



openFinance API Framework Implementation Guidelines for Extended Services

(Standalone) Document Services

Version 1.0

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Contents

1	Introduction.....	1
1.1	From Core XS2A Interface to openFinance API	1
1.2	Document Services	2
1.3	Document Structure.....	3
1.4	Document History	3
2	Application Layer: Guiding Principles.....	4
2.1	Overview	4
	API Client and API Server	4
2.2	API Access Methods	5
	API Access for posting Documents.....	5
2.3	Additional Error Information	6
2.4	Status Information	6
3	Message Types	7
3.1	Document Submission Request.....	7
	Request.....	7
	Response	9
	Examples	11
3.2	Document Status Request.....	12
	Request.....	12
	Response	13
	Example	14
3.3	Retrieve Document Request.....	15
	Request.....	15
	Response	15
	Example	17
3.4	Document Withdrawal Request	18
	Request.....	18
	Response	19
	Examples	19
4	References	20
4.1	Normative References.....	20

4.2	Informative References	20
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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 is now planned to 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:

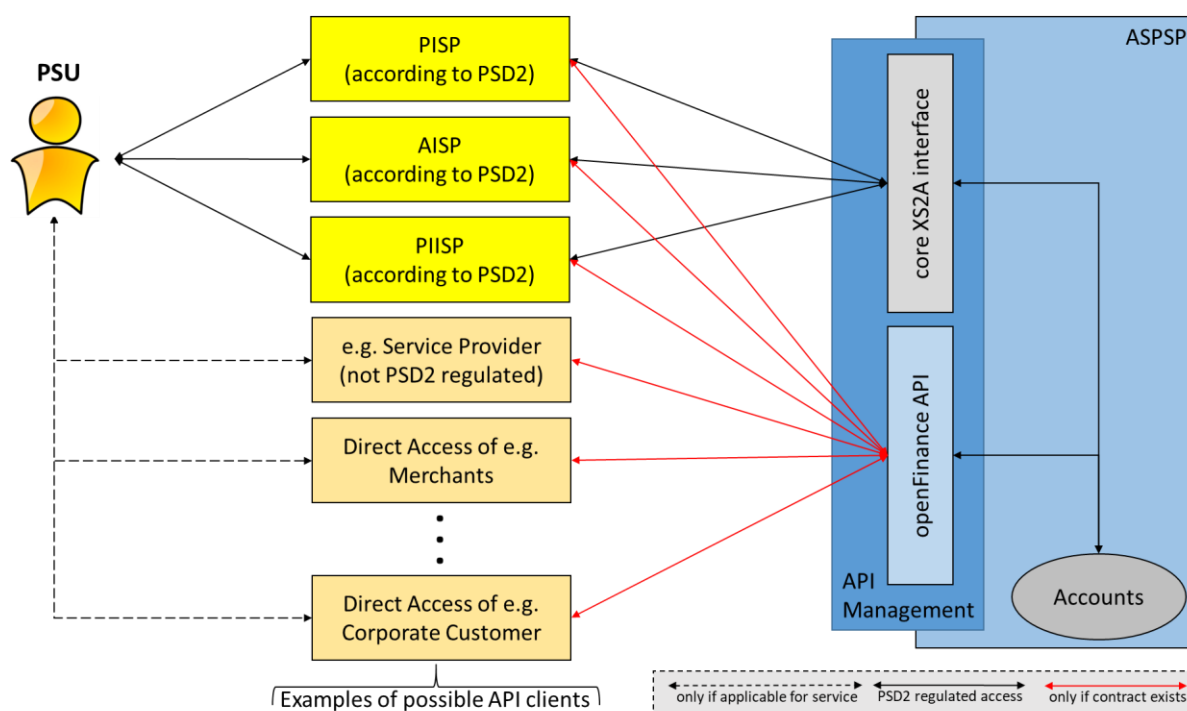


Figure 1: Core XS2A interface and openFinance API

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 document [oFA-IG-Adm].

1.2 Document Services

On the one side, there are many potential use cases, where documents related to payment requests, card payments or other banking transactions need to be transmitted to bank customers. On the other side, most banks today offer mail boxes in their online channels, where the customers receive today bank internal information like (legal) account statements or trade and tax reports for trading securities.

The service defined in this document will offer third parties to securely transmit documents to a person or a corporate by addressing related post boxes of the addressed person or corporate directly via the openFinance API.

As an optional service, the ASPSP might offer the usage of SCA mechanisms to the API client in a consent management between API Client and user for the submission of related documents, cp. [oFA-CO]. Please note, that only restricted consent models are supported for this in a first phase:

- Consent Type A: Consent to the pair (TPP, document sender) to transmit electronic documents to the PSU
- Consent Type B: Consent to the TPP to transmit electronic documents to the PSU for any document sender behind.

This in analogy to related services in the Request to Pay Services, cp. [oFA-IG-RTP].

RFU: In a later version, this service might be extended by responding to documents, e.g. accepting a document or after a signature etc. This could support e.g. use cases of fully digitalised contracting processes.

RFU: In future, this service could also be extended to lookup or reachability services if e.g. the consent is provided via more generic or not TPP sharp solutions. This is not necessarily needed as long as a TPP related consent mechanism is supported only or where the consent is provided implicitly via API Access Schemes.

1.3 Document Structure

Section 2 introduces an overview on the API on application layer. The detailed specification of related endpoints and access methods is provided in Section 3.

Data structures which are referenced in this document are contained in [oFA DaD].

1.4 Document History

Version	Change/Note	Approved
Draft 0.8	Complete Draft for internal review with the taskforce and the advisory board.	2024-08-28
Draft 0.9	Final draft for market consultation	2024-11-05
1.0	First	2024-12-16

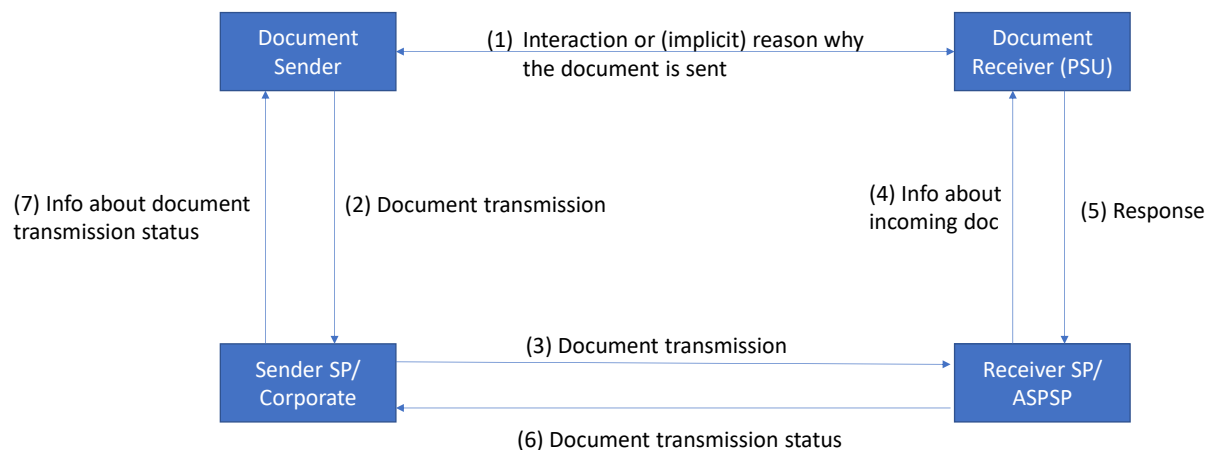
2 Application Layer: Guiding Principles

2.1 Overview

This document will define requests for an API Client to submit an electronic document, following the service description as defined in .

API Client and API Server

As addressed in [oFA-OR-Doc], the following roles are supported for Document Services. Here, "SP" stands for "Service Provider".



This API definition addresses the following potential APIs:

- Receiver-SP/ASPSP as API Server,
 - Sender SP as API Client , cp. number (3)
- Sender-SP as API Server,
 - Document sender as API Client, cp. number (2) in a direct access scenario

The same calls might be used in these APIs. Still, there might be some minor differentiation on attribute level. This is then defined within the call definitions.

Since the whole openFinance API Framework is laid out with the assumption that the API Server is an ASPSP, these guidelines make the assumption that the Receiver-SP is an ASPSP. Anyhow, also non-ASPSP could use this standard in a role of a Receiver-SP with very little deviation, if any at all. Please note, that the general definition of roles inherits from the

role model in [oFA-IG-Com]. Particularly, the "PSU" in the context of a document is identical to the Document Receiver.

The ASPSP may require the API Client to sign request messages. This requirement shall be stated in the ASPSP documentation. The signing requirements are defined in [oFA SMPF]. No specific requirements are defined for the Document Services.

2.2 API Access Methods

The following tables give an overview on the HTTP access methods supported by the new API endpoint and by resources created through this API.

API Access for posting Documents

For now, the following endpoints and access methods are defined. As always the condition of an access method of a sub-element is relative to the support of the parent node.

Endpoints/Resources	Method	Condition	Description
/documents	POST	Mandatory	Create a document resource This is the first step in the API to initiate the related document service. See Section 3.1
/documents/{documentResourceId}	GET	Mandatory	Read the details of a document resource. See Section 3.3
/documents/{documentResourceId}/status	GET	Mandatory	Read the transmission status of the related document resource. See Section 3.2
/documents/{documentResourceId}	DELETE	Mandatory	Cancel a submitted document. See Section 3.4

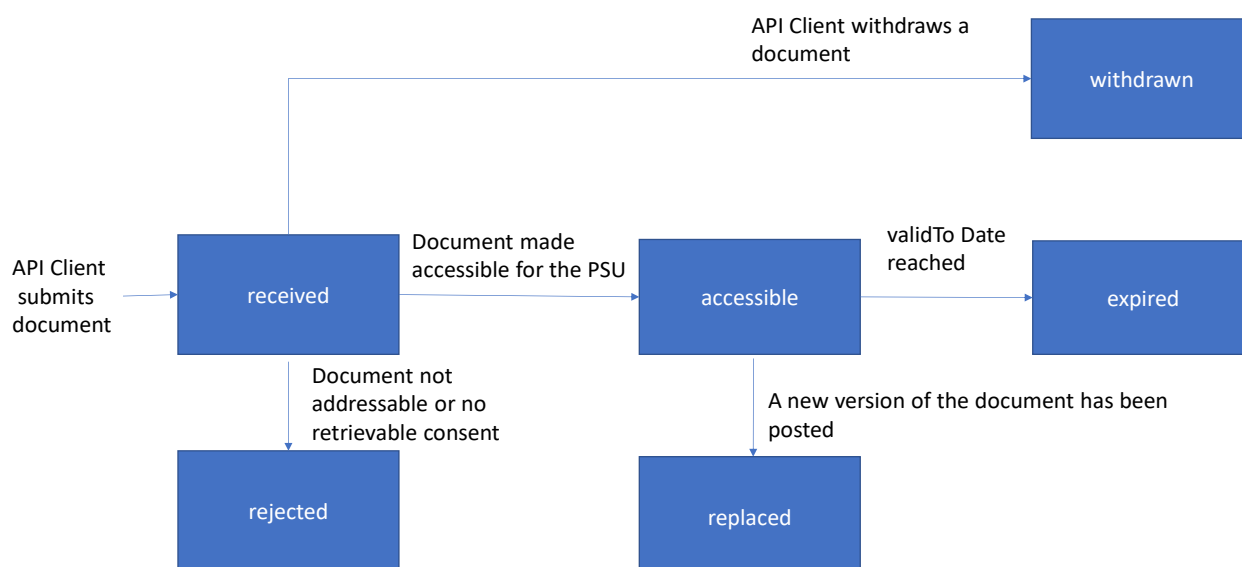
RFU: In contrast to the services defined in [oFA-IG-RTP], the first version of this specification will not support bulk document transmission in the interface between Document Sender and Sender SP. This will be added as soon as a related standardisation need is identified.

2.3 Additional Error Information

No specific additional error information in addition to the definitions in [oFA SMPF] is needed for this extended service.

2.4 Status Information

The following codes are supported for documentStatus in a document transmission lifecycle:



RFU: In a later phase, further status changes e.g. from "accessible" to "rejected" could be supported to enable explicit acceptance/refusal processes. Also, a new status "delivered" could be added in future to fulfil compliance needs to really deliver a document to a customer.

RFU: The status change from "accessible" to "replaced" is not yet fully defined. This needs further clarification with market demand side on functional requirements.

3 Message Types

This service description is based on openFinance framework functions as defined in [oFA SMPF], also including related http headers which are not defined here any more in detail to reach a better readability, e.g. headers around the resource status notification function.

NOTE: Please note, that this service does not cater for any authorisation via the user, so it is **not** a Transaction Initiation process as defined in [oFA SMPF], i.e. all http headers around steering authorisation processes or related to user identification are not supported.

3.1 Document Submission Request

Request

Call

POST /v2/documents

This call is posting a document to an addressed user or corporate identified in the message body.

Path Parameters

None.

Query Parameters

No specific query parameter.

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
Authorization	String	Conditional	Is contained only, if Oauth2 has been used in a pre-step for onboarding the API Client
Client-Brand-Logging-Information	String	Optional	This header might be used by Clients to inform the ASPSP about the brand used by the API Client towards the PSU. This information is meant for logging entries to enhance communication between ASPSP and PSU or ASPSP and API Client. This header might be ignored by the ASPSP.

Attribute	Type	Condition	Description
API-Contract-ID	UUID	Conditional+	ID of the underlying API service contract between API Client and API Server, if resulting from API Client onboarding, following [oFA-IG-Adm].

Request Body

Attribute	Type	Condition	Description
receivingParty	Party Description	{Or	Data to identify the receiving party unanimously.
accountId	Account Reference	Or}	Account reference of the account to be addressed for the receiving party.
sendingParty	Party Description	Optional	Data to identify the sending party.
typeCode	Document Type Code	{Or Optional	Type of document or template.
typeProprietary	Max35Text	Optional Or}	Proprietary document type definition.
identification	Max35Text	Mandatory	Identification of the document or template.
issueDate	ISODate	{Or	Issue date of the document.
issueDateTime	ISODateTime	Or}	Issue date and time of the document.
name	Max140Text	Optional	Name of document or transaction, for example, tax invoice.
languageCode	Language Code	Optional	Unique identifier for a language used in the document.
formatCode	Document Format Code	{Or	Format of the document or template, such as PDF, XML, XSLT.
formatProprietary	Max35Text	Or}	Proprietary format encoding.
formatProprietary SchemeName	Max35Text	Optional	May be used only if also formatProprietary is used.

Attribute	Type	Condition	Description
formatProprietary Issuer	Max35Text	Optional	May be used only if also formatProprietary is used.
fileName	Max140Text	Optional	Technical name of the file.
relatedDocuments	Array of Related Document Information	Optional	A list of related documents
enclosure	Binary Document	Mandatory	Base64 encoding of the binary file representing the enclosed document or template, such as a PDF file, image file, XML file, MT message.

Response

Response Code

HTTP Response Code equals 201.

Response Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
ASPSP-Timestamp	ISODateTime	Conditional	Timestamp of the response from the Receiver-SP. Mandatory, if the API Server is not in the role of the Receiver-SP(with regards to this specific request). Otherwise optional. Remark: The date and time of the response that comes directly from the Receiver-SP is already provided in the date header.

Response Body

Attribute	Type	Condition	Description
documentResourceId	UUID	Mandatory	The technical identification of the document resource.
documentStatus	Document Status	Mandatory	The status of the related document.
reasonCode	Status Reason Code	{Or - Optional	Additional information on the reason for e.g. rejecting the request.
reasonProprietary	Max35Text	Or Optional}	Additional information on the reason for e.g. rejecting the request using proprietary encoding.
_links	Links	Mandatory	A list of hyperlinks to be recognised by the API Client. The actual hyperlinks used in the response depend on the dynamical decisions of the ASPSP when processing the request. Remark: All links can be relative or full links, to be decided by the ASPSP. Type of links admitted in this response, (further links might be added for extensions defined by the API Server): “self”: The link to the resource created by this request. This link can be used to retrieve the resource data. “status”: The link to retrieve the resource status.
psuMessage	Max500Text	Optional	Text to be displayed to the PSU
apiClientMessages	Array of Client Message Information	Optional	Messages to the API Client on operational issues.

Examples

Example Sender-SP sending an e-receipt after a card payment to the card issuer ASPSP

Request

```
POST https://api.testbank.com/open-finance/v2/documents
Content-Type: application/json
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7721
Client-Notification-URI:
    www.fintech.com/documents/transactions/9987654/notifications
Client-Notification-Content-Preferred: LAST
API-Contract-ID: 99391c7e-ffff-49ec-a2ad-99ddcb1f7721
Date: Sun, 8 June 2024 15:02:37 GMT

{
  "accountId": {"PAN": "cardPAN"},
  "sendingParty": {"name": "merchant name"},
  "typeCode": "VCHR",
  "identification": "document-id-1234",
  "issueDateTime": "2024-06-08",
  "formatCode": "DPDF",
  "enclosure": "<Base64encoded document>"
}
```

Response

```
HTTP/1.x 201 Created
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7722
ASPSP-Notification-Support: true
ASPSP-Notification-Content: PROCESS
Date: Sun, 8 June 2024 15:02:39 GMT
Location: https://api.testbank.com/document-
server/v2/documents/3d9a81b3-a47d-4130-8765-a9c0ff861100
Content-Type: application/json

{
  "dcoumentResourceId": "3d9a81b3-a47d-4130-8765-a9c0ff861100",
  "documentStatus": "received",
  "_links": {
    "self": {"href": "/v2/documents/3d9a81b3-a47d-4130-8765-
a9c0ff861100"},
    "status": {"href": "/v2/documents/3d9a81b3-a47d-4130-8765-
a9c0ff861100/status"}
  }
}
```

```
}
```

Example A city administration sending a formal notification to a citizen via the related ASPSP

Request

POST <https://api.testbank.com/open-finance/v2/documents>

Content-Type: application/json
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7721
Client-Notification-URI: www.city.com/documents/transactions/9987654/notifications
Client-Notification-Content-Preferred: LAST
API-Contract-ID: 99391c7e-ffff-49ec-a2ad-99ddcb1f7721
Date: Sun, 8 June 2024 15:02:37 GMT

```
{
  "receivingParty": {"identification": {
    "privateId": {
      "others": {
        "identification": "1234Y56789",
        "schemeNameCode": "NIDN",
        "issuer": "city"}
      }
    }
  },
  "sendingParty": {"name": "city administration name"},
  "typeProprietary": "publicNotification", /* no ISO code yet available
                                           /* will be requested for implementations
  "identification": "document-id-1235",
  "issueDateTime": "2024-06-08",
  "formatCode": "DPDF",
  "enclosure": "<Base64encoded document>"
}
```

3.2 Document Status Request

Request

Call

GET /v2/documents/{documentResourceId}/status

Reads status information of a document.

Path Parameter

Attribute	Type	Description
document ResourceId	String	Resource identification of the corresponding document resource as returned by a Document Submission Request

Query Parameters

No specific query parameter.

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
Authorization	String	Conditional	Is contained only if OAuth2 has been used in an onboarding pre-step.

Request Body

No request body.

Response

Response Code

HTTP Response Code equals 200.

Response Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.

Response Body

Attribute	Type	Condition	Description
documentStatus	Document Status	Optional	received, viewed, replaced, rejected;
reasonCode	Status Reason Code	{Or – Optional	Additional information on the reason for e.g. rejecting the request
reasonProprietary	Max35Text	Or – Optional]	Proprietary additional information on the reason for e.g. rejecting the request.
accessDateTime	ISO Date Time	Optional	The date and time when the PSU has accessed the document the first time.
psuMessage	Max500Text	Optional	Text information for the PSU
relatedDocuments	Links	Optional	Linking to other documents, where applicable.

Example

Request

GET https://www.testbank.com/open-finance/v2/documents/3d9a81b3-a47d-4130-8765-a9c0ff861100/status

X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7798

Date: Sun, 22 June 2024 15:05:37 GMT

Content-Type: application/json

Response

HTTP/1.x 200 OK

X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7798

Date: Sun, 22 June 2024 15:05:39 GMT

Content-Type: application/json

```
{
  "documentStatus": "accessible",
  "accessDateTime": "2024-06-20T16:03:12Z"
}
```

3.3 Retrieve Document Request

Request

Call

GET /v2/documents/{documentResourceId}

Returns the content of a document object.

Path Parameter

Attribute	Type	Description
document ResourceId	String	Resource identification of the corresponding document resource as returned by a Document Submission Request

Query Parameters

No specific query parameter.

Request Headers

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
Authorization	String	Conditional	Is contained only, if an OAuth2 based authentication was performed in an onboarding pre-step.

Request Body

No request body.

Response

Response Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.

Response Code

The HTTP response code equals 200.

Response Body

The response body contains the view of the ASPSP on the addressed document resource.

Attribute	Type	Condition	Description
paymentResourceId	UUID	Mandatory	Resource identification of the related document.
documentStatus	Document Status	Mandatory	
receivingParty	Party Description	{Or	Data to identify the receiving party unanimously.
accountId	Account Reference	Or}	Account reference of the account to be addressed for the receiving party.
sendingParty	Party Description	Optional	Data to identify the sending party.
typeCode	Document Type Code	{Or Optional	Type of document or template.
typeProprietary	Max35Text	Optional Or}	Proprietary document type definition.
identification	Max35Text	Mandatory	Identification of the document or template.
issueDate	ISODate	{Or	Issue date of the document.
issueDateTime	ISODateTime	Or}	Issue date and time of the document.
name	Max140Text	Optional	Name of document or transaction, for example, tax invoice.
languageCode	Language Code	Optional	Unique identifier for a language used in the document.
formatCode	Document Format Code	{Or	Format of the document or template, such as PDF, XML, XSLT.
formatProprietary	Max35Text	Or}	Proprietary format encoding.

Attribute	Type	Condition	Description
formatProprietary SchemeName	Max35Text	Optional	May be used only if also formatProprietary is used.
formatProprietary Issuer	Max35Text	Optional	May be used only if also formatProprietary is used.
fileName	Max140Text	Optional	Technical name of the file.
relatedDocuments	Array of Related Document Information	Optional	A list of related documents
enclosure	Binary Document	Mandatory	Base64 encoding of the binary file representing the enclosed document or template, such as a PDF file, image file, XML file, MT message.
_links	Links	Optional	

Example

```
GET https://www.testbank.com/open-finance/v2/documents/3d9a81b4-a47d-4130-
8765-a9c0ff861100
X-Request-ID:          99391c7e-ad88-49ec-a2ad-99ddcb1f7798
Date:                  Sun, 8 June 2024 19:05:37 GMT
Content-Type:          application/json
```

Response

```
HTTP/1.x 200 OK
X-Request-ID:          99391c7e-ad88-49ec-a2ad-99ddcb1f7799
Date:                  Sun, 8 June 2024 19:05:38 GMT
Content-Type:          application/json
```

```
{
  "dcoumentResourceId": "3d9a81b3-a47d-4130-8765-a9c0ff861100",
  "documentStatus": "accessible",
  "receivingParty": {"identification": {
    "privateId": {
      "others": {
```

```
        "identification": "1234Y56789",
        "schemeNameCode": "NIDN",
        "issuer": "city"}
    }
}
}
"sendingParty": {"name": "city administration name"},
"typeProprietary": "publicNotification", /* no ISO code yet available
                                           /* will be requested for implementations
"identification": "document-id-1235",
"issueDateTime": "2024-06-08",
"formatCode": "DPDF",
"enclosure": "<Base64encoded document>",

"_links": {
    "self": {"href": "/v2/documents/3d9a81b3-a47d-4130-8765-
a9c0ff861100"},
    "status": {"href": "/v2/documents/3d9a81b3-a47d-4130-8765-
a9c0ff861100/status"}
```

3.4 Document Withdrawal Request

Request

Call

DELETE /v2/documents/{docuemntResourceId}

It initiates the withdrawal of a submitted document.

Path Parameter

Attribute	Type	Description
document ResourceId	String	Resource identification of the corresponding document resource as returned by a Document Submission Request

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
Authorization	String	Conditional	Is contained only, if an OAuth2 based authentication was performed in an onboarding pre-step.

Query Parameters

No specific query parameters defined.

Request Body

No request body.

Response

Response Code

Since the DELETE is sufficient for withdrawing a submitted document: HTTP response code 204.

Response Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.

Response Body

In case of HTTP code 204, no response body is used.

Examples

DELETE <https://api.testbank.com/document-server/v2/documents/3d9a81b3-a47d-4130-8765-a9c0ff861100>

```
Content-Type      application/json
X-Request-ID     99391c7e-ad88-49ec-a2ad-99ddcb1f7769
Date             Sun, 09 May 2021 17:05:37 GMT
```

4 References

4.1 Normative References

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- [oFA-IG-Adm] openFinance API Framework, Implementation Guidelines, Administrative Services, version 1.0, 21 February 2024
- [oFA-IG-Com] openFinance API Framework, Implementation Guidelines, XS2A API for Compliance Services, Version 2.1, 31 July 2024
- [oFA-CO] openFinance API Framework, Consent API for V2, Implementation Guidelines, Version 2.1, 31 July 2024
- [oFA DaD] openFinance API Framework, Data Dictionary for V2.x, Version 2.2.2, 16 December 2024
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- [EBA-RTS] Commission Delegated Regulation (EU) 2018/389 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, C(2017) 7782 final, published 13 March 2018
- [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
- [PSD2] Directive (EU) 2015/2366 of the European Parliament and of the Council on payment services in the internal market, published 23 December 2015

4.2 Informative References

- [oFA-IG-RTP] openFinance API Framework, Implementation Guidelines, Request to Pay Services, version 2.1, 18 October 2024

