRef	N/A	No
productOrderItem	array	RelatedProductOrderItem	No
productPrice	array	ProductPrice	No
productRelationship	array	ProductRelationship	No
productSpecification	ProductSpecificationRef	N/A	No
productTerm	array	ProductTerm	No
realizingResource	array	ResourceRef	No
realizingService	array	ServiceRef	No
relatedParty	array	RelatedParty	No
status	ProductStatusType	N/A	No

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Field	Type	Format	Required
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.159: Fields of Product_Update.

4.160 Quantity

An amount in a given unit

Field	Type	Format	Required
amount	number	float	No
units	string	N/A	No

Table 4.160: Fields of Quantity.

4.161 QuoteItemRef

It's a Quote item that has been executed previously.

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
quoteHref	string	N/A	No
quoteId	string	N/A	Yes
quoteName	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.161: Fields of QuoteItemRef.

4.162 QuoteRef

It's a Quote that has been executed previously

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Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.162: Fields of QuoteRef.

4.163 RelatedChannel

Related channel to another entity. May be online web, mobile app, social ,etc.

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
role	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.163: Fields of RelatedChannel.

4.164 RelatedEntity

A reference to an entity, where the type of the entity is not known in advance.

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
role	string	N/A	Yes
\@baseType	string	N/A	No

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Field	Type	Format	Required
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	Yes

Table 4.164: Fields of RelatedEntity.

4.165 RelatedEntityRefOrValue

A reference to an entity, where the type of the entity is not known in advance. A related entity defines a entity described by reference or by value linked to a specific entity. The polymorphic attributes @type, @schemaLocation & @referredType are related to the Entity and not the RelatedEntityRefOrValue class itself

Field	Type	Format	Required
id	string	N/A	Yes
href	string	N/A	No
name	string	N/A	No
role	string	N/A	Yes
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	Yes

Table 4.165: Fields of RelatedEntityRefOrValue.

4.166 RelatedParty

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

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
role	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

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Field	Type	Format	Required
\@referredType	string	N/A	Yes

Table 4.166: Fields of RelatedParty.

4.167 RelatedPlaceRefOrValue

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

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
role	string	N/A	Yes
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.167: Fields of RelatedPlaceRefOrValue.

4.168 RelatedProductOrderItem

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

Field	Type	Format	Required
orderItemAction	string	N/A	No
orderItemId	string	N/A	Yes
productOrderHref	string	N/A	No
productOrderId	string	N/A	Yes
role	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

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Field	Type	Format	Required

Table 4.168: Fields of RelatedProductOrderItem.

4.169 RelatedServiceOrderItem

RelatedServiceOrderItem (a ServiceOrder item) .The service order item which triggered service creation/change/termination.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
itemId	string	N/A	Yes
role	string	N/A	No
serviceOrderHref	string	N/A	No
serviceOrderId	string	N/A	Yes
itemAction	OrderItemActionType	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.169: Fields of RelatedServiceOrderItem.

4.170 Resource

Resource is an abstract entity that describes the common set of attributes shared by all concrete resources (e.g. TPE, EQUIPMENT) in the inventory.

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	Yes
name	string	N/A	No
description	string	N/A	No
category	string	N/A	No
endOperatingDate	string	date-time	No
resourceVersion	string	N/A	No

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Field	Type	Format	Required
startOperatingDate	string	date-time	No
activationFeature	array	Feature	No
administrativeState	ResourceAdministrativeStateType	N/A	No
attachment	array	AttachmentOrDocumentRef	No
note	array	Note	No
operationalState	ResourceOperationalStateType	N/A	No
place	RelatedPlaceRefOrValue	N/A	No
relatedParty	array	RelatedParty	No
resourceCharacteristic	array	Characteristic	No
resourceRelationship	array	ResourceRelationship	No
resourceSpecification	ResourceSpecificationRef	N/A	No
resourceStatus	ResourceStatusType	N/A	No
usageState	ResourceUsageStateType	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.170: Fields of Resource.

4.171 ResourceAdministrativeStateType

ResourceAdministrativeStateType enumerations

Field	Type	Format	Required
ResourceAdministrativeStateType	string	oneOf[locked, unlocked, shutdown]	No

Table 4.171: Fields of ResourceAdministrativeStateType.

4.172 ResourceCandidateRef

ResourceCandidate is an entity that makes a resource specification available to a catalog. A ResourceCandidate and its associated resource specification may be published - made visible - in any number of resource catalogs, or in none.

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No

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Field	Type	Format	Required
name	string	N/A	No
version	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.172: Fields of ResourceCandidateRef.

4.173 ResourceOperationalStateType

ResourceOperationalStateType enumerations

Field	Type	Format	Required
ResourceOperationalStateType	string	oneOf[enable, disable]	No

Table 4.173: Fields of ResourceOperationalStateType.

4.174 ResourceRef

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
value	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.174: Fields of ResourceRef.

4.175 ResourceRefOrValue

Resource is an abstract entity that describes the common set of attributes shared by all concrete resources. The polymorphic attributes @type, @schemaLocation & @referredType are related to the Resource entity and not the related ResourceRefOrValue class itself

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Field	Type	Format	Required
id	string	N/A	Yes
href	string	N/A	Yes
name	string	N/A	No
description	string	N/A	No
category	string	N/A	No
endOperatingDate	string	date-time	No
resourceVersion	string	N/A	No
startOperatingDate	string	date-time	No
activationFeature	array	Feature	No
administrativeState	ResourceAdministrativeStateType	N/A	No
attachment	array	AttachmentOrDocumentRef	No
note	array	Note	No
operationalState	ResourceOperationalStateType	N/A	No
place	RelatedPlaceRefOrValue	N/A	No
relatedParty	array	RelatedParty	No
resourceCharacteristic	array	Characteristic	No
resourceRelationship	array	ResourceRelationship	No
resourceSpecification	ResourceSpecificationRef	N/A	No
resourceStatus	ResourceStatusType	N/A	No
usageState	ResourceUsageStateType	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.175: Fields of ResourceRefOrValue.

4.176 ResourceRelationship

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

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Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
relationshipType	string	N/A	Yes
resource	ResourceRefOrValue	N/A	Yes
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.176: Fields of ResourceRelationship.

4.177 ResourceSpecification

Resources are physical or non-physical components (or some combination of these) within an enterprise's infrastructure or inventory. They are typically consumed or used by services (for example a physical port assigned to a service) or contribute to the realization of a Product (for example, a SIM card). They can be drawn from the Application, Computing and Network domains, and include, for example, Network Elements, software, IT systems, content and information, and technology components. A ResourceSpecification is a base class that represents a generic means for implementing a particular type of Resource. In essence, a ResourceSpecification defines the common attributes and relationships of a set of related Resources, while Resource defines a specific instance that is based on a particular ResourceSpecification.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
description	string	N/A	No
category	string	N/A	No
isBundle	boolean	N/A	No
lastUpdate	string	date-time	No
lifecycleStatus	string	N/A	No
version	string	N/A	No
attachment	array	AttachmentOrDocumentRef	No
featureSpecification	array	FeatureSpecification	No
relatedParty	array	RelatedParty	No
resourceSpecCharacteristic	array	ResourceSpecificationCharacteristic	No
resourceSpecRelationship	array	ResourceSpecificationRelationship	No
targetResourceSchema	TargetResourceSchema	N/A	No

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Field	Type	Format	Required
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	oneOf[“LogicalResourceSpecification”, “PhysicalResourceSpecification”, “ResourceSpecification”]	Yes

Table 4.177: Fields of ResourceSpecification.

4.178 ResourceSpecificationCharacteristic

This class defines the characteristic features of a resource specification. Every ResourceSpecification has a variety of important attributes, methods, constraints, and relationships, which distinguish a resource specification from other resource specifications.

Field	Type	Format	Required
id	string	N/A	No
name	string	N/A	No
description	string	N/A	No
configurable	boolean	N/A	No
extensible	boolean	N/A	No
isUnique	boolean	N/A	No
maxCardinality	integer	N/A	No
minCardinality	integer	N/A	No
regex	string	N/A	No
valueType	string	N/A	No
resourceSpecCharRelationship	array	ResourceSpecificationCharacteristicRelationship	No
resourceSpecCharacteristicValue	array	CharacteristicValueSpecification	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@valueSchemaLocation	string	N/A	No

Table 4.178: Fields of ResourceSpecificationCharacteristic.

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4.179 ResourceSpecificationCharacteristicRelationship

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

Field	Type	Format	Required
name	string	N/A	No
characteristicSpecificationId	string	N/A	No
relationshipType	string	N/A	No
resourceSpecificationHref	string	uri	No
resourceSpecificationId	string	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.179: Fields of ResourceSpecificationCharacteristicRelationship.

4.180 ResourceSpecificationRef

Resources are physical or non-physical components (or some combination of these) within an enterprise's infrastructure or inventory. They are typically consumed or used by services (for example a physical port assigned to a service) or contribute to the realization of a Product (for example, a SIM card). They can be drawn from the Application, Computing and Network domains, and include, for example, Network Elements, software, IT systems, content and information, and technology components. A ResourceSpecification is an abstract base class for representing a generic means for implementing a particular type of Resource. In essence, a ResourceSpecification defines the common attributes and relationships of a set of related Resources, while Resource defines a specific instance that is based on a particular ResourceSpecification.

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
version	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

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Field	Type	Format	Required

Table 4.180: Fields of ResourceSpecificationRef.

4.181 ResourceSpecificationRelationship

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

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
defaultQuantity	integer	N/A	No
maximumQuantity	integer	N/A	No
minimumQuantity	integer	N/A	No
relationshipType	string	N/A	No
role	string	N/A	No
characteristic	array	ResourceSpecificationCharacteristic	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.181: Fields of ResourceSpecificationRelationship.

4.182 ResourceSpecification_Create

Resources are physical or non-physical components (or some combination of these) within an enterprise's infrastructure or inventory. They are typically consumed or used by services (for example a physical port assigned to a service) or contribute to the realization of a Product (for example, a SIM card). They can be drawn from the Application, Computing and Network domains, and include, for example, Network Elements, software, IT systems, content and information, and technology components. A ResourceSpecification is a base class that represents a generic means for implementing a particular type of Resource. In essence, a ResourceSpecification defines the common attributes and relationships of a set of related Resources, while Resource defines a specific instance that is based on a particular ResourceSpecification. Skipped properties: id,href

Field	Type	Format	Required
name	string	N/A	Yes
description	string	N/A	No

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Field	Type	Format	Required
category	string	N/A	No
isBundle	boolean	N/A	No
lastUpdate	string	date-time	No
lifecycleStatus	string	N/A	No
version	string	N/A	No
attachment	array	AttachmentOrDocumentRef	No
featureSpecification	array	FeatureSpecification	No
relatedParty	array	RelatedParty	No
resourceSpecCharacteristic	array	ResourceSpecificationCharacteristic	No
resourceSpecRelationship	array	ResourceSpecificationRelationship	No
targetResourceSchema	TargetResourceSchema	N/A	No
validFor	TimePeriod	N/A	No
model	string	N/A	No
part	string	N/A	No
sku	string	N/A	No
vendor	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.182: Fields of ResourceSpecification_Create.

4.183 ResourceSpecification_Update

Resources are physical or non-physical components (or some combination of these) within an enterprise's infrastructure or inventory. They are typically consumed or used by services (for example a physical port assigned to a service) or contribute to the realization of a Product (for example, a SIM card). They can be drawn from the Application, Computing and Network domains, and include, for example, Network Elements, software, IT systems, content and information, and technology components. A ResourceSpecification is a base class that represents a generic means for implementing a particular type of Resource. In essence, a ResourceSpecification defines the common attributes and relationships of a set of related Resources, while Resource defines a specific instance that is based on a particular ResourceSpecification. Skipped properties: id,href

Field	Type	Format	Required
name	string	N/A	No
description	string	N/A	No
category	string	N/A	No

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Field	Type	Format	Required
isBundle	boolean	N/A	No
lastUpdate	string	date-time	No
lifecycleStatus	string	N/A	No
version	string	N/A	No
attachment	array	AttachmentOrDocumentRef	No
featureSpecification	array	FeatureSpecification	No
relatedParty	array	RelatedParty	No
resourceSpecCharacteristic	array	ResourceSpecificationCharacteristic	No
resourceSpecRelationship	array	ResourceSpecificationRelationship	No
targetResourceSchema	TargetResourceSchema	N/A	No
validFor	TimePeriod	N/A	No
model	string	N/A	No
part	string	N/A	No
sku	string	N/A	No
vendor	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.183: Fields of ResourceSpecification_Update.

4.184 ResourceStatusType

ResourceStatusType enumerations

Field	Type	Format	Required
ResourceStatusType	string	oneOf[standby, alarm, available, reserved, unknown, suspended]	No

Table 4.184: Fields of ResourceStatusType.

4.185 ResourceUsageStateType

ResourceUsageStateType enumerations

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Field	Type	Format	Required

Field	Type	Format	Required
ResourceUsageStateType	string	oneOf[idle, active, busy]	No

Table 4.185: Fields of ResourceUsageStateType.

4.186 Resource_Create

Resource is an abstract entity that describes the common set of attributes shared by all concrete resources (e.g. TPE, EQUIPMENT) in the inventory. Skipped properties: id,href

Field	Type	Format	Required
name	string	N/A	Yes
description	string	N/A	No
category	string	N/A	No
endOperatingDate	string	date-time	No
resourceVersion	string	N/A	No
startOperatingDate	string	date-time	No
activationFeature	array	Feature	No
administrativeState	ResourceAdministrativeStateType	N/A	No
attachment	array	AttachmentOrDocumentRef	No
note	array	Note	No
operationalState	ResourceOperationalStateType	N/A	No
place	RelatedPlaceRefOrValue	N/A	No
relatedParty	array	RelatedParty	No
resourceCharacteristic	array	Characteristic	No
resourceRelationship	array	ResourceRelationship	No
resourceSpecification	ResourceSpecificationRef	N/A	No
resourceStatus	ResourceStatusType	N/A	No
usageState	ResourceUsageStateType	N/A	No
value	string	N/A	No
manufactureDate	string	date-time	No
powerState	string	N/A	No
serialNumber	string	N/A	No
versionNumber	string	N/A	No

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Field	Type	Format	Required
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.186: Fields of Resource_Create.

4.187 Resource_Update

Resource is an abstract entity that describes the common set of attributes shared by all concrete resources (e.g. TPE, EQUIPMENT) in the inventory. Skipped properties: id,href

Field	Type	Format	Required
name	string	N/A	No
description	string	N/A	No
category	string	N/A	No
endOperatingDate	string	date-time	No
resourceVersion	string	N/A	No
startOperatingDate	string	date-time	No
activationFeature	array	Feature	No
administrativeState	ResourceAdministrativeStateType	N/A	No
attachment	array	AttachmentOrDocumentRef	No
note	array	Note	No
operationalState	ResourceOperationalStateType	N/A	No
place	RelatedPlaceRefOrValue	N/A	No
relatedParty	array	RelatedParty	No
resourceCharacteristic	array	Characteristic	No
resourceRelationship	array	ResourceRelationship	No
resourceSpecification	ResourceSpecificationRef	N/A	No
resourceStatus	ResourceStatusType	N/A	No
usageState	ResourceUsageStateType	N/A	No
value	string	N/A	No
manufactureDate	string	date-time	No
powerState	string	N/A	No
serialNumber	string	N/A	No
versionNumber	string	N/A	No

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Field	Type	Format	Required
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.187: Fields of Resource_Update.

4.188 ResponseTime

The response time for an inquiry. At least the maximum estimated time must be filled on creation, the actual value is filled on completion.

Field	Type	Format	Required
minimum	string	date-time	No
average	string	date-time	No
maximum	string	date-time	Yes
actual	string	date-time	No

Table 4.188: Fields of ResponseTime.

4.189 SLARef

ServiceLevelAgreement reference: A service level agreement (SLA) is a type of agreement that represents a formal negotiated agreement between two parties designed to create a common understanding about products, services, priorities, responsibilities, and so forth. The SLA is a set of appropriate procedures and targets formally or informally agreed between parties in order to achieve and maintain specified Quality of Service.

Field	Type	Format	Required
id	string	N/A	Yes
href	string	N/A	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.189: Fields of SLARef.

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4.190 Service

Service is a base class for defining the Service hierarchy. All Services are characterized as either being possibly visible and usable by a Customer or not. This gives rise to the two subclasses of Service: CustomerFacingService and ResourceFacingService.

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
description	string	N/A	No
category	string	N/A	No
endDate	string	date-time	No
hasStarted	boolean	N/A	No
isBundle	boolean	N/A	No
isServiceEnabled	boolean	N/A	No
isStateful	boolean	N/A	No
serviceDate	string	N/A	No
serviceType	string	N/A	No
startDate	string	date-time	No
startMode	string	N/A	No
feature	array	Feature	No
note	array	Note	No
place	array	RelatedPlaceRefOrValue	No
relatedEntity	array	RelatedEntityRefOrValue	No
relatedParty	array	RelatedParty	No
serviceCharacteristic	array	Characteristic	No
serviceOrderItem	array	RelatedServiceOrderItem	No
serviceRelationship	array	ServiceRelationship	No
serviceSpecification	ServiceSpecificationRef	N/A	No
state	ServiceStateType	N/A	No
supportingResource	array	ResourceRef	No
supportingService	array	ServiceRefOrValue	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

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Field	Type	Format	Required

Table 4.190: Fields of Service.

4.191 ServiceCandidateRef

ServiceCandidate reference. ServiceCandidate is an entity that makes a ServiceSpecification available to a catalog.

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
version	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.191: Fields of ServiceCandidateRef.

4.192 ServiceFeatureSpecification

Specification for service features

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
isBundle	boolean	N/A	No
isEnabled	boolean	N/A	No
version	string	N/A	No
constraint	array	ConstraintRef	No
featureSpecCharacteristic	array	CharacteristicSpecification	No
featureSpecRelationship	array	FeatureSpecificationRelationship	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No

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Field	Type	Format	Required
\@type	string	N/A	No

Table 4.192: Fields of ServiceFeatureSpecification.

4.193 ServiceLevelObjective

Service level objectives are defined in terms of parameters and metrics, thresholds, and tolerances associated with the parameters.

Field	Type	Format	Required
id	string	N/A	No
href	string	N/A	No
name	string	N/A	No
conformancePeriod	TimePeriod	N/A	No
conformanceTarget	string	N/A	No
graceTimes	string	N/A	No
thresholdTarget	string	N/A	No
tolerancePeriod	TimeInterval	N/A	No
toleranceTarget	string	N/A	No
validFor	TimePeriod	N/A	No
keyIndicator	KeyIndicator	N/A	No
consequence	array	ServiceLevelSpecConsequence	No
threshold	array	ServiceLevelObjectiveThreshold	No
applicability	array	ApplicableTimePeriod	No
\@baseType	string	N/A	No
\@schemaLocation	string	N/A	No
\@type	string	N/A	No

Table 4.193: Fields of ServiceLevelObjective.

4.194 ServiceLevelObjectiveRef

A set of Service Level Objectives that are contained in the Service Level Specification.

Field	Type	Format	Required
id	string	N/A	Yes

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Field	Type	Format	Required
href	string	N/A	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.194: Fields of ServiceLevelObjectiveRef.

4.195 ServiceLevelObjectiveThreshold

A threshold base entity containing threshold rules.This entity is mandatory.

Field	Type	Format	Required
id	string	N/A	No
name	string	N/A	No
description	string	N/A	No
thresholdType	string	oneOf[LogicDefinition, PreDefined]	No
consequence	array	ServiceLevelSpecConsequence	No
thresholdCondition	string	oneOf[Raise, Clear]	No
applicability	array	ApplicableTimePeriod	No
upperBound	Quantity	N/A	No
lowerBound	Quantity	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	N/A	No
\@type	string	N/A	No

Table 4.195: Fields of ServiceLevelObjectiveThreshold.

4.196 ServiceLevelObjective_Create

Service level objectives are defined in terms of parameters and metrics, thresholds, and tolerances associated with the parameters.

Field	Type	Format	Required
id	string	N/A	No

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Field	Type	Format	Required
href	string	N/A	No
name	string	N/A	No
conformancePeriod	TimePeriod	N/A	No
conformanceTarget	string	N/A	Yes
graceTimes	string	N/A	No
thresholdTarget	string	N/A	No
tolerancePeriod	TimeInterval	N/A	No
toleranceTarget	string	N/A	No
validFor	TimePeriod	N/A	No
keyIndicator	KeyIndicator	N/A	Yes
consequence	array	ServiceLevelSpecConsequence	No
threshold	array	ServiceLevelObjectiveThreshold	No
applicability	array	ApplicableTimePeriod	No
\@baseType	string	N/A	No
\@schemaLocation	string	N/A	No
\@type	string	N/A	No

Table 4.196: Fields of ServiceLevelObjective_Create.

4.197 ServiceLevelObjective_Update

Service level objectives are defined in terms of parameters and metrics, thresholds, and tolerances associated with the parameters.

Field	Type	Format	Required
name	string	N/A	No
conformancePeriod	TimePeriod	N/A	No
conformanceTarget	string	N/A	No
graceTimes	string	N/A	No
thresholdTarget	string	N/A	No
tolerancePeriod	TimeInterval	N/A	No
toleranceTarget	string	N/A	No
keyIndicator	KeyIndicator	N/A	No
consequence	array	ServiceLevelSpecConsequence	No
threshold	array	ServiceLevelObjectiveThreshold	No

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Field	Type	Format	Required
applicability	array	ApplicableTimePeriod	No
\@baseType	string	N/A	No
\@schemaLocation	string	N/A	No
\@type	string	N/A	No

Table 4.197: Fields of ServiceLevelObjective_Update.

4.198 ServiceLevelSpecConsequence

A target/threshold crossing or a target/threshold ceased to be crossing results in a consequence.

Field	Type	Format	Required
name	string	N/A	No
description	string	N/A	No
prescribedAction	PrescribedAction	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	N/A	No
\@type	string	N/A	No

Table 4.198: Fields of ServiceLevelSpecConsequence.

4.199 ServiceLevelSpecification

A Service Level Specification represents a pre-defined or negotiated set of Service Level Objectives. In addition, certain consequences are associated with not meeting the Service Level Objectives. Service Level Agreements are expressed in terms of Service Level Specifications.

Field	Type	Format	Required
id	string	N/A	No
href	string	N/A	No
name	string	N/A	No
description	string	N/A	No
relatedServiceLevelObjective	array	ServiceLevelObjectiveRef	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No

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Field	Type	Format	Required
\@type	string	N/A	No

Table 4.199: Fields of ServiceLevelSpecification.

4.200 ServiceLevelSpecificationRef

A Service Level Specification represents a pre-defined or negotiated set of Service Level Objectives. In addition, certain consequences are associated with not meeting the Service Level Objectives. Service Level Agreements are expressed in terms of Service Level Specifications.

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.200: Fields of ServiceLevelSpecificationRef.

4.201 ServiceLevelSpecification_Create

A Service Level Specification represents a pre-defined or negotiated set of Service Level Objectives. In addition, certain consequences are associated with not meeting the Service Level Objectives. Service Level Agreements are expressed in terms of Service Level Specifications. Skipped properties: id,href

Field	Type	Format	Required
name	string	N/A	Yes
description	string	N/A	No
relatedServiceLevelObjective	array	ServiceLevelObjectiveRef	Yes
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.201: Fields of ServiceLevelSpecification_Create.

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4.202 ServiceLevelSpecification_Update

A Service Level Specification represents a pre-defined or negotiated set of Service Level Objectives. In addition, certain consequences are associated with not meeting the Service Level Objectives. Service Level Agreements are expressed in terms of Service Level Specifications. Skipped properties: id,href,validFor

Field	Type	Format	Required
name	string	N/A	No
description	string	N/A	No
relatedServiceLevelObjective	array	ServiceLevelObjectiveRef	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.202: Fields of ServiceLevelSpecification_Update.

4.203 ServiceRef

Service reference, for when Service is used by other entities

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.203: Fields of ServiceRef.

4.204 ServiceRefOrValue

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

Field	Type	Format	Required
id	string	N/A	Yes

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Field	Type	Format	Required
href	string	N/A	No
name	string	N/A	No
description	string	N/A	No
category	string	N/A	No
endDate	string	date-time	No
hasStarted	boolean	N/A	No
isBundle	boolean	N/A	No
isServiceEnabled	boolean	N/A	No
isStateful	boolean	N/A	No
serviceDate	string	N/A	No
serviceType	string	N/A	No
startDate	string	date-time	No
startMode	string	N/A	No
feature	array	Feature	No
note	array	Note	No
place	array	RelatedPlaceRefOrValue	No
relatedEntity	array	RelatedEntityRefOrValue	No
relatedParty	array	RelatedParty	No
serviceCharacteristic	array	Characteristic	No
serviceOrderItem	array	RelatedServiceOrderItem	No
serviceRelationship	array	ServiceRelationship	No
serviceSpecification	ServiceSpecificationRef	N/A	No
state	ServiceStateType	N/A	No
supportingResource	array	ResourceRef	No
supportingService	array	ServiceRefOrValue	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.204: Fields of ServiceRefOrValue.

4.205 ServiceRelationship

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Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
relationshipType	string	N/A	Yes
service	ServiceRefOrValue	N/A	Yes
serviceRelationshipCharacteristic	array	Characteristic	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.205: Fields of ServiceRelationship.

4.206 ServiceSpecRelationship

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

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
name	string	N/A	No
relationshipType	string	N/A	Yes
role	string	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.206: Fields of ServiceSpecRelationship.

4.207 ServiceSpecification

ServiceSpecification is a class that offers characteristics to describe a type of service. Functionally, it acts as a template by which Services may be instantiated. By sharing the same specification, these services would therefore share the same set of characteristics.

Field	Type	Format	Required
id	string	N/A	No

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Field	Type	Format	Required
href	string	uri	No
name	string	N/A	No
description	string	N/A	No
isBundle	boolean	N/A	No
lastUpdate	string	date-time	No
lifecycleStatus	string	N/A	No
version	string	N/A	No
attachment	array	AttachmentOrDocumentRef	No
constraint	array	ConstraintRef	No
entitySpecRelationship	array	EntitySpecificationRelationship	No
featureSpecification	array	ServiceFeatureSpecification	No
relatedParty	array	RelatedParty	No
resourceSpecification	array	ResourceSpecificationRef	No
serviceLevelSpecification	array	ServiceLevelSpecificationRef	No
serviceSpecRelationship	array	ServiceSpecRelationship	No
specCharacteristic	array	CharacteristicSpecification	No
targetEntitySchema	TargetEntitySchema	N/A	No
validFor	TimePeriod	N/A	No
category	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.207: Fields of ServiceSpecification.

4.208 ServiceSpecificationRef

Service specification reference: ServiceSpecification(s) required to realize a ProductSpecification.

Field	Type	Format	Required
id	string	N/A	Yes
href	string	uri	No
name	string	N/A	No
version	string	N/A	No

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Field	Type	Format	Required
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No
\@referredType	string	N/A	No

Table 4.208: Fields of ServiceSpecificationRef.

4.209 ServiceSpecification_Create

ServiceSpecification is a class that offers characteristics to describe a type of service. Functionally, it acts as a template by which Services may be instantiated. By sharing the same specification, these services would therefore share the same set of characteristics. Skipped properties: id,href

Field	Type	Format	Required
name	string	N/A	Yes
description	string	N/A	No
isBundle	boolean	N/A	No
lastUpdate	string	date-time	No
lifecycleStatus	string	N/A	No
version	string	N/A	No
attachment	array	AttachmentOrDocumentRef	No
constraint	array	ConstraintRef	No
entitySpecRelationship	array	EntitySpecificationRelationship	No
featureSpecification	array	ServiceFeatureSpecification	No
relatedParty	array	RelatedParty	No
resourceSpecification	array	ResourceSpecificationRef	No
serviceLevelSpecification	array	ServiceLevelSpecificationRef	No
serviceSpecRelationship	array	ServiceSpecRelationship	No
specCharacteristic	array	CharacteristicSpecification	No
targetEntitySchema	TargetEntitySchema	N/A	No
validFor	TimePeriod	N/A	No
category	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

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Field	Type	Format	Required

Table 4.209: Fields of ServiceSpecification_Create.

4.210 ServiceSpecification_Update

ServiceSpecification is a class that offers characteristics to describe a type of service. Functionally, it acts as a template by which Services may be instantiated. By sharing the same specification, these services would therefore share the same set of characteristics. Skipped properties: id,href,lastUpdate

Field	Type	Format	Required
name	string	N/A	No
description	string	N/A	No
isBundle	boolean	N/A	No
lifecycleStatus	string	N/A	No
version	string	N/A	No
attachment	array	AttachmentOrDocumentRef	No
constraint	array	ConstraintRef	No
entitySpecRelationship	array	EntitySpecificationRelationship	No
featureSpecification	array	ServiceFeatureSpecification	No
relatedParty	array	RelatedParty	No
resourceSpecification	array	ResourceSpecificationRef	No
serviceLevelSpecification	array	ServiceLevelSpecificationRef	No
serviceSpecRelationship	array	ServiceSpecRelationship	No
specCharacteristic	array	CharacteristicSpecification	No
targetEntitySchema	TargetEntitySchema	N/A	No
validFor	TimePeriod	N/A	No
category	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.210: Fields of ServiceSpecification_Update.

4.211 ServiceStateType

Valid values for the lifecycle state of the service

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Field	Type	Format	Required
ServiceStateType	string	oneOf[feasibilityChecked, designed, reserved, inactive, active, terminated]	No

Table 4.211: Fields of ServiceStateType.

4.212 Service_Create

Service is a base class for defining the Service hierarchy. All Services are characterized as either being possibly visible and usable by a Customer or not. This gives rise to the two subclasses of Service: CustomerFacingService and ResourceFacingService. Skipped properties: id,href

Field	Type	Format	Required
name	string	N/A	No
description	string	N/A	No
category	string	N/A	No
endDate	string	date-time	No
hasStarted	boolean	N/A	No
isBundle	boolean	N/A	No
isServiceEnabled	boolean	N/A	No
isStateful	boolean	N/A	No
serviceDate	string	N/A	No
serviceType	string	N/A	No
startDate	string	date-time	No
startMode	string	N/A	No
feature	array	Feature	No
note	array	Note	No
place	array	RelatedPlaceRefOrValue	No
relatedEntity	array	RelatedEntityRefOrValue	No
relatedParty	array	RelatedParty	No
serviceCharacteristic	array	Characteristic	No
serviceOrderItem	array	RelatedServiceOrderItem	No
serviceRelationship	array	ServiceRelationship	No
serviceSpecification	ServiceSpecificationRef	N/A	Yes
state	ServiceStateType	N/A	Yes
supportingResource	array	ResourceRef	No

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Field	Type	Format	Required
supportingService	array	ServiceRefOrValue	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.212: Fields of Service_Create.

4.213 Service_Update

Service is a base class for defining the Service hierarchy. All Services are characterized as either being possibly visible and usable by a Customer or not. This gives rise to the two subclasses of Service: CustomerFacingService and ResourceFacingService. Skipped properties: id,href,serviceDate

Field	Type	Format	Required
name	string	N/A	No
description	string	N/A	No
category	string	N/A	No
endDate	string	date-time	No
hasStarted	boolean	N/A	No
isBundle	boolean	N/A	No
isServiceEnabled	boolean	N/A	No
isStateful	boolean	N/A	No
serviceType	string	N/A	No
startDate	string	date-time	No
startMode	string	N/A	No
feature	array	Feature	No
note	array	Note	No
place	array	RelatedPlaceRefOrValue	No
relatedEntity	array	RelatedEntityRefOrValue	No
relatedParty	array	RelatedParty	No
serviceCharacteristic	array	Characteristic	No
serviceOrderItem	array	RelatedServiceOrderItem	No
serviceRelationship	array	ServiceRelationship	No
serviceSpecification	ServiceSpecificationRef	N/A	No
state	ServiceStateType	N/A	No

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Field	Type	Format	Required
supportingResource	array	ResourceRef	No
supportingService	array	ServiceRefOrValue	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.213: Fields of Service_Update.

4.214 Skill

Skills evaluated for an individual with a level and possibly with a limited validity when an obsolescence is defined (Ex: the first-aid certificate first level is limited to one year and an update training is required each year to keep the level).

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
comment	string	N/A	No
evaluatedLevel	string	N/A	No
skillCode	string	N/A	No
skillName	string	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.214: Fields of Skill.

4.215 StatusChange

Holds the status notification reasons and associated date the status changed, populated by the server

Field	Type	Format	Required
id	string	N/A	No
href	string	uri	No
changeDate	string	date-time	No

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Field	Type	Format	Required
changeReason	string	N/A	No
status	TroubleTicketStatusType	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.215: Fields of StatusChange.

4.216 TargetEntitySchema

The reference object to the schema and type of target entity which is described by a specification

Field	Type	Format	Required
\@schemaLocation	string	N/A	Yes
\@type	string	N/A	Yes

Table 4.216: Fields of TargetEntitySchema.

4.217 TargetProductSchema

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

Field	Type	Format	Required
\@schemaLocation	string	uri	Yes
\@type	string	N/A	Yes

Table 4.217: Fields of TargetProductSchema.

4.218 TargetResourceSchema

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

Field	Type	Format	Required
\@schemaLocation	string	uri	Yes
\@type	string	N/A	Yes

Table 4.218: Fields of TargetResourceSchema.

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4.219 TaskStateType

Possible values for the state of a task

Field	Type	Format	Required
TaskStateType	string	oneOf[accepted, terminatedWithError, inProgress, done]	No

Table 4.219: Fields of TaskStateType.

4.220 TaxDefinition

Reference of a tax definition. A tax is levied by an authorized tax jurisdiction. There are many different types of tax (Federal Tax levied by the US Government, State Tax levied by the State of California,...).

Field	Type	Format	Required
id	string	N/A	No
name	string	N/A	No
jurisdictionLevel	string	N/A	No
jurisdictionName	string	N/A	No
taxType	string	N/A	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.220: Fields of TaxDefinition.

4.221 TaxExemptionCertificate

A tax exemption certificate represents a tax exemption granted to a party (individual or organization) by a tax jurisdiction which may be a city, state, country,... An exemption has a certificate identifier (received from the jurisdiction that levied the tax) and a validity period. An exemption is per tax types and determines for each type of tax what portion of the tax is exempted (partial by percentage or complete) via the tax definition.

Field	Type	Format	Required
id	string	N/A	No
certificateNumber	string	N/A	No
issuingJurisdiction	string	N/A	No
reason	string	N/A	No

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Field	Type	Format	Required
attachment	AttachmentOrDocumentRef	N/A	No
taxDefinition	array	TaxDefinition	No
validFor	TimePeriod	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.221: Fields of TaxExemptionCertificate.

4.222 TaxItem

A tax item is created for each tax rate and tax type used in the bill.

Field	Type	Format	Required
taxCategory	string	N/A	No
taxRate	number	float	No
taxAmount	Money	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.222: Fields of TaxItem.

4.223 TimeInterval

An interval of time from start- to endTime. If a time zone is required, it must be determined from the context.

Field	Type	Format	Required
startTime	string	time	Yes
endTime	string	time	Yes

Table 4.223: Fields of TimeInterval.

4.224 TimePeriod

A period of time, either as a deadline (endDateTime only) a startDateTime only, or both

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Field	Type	Format	Required
endDateTime	string	date-time	No
startDateTime	string	date-time	No

Table 4.224: Fields of TimePeriod.

4.225 Topic

Is a event channel provided by the Event Streaming API

Field	Type	Format	Required
id	string	N/A	No
href	string	N/A	No
name	string	N/A	No
contentQuery	string	N/A	No
headerQuery	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.225: Fields of Topic.

4.226 TroubleTicket

A trouble ticket is a record of an issue that is created, tracked, and managed by a trouble ticket management system

Field	Type	Format	Required
id	string	N/A	No
href	string	N/A	No
name	string	N/A	No
description	string	N/A	No
creationDate	string	date-time	No
expectedResolutionDate	string	date-time	No
externalId	string	N/A	No
lastUpdate	string	date-time	No
priority	string	N/A	No
requestedResolutionDate	string	date-time	No

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Field	Type	Format	Required
resolutionDate	string	date-time	No
severity	string	N/A	No
statusChangeDate	string	date-time	No
statusChangeReason	string	N/A	No
ticketType	string	N/A	No
attachment	array	AttachmentOrDocumentRef	No
channel	ChannelRef	N/A	No
note	array	Note	No
relatedEntity	array	RelatedEntity	No
relatedParty	array	RelatedParty	No
status	TroubleTicketStatusType	N/A	No
statusChange	array	StatusChange	No
troubleTicketRelationship	array	TroubleTicketRelationship	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.226: Fields of TroubleTicket.

4.227 TroubleTicketRelationship

Represents a relationship between trouble Trouble Tickets

Field	Type	Format	Required
id	string	N/A	No
href	string	N/A	No
name	string	N/A	No
relationshipType	string	N/A	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.227: Fields of TroubleTicketRelationship.

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4.228 TroubleTicketStatusType

Possible values for the status of the trouble ticket

Field	Type	Format	Required
TroubleTicketStatusType	string	oneOf[acknowledged, rejected, pending, held, inProgress, cancelled, closed, resolved]	No

Table 4.228: Fields of TroubleTicketStatusType.

4.229 TroubleTicket_Create

A trouble ticket is a record of an issue that is created, tracked, and managed by a trouble ticket management system
Skipped properties: id,href

Field	Type	Format	Required
name	string	N/A	No
description	string	N/A	Yes
creationDate	string	date-time	No
expectedResolutionDate	string	date-time	No
externalId	string	N/A	No
lastUpdate	string	date-time	No
priority	string	N/A	No
requestedResolutionDate	string	date-time	No
resolutionDate	string	date-time	No
severity	string	N/A	Yes
statusChangeDate	string	date-time	No
statusChangeReason	string	N/A	No
ticketType	string	N/A	Yes
attachment	array	AttachmentOrDocumentRef	No
channel	ChannelRef	N/A	No
note	array	Note	No
relatedEntity	array	RelatedEntity	No
relatedParty	array	RelatedParty	No
status	TroubleTicketStatusType	N/A	No
statusChange	array	StatusChange	No
troubleTicketRelationship	array	TroubleTicketRelationship	No

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Field	Type	Format	Required
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.229: Fields of TroubleTicket_Create.

4.230 TroubleTicket_Update

A trouble ticket is a record of an issue that is created, tracked, and managed by a trouble ticket management system Skipped properties: id,href,creationDate,lastUpdate,statusChange,statusChangeDate

Field	Type	Format	Required
name	string	N/A	No
description	string	N/A	No
expectedResolutionDate	string	date-time	No
externalId	string	N/A	No
priority	string	N/A	No
requestedResolutionDate	string	date-time	No
resolutionDate	string	date-time	No
severity	string	N/A	No
statusChangeReason	string	N/A	No
ticketType	string	N/A	No
attachment	array	AttachmentOrDocumentRef	No
channel	ChannelRef	N/A	No
note	array	Note	No
relatedEntity	array	RelatedEntity	No
relatedParty	array	RelatedParty	No
status	TroubleTicketStatusType	N/A	No
troubleTicketRelationship	array	TroubleTicketRelationship	No
\@baseType	string	N/A	No
\@schemaLocation	string	uri	No
\@type	string	N/A	No

Table 4.230: Fields of TroubleTicket_Update.

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4.231 UsageEstimation

The estimated usage of a product. The customer may provide this to allow the provider to optimize the returned products.

Field	Type	Format	Required
name	string	N/A	No
value	integer	N/A	No
unitOfMeasure	string	N/A	No
recurringChargePeriod	string	N/A	No
recurringChargePeriodLength	integer	N/A	No

Table 4.231: Fields of UsageEstimation.

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