



openFinance API Framework
Operational Rules for Extended Services
(Standalone) Document Services

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1 Introduction

1.1 From Core XS2A Interface to openFinance API

With [PSD2] the European Union has published a directive on payment services in the internal market. Among others [PSD2] contains regulations on services to be operated by so called Third Party Payment Service Providers (TPP) on behalf of a Payment Service User (PSU). These services are

- Payment Initiation Service (PIS) to be operated by a Payment Initiation Service Provider (PISP) TPP as defined by article 66 of [PSD2],
- Account Information Service (AIS) to be operated by an Account Information Service Provider (AISP) TPP as defined by article 67 of [PSD2], and
- Confirmation on the Availability of Funds Service (FCS) to be used by a Payment Instrument Issuing Service Provider (PIISP) TPP as defined by article 65 of [PSD2].

To implement these services (subject to PSU consent) a TPP needs to access the account of the PSU. The account is managed by another PSP called the Account Servicing Payment Service Provider (ASPSP). To support the TPP in accessing the accounts managed by an ASPSP, each ASPSP has to provide an "access to account interface" (XS2A interface). Such an interface has been defined in the Berlin Group NextGenPSD2 XS2A Framework.

This XS2A Framework will now be extended to premium services. This interface is addressed in the following as **openFinance API**. This openFinance API differs from the XS2A interface in several dimensions:

- The extended services might not rely anymore solely on PSD2.
- Other important regulatory frameworks which apply are e.g. GDPR.
- The openFinance API can address different types of **API Clients** as access clients, e.g. TPPs regulated by an NCA according to PSD2, or corporates not regulated by an NCA.
- The extended services might require contracts between the access client and the ASPSP.
- While the client identification at the openFinance API can still be based on eIDAS certificates, they do not need to be necessarily PSD2 compliant eIDAS certificates.
- The extended services might require e.g. the direct involvement of the access client's bank for KYC processes.

Note: The notions of API Client and ASPSP are used because of the technical standardisation perspective of the openFinance API. These terms are analogous to "asset broker" and "asset holder" resp. in the work of the ERPB on a SEPA API access scheme.

Note: In implementations, the API services of several ASPSPs might be provided on an aggregation platform. Such platforms will be addressed in the openFinance API Framework as "API provider".

The following account access methods are covered by this framework:

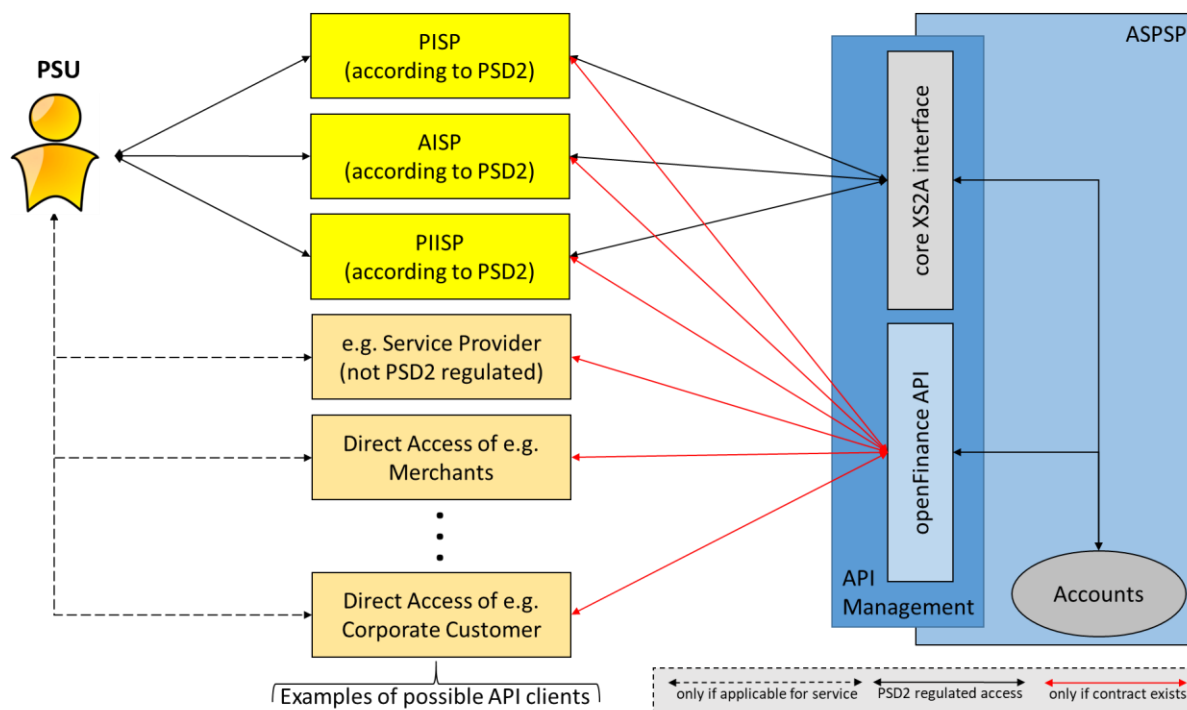


Figure 1: Core XS2A interface and openFinance API

The ASPSP may restrict the access to the services offered at its openFinance API and require dedicated onboarding. The requirements for the rights to access to services offered at the openFinance API are out of scope of this document. These requirements will be described in a dedicated operational rules document [oFA-OR-ADM].

1.2 Document Services

An ASPSP may support document services at his openFinance API. Using these document services an API Client may transmit an electronic document to a PSU. The ASPSP will inform the PSU about the receipt of the document and will present it to the PSU. The information to the PSU and the presentation of the document to the PSU depend on the product design of the ASPSP and is not part of this service defined by the openFinance API Framework.

Usually the API Client will transmit a document on behalf of one of its customers, i.e. the original sender of the document. Usually this will be a business customer of the API Client and

not a private customer. By the Document Services, a (secure) channel is provided to the customer of the API client to transmit (electronic) documents to the PSU via the API Client. To avoid the abuse of the Document Services for the transmission of "unwanted documents", the consent of the PSU is needed for transmitting documents to the PSU using these Document Services. This consent is not necessarily a technical consent mechanism via the openFinance API, cp. below.

The Document Services can be used for the transmission of an electronic document independently from the content of the document. As seen from the Document Services an electronic document is only a data structure to be transmitted to the PSU. No further analysis or processing of the document is part of the Document Services. Nevertheless, an ASPSP may define some restrictions about the format of an electronic document to be able to present it to the PSU correctly.

In addition to the usual security mechanisms to protect the communication between an API Client and an ASPSP the Document Services of the openFinance API do not provide any further security mechanisms to protect the authenticity, integrity or confidentiality of the document transmitted by these services. Of course the document transmitted may be an electronically signed document or even an encrypted document. But in this case the security mechanisms for the protection of the document will be part of the document itself and have to be coordinated and agreed bilaterally between the customer of the API Client (as sender of the document) and the PSU (as receiver of the document). The ASPSP has to determine if it restricts the documents to be transmitted to not signed and/or not encrypted documents. If signed and/or encrypted documents are accepted by an ASPSP it depends on the product design of the ASPSP if it supports the PSU by the verification of these security features.

The operational rules document at hand only considers the standalone Document Services of an openFinance API. By this standalone Document Services an electronic document can be transmitted to a PSU, but without any relation to another transaction at the openFinance API. Further document services will also be integrated into the Extended Payment Services and into the Request to Pay Services of the openFinance API Framework. These integrated document services will be described by the Operational Rules documents for these services.

For the first phase the document services consider only functions to be used for the consent management and for transmitting a document by an API Client to an ASPSP using the openFinance API. For future phases this functionality may be enhanced, for example by function for the retrieval of documents by an API Client from an ASPSP using the openFinance API.

The consent management is offered in analogy to consent to RTP processes, please cp. [oFA-OR-RTP]. As stated in the RTP documentation, the consent process is a process between PSU and API Client, which is not checked in the document services afterwards, i.e. a related consent token is not transported in the Document Services afterwards. Still, the ASPSP might mandate the usage of consent processes in certain scenarios via e.g. bilateral or multilateral contracts. For the management of the PSU consent, two different cases have to be distinguished. For the first case the API Client is involved and the PSU consent is given as part

of a (consent-) transaction at the openFinance API. In this case the transaction includes an SCA of the PSU verified directly by the ASPSP, i.e. the ASPSP verifies the consent of the PSU directly. This case is supported by usual Establish Consent API Services of the openFinance API, cp. [oFA-Con].

For the second case, the API Client is not involved. This second case is supported by subscription models, where the PSU is subscribing e.g. in ASPSP online channels to document services. As part of the subscription the document transmission may be restricted to a dedicated context, e.g. by restricting the original sender to be from a certain industry sector or by restricting the document type e.g. to e-receipts. In such cases the consent might be given only implicitly and will not be managed by technical consent resources. By this the API Client has no means to detect the reachability of the PSU at the openFinance API of a certain ASPSP directly from technical consent resources. To support this case, the Document Services might offer dedicated reachability and lookup APIs in future.

1.3 Document Structure

The document at hand gives an overview on the functional models of the (standalone) Document Services at an openFinance API as outlined in Section 3.2.

The technical specification of the Document Services in form of an API specification is not part of this document. Please refer to the corresponding Implementation Guidelines [oFA-IG-DocS] for this technical specification.

1.4 Document History

Version	Change/Note	Approved
0.9	Final Draft for Market Consultation	4 February 2022
1.0	First published version	16 December 2022

2 Overview: Standalone Document Services

The following figure gives an overview of the actors involved in the document services:

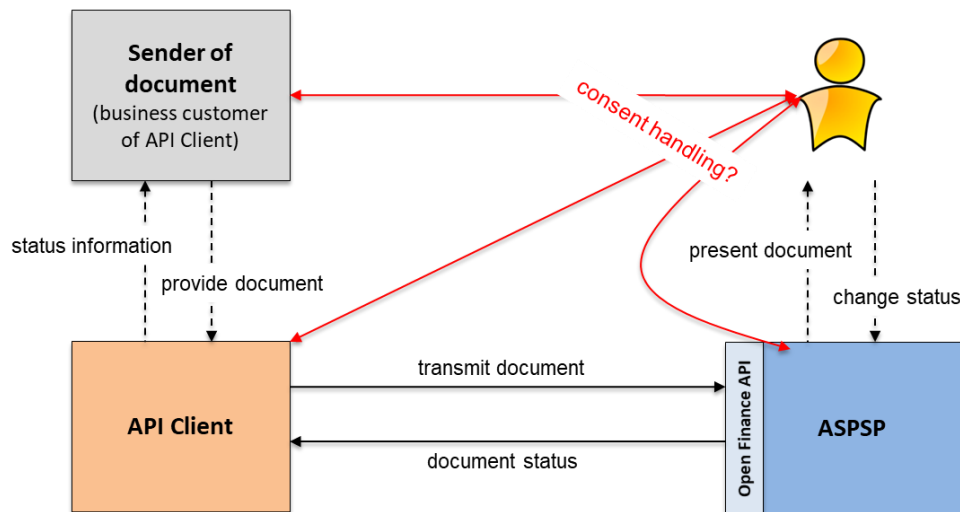


Figure 2: Actors of the Document Services

The Document Services of the openFinance API Framework defines the API service for the transmission of an electronic document to an ASPSP by an API Client and the information to the API Client by the ASPSP about the status of the document. In addition the openFinance API Framework supports the arrangement of a consent given by the PSU as receiver of a document to the customer of the API Client as sender of the document. If necessary the API Client can cancel a document transmitted before in case of processing errors as long as the document has not yet been fully transmitted to the PSU sphere.

RFU: In addition the Document Services might offer reachability checks and lookup functions such that the API Client can check whether the PSU is reachable for the related services in case where the consent has not been processed via the API Client, or where such reachability is not yet organised via contractual agreements between API Client and ASPSP.

The communication between the ASPSP and the PSU to inform the PSU about a new received document and to present a document to the PSU is (currently) not defined by the openFinance API Framework. The same holds for the communication between the API Client and his (business) customer to provide the document and to inform about the status, which is also out of scope of the openFinance API Framework.

For the first phase the document services consider only functions to be used for the consent management and for transmitting a document by an API Client to an ASPSP using the openFinance API. For future phases this functionality may be enhanced, for example by function for the retrieval of documents by an API Client from an ASPSP using the openFinance API.

2.1 Transmission of documents

For the transmission of an electronic document the API Client has to send a request to a special endpoint at the openFinance API of the ASPSP. Besides others the following data will be sent with this request:

- Data to identify the PSU as receiver of the document.
- Data to identify the customer of the API Client as sender of the document.
- Document container.

Details of the related data structures are defined in [oFA-IG-DocS].

If the document container comes with a signed document (for example signed PDF/signed XML according to PAdES/XAdES standards of ETSI), the electronic signature and all relevant information for its verification are already contained in the PDF/XML document. In this case the Element DigitalSignature should not be used to repeat the signature.

After receiving the request the ASPSP checks the consent and executes some technical checks on the content of the document container. If successful, a resource is created and the document container is added to this resource.

As response of this request the ASPSP informs the API Client about the technical acceptance (RECEIVED) or the technical rejection (REJECTED) of the document.

The PSU is not involved in this technical acceptance or rejection of the document.

2.2 Status of transmitted documents

After the document container has been added to the resource and the API Client has been informed about this, the status of the document contained in the resource may change. Following values are examples for a possible status of a document:

- Document received successfully.
- PSU informed about document.
- Document has been presented to PSU.
- Document transferred by PSU to another location, for example has downloaded the document or has transferred the document to another service of the ASPSP like an E-Safe Service. After this status has been reached the document is no longer available in the resource.

Remark:

Further statuses modelling more business logic like "Confirmation of document by PSU" might be available in future versions of this service.

Complete lists of possible values for the status of a document will be given by the Implementation Guidelines [oFA-IG-DocS].

The following two mechanisms can be used to inform the API Client about a new status of a document:

- The API Client can do some polling for requesting the status of the resource which has been created when the document has been transmitted, using a GET on the resource. The current status of the document will be provided as part of the response data of this GET. This variant is always available due to the RESTful API approach.
- The Resource Status Notification function as defined in [oFA-PFSM] might be used by the ASPSP to inform the API Client about any change of the status of the resource, possibly including some parameters of the new status. The subscription to this service will be "on the fly" with request of the API Client for the transmission of the document. If necessary the API Client can then use a GET on the resource, if he needs further information about the document. The information about the document will be provided as part of the response data of this GET method.

Each ASPSP supporting the Document Services at his openFinance API should also support the Resource Status Notification function. For the API Client the usage of this notification service is optional (but recommended). If the API Client wants to use this notification service, he has to add a URI for the notification to the request message for transmitting the document.

2.3 Cancellation of a document transmission

As long as the document has not been presented to the PSU, the API Client may withdraw the document (on behalf of his customer) again.

The API Client can do this by sending a cancellation request to the resource containing the document container.

2.4 Arrangement of a consent

An API Client can transmit a document to a PSU using the openFinance API of an ASPSP only successfully if the PSU has given his consent to receive such documents. By this it is avoided that the Document Services can be abused for spamming a PSU with unwanted documents.

Different ways exist how the PSU can inform the ASPSP about his consent to receive documents from an API Client using the openFinance API of the ASPSP. Which of these ways fits best depend on the single use case. Consider the following examples:

- Example 1: An ASPSP offers a service that a PSU may receive electronic receipts after a debit card transaction at a POS in his post box at his payment account. Different merchants take part in this service using different API Clients to transmit these electronic receipts using the openFinance API of the ASPSP.

If a PSU wants to participate to this special service, he has to inform his ASPSP about this. Of course he wants to do this only once for this service independent of a special merchant or a special API Client. Otherwise this service would not be user friendly at all.

In this case the consent is given to receive special types of documents (electronic receipts). This consent is independent from a special API Client and independent from the sender of the document. In general this will be a recurring consent, which has no interaction via the openFinance API.

- Example 2: The public administration of a city, a county, a state or any public administration wants to use the Document Services to send official electronic documents to the citizens of the city/county. A PSU (as citizen) will receive these documents in his post box at his payment account. Different departments of the public administration may use the services of different API Clients to transmit these official electronic documents using the openFinance API of the ASPSP.

If a PSU wants to take part in this service of the public administration, he has to inform his ASPSP about this. Of course he wants to do this only once for the complete public administration for his city, county or state, independent to a special department or a special API Client.

In this case the consent is given to receive special types of documents (official electronic documents) sent by a special type of sender (part of the public administration). This consent is independent from a special API Client and independent from the special sender of the document (i.e. department of the public administration). In general this will be a recurring consent. There is not necessarily an interaction via the openFinance API, since this confirmation might be handled directly between ASPSP and PSU in the related ASPSP online channels.

- Example 3: A provider of an e-commerce shop wants to use the Document Services to transmit an invoice and a certificate of guarantee to his customer after a purchase. The PSU (as customer of the e-commerce shop) will receive these documents in his post box at his payment account. The provider of the e-commerce shop uses a special API Client to transmit these documents using the openFinance API of the ASPSP. These documents are transmitted to the PSU independently from the payment service used for the payment of the purchase.

If a PSU wants to use this service of the provider of the e-commerce shop he has to give his consent to this provider in combination with the API Client used by the provider. This consent is special to the combination provider of the e-commerce shop (as customer of the API Client) and the API Client. Depending on the use case one-off consent and/or recurring consent can be used for this, which is defined in [oFA-Con] for document services. Please note that this service enables the API Client to be sure of the related consent of the PSU, of the related access of the PSU to the addressed account and potentially also about the identity of the PSU. In difference to Account Information Services described in [XS2A-OR-Core], the related consent will not be checked in real-time within the document services, but will be mandated only via contractual agreements. These agreements could mandate the API Client to prove the PSU consent with related logs etc. in case of a PSU complaint or in case of dispute. Such agreements could also define liabilities for the API Clients.

Further examples for different use cases might exist.

To handle the consent in different use cases correctly, different consent types will be distinguished. For the first version of the document services the following types will be considered:

Consent Type A: Dedicated API Client Consent

- The consent is given to an API Client.
- The consent is independent from the sender or the document (as customer of the API Client).
- The consent is independent from the type of the document.

Note: This consent model is technically similar to the AIS like consents.

Consent Type B: Dedicated Sender/API Client Consent

- The consent is given to an API Client.
- The consent is only valid for a special sender of the document (as customer of the API Client).
- The consent is independent from the type of the document.

Note: This consent model is technically similar to the AIS like consents with an additional requirement on the original sender.

Consent Type C: Sender whitelisting

- The consent is given to the sender of the document.
- The consent is independent from the API Client (as transmitter of the document).
- The consent is independent from the type of document.

Consent Type D: Subscription variant "document type"

- The consent is valid for a special type of document.
- The consent is independent from the API Client (as transmitter of the document).
- The consent is independent from the sender of the document (as customer of the API Client).

Consent Type E: Subscription variant "business domain sender"

- The consent is given to a business domain of a sender, e.g. insurance, telcos, energy supplier
- The consent is independent from the API Client (as transmitter of the document)
- The consent is independent from the type of the document. (to be discussed, e.g. certain documents type like advertising could be prohibited.)

NOTE: The consent services defined in [oFA-Con] for now only support consents of type A and type B. **RFU:** In future, the Document Services might support these functions for managing subscriptions like the subscription services for the Push Account Information Services also via the API.

Anyhow, the Document Services will partially support functions to be used by an API Client to check if a consent to send a document or a subscription to a more generic document service is already available. The response of the ASPSP will inform the API Client if the PSU (as receiver of the documents) accepts documents depending on a special consent type. In the request the API Client may optionally identify the sender of a document and/or indicate the type of document he wants to transmit in the following step.

Note: In case of consent model of type A or B, this so-called reachability check might be done via a consent resource check directly on the API. For consent model of type C to E, dedicated APIs need to be offered in future.

For these services it will be necessary to identify the Sender of a document securely. Contracts can require KYC requirements performed by the API Client. LEI is one of the potential identifiers. Contracts might also require the sender to electronically seal or sign the documents with the sender's certificate, depending on the use case. No other impact identified on the API for now.

The API Client has to indicate the type of the document (parameter TypeCode or TypeProprietary) correctly. Liability in cases of misuse have to be solved by scheme and/or bank rules and contracts.

2.5 Lookup Functions via directories

Above, the reachability for a given PSU at a given ASPSP was defined. For implementations API Clients might want to implement more convenience for onboarding PSUs to such a service and might have the requirement to check for which ASPSP a given PSU might be reachable using the openFinance API. The related service is called a directory service. Directories might

be implemented on API Access Scheme level or on API Provider level. The openFinance API Framework intends to offer openFinance API standardisation also for such directories in future, independent of the implementation details above.

In the related lookup requests, the API Client might use proxy information to identify the given PSU. This proxy information might be e.g. mobile phone number, email address or name and postal address.



3 Document Services of the openFinance API

3.1 Services of the openFinance API

The openFinance API supports different services. It might also subsume core services as they are offered in the core XS2A interface to fulfil the PSD2 requirements. In difference to the PSD2 compliant XS2A interface, the openFinance API is not necessarily requiring the API Client to be a TPP regulated by PSD2.

The ASPSP might mandate a contract between the API Client and the ASPSP for accessing the openFinance API. All potentially used administrative processes in the openFinance API, e.g. for onboarding processes are described in [oFA-OR-ADM].

This openFinance API standard is not defining whether a service is to be supported in the openFinance API or not, but it might define a mandatory support of sub-services once a dedicated openFinance API service is offered.

3.2 Services covered in this document

The following **sub-services** of Document Services are addressed in this document within the openFinance API Framework:

Services addressed	Usage
Document Services	Within this sub-service, the ASPSP offers technically separated building blocks, by which he can • receive a document from an API Client, • receive a document Cancellation request from an API Client, and • provide the corresponding document status to an API Client. In addition building blocks are offered by which a consent between the PSU and the sender of the document (customer of the API Client) can be established (via the API Client) using the openFinance API. In addition also building blocks are offered by which an API Client can ask if a consent/subscription is already available, i.e. if a given PSU is reachable for a given sender and document type

Table 1: Document Services scheduled for further detailed work

4 Actors and roles

4.1 Client related scenario

In general, services offered by an ASPSP at his openFinance API may be accessed/used not only by API Clients registered by an NCA in the role of a TPP according to the PSD2 regulation. Additional service providers may take the role of an API Client (see [oFA-OR-ADM]). This is also true for the Document Services.

4.2 Direct access scenario

The openFinance API Framework plans to develop best practices for re-using the API Client/ASPSP openFinance API also as a PSU-ASPSP interface, especially for the corporate case, where the broad functionality like multi-signing etc. applies. For the services at hand, this might be applicable in the future.



5 API Services supported for the Document Services

The current version of the Document Services supports the following API services. The **Service Type** is indicating a bundling of several API services to a service family.

For the standalone Document Services the following service types are introduced:

- Document services (XDocS).

The following table gives an overview of this API services:

API Services	Service Type	Technical Functionalities	PSU directly involved
Establish consent for document transmission	Con-Doc	Arrangement of a consent between the PSU and the sender of the document which is a customer of the API Client. Compare [oFA-Con]	Yes
Reachability Check	XDocS	Get the information if a consent or a subscription internally managed by the ASPSP is already available for a given PSU and potentially a given document type and/or sender	no
Lookup	XLkpS	A request towards a directory to ask for the endpoint to address for document services for a given PSU defined by proxy information	no
Document transmission	XDocS	Delivery of a document	no
Document cancellation	XDocS	Cancellation of a document	no
Document status	XDocS	Request of the status	no

Table 2: API services of the Document Services

Remark: In a first phase, managing subscriptions to document services or sender white listings are not offered via the openFinance API, since these functions are independent from the dedicated API Client or Document Sender. Thus, these subscriptions and sender whitelisting management need to be handled in the ASPSP online channel directly. In future, such management functions might be offered at the openFinance API.

In addition, the openFinance API will support technical use cases within the RESTful API approach which are not necessarily used within the above mentioned use cases, e.g. to read details on created resources.

In the following sub-sections the top level information flows for these single services are shown.

5.1 API Service: Establish Consent for document transmission

Before transmitting a document to a PSU by using the openFinance API the API Client needs the consent of the PSU for this. As described in section 2.4 different methods may be supported by an ASPSP to support the arrangement of the consent. In case of consent of type A or B, it is mandated to use the service to establish a consent offered at the openFinance API as defined in this section.

The following figure shows only the top level information flow for this API Service:

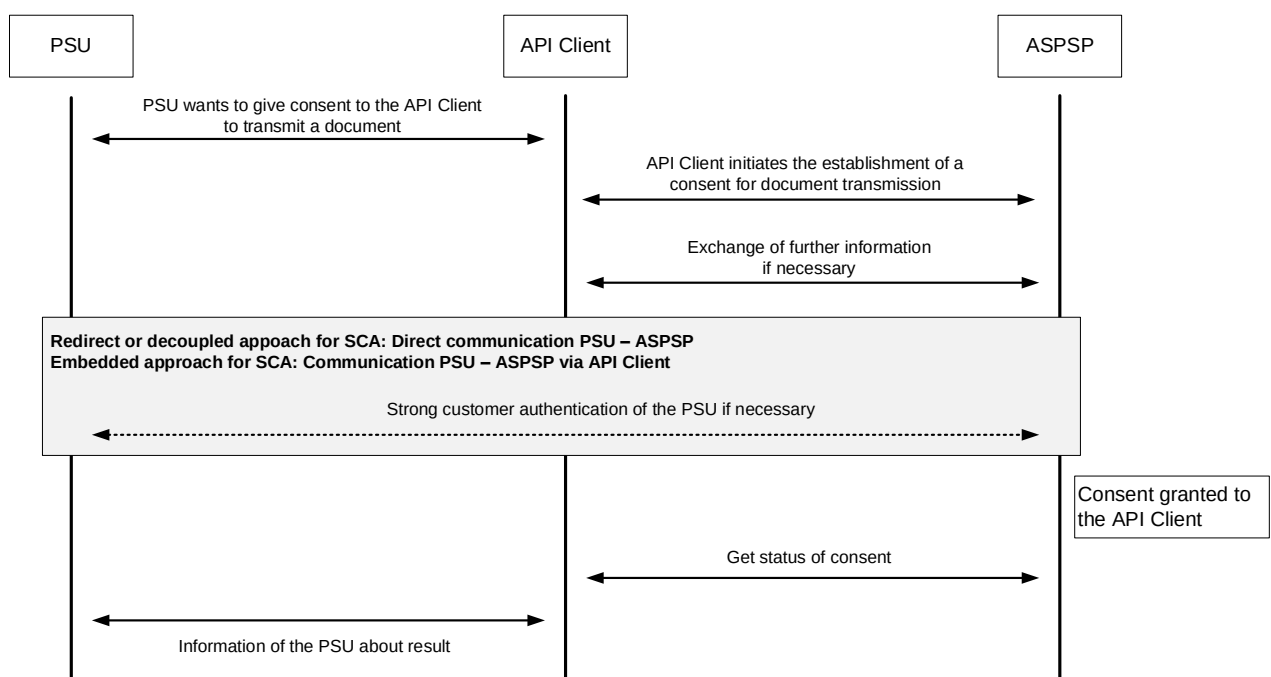


Figure 3: API Service: Establish consent for document transmission

Remarks:

- As part of this API Service also the customer of the API Client as sender of the document to be transmitted has to be identified in some use cases (i.e. for consent type A). The requirements/procedures for this have to be defined. For other use cases the identification of the customer of the API Client as sender of the document to be transmitted is not necessary (i.e. for consent type B).

- For some uses cases the consent established with this API Service is given to the combination of the API Client and his customer as sender of the document (i.e. consent type A) or for other uses only to the API Client regardless of the customer as sender of the document (i.e. consent type B).
- The requirements for the identification of the sender of the document and the technical functionality to enable the sender of the document to "move" this consent to other API Clients will be fixed by the implementation guidelines [oFA-IG-DocS].
- The arrangement of the consent has to be secured by a strong customer authentication of the PSU. Depending on the SCA approaches supported by the ASPSP this can be executed using the embedded, redirect or decoupled approach.
- One-off and recurring consents may be established using this API Service.
- The ASPSP may support also further methods for the arrangement of a consent between the PSU (as receiver of the document) and the customer of the API Client (as sender of the document).

5.2 RFU: API Service: Reachability Check

RFU: This service is not supported in the first version of the related Implementation Guidelines [oFA-IG-DocS].

Using this API Service the API Client can send an inquiry to the ASPSP to get information, if a needed consent is provided by a given PSU by a subscription to a service which is subsuming to transmit a document of a given type and from a given Sender via the openFinance API of the ASPSP.

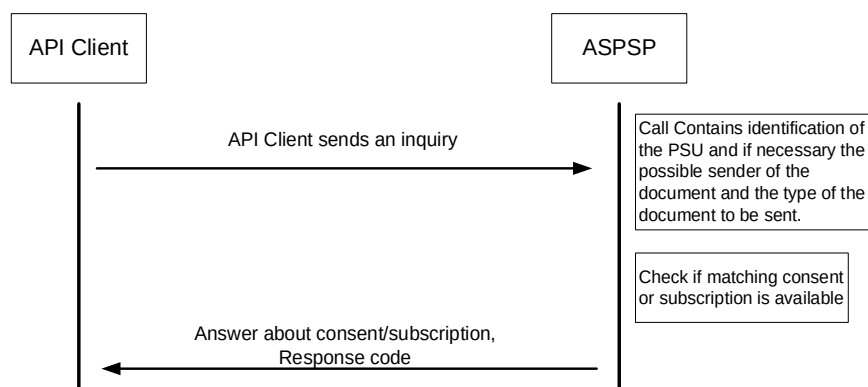


Figure 4: API Service: Reachability check

Remark:

- The API Client has to identify the PSU to whom he wants to transmit a document.

- The identification of the PSU can be done using corresponding proxy information like email address, IBAN, mobile number, etc. Details about this have to be defined.
- Depending on the use case the API Client has to send information about the type of the document and/or the identity of the sender of the document he wants to transmit after this reachability check.

5.3 RFU: API Service: Lookup function

RFU: This service is not supported in the first version of the related Implementation Guidelines [oFA-IG-DocS].

Using this lookup function, the API client can ask a directory hosted by an API Provider or an API Access Scheme where a PSU represented by related proxy information is reachable for a given document type and/or Sender.

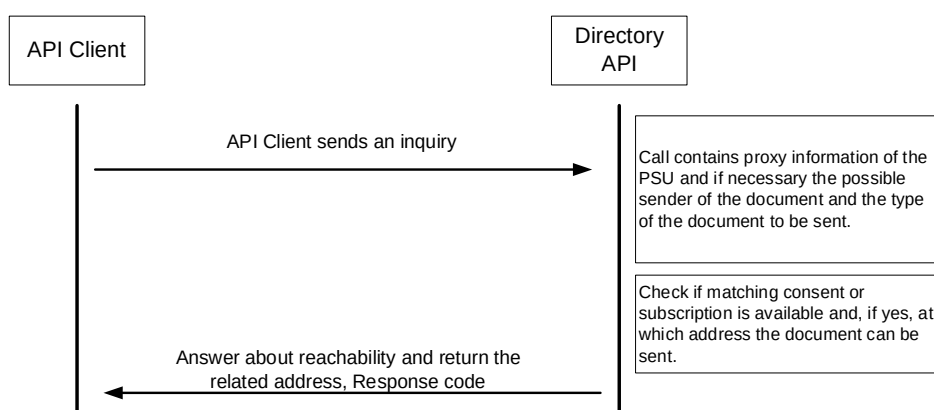


Figure 5: API Service: Lookup Function

Remark:

- The API Client has to identify the PSU to whom he wants to transmit a document by proxy information like e.g. PSU-ID, mobile phone number, email address.
- The API Client/Directory Service might need to observe priority rules like indicated in Section 7.9.

5.4 API Service: Document transmission

This API service can be used by an API Client to transmit an electronic document to the ASPSP.

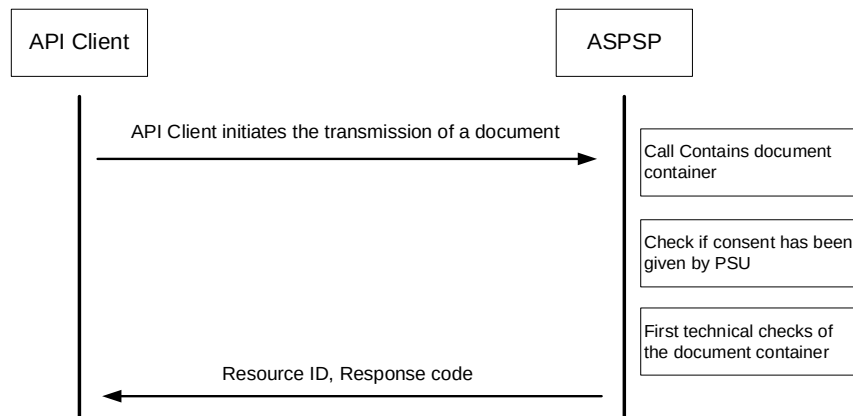


Figure 6: API Service: Document transmission

Remark:

- The API Client is not the original sender of the document. The document is sent rather by a (business) customer of the API Client. The sender of the document and its communication with the API Client is not shown in the figure. This communication is out of scope of the openFinance API Framework.
- The ASPSP is not the final receiver of the document. The document is received rather by a PSU as customer of the ASPSP. The final receiver of the document and its communication with the ASPSP is not shown in the figure. This communication is out of scope of the openFinance API Framework.
- The request will contain also parameters to identify the original sender of the document. The API Client has got the responsibility that the values of these parameters identify the sender correctly.
- Besides the electronic document further parameters are part of the document container indicating the type and format of the electronic document. The API Client has got the responsibility that the values of these parameters are consistent with the electronic document.
- The transmission of the document will only be successful if the ASPSP can prove the consent of the PSU. If not the document will be rejected.

5.5 API Service: Document cancellation

This API service can be used by an API Client to cancel an electronic document again, which he has transmitted to the ASPSP before.

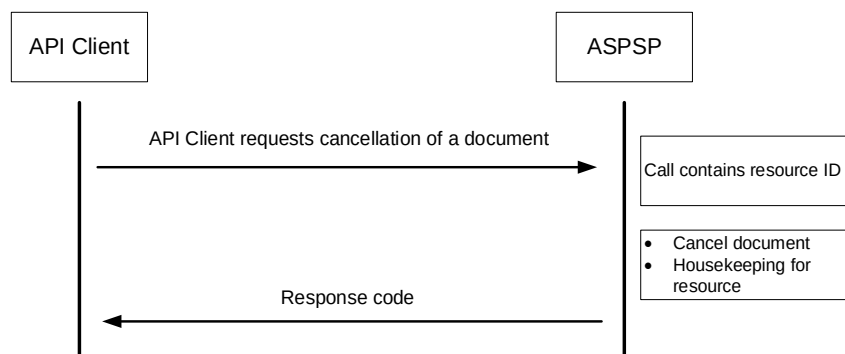


Figure 7: API Service: Document cancellation

Remark:

- The cancellation of the document will only be successful if the document has not already been presented by the ASPSP to the PSU.
- If the document has already been presented to the PSU the cancellation request will be rejected by the ASPSP.

5.6 API Service: Document Status

This API service can be used by an API Client to request from the ASPSP the current status of an electronic document transmitted before.

Depending on the question whether the Resource Status Notification function defined in [oFA-PFSM] is used by the API Client or not, two cases have to be distinguished:

- Status information by polling the resource.
- Status information after being notified about a status change.

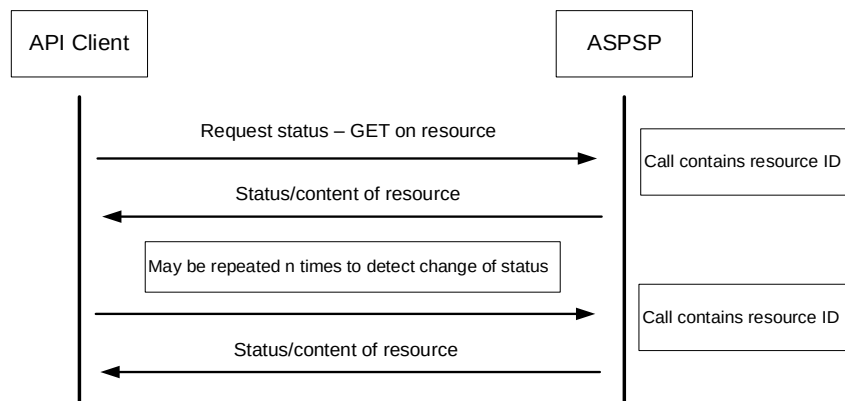
Request the document status by polling the API of the ASPSP:

Figure 8: API Service: Document Status with polling

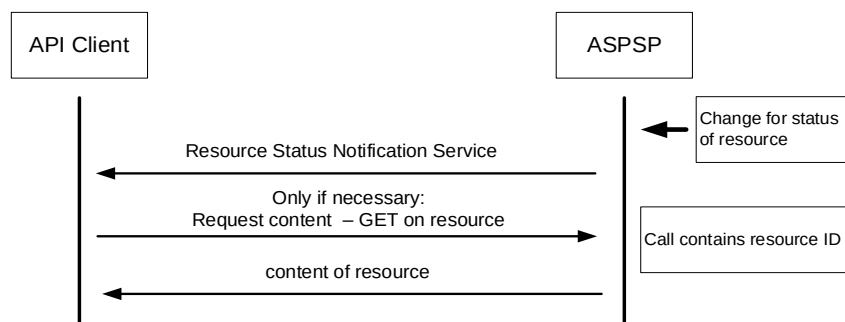
Request the document status by using the Resource Status Notification Service:

Figure 9: API Service: Document Status with Resource Status Notification Service

Remarks:

- An ASPSP shall always support the Resource Status Notification Service at its openFinance API.
- The polling shall only be used by an API Client if the Resource Status Notification Service is not useable by the API Client.
- The message of the Resource Status Notification Service will indicate the change of the status of the resource, possibly including some parameters of the new status.
- The message of the lean Resource Status Notification Service will also indicate if a following GET on the resource will be necessary to get further details about the new status.

6 Key concepts of the openFinance interface for the Document Services

This section contains an overview of key concepts of the openFinance API specific to the Document Services. For basic key concepts please refer to [XS2A-OR-Core]. For the detailed specification of this extended service please refer to the document [oFA-IG-DocS].

6.1 Confirmation of the consent of the PSU (towards the API Client)

Transaction	How the PSU grants consent	How consent of the PSU is verified
Establish consent for document transmission	Identifies itself as part of the transaction, if necessary by strong customer authentication.	Verification of the identity of the PSU, if necessary by strong customer authentication.
Reachability check	No consent of the PSU needed.	No consent to be verified.
Lookup function	No consent of the PSU needed.	No consent to be verified.
Document transmission	Consent was granted during a previously executed Establish consent for document transmission transaction, or the consent has been confirmed within a subscription process.	Verification of the consent.
Document cancellation	No consent of the PSU needed.	No consent to be verified.
Document status	No consent of the PSU needed.	No consent to be verified.

Table 3: Consent of the PSU within transactions

A transaction at the openFinance API may only be executed if the consent of the PSU can be confirmed where needed. Otherwise the ASPSP will reject the transaction.

7 Operational rules

This section summarises the operational rules specifically to be observed by each API Client accessing the openFinance API for the Document Services and each ASPSP providing the Document Services at the openFinance API. In addition, the general operational rules as specified in [XS2A-OR-Core] apply.

Not all of these rules are enforced by technical means of the Extended Service within the openFinance API.

The order of the rules does not represent an order of importance.

7.1 API-Client authorisation

ASPSPs might refuse access to the openFinance API even if the related eIDAS certificate is valid, if not all related contractual arrangements are fulfilled. This might be controlled e.g. via a scheme directory.

7.2 API-Client identification

Accessing clients are identified based on eIDAS certificates (QWAC) in analogy to the Core XS2A Interface, but without mandating PSD2 specific attributes in the certificate. These certificates are only used for the identification of the API client. In general these certificates will not contain any scheme or service specific data. See also [oFA-OR-ADM].

TPPs according to PSD2 regulation already owning PSD2 compliant eIDAS certificates can reuse these certificates by their access to the openFinance API of an ASPSP.

7.3 Coding of business data

Different formats for electronic documents may be supported by an ASPSP. The ASPSP will inform about the formats supported using the Discovery API Service.

7.4 Correct information within the document container

It is within the responsibility of the sender of a document that the type and format of the document are indicated correctly within the document container.

If further requirements for the identification and/or name and/or content of a document are defined by a scheme it is within the responsibility of the sender of a document that a document to be transmitted is compliant with these requirements.

7.5 Document Cancellation

An API Client may cancel an electronic document which he has transmitted to the ASPSP before.

An electronic document shall not be cancelled if it has already been presented to the PSU.

Further restrictions for the cancellation of an electronic document may be defined by a scheme regulating the Document Services offered by an ASPSP.

7.6 Correct identification of the sender of a document and the business domain

If requested the API Client has to insert some identity data to identify the (possible) sender of a document into his requests. It is within the responsibility of the API Client that the given identity data identifies the sender correctly. The API Client has to support sufficient KYC procedures to identify his customers correctly.

If requested the API Client has to insert an identification of the business domain of possible sender of a document. It is within the responsibility of the API Client that the given business domain of the sender is correct. The API Client has to support sufficient KYC procedures to identify his customers correctly.

It is possible that schemes will introduce further requirements for an API Client for the identification of his customers and his KYC procedures.

7.7 Status of an electronic document

After receiving an electronic document the status of the document will have different values depending on the process. The following values for the status are distinguished:

Rejected

The document has been rejected by the ASPSP directly for different reasons:

- API Client not known or not authorised to use the Document Service of the ASPSP.
- Receiver of the document (PSU) not known by the ASPSP.
- Consent of the PSU cannot be proven.
- Document container technically not correct.

Codes indicating the reason for rejection will be given with the response.

Pending

Document container technically accepted, but no checks about the PSU (as receiver of the document) and his consent have been made yet.

Received

Document container technically accepted, PSU is known by the ASPSP, consent of the PSU has been proven successfully. Document is available for PSU.

Informed

PSU has been informed about the document.

Presented

Document has been presented to the PSU.

Transferred

Document has been transferred (by the PSU) to another location.

Remarks:

- For a given document some of the values for the status may not be relevant or skipped. For example it is possible, that a document has got the status "Received", and the next status value is "Transferred", if the PSU has for example transferred the document from his mailbox to his own computer as part of the presentation of the document.
- Further statuses modelling more business logic like "Confirmation of document by PSU" might be available in future versions of this service.
- The API client can always read the status by a GET message on the resource, which will be created by the ASPSP as result of the transmission of the document with the request to the openFinance API of the API Client.
- If the API Client supports the Resource Status Notification Service, the ASPSP will inform the API Client about any change of the status of the resource by using this Resource Status Notification Service.

7.8 Status Notification

If the ASPSP uses the Resource Status Notification function to inform the API Client about a change of the status, the ASPSP will start three attempts to push the status information to the URI given by the API Client as part of the RTP initiation request.

If the third attempt is not successful the ASPSP "stays silent" for this change of the status. Of course information about the new status will still be available for the API Client using the GET access method.

7.9 Priority Rules

Directories will respond only with one address even if the look-up function might match with several entries in the directory. The final result might depend on internal rules.

An API Access Scheme might add priority rules in case several directories are contacted by an API Client. The following is assumed as default:

If one or several responses which include an indication of a preference chosen by the PSU in the repository level are received by the API Client, then the address data provided by the repository which indicates the most recent preference indication should be used by the API Client for the related document transmission.

If none of the responses received by the API Client received from several directories contains an indication of a preference chosen by the PSU, then the address data provided by the repository which indicates the most recent registration indication should be used by the API Client for the related document transmission.



8 Message and data model

In the following, an abstract data model is presented for the specific usage of the Document Services within the openFinance API. The basic abstract data model for the openFinance API is defined in [XS2A-OR-Core].

A detailed data model for this Document Services is defined in [oFA-IG-DocS].

8.1 Protocol Level

There are no specific requirements on data modelling on protocol level. The following data elements are used independently of the semantic of the related messages, building an abstract basic protocol level.

8.2 Authorisation Data Model

For transactions specific to this Extended Service which mandate authorisation, a uniform authorisation data model is used. To enable such a uniform authorisation, to each transaction to be authorised an authorisation sub-resource is associated. In cases where several authorisations are needed, this sub-resource is repeated.

8.3 Document Services related data model

8.3.1 Reachability check (to be detailed in a later version of the specification)

8.3.1.1 PSU data

- PSU Identification (mandatory)
 - PSU-ID or
 - PSU proxy information (supported proxy types are published by the ASPSP)
- PSU Corporate Identification and Type (conditional, only if mandated by parameters published by the ASPSP and only if PSU is a corporate)

8.3.1.2 API Client data

none

8.3.1.3 Further request data

- Identification of the possible sender of the document (optional).
- Identification of the business domain of a possible sender of the document (optional).
- Type of the document to be sent (optional).

8.3.1.4 Response Data

- reachability

8.3.2 Lookup-function (to be detailed in a later version of the specification)

8.3.2.1 PSU data

- PSU Identification (mandatory)
 - PSU-ID or
 - PSU proxy information (supported proxy types are published by the ASPSP)
- PSU Corporate Identification and Type (conditional, only if mandated by parameters published by the ASPSP and only if PSU is a corporate)

8.3.2.2 API Client data

none

8.3.2.3 Further request data

- PSU proxy information (conditional, only if mandated by parameters published by the ASPSP)
- Identification of the possible sender of the document (optional).
- Identification of the business domain of a possible sender of the document (optional).
- Type of the document to be sent (optional).

8.3.2.4 Response Data

- Reachability API address (mandatory)
- Preference Indicator (optional)

An indicator to indicate a preference of the PSU to use this address for document services.

- Registration date (mandatory)

The date when the PSU has given his/her consent to the subscription.

8.3.3 Document transmission

8.3.3.1 API Client data

- Status URL-API Client (conditional, only mandated if the Resource Status Notification function will be used)

8.3.3.2 Further request data

- Identification of the sender of the document (Optional)
- Identification of the PSU, either as personal/corporate identification or as an account (Mandatory)
- Document container (Mandatory) with the following sub attributes
 - Document Type (Optional)

The type of the document, e.g. Invoice, contract etc.
 - Document Identification (Mandatory)

A document identification which is unique (relative to the sender and the receiver of the document).
 - Either Issue Date or Issue Date Time (Mandatory)

The date or date/time of issuing the document.
 - Document Name (Optional)

The document name, as assigned by the sender.
 - Language Code (Optional)

The language of the related document.
 - Format Code (Mandatory)

The technical format of the digital document.
 - File Name (Optional)

The technical file name.
 - Array of Related Documents (Optional)

A collection of references to related documents.

- Enclosed Document (Mandatory)

The actual document in Base64 encoding.

8.3.3.3 Response Data

- Resource Identification (Mandatory)

Technical identification of the API document resource.

- Status of the document transmission (Mandatory)

Provides information of whether the document has been transmitted already into the PSU mailbox etc.

- Reason of the Status (Optional)

This attribute offers more information about the provided status.

8.3.4 Document cancellation

This is done by a DELETE method on the resource using the resource id.

8.3.5 Document status

This is done either by a GET method on the resource using the resource ID or by the Resource Status Notification function, cp. [oFA-PFSM].

9 Annex

9.1 Glossary

AIS

Account Information Service according to article 4 (16) of [PSD2] and as regulated by article 67 of [PSD2].

AISP

Payment service provider offering an AIS to its customer. See article 4 (19) of [PSD2].

ASPSP

Account Servicing Payment Service Provider providing and maintain a payment account for a payer. See article 4 (17) of [PSD2].

Onboarding

In this document the term onboarding is only used for the (technical) onboarding of an API client at the openFinance API of an ASPSP according to [oFA-OR-ADM].

PIISP

Payment Instrument Issuer Service Provider according to article 4 (14) and 45) of [PSD2]. A PIISP can use the service "Confirmation on the availability of funds" as regulated by article 65 of [PSD2].

PIS

Payment Initiation Service according to article 4 (15) of [PSD2] and as regulated by article 66 of [PSD2].

PISP

Payment service provider offering a PIS to its customer. See article 4 (18) of [PSD2].

PSP

Payment service provider according to article 4 (11) of [PSD2].

PSU

Payment Service User according to article 4 (10) of [PSD2].

QTSP

Qualified Trust Service Provider, e. g. a trust centre issuing qualified certificates-

QWAC

Qualified certificate for website authentication issued by a QTSP.

RTP

Request to Pay

RTPSP

Request to Pay Service Provider

SCA

Strong Customer Authentication – authentication procedure based on two factors compliant with the requirements of [PSD2] and [RTS].

TPP

Third Party Provider – generic term for AISP/PIISP/PISP.

TSP/QTSP

Trust Service Provider according to [eIDAS]. Within the context of the XS2A interface specification only qualified TSPs (QTSPs) according to section 3 of [eIDAS] issuing qualified certificates for electronic seals and/or qualified certificates for website authentication which are compliant with the requirements of [RTS] are relevant.

XS2A interface

Access to account interface – interface provided by an ASPSP to TPP for accessing accounts.

9.2 References

[XS2A-OR-Core] NextgenPSD2 XS2A Framework, Operational Rules, The Berlin Group Joint Initiative on a PSD2 Compliant XS2A Interface, version 1.3, published December 2018

[oFA-OR-RTP] openFinance API Framework, Operational Rules, Extended Services, RTP Services, Version 2.1, 18 October 2024

[oFA-Con] openFinance API Framework, Consent API, Version 2.1, 31 July 2024

- [oFA-PFSM] openFinance API Framework, Protocol Functions and Security Measures, Version 2.1, 31 July 2024
- [oFA-IG-DocS] openFinance API Framework, Implementation Guidelines, Extended Services, Document Services, version 1.0, 16 December 2024
- [oFA-OR-ADM] openFinance API Framework, Operational Rules for Extended Services, Administrative Services, draft version 0.9, 27.05.2021
- [oFA-OR-PAIS] openFinance API Framework, Operational Rules, Push Account Information Services, version 2.1, 31 July 2024
- [eIDAS] Regulation (EU) No 910/2014 of the European Parliament and of the Council on Electronic Identification and Trust Services for Electronic Transactions in the Internal Market, 23 July 2014, published 28 August 2014
- [ExCodeSet] Inventory of External Code Sets, ISO20022.org, 27 Aug 2021 – 2Q2021
- [ISO-CPAR] ISO 20022, Creditor Payment Activation Request – Maintenance 2020 – 2021, Messaged Definition Report -Part 2, Approved by the Payment SEG on 11 January 2021
- [PSD2] Directive (EU) 2015/2366 of the European Parliament and of the Council on Payment Services in the Internal Market, published 25 November 2016
- [RTS] Commission Delegated Regulation (EU) 2018/§() of 27 November 2017 supplementing Directive 2015/2366 of the European Parliament and of the Council with regard to Regulatory Technical Standards for Strong Customer Authentication and Common and Secure Open Standards of Communication, L69/23, Official Journal of the European Union, 13.03.2018
- [TS 119 495] Draft ETSI TS 119 495, Electronic Signatures and Infrastructures (ESI); Sector Specific Requirements; Qualified Certificates Profiles and TSP Policy Requirements under the Payment Service Directive 2015/2366/EU, V1.1.2 (2018-07)

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