



PSI Requirements

PSI-REQ

SES[^] TECHCOM



Version: 1.0.0
Date: 2024-04-08
Reference: PSI-REQ
Total Pages: 61

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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-TAD	PSI-TAD	Terms, Abbreviations and Definitions	1.0.0
PSI-TOD	PSI-TOD	Tasks and Operations Dictionary	1.0.0

Table 1.1: Reference Documents.

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 aspects 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** alliance¹. 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/>

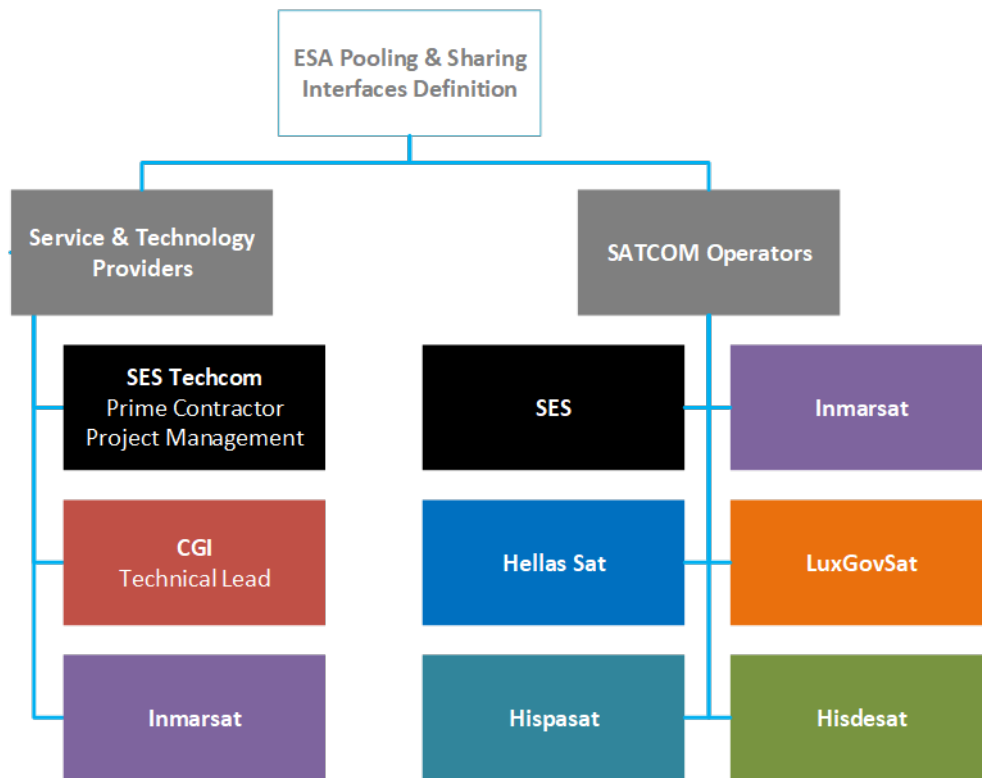


Figure 2.1: The PSI consortium.

2.1 Document Scope

This document contains requirements defined to the Pooling And Sharing Interfaces Standardisation Project (PSI).

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

Changes to this document are tracked electronically. No signature is required by the authors. The information in the “Source Control” chapter can prove the integrity of the document and reveal any change.

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

2.1.3 PSI First Release Note - Version 1.0.0

2.1.3.1 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.

2.1.3.2 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.

2.1.3.3 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 sent 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 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

- **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

- **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

2.1.3.4 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.
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.

2.1.4 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.

3 Requirement Categories

The PSI Requirements are written along the project specific terminology and definitions. Please refer to the PSI Terms, Abbreviations & Definitions [PSI-TAD] for more information.

For clarity and ease of use, all PSI requirements are grouped by the corresponding endpoint of the interface and then enumerated corresponding to the [PSI-TOD]. Additionally, they are tagged according to their core semantic with one or more category. The categories are listed and described in the table below.

Category	Description
INQUIRY	Requirements on customer inquiries
PARTY	Requirements on party management (individuals, organizations)
POOLING	Requirements on pooling of resources, services and products
SEC	Requirements on Security
ORDER	Requirements on product ordering
DOC	Requirements on managing documents as attachments
TICKET	Requirements on managing trouble tickets
MONITOR	Requirements on managing service monitoring

Table 3.1: PSID Requirement Categories

3.1 Interfaces

A PSS has at least four different actors they need to interact with:

- Providers (satellite operators, SatCom service providers)
- Other Pooling & Sharing Systems
- Users
- Governance (the operator of the PSS and their staff)

Towards deducing the interfaces that implement a given PSI requirement, the diagram in the respective operation in the [PSI-TOD] should be consulted. The diagram demonstrates graphically who takes the role of a server for the REST endpoints and who are the actors that consume them, taking over the role of a client.

For example, if the server is the PSS and the clients are the customers, providers, and other PSS, the requirement relates to the PSS-user I/F, the PSS-provider I/F, and the PSS-PSS I/F respectively.

3.2 RFC 2119 Phrasing

Several words are used to signify the requirements in the specification. The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, “MAY”, and “OPTIONAL” in this document are to be interpreted as described in [RFC 2119](#).

1. **MUST** This word, or the terms “REQUIRED” or “SHALL”, mean that the definition is an absolute requirement of the specification.
2. **MUST NOT** This phrase, or the phrase “SHALL NOT”, mean that the definition is an absolute prohibition of the specification.
3. **SHOULD** This word, or the adjective “RECOMMENDED”, mean that there may exist valid reasons in particular circumstances to ignore a particular item, but the full implications must be understood and carefully weighed before choosing a different course.
4. **SHOULD NOT** This phrase, or the phrase “NOT RECOMMENDED” mean that there may exist valid reasons in particular circumstances when the particular behaviour is acceptable or even useful, but the full implications should be understood and the case carefully weighed before implementing any behaviour described with this label.
5. **MAY** This word, or the adjective “OPTIONAL”, mean that an item is truly optional. One vendor may choose to include the item because a particular marketplace requires it or because the vendor feels that it enhances the product while another vendor may omit the same item. An implementation which does not include a particular option **MUST** be prepared to interoperate with another implementation which does include the option, though perhaps with reduced functionality. In the same vein an implementation which does include a particular option **MUST** be prepared to interoperate with another implementation which does not include the option (except, of course, for the feature the option provides.)

4 PSI Requirements

Derived requirements engineered in the course of project execution.

4.1 REQ-01-Miscellaneous

4.1.1 REQ-01-01-Party_Management

4.1.1.1 REQ-01-01-01-Create_Party_Profile

Req. ID	Description	Comment / Understanding	Category
PSI-01-01-01-01	The interface shall allow an individual to register as a party to a PSS.	-	PARTY
PSI-01-01-01-02	The interface shall allow an organization to register as a party to a PSS.	-	PARTY
PSI-01-01-01-03	The interface shall allow an organization to register its sub-organization(s) in hierarchical layers.	Role inheritance by the sub-organizations and individuals is enabled by the API. The usage of such is however within the scope of the PSS implementation.	PARTY
PSI-01-01-01-04	The interface shall allow an organization to register its associated community of individuals (users).	-	PARTY
PSI-01-01-01-05	The interface shall allow the governance to register a party to a PSS.	-	PARTY
PSI-01-01-01-06	The interface shall allow the store contract relevant information about a party.	This could be accessible pools, SLA-Information of the PSS itself or other capabilities available to the party.	PARTY

Table 4.1: Requirements for creating a party profile.

4.1.1.2 REQ-01-01-02-Update_Party_Profile

Req. ID	Description	Comment / Understanding	Category
PSI-01-01-02-01	The interface shall allow an individual to update the existing party in a PSS.	-	PARTY
PSI-01-01-02-02	The interface shall allow an individual to update only their party in the PSS.	-	PARTY, SEC
PSI-01-01-02-03	The interface shall allow an organization to update the existing party in a PSS.	-	PARTY, SEC
PSI-01-01-02-04	The interface shall allow an organization to update only their party in the PSS.	-	PARTY, SEC
PSI-01-01-02-05	The interface shall allow an organization to specify its sub-organization(s) in hierarchical layers.	The interface shall allow an organization to register its sub-organization(s) in hierarchical layers.	PARTY
PSI-01-01-02-06	The interface shall allow an organization to specify its associated community of individuals (users).	-	PARTY
PSI-01-01-02-07	The interface shall allow the governance to update an existing party in a PSS.	-	PARTY
PSI-01-01-02-08	The interface shall allow the governance to set the response time for orders and inquiries of an existing organization party (i.e. provider) in a PSS.	The governance uses the response time to enforce the respective provider organization to respond according to their SLA.	PARTY
PSI-01-01-02-09	The interface shall allow the governance to set the maximum priority for inquiries of an existing party (i.e. customer) in a PSS.	-	PARTY

Req. ID	Description	Comment / Understanding	Category
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Table 4.2: Requirements for updating a party profile.

4.1.1.3 REQ-01-01-03-Remove_Party_Profile

Req. ID	Description	Comment / Understanding	Category
PSI-01-01-03-01	The interface shall allow an individual to delete the existing party or mark it as invalid in a PSS.	-	PARTY
PSI-01-01-03-02	The interface shall allow an individual to delete only their party in the PSS.	-	PARTY, SEC
PSI-01-01-03-03	The interface shall allow an organization to delete the existing party or mark it as invalid in a PSS.	-	PARTY
PSI-01-01-03-04	The interface shall allow an organization to delete only their party in the PSS.	-	PARTY, SEC
PSI-01-01-03-05	The interface shall allow the governance to delete an existing party or mark it as invalid in a PSS.	-	PARTY

Table 4.3: Requirements for deleting a party profile.

4.1.1.4 REQ-01-01-04-View_Party_Profile

Req. ID	Description	Comment / Understanding	Category
PSI-01-01-04-01	The interface shall allow an individual to retrieve the existing party from a PSS.	-	PARTY

Req. ID	Description	Comment / Understanding	Category
PSI-01-01-04-02	The interface shall allow an individual to access only their party in the PSS.	-	PARTY, SEC
PSI-01-01-04-03	The interface shall allow an organization to retrieve the existing party from a PSS.	-	PARTY
PSI-01-01-04-04	The interface shall allow an organization to access only their party in the PSS.	-	PARTY, SEC
PSI-01-01-04-05	The interface shall allow the governance to retrieve an existing party from a PSS.	-	PARTY

Table 4.4: Requirements for viewing a party profile.

4.1.1.5 REQ-01-01-05-View_All_Party_Profiles

Req. ID	Description	Comment / Understanding	Category
PSI-01-01-05-01	The interface shall allow the governance to retrieve all parties from a PSS.	-	PARTY
PSI-01-01-05-02	The interface shall allow an organization to retrieve all associated parties from a PSS.	-	PARTY

Table 4.5: Requirements for viewing all party profiles.

4.1.2 REQ-01-02-Event_Management

4.1.2.1 REQ-01-02-01-View_Event_Topics

Req. ID	Description	Comment / Understanding	Category
PSI-01-02-01-01	The interface shall allow other systems to retrieve a list of event topics.	-	-

Req. ID	Description	Comment / Understanding	Category
PSI-01-02-01-02	The interface shall offer at least the event topics “order” and “inquiry”.	-	-

Table 4.6: Requirements for viewing event topics.

4.1.2.2 REQ-01-02-02-Register_Event_Callback

Req. ID	Description	Comment / Understanding	Category
PSI-01-02-02-01	The interface shall allow other systems to register callbacks for event topics.	-	-
PSI-01-02-02-02	The interface shall allow the optional specification of filter queries for callbacks.	-	-
PSI-01-02-02-03	The implementation shall reject callback URLs with unknown hosts.	-	-

Table 4.7: Requirements for registering an event callback.

4.1.2.3 REQ-01-02-03-Dispatch_Event

Req. ID	Description	Comment / Understanding	Category
PSI-01-02-03-01	The interface shall allow receiving events from other systems.	-	-
PSI-01-02-03-02	The interface shall allow exchange of entity data within events.	-	-
PSI-01-02-03-03	The sender implementation shall filter receivers by event topics.	-	-
PSI-01-02-03-04	The sender implementation shall filter receivers on a need-to-know basis.	-	-

Req. ID	Description	Comment / Understanding	Category
PSI-01-02-03-05	The sender implementation shall filter receivers based on their filter query.	-	-
PSI-01-02-03-06	The sender implementation must apply an exponential back-off strategy for rejected events.	-	-
PSI-01-02-03-07	The sender implementation may halt event transmission to broken callbacks for manual resumption.	-	-
PSI-01-02-03-08	The sender implementation must always send events in the original timely order.	-	-
PSI-01-02-03-09	The sender implementation must authenticate with the target host before sending an event.	-	-

Table 4.8: Requirements for dispatching events.

4.1.2.4 REQ-01-02-04-Deregister_Event_Callback

Req. ID	Description	Comment / Understanding	Category
PSI-01-02-04-01	The interface shall allow other systems to unregister their already registered callbacks for event topics.	-	-

Table 4.9: Requirements for unregistering an event callback.

4.1.3 REQ-01-03-Document_Management

4.1.3.1 REQ-01-03-01-Create_Document

Req. ID	Description	Comment / Understanding	Category
PSI-01-03-01-01	The interface shall allow a party to create a document in a PSS.	-	DOC

Table 4.10: Requirements for creating a document.

4.1.3.2 REQ-01-03-02-Update_Document

Req. ID	Description	Comment / Understanding	Category
PSI-01-03-02-01	The interface shall allow a party to update an existing document in a PSS.	-	DOC
PSI-01-03-02-02	The interface shall allow a party to control write access to a document they have created in a PSS.	-	DOC, SEC

Table 4.11: Requirements for updating a document.

4.1.3.3 REQ-01-03-03-Remove_Document

Req. ID	Description	Comment / Understanding	Category
PSI-01-03-03-01	The interface shall allow a party to delete or mark an existing document from a PSS as invalid.	-	DOC
PSI-01-03-03-02	The interface shall allow a party to delete only documents they have created in a PSS.	-	DOC, SEC
PSI-01-03-03-03	The implementation shall cascade the deletion of a document to all associated attachments.	-	DOC

Table 4.12: Requirements for deleting a document.

4.1.3.4 REQ-01-03-04-View_Document

Req. ID	Description	Comment / Understanding	Category
PSI-01-03-04-01	The interface shall allow a party to retrieve a document from a PSS.	-	DOC
PSI-01-03-04-02	The interface shall allow a party to control read access to a document they have created in a PSS.	-	DOC, SEC

Table 4.13: Requirements for viewing a document.

4.1.3.5 REQ-01-03-05-View_All_Documents

Req. ID	Description	Comment / Understanding	Category
PSI-01-03-05-01	The interface shall allow a party to retrieve all documents that are applicable to them in a PSS.	-	DOC

Table 4.14: Requirements for viewing all documents.

4.1.3.6 REQ-01-03-06-Create_Attachment

Req. ID	Description	Comment / Understanding	Category
PSI-01-03-06-01	The interface shall allow a party to create and transfer an attachment to a PSS.	-	DOC
PSI-01-03-06-02	The attachment shall be added as part of an existing document.	-	DOC
PSI-01-03-06-03	The interface shall allow a party to specify the mime type of the attachment (e.g. application/pdf, application/msword, image/jpeg, etc.).	-	DOC

Table 4.15: Requirements for creating an attachment.

4.1.3.7 REQ-01-03-07-Update_Attachment

Req. ID	Description	Comment / Understanding	Category
PSI-01-03-07-01	The interface shall allow a party to update an existing attachment of a document in a PSS.	-	DOC
PSI-01-03-07-02	The interface shall allow a party to control write access to an attachment they have created in a PSS.	-	DOC, SEC

Table 4.16: Requirements for updating an attachment.

4.1.3.8 REQ-01-03-08-Remove_Attachment

Req. ID	Description	Comment / Understanding	Category
PSI-01-03-08-01	The interface shall allow a party to delete or mark an existing attachment of a document from a PSS as invalid.	-	DOC
PSI-01-03-08-02	The interface shall allow a party to delete only attachments they have created in a PSS.	-	DOC, SEC

Table 4.17: Requirements for removing an attachment.

4.1.3.9 REQ-01-03-09-View_Attachment

Req. ID	Description	Comment / Understanding	Category
PSI-01-03-09-01	The interface shall allow a party to view an existing attachment object of a document from a PSS.	-	DOC

Req. ID	Description	Comment / Understanding	Category
PSI-01-03-09-02	The interface shall allow a party to control read access to an attachment that they have created in a PSS.	-	DOC, SEC

Table 4.18: Requirements for viewing a document.

4.1.3.10 REQ-01-03-10-View_All_Attachments

Req. ID	Description	Comment / Understanding	Category
PSI-01-03-10-01	The interface shall allow a party to retrieve a list of all existing attachments of a document that they have created or are applicable to them in a PSS.	-	DOC

Table 4.19: Requirements for viewing all attachments.

4.1.3.11 REQ-01-03-11-Fetch_Attachment_Content

Req. ID	Description	Comment / Understanding	Category
PSI-01-03-11-01	The interface shall allow a party to retrieve the binary content for preview of an existing attachment of a document from a PSS.	-	DOC
PSI-01-03-11-02	The interface shall allow a party to control read access to the binary content of an attachment that they have created in a PSS.	-	DOC, SEC

Table 4.20: Requirements for viewing an attachment content.

4.1.3.12 REQ-01-03-12-Update_Attachment_Content

Req. ID	Description	Comment / Understanding	Category
PSI-01-03-12-01	The interface shall allow a party to update the binary content of an existing attachment of a document in a PSS.	-	DOC
PSI-01-03-12-02	The interface shall allow a party to control write access to the binary content of an attachment they have created in a PSS.	-	DOC, SEC

Table 4.21: Requirements for updating an attachment content.

4.2 REQ-02-Product-Publishing

4.2.1 REQ-02-01-Resource_Catalog_Management

4.2.1.1 REQ-02-01-01-Create_Resource_Specification

Req. ID	Description	Comment / Understanding	Category
PSI-02-01-01-01	The interface shall allow a party to register a resource specification to a PSS.	The provider is enabled to upload services and resources, covering their specifications, to a PSS. As the same endpoint is provided to user parties, declaration of user owned assets to the PSS is enabled, too.	POOLING
PSI-02-01-01-02	The interface shall ensure that the resource specifications are organised into a resource catalog according to resource types.	-	POOLING
PSI-02-01-01-03	The interface shall allow the specification of footprints in GeoJSON format.	-	POOLING
PSI-02-01-01-04	The implementation shall reject the specification if it does not match the schema.	-	POOLING

Table 4.22: Requirements for creating a resource specification.

4.2.1.2 REQ-02-01-02-Update_Resource_Specification

Req. ID	Description	Comment / Understanding	Category
PSI-02-01-02-01	The interface shall allow a party to update an existing resource specification in a PSS.	-	POOLING
PSI-02-01-02-02	The interface shall allow a party to control write access to a resource specification they have created in the PSS.	-	POOLING, SEC

Table 4.23: Requirements for updating a resource specification.

4.2.1.3 REQ-02-01-03-Remove_Resource_Specification

Req. ID	Description	Comment / Understanding	Category
PSI-02-01-03-01	The interface shall allow a party to delete or mark an existing resource specification from a PSS as invalid.	-	POOLING
PSI-02-01-03-02	The interface shall allow a party to delete only resource specifications they have created in the PSS.	-	POOLING, SEC

Table 4.24: Requirements for deleting a resource specification.

4.2.1.4 REQ-02-01-04-View_Resource_Specification

Req. ID	Description	Comment / Understanding	Category
PSI-02-01-04-01	The interface shall allow a party to retrieve a resource specification from a PSS.	-	POOLING

Req. ID	Description	Comment / Understanding	Category
PSI-02-01-04-02	The interface shall allow a party to control read access to a resource specification they have created in the PSS.	-	POOLING, SEC

Table 4.25: Requirements for viewing a resource specification.

4.2.1.5 REQ-02-01-05-View_All_Resource_Specifications

Req. ID	Description	Comment / Understanding	Category
PSI-02-01-05-01	The interface shall allow a party to retrieve all resource specifications that are applicable to them in a PSS.	-	POOLING
PSI-02-01-05-02	The interface shall allow a party to filter resource specifications at least by a resource type, region and frequency band (if applicable).	Allows the creation of statistics about coverage in different geographical areas.	POOLING

Table 4.26: Requirements for viewing all resource specifications.

4.2.2 REQ-02-02-Service_Catalog_Management

4.2.2.1 REQ-02-02-01-Create_Service_Specification

Req. ID	Description	Comment / Understanding	Category
PSI-02-02-01-01	The interface shall allow a party to register a service specification to a PSS.	-	POOLING
PSI-02-02-01-02	The interface shall ensure that the service specifications are organised into a service catalog according to service types.	-	POOLING

Req. ID	Description	Comment / Understanding	Category
PSI-02-02-01-03	The interface shall allow the specification of service areas in GeoJSON format.	-	POOLING
PSI-02-02-01-04	The implementation shall reject the specification if it does not match the schema.	-	POOLING

Table 4.27: Requirements for creating service specification.

4.2.2.2 REQ-02-02-02-Update_Service_Specification

Req. ID	Description	Comment / Understanding	Category
PSI-02-02-02-01	The interface shall allow a party to update an existing service specification in a PSS.	-	POOLING
PSI-02-02-02-02	The interface shall allow a party to control write access to the service specifications they have created in the PSS.	-	POOLING, SEC

Table 4.28: Requirements for updating service specification.

4.2.2.3 REQ-02-02-03-Remove_Service_Specification

Req. ID	Description	Comment / Understanding	Category
PSI-02-02-03-01	The interface shall allow a party to delete or mark an existing service specification from a PSS as invalid.	-	POOLING
PSI-02-02-03-02	The interface shall allow a party to delete only service specifications they have created in the PSS.	-	POOLING, SEC

Table 4.29: Requirements for deleting service specification.

4.2.2.4 REQ-02-02-04-View_Service_Specification

Req. ID	Description	Comment / Understanding	Category
PSI-02-02-04-01	The interface shall allow a party to retrieve a service specification from a PSS.	-	POOLING
PSI-02-02-04-02	The interface shall allow a party to control read access to a resource specification they have created in the PSS.	-	POOLING, SEC

Table 4.30: Requirements for viewing a service specification.

4.2.2.5 REQ-02-02-05-View_All_Service_Specifications

Req. ID	Description	Comment / Understanding	Category
PSI-02-02-05-01	The interface shall allow a party to retrieve all service specifications that are applicable to them in a PSS.	-	POOLING
PSI-02-02-05-02	The interface shall allow a party to filter service specifications at least by a service type, region and frequency band (if applicable).	Allows the creation of statistics about coverage in different geographical areas.	POOLING

Table 4.31: Requirements for viewing all service specifications.

4.2.3 REQ-02-03-Product_Catalog_Management

4.2.3.1 REQ-02-03-01-Create_Product_Specification

Req. ID	Description	Comment / Understanding	Category
PSI-02-03-01-01	The interface shall allow a party to register a product specification to a PSS.	-	POOLING

Req. ID	Description	Comment / Understanding	Category
PSI-02-03-01-02	The interface shall allow to describe the competitive advantages of a product.	-	POOLING
PSI-02-03-01-03	The implementation shall reject the specification if it does not match the schema.	-	POOLING

Table 4.32: Requirements for creating a product specification.

4.2.3.2 REQ-02-03-02-Update_Product_Specification

Req. ID	Description	Comment / Understanding	Category
PSI-02-03-02-01	The interface shall allow a party to update an existing product specification in a PSS.	-	POOLING
PSI-02-03-02-02	The interface shall allow a party to control write access to a product specification they have created in the PSS.	-	POOLING, SEC

Table 4.33: Requirements for updating a product specification.

4.2.3.3 REQ-02-03-03-Remove_Product_Specification

Req. ID	Description	Comment / Understanding	Category
PSI-02-03-03-01	The interface shall allow a party to delete or mark an existing product specification from a PSS as invalid.	-	POOLING
PSI-02-03-03-02	The interface shall allow a party to delete only a product specification they have created in the PSS.	-	POOLING, SEC

Table 4.34: Requirements for removing a product specification.

4.2.3.4 REQ-02-03-04-View_Product_Specification

Req. ID	Description	Comment / Understanding	Category
PSI-02-03-04-01	The interface shall allow a party to retrieve a product specification from a PSS.	-	POOLING
PSI-02-03-04-02	The interface shall allow a party to control read access to the product specifications they have created in the PSS.	-	POOLING, SEC
PSI-02-03-04-03	The implementation shall calculate the accessibility of a product specification based on the required resources.	-	POOLING

Table 4.35: Requirements for viewing a product specification.

4.2.3.5 REQ-02-03-05-View_All_Product_Specifications

Req. ID	Description	Comment / Understanding	Category
PSI-02-03-05-01	The interface shall allow a party to retrieve all product specifications that are applicable to them in a PSS.	-	POOLING

Table 4.36: Requirements for viewing all product specifications.

4.2.4 REQ-02-04-Product_Offering_Management

4.2.4.1 REQ-02-04-01-Create_Product_Offering

Req. ID	Description	Comment / Understanding	Category
PSI-02-04-01-01	The interface shall allow a party to register a product offering with a price value to a PSS.	-	POOLING

Req. ID	Description	Comment / Understanding	Category
PSI-02-04-01-02	The interface shall allow a party to specify the access probability of a product offering.	-	POOLING

Table 4.37: Requirements for creating a product offering.

4.2.4.2 REQ-02-04-02-Update_Product_Offering

Req. ID	Description	Comment / Understanding	Category
PSI-02-04-02-01	The interface shall allow a party to update an existing product offering in a PSS.	-	POOLING
PSI-02-04-02-02	The interface shall allow a party to control write access to a product offering they have created in the PSS.	-	POOLING, SEC
PSI-02-04-02-03	The interface shall allow a party to update the access probability of a product offering.	-	POOLING
PSI-02-04-02-04	The implementation may allow the governance to update the access probability based on collected statistics.	-	POOLING

Table 4.38: Requirements for updating a product offering.

4.2.4.3 REQ-02-04-03-Remove_Product_Offering

Req. ID	Description	Comment / Understanding	Category
PSI-02-04-03-01	The interface shall allow a party to delete or mark an existing product offering from a PSS as invalid.	-	POOLING

Req. ID	Description	Comment / Understanding	Category
PSI-02-04-03-02	The interface shall allow a party to delete only product offerings they have created themselves in the PSS.	-	POOLING, SEC

Table 4.39: Requirements for deleting a product offering.

4.2.4.4 REQ-02-04-04-View_Product_Offering

Req. ID	Description	Comment / Understanding	Category
PSI-02-04-04-01	The interface shall allow a party to retrieve a product offering from a PSS.	-	POOLING
PSI-02-04-04-02	The interface shall allow a party to control read access to the product offering they have created in the PSS.	-	POOLING, SEC

Table 4.40: Requirements for viewing a product offering.

4.2.4.5 REQ-02-04-05-View_All_Product_Offerings

Req. ID	Description	Comment / Understanding	Category
PSI-02-04-05-01	The interface shall allow a party to retrieve all product offerings that are applicable to them in a PSS.	This allows to monitor active missions, reservations and orders, if a monitoring system is included in a PSS.	POOLING

Table 4.41: Requirements for viewing all product offerings.

4.3 REQ-03-Product_Inquiry_And_Ordering

4.3.1 REQ-03-01-Customer_Inquiry_Management

4.3.1.1 REQ-03-01-01-Create_Customer_Inquiry

Req. ID	Description	Comment / Understanding	Category
PSI-03-01-01-01	The interface shall allow a customer to create an inquiry in a PSS.	-	INQUIRY
PSI-03-01-01-02	The implementation shall publish the creation of inquiries to all participating providers using the Event API.	-	POOLING
PSI-03-01-01-03	The implementation should filter the list of participating providers sent to them.	While the list in the PSS contains all providers, the message sent to provider A does only contain their entry, not the one of provider B and C. This has to be merged correctly when updates are received.	POOLING
PSI-03-01-01-04	The interface shall allow a PSS to send a customer profile to the provider.	This allows the forwarding of selected fields (e.g. allowed security grade, service grade determined by security and availability) without exposing the whole profile, as well as other characteristics like the customer priority.	INQUIRY
PSI-03-01-01-05	The interface shall indicate the maximum response time for an inquiry.	-	INQUIRY
PSI-03-01-01-06	The interface may indicate the minimum and/or average response time for an inquiry.	-	INQUIRY
PSI-03-01-01-07	The interface shall allow the definition of different features (on service layer L0/L1/L2/L3) in an inquiry.	-	INQUIRY
PSI-03-01-01-08	The interface shall allow the definition of geographies for every applicable feature in an inquiry.	-	INQUIRY
PSI-03-01-01-09	The interface shall allow the definition of the desired frequency band for every applicable feature in an inquiry.	-	INQUIRY

Req. ID	Description	Comment / Understanding	Category
PSI-03-01-01-10	The interface shall allow the definition of forward/return information rates (committed and peak) for every applicable feature in an inquiry.	-	INQUIRY
PSI-03-01-01-11	The interface shall allow the definition of the service period for every requested feature in an inquiry.	-	INQUIRY
PSI-03-01-01-12	The interface shall allow a partial match on single feature characteristics (best-effort option).	-	INQUIRY

Table 4.42: Requirements for creating a customer inquiry.

4.3.1.2 REQ-03-01-02-View_Customer_Inquiry

Req. ID	Description	Comment / Understanding	Category
PSI-03-01-02-01	The interface shall allow a party to retrieve a customer inquiry from a PSS.	-	INQUIRY
PSI-03-01-02-02	The interface shall allow a customer and target provider(s) to control read access to an inquiry that is applicable to them in the PSS.	-	INQUIRY, SEC
PSI-03-01-02-03	The interface shall indicate the processing status of an inquiry.	-	INQUIRY
PSI-03-01-02-04	The interface shall allow providers to add general notes to their inquiry response.	-	INQUIRY

Table 4.43: Requirements for viewing a customer inquiry.

4.3.1.3 REQ-03-01-03-View_Inquiry_Results

Req. ID	Description	Comment / Understanding	Category
PSI-03-01-03-01	The interface shall allow a customer to view the product offerings matching their inquiry.	-	INQUIRY
PSI-03-01-03-02	The interface shall allow a customer to view the product specifications matching their inquiry.	-	INQUIRY
PSI-03-01-03-03	The interface shall allow a customer to view the service specifications matching their inquiry.	-	INQUIRY
PSI-03-01-03-04	The interface shall allow a customer to view the resource specifications matching their inquiry.	-	INQUIRY
PSI-03-01-03-05	If no results are available, the interface shall indicate the reason using specified HTTP status codes.	The reason could be that the inquiry was not yet processed (204, no content) or that no matches were found (200 with empty array)	INQUIRY
PSI-03-01-03-06	The interface may block up to 20 seconds if results are calculated by an algorithm.	Used instead of returning the 204 code to avoid busy waiting.	INQUIRY
PSI-03-01-03-07	The interface shall return relevant security and availability information for each inquiry results.	-	INQUIRY
PSI-03-01-03-08	The interface shall allow the provider to add notes to inquiry results.	-	INQUIRY

Table 4.44: Requirements for viewing inquiry results.

4.3.1.4 REQ-03-01-04-Update_Customer_Inquiry

Req. ID	Description	Comment / Understanding	Category
PSI-03-01-04-01	The interface shall allow a customer to update the list of inquired providers of an existing customer inquiry in a PSS.	-	INQUIRY
PSI-03-01-04-02	The implementation shall publish the inquiries to all new participating providers using the Event API.	-	POOLING
PSI-03-01-04-03	The implementation shall publish cancellations of inquiries for the case that previously participating providers are removed from the inquiry using the Event API.	-	POOLING
PSI-03-01-04-04	The implementation should filter the list of participating providers sent to them.	While the list in the PSS contains all providers, the message sent to provider A does only contain their entry, not the one of provider B and C. This has to be merged correctly when updates are received.	POOLING
PSI-03-01-04-05	The interface shall reject updates of already completed or cancelled customer inquiries in a PSS.	-	INQUIRY, SEC

Table 4.45: Requirements for updating a customer inquiry.

4.3.1.5 REQ-03-01-05-Cancel_Customer_Inquiry

Req. ID	Description	Comment / Understanding	Category
PSI-03-01-05-01	The interface shall allow a customer to cancel an existing customer inquiry in a PSS.	-	INQUIRY

Table 4.46: Requirements for removing a customer inquiry.

4.3.2 REQ-03-02-Product_Order_Management

4.3.2.1 REQ-03-02-01-Create_Product_Order

Req. ID	Description	Comment / Understanding	Category
PSI-03-02-01-01	The interface shall allow a user or a user organisation to create a product order to a PSS.	-	ORDER
PSI-03-02-01-02	The interface shall allow a PSS to notify a provider that an order has been created.	-	ORDER
PSI-03-02-01-03	The implementation shall publish the creation of orders to other participating parties using the Event API.	-	ORDER
PSI-03-02-01-04	The interface shall allow user organisations to submit orders on behalf of their user community.	-	ORDER

Table 4.47: Requirements for creating product order.

4.3.2.2 REQ-03-02-02-Update_Product_Order

Req. ID	Description	Comment / Understanding	Category
PSI-03-02-02-01	The interface shall allow a user and a provider to update an existing order in a PSS.	-	ORDER
PSI-03-02-02-02	The interface shall allow a PSS to notify a provider that an order has been updated.	-	ORDER
PSI-03-02-02-03	The interface shall allow a provider to notify a PSS about an order state change.	-	ORDER

Req. ID	Description	Comment / Understanding	Category
PSI-03-02-02-04	The interface shall allow a user and a provider to control write access to the orders they have created in the PSS.	-	ORDER, SEC

Table 4.48: Requirements for updating product order.

4.3.2.3 REQ-03-02-03-View_Product_Order

Req. ID	Description	Comment / Understanding	Category
PSI-03-02-03-01	The interface shall allow a user and a provider to retrieve a product order from a PSS.	This allows to monitor active missions, reservations and orders, if a monitoring system is included in a PSS.	ORDER
PSI-03-02-03-02	The interface shall allow a user and a provider to control read access to a product order that is applicable to them in the PSS.	-	ORDER, SEC

Table 4.49: Requirements for viewing a product order

4.3.2.4 REQ-03-02-04-View_All_Product_Orders

Req. ID	Description	Comment / Understanding	Category
PSI-03-02-04-01	The interface shall allow a user and a provider to retrieve all product orders that are applicable to them in a PSS.	This allows to monitor active missions, reservations and orders, if a monitoring system is included in a PSS.	ORDER

Table 4.50: Requirements for viewing all product orders

4.3.3 REQ-03-03-Customer_Bill_Management

4.3.3.1 REQ-03-03-01-Create_Customer_Bill

Req. ID	Description	Comment / Understanding	Category
PSI-03-03-01-01	The interface shall allow a provider to create a customer bill to a PSS.	-	ORDER
PSI-03-03-01-02	The interface shall allow a provider to specify a debtor other than the product user.	-	ORDER
PSI-03-03-01-03	The interface shall allow a provider to specify multiple related parties for a bill.	-	ORDER
PSI-03-03-01-04	The implementation may intercept and transform a customer bill before delivering it to the customer.	-	ORDER

Table 4.51: Requirements for creating customer bill.

4.3.3.2 REQ-03-03-02-Update_Customer_Bill

Req. ID	Description	Comment / Understanding	Category
PSI-03-03-02-01	The interface shall allow a provider to change only the state of a customer bill, for example, to inform the PSS that the bill has been paid.	-	ORDER
PSI-03-03-02-02	The interface shall allow a provider to control write access to a customer bill they have created in the PSS.	-	ORDER, SEC

Table 4.52: Requirements for updating customer bill.

4.3.3.3 REQ-03-03-03-View_Customer_Bill

Req. ID	Description	Comment / Understanding	Category
PSI-03-03-01	The interface shall allow a user or a provider to retrieve a customer bill from a PSS.	-	ORDER
PSI-03-03-02	The interface shall allow a provider to control read access to a customer bill that is created by them in the PSS.	-	ORDER, SEC
PSI-03-03-03	The interface should return a bill document as attachment(s).	-	ORDER
PSI-03-03-04	The interface should return the state of a customer bill (e.g. 'sent', 'settled', 'partiallyPaid', etc.).	-	ORDER
PSI-03-03-05	The interface may return the payment method of a customer bill.	-	ORDER
PSI-03-03-06	The interface may return the billing account of a customer bill.	-	ORDER
PSI-03-03-07	The interface may return a list of applied payments of a customer bill.	-	ORDER

Table 4.53: Requirements for viewing a customer bill.

4.3.3.4 REQ-03-03-04-View_All_Customer_Bills

Req. ID	Description	Comment / Understanding	Category
PSI-03-03-04-01	The interface shall allow a user or a provider to retrieve all customer bills that are applicable to them in a PSS.	-	ORDER

Req. ID	Description	Comment / Understanding	Category
PSI-03-03-04-02	The interface shall allow a user or a provider to filter customer bills at least by bill number and state.	-	ORDER

Table 4.54: Requirements for viewing all customer bills.

4.3.3.5 REQ-03-03-05-Withdraw_Customer_Bill

Req. ID	Description	Comment / Understanding	Category
PSI-03-03-05-01	The interface shall allow a provider to withdraw an existing customer bill in a PSS.	-	ORDER

Table 4.55: Requirements for withdrawal a customer bill.

4.4 REQ-04-Template_Management

4.4.1 REQ-04-01-Resource_Template_Management

Req. ID	Description	Comment / Understanding	Category
PSI-04-01-00-01	The interface shall ensure that the resource templates are provider-agnostic.	-	POOLING
PSI-04-01-00-02	The interface shall allow only the governance to have write access to resource templates in the PSS.	-	POOLING, SEC

Table 4.56: Requirements for resource templates.

4.4.1.1 REQ-04-01-01-Create_Resource_Template

Req. ID	Description	Comment / Understanding	Category
PSI-04-01-01-01	The interface shall allow the governance to register a resource template (with static and dynamic fields) to a PSS, containing all the necessary information that would allow a party to create a resource specification.	-	POOLING
PSI-04-01-01-02	The interface shall ensure that the resource templates are organised into a resource template catalog according to resource types.	-	POOLING

Table 4.57: Requirements for creating a resource template.

4.4.1.2 REQ-04-01-02-Update_Resource_Template

Req. ID	Description	Comment / Understanding	Category
PSI-04-01-02-01	The interface shall allow the governance to update an existing resource template in a PSS.	-	POOLING
PSI-04-01-02-02	The interface shall allow only the governance to have write access to resource templates in the PSS.	-	POOLING, SEC

Table 4.58: Requirements for updating a resource template.

4.4.1.3 REQ-04-01-03-Remove_Resource_Template

Req. ID	Description	Comment / Understanding	Category
PSI-04-01-03-01	The interface shall allow the governance to delete or mark an existing resource template from a PSS as invalid.	-	POOLING
PSI-04-01-03-02	The interface shall allow only the governance to delete resource templates in the PSS.	-	POOLING, SEC

Table 4.59: Requirements for deleting a resource template.

4.4.1.4 REQ-04-01-04-View_Resource_Template

Req. ID	Description	Comment / Understanding	Category
PSI-04-01-04-01	The interface shall allow a party to request and retrieve a resource template from a PSS for a particular resource specification.	-	POOLING
PSI-04-01-04-02	The interface shall allow the governance to control read access to a resource template they have created in the PSS.	-	POOLING, SEC

Table 4.60: Requirements for viewing a resource template.

4.4.1.5 REQ-04-01-05-View_All_Resource_Templates

Req. ID	Description	Comment / Understanding	Category
PSI-04-01-05-01	The interface shall allow parties to filter from available resource templates at least by name and resource type.	-	POOLING

Table 4.61: Requirements for viewing resource templates.

4.4.2 REQ-04-02-Service_Template_Management

Req. ID	Description	Comment / Understanding	Category
PSI-04-02-00-01	The interface shall ensure that the service templates are provider-agnostic.	-	POOLING
PSI-04-02-00-02	The interface shall allow only the governance to have write access to service templates in the PSS.	-	POOLING, SEC

Table 4.62: Requirements for service templates.

4.4.2.1 REQ-04-02-01-Create_Service_Template

Req. ID	Description	Comment / Understanding	Category
PSI-04-02-01-01	The interface shall allow the governance to register a service template (with static and dynamic fields) to a PSS, containing all the necessary information that would allow a party to create a service specification.	-	POOLING
PSI-04-02-01-02	The interface shall ensure that the service templates are organised into a service template catalog according to service types.	-	POOLING

Table 4.63: Requirements for creating a service template.

4.4.2.2 REQ-04-02-02-Update_Service_Template

Req. ID	Description	Comment / Understanding	Category
PSI-04-02-02-01	The interface shall allow the governance to update an existing service template in a PSS.	-	POOLING

Req. ID	Description	Comment / Understanding	Category
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Table 4.64: Requirements for updating a service template.

4.4.2.3 REQ-04-02-03-Remove_Service_Template

Req. ID	Description	Comment / Understanding	Category
PSI-04-02-03-01	The interface shall allow the governance to delete or mark an existing service template from a PSS as invalid.	-	POOLING
PSI-04-02-03-02	The interface shall allow only the governance to delete service templates in the PSS.	-	POOLING, SEC

Table 4.65: Requirements for deleting a service template.

4.4.2.4 REQ-04-02-04-View_Service_Template

Req. ID	Description	Comment / Understanding	Category
PSI-04-02-04-01	The interface shall allow a party to request and retrieve a service template from a PSS for a particular service specification.	-	POOLING
PSI-04-02-04-02	The interface shall allow the governance to control read access to a service template they have created in the PSS.	-	POOLING, SEC

Table 4.66: Requirements for viewing a service template.

4.4.2.5 REQ-04-02-05-View_All_Service_Templates

Req. ID	Description	Comment / Understanding	Category
PSI-04-02-05-01	The interface shall allow parties to filter from available service templates at least by name and service type.	-	POOLING

Table 4.67: Requirements for viewing service templates.

4.4.3 REQ-04-03-Product_Template_Management

Req. ID	Description	Comment / Understanding	Category
PSI-04-03-00-01	The interface shall ensure that the product templates are provider-agnostic.	-	POOLING
PSI-04-03-00-02	The interface shall allow only the governance to have write access to product templates in the PSS.	-	POOLING, SEC

Table 4.68: Requirements for product templates.

4.4.3.1 REQ-04-03-01-Create_Product_Template

Req. ID	Description	Comment / Understanding	Category
PSI-04-03-01-01	The interface shall allow the governance to register a product template (with static and dynamic fields) to a PSS, containing all the necessary information that would allow a party to create a product specification.	-	POOLING
PSI-04-03-01-02	The interface shall ensure that the product templates are organised into a product template catalog according to product types.	-	POOLING

Req. ID	Description	Comment / Understanding	Category
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Table 4.69: Requirements for creating a product template.

4.4.3.2 REQ-04-03-02-Update_Product_Template

Req. ID	Description	Comment / Understanding	Category
PSI-04-03-02-01	The interface shall allow the governance to update an existing product template in a PSS.	-	POOLING

Table 4.70: Requirements for updating a product template.

4.4.3.3 REQ-04-03-03-Remove_Product_Template

Req. ID	Description	Comment / Understanding	Category
PSI-04-03-03-01	The interface shall allow the governance to delete or mark an existing product template from a PSS as invalid.	-	POOLING
PSI-04-03-03-02	The interface shall allow only the governance to delete product templates in the PSS.	-	POOLING, SEC

Table 4.71: Requirements for deleting a product template.

4.4.3.4 REQ-04-03-04-View_Product_Template

Req. ID	Description	Comment / Understanding	Category
PSI-04-03-04-01	The interface shall allow a party to request and retrieve a product template from a PSS for a particular product specification.	-	POOLING

Req. ID	Description	Comment / Understanding	Category
PSI-04-03-04-03	The interface shall allow the governance to control read access to a product template they have created in the PSS.	-	POOLING, SEC

Table 4.72: Requirements for viewing a product template.

4.4.3.5 REQ-04-03-05-View_All_Product_Templates

Req. ID	Description	Comment / Understanding	Category
PSI-04-03-05-01	The interface shall allow parties to filter from available product templates at least by name and product type.	-	POOLING

Table 4.73: Requirements for viewing product templates.

4.5 REQ-05-Inventory_Management

4.5.1 REQ-05-01-Resource_Inventory_Management

Req. ID	Description	Comment / Understanding	Category
PSI-05-01-00-01	The implementation shall track the status of a resource.	The status of a resource is to be understood as parameters that can be translated to a lifecycle status.	POOLING

Table 4.74: Requirements for resource inventory.

4.5.1.1 REQ-05-01-01-Create_Resource

Req. ID	Description	Comment / Understanding	Category
PSI-05-01-01-01	The interface shall allow a party to register a resource to a PSS.	-	POOLING
PSI-05-01-01-02	The interface shall allow committing resources to the PSS for a period of time.	-	POOLING

Req. ID	Description	Comment / Understanding	Category
PSI-05-01-01-03	The interface shall allow resources to be assigned to customers for a period of time.	-	POOLING
PSI-05-01-01-04	The interface shall allow resources to be created as part of a product order.	-	POOLING, ORDER
PSI-05-01-01-05	The interface shall allow resources to be divided into sub-resources.	-	POOLING
PSI-05-01-01-06	The interface shall allow reserving resources before booking them.	-	POOLING

Table 4.75: Requirements for creating a resource.

4.5.1.2 REQ-05-01-02-Update_Resource

Req. ID	Description	Comment / Understanding	Category
PSI-05-01-02-01	The interface shall allow a party to update an existing resource in a PSS.	-	POOLING

Table 4.76: Requirements for updating a resource.

4.5.1.3 REQ-05-01-03-Remove_Resource

Req. ID	Description	Comment / Understanding	Category
PSI-05-01-03-01	The interface shall allow a party to delete or mark an existing resource in a PSS as invalid.	-	POOLING
PSI-05-01-03-02	The interface shall allow a party to delete only resources they have created in the PSS.	-	POOLING, SEC

Req. ID	Description	Comment / Understanding	Category
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Table 4.77: Requirements for deleting a resource.

4.5.1.4 REQ-05-01-04-View_Resource

Req. ID	Description	Comment / Understanding	Category
PSI-05-01-04-01	The interface shall allow a party to retrieve a resource from a PSS.	-	POOLING
PSI-05-01-04-02	The interface shall allow a party to control read access to a resource they have created in the PSS.	-	POOLING, SEC

Table 4.78: Requirements for viewing a resource.

4.5.1.5 REQ-05-01-05-View_All_Resources

Req. ID	Description	Comment / Understanding	Category
PSI-05-01-05-01	The interface shall allow a party to retrieve all resources that are applicable to them in a PSS.	This represents a whitelisting of applicable resources and thus resource providers. The representation of such whitelisting is part of the PSS's implementation.	POOLING
PSI-05-01-05-02	The interface shall allow a party to filter resources at least by a resource type, region and frequency band (if applicable).	Allows the creation of statistics about usage in different geographical areas.	POOLING

Table 4.79: Requirements for viewing all resources.

4.5.2 REQ-05-02-Service_Inventory_Management

Req. ID	Description	Comment / Understanding	Category
PSI-05-02-00-01	The implementation shall track the status of a service.	-	POOLING

Table 4.80: Requirements for service inventory.

4.5.2.1 REQ-05-02-01-Create_Service

Req. ID	Description	Comment / Understanding	Category
PSI-05-02-01-01	The interface shall allow a party to register a service to a PSS.	-	POOLING
PSI-05-02-01-02	The interface shall allow services to be assigned to customers for a period of time.	-	POOLING

Table 4.81: Requirements for creating a service.

4.5.2.2 REQ-05-02-02-Update_Service

Req. ID	Description	Comment / Understanding	Category
PSI-05-02-02-01	The interface shall allow a party to update an existing service in a PSS.	-	POOLING

Table 4.82: Requirements for updating a service.

4.5.2.3 REQ-05-02-03-Remove_Service

Req. ID	Description	Comment / Understanding	Category
PSI-05-02-03-01	The interface shall allow a party to delete or mark an existing service in a PSS as invalid.	-	POOLING
PSI-05-02-03-02	The interface shall allow a party to delete only services they have created in the PSS.	-	POOLING, SEC

Table 4.83: Requirements for deleting a service.

4.5.2.4 REQ-05-02-04-View_Service

Req. ID	Description	Comment / Understanding	Category
PSI-05-02-04-01	The interface shall allow a party to retrieve a service from a PSS.	-	POOLING
PSI-05-02-04-02	The interface shall allow a party to control read access to a service they have created in the PSS.	-	POOLING, SEC

Table 4.84: Requirements for viewing a service.

4.5.2.5 REQ-05-02-05-View_All_Services

Req. ID	Description	Comment / Understanding	Category
PSI-05-02-05-01	The interface shall allow a party to retrieve all services that are applicable to them in a PSS.	-	POOLING
PSI-05-02-05-02	The interface shall allow a party to filter services at least by a service type, region and frequency band (if applicable).	Allows the creation of statistics about usage in different geographical areas.	POOLING

Table 4.85: Requirements for viewing all services.

4.5.3 REQ-05-03-Product_Inventory_Management

Req. ID	Description	Comment / Understanding	Category
PSI-05-03-00-01	The implementation shall track the status of a product.	-	POOLING
PSI-05-03-00-02	The implementation shall manage the priority of a product.	-	POOLING

Table 4.86: Requirements for product inventory.

4.5.3.1 REQ-05-03-01-Create_Product

Req. ID	Description	Comment / Understanding	Category
PSI-05-03-01-01	The interface shall allow a party to register a product to a PSS.	-	POOLING
PSI-05-03-01-02	The interface shall allow products to be assigned to customers for a period of time.	-	POOLING

Table 4.87: Requirements for creating a product.

4.5.3.2 REQ-05-03-02-Update_Product

Req. ID	Description	Comment / Understanding	Category
PSI-05-03-02-01	The interface shall allow a party to update an existing product in a PSS.	-	POOLING

Table 4.88: Requirements for updating a product.

4.5.3.3 REQ-05-03-03-Remove_Product

Req. ID	Description	Comment / Understanding	Category
PSI-05-03-03-01	The interface shall allow a party to delete or mark an existing product in a PSS as invalid.	-	POOLING
PSI-05-03-03-02	The interface shall allow a party to delete only products they have created in the PSS.	-	POOLING, SEC

Table 4.89: Requirements for deleting a product.

4.5.3.4 REQ-05-03-04-View_Product

Req. ID	Description	Comment / Understanding	Category
PSI-05-03-04-01	The interface shall allow a party to retrieve a product from a PSS.	-	POOLING

Req. ID	Description	Comment / Understanding	Category
PSI-05-03-04-02	The interface shall allow a party to control read access to a product they have created in the PSS.	-	POOLING, SEC

Table 4.90: Requirements for viewing a product.

4.5.3.5 REQ-05-03-05-View_All_Products

Req. ID	Description	Comment / Understanding	Category
PSI-05-03-05-01	The interface shall allow a party to retrieve all products that are applicable to them in a PSS.	-	POOLING
PSI-05-03-05-02	The interface shall allow a party to filter products at least by a product type.	-	POOLING

Table 4.91: Requirements for viewing all products.

4.5.4 REQ-05-04-Stock_Management

4.5.4.1 REQ-05-04-01-Check_Product_Stock

Req. ID	Description	Comment / Understanding	Category
PSI-05-04-01-01	The interface shall allow the PSS to check the product stock of a provider.	-	ORDER
PSI-05-04-01-02	The interface shall allow the provider system to respond with alternative products.	-	ORDER
PSI-05-04-01-03	The implementation shall signal immediate or delayed availability of check stock results via HTTP status codes.	-	ORDER

Table 4.92: Requirements for checking the product stock.

4.6 REQ-06-Quality_Management

4.6.1 REQ-06-01-Service_Level_Objective_Management

4.6.1.1 REQ-06-01-01-Create_Service_Level_Objective

Req. ID	Description	Comment / Understanding	Category
PSI-06-01-01-01	The interface shall allow a party to register a service level objective (SLO) to a PSS.	“Ordered services” refers to SatCom services as offered by resource providers. Those services may include constraints given by resource providers for which the interface is not to be hold responsible.	MONITOR

Table 4.93: Requirements for creating a service level objective.

4.6.1.2 REQ-06-01-02-Update_Service_Level_Objective

Req. ID	Description	Comment / Understanding	Category
PSI-06-01-02-01	The interface shall allow a party to update a service level objective (SLO) in a PSS.	“Ordered services” refers to SatCom services as offered by resource providers. Those services may include constraints given by resource providers for which the interface is not to be hold responsible.	MONITOR

Table 4.94: Requirements for updating a service level objective.

4.6.1.3 REQ-06-01-03-Remove_Service_Level_Objective

Req. ID	Description	Comment / Understanding	Category
PSI-06-01-03-01	The interface shall allow a party to delete or mark an existing service level objective (SLO) in a PSS as invalid.	-	MONITOR
PSI-06-01-03-02	The interface shall allow a party to delete only service level objectives they have created in the PSS.	-	MONITOR

Table 4.95: Requirements for removing a service level objective.

4.6.1.4 REQ-06-01-04-View_Service_Level_Objective

Req. ID	Description	Comment / Understanding	Category
PSI-06-01-04-01	The interface shall allow a party to retrieve a service level objective from a PSS.	-	MONITOR
PSI-06-01-04-02	The interface shall allow a party to control read access to a service level objective they have created in the PSS.	-	MONITOR, SEC

Table 4.96: Requirements for viewing a service level objective.

4.6.1.5 REQ-06-01-05-View_All_Service_Level_Objective

Req. ID	Description	Comment / Understanding	Category
PSI-06-01-05-01	The interface shall allow a party to retrieve all service level objectives that are applicable to them in a PSS.	-	MONITOR
PSI-06-01-05-02	The interface shall allow a party to filter services level objective at least by a service references.	-	MONITOR

Table 4.97: Requirements for viewing all service level objectives.

4.6.2 REQ-06-02-Service_Level_Specification_Management

4.6.2.1 REQ-06-02-01-Create_Service_Level_Specification

Req. ID	Description	Comment / Understanding	Category
PSI-06-02-01-01	The interface shall allow a party to register a service level specification (SLS) to a PSS.	“Ordered services” refers to SatCom services as offered by resource providers. Those services may include constraints given by resource providers for which the interface is not to be hold responsible.	MONITOR

Table 4.98: Requirements for creating a service level specification.

4.6.2.2 REQ-06-02-02-Update_Service_Level_Specification

Req. ID	Description	Comment / Understanding	Category
PSI-06-02-02-01	The interface shall allow a party to update a service level specification (SLS) in a PSS.	“Ordered services” refers to SatCom services as offered by resource providers. Those services may include constraints given by resource providers for which the interface is not to be held responsible.	MONITOR

Table 4.99: Requirements for updating a service level specification.

4.6.2.3 REQ-06-02-03-Remove_Service_Level_Specification

Req. ID	Description	Comment / Understanding	Category
PSI-06-02-03-01	The interface shall allow a party to delete or mark an existing service level specification (SLS) in a PSS as invalid.	-	MONITOR
PSI-06-02-03-02	The interface shall allow a party to delete only service level specification they have created in the PSS.	-	MONITOR

Table 4.100: Requirements for removing a service level specification.

4.6.2.4 REQ-06-02-04-View_Service_Level_Specification

Req. ID	Description	Comment / Understanding	Category
PSI-06-02-04-01	The interface shall allow a party to retrieve a service level specification from a PSS.	-	MONITOR
PSI-06-02-04-02	The interface shall allow a party to control read access to a service level specification they have created in the PSS.	-	MONITOR, SEC

Table 4.101: Requirements for viewing a service level specification.

4.6.2.5 REQ-06-02-05-View_All_Service_Level_Specification

Req. ID	Description	Comment / Understanding	Category
PSI-06-02-05-01	The interface shall allow a party to retrieve all service level specification that are applicable to them in a PSS.	-	MONITOR

Table 4.102: Requirements for viewing all service level specification.

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