



XS2A API Description

Version 1.0 as of 14.03.2019

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1 General

The below API description follows the guidelines of the Berlin Group Standard and is supporting accounts for RZBAATWW.

Please use the following settings:

URL: <https://xs2atest.rbinternational.com>

Test accounts:

- AT123100001000975706
- AT563100001100975706

Test PSU IDs:

- TPPTTEST1 (Single signature)
- TPPTTEST2 (First signature)
- TPPTTEST3 (Second signature)
- TPPTTEST4 (No signature)

To meet the legal requirements of Article 34(1) and Article 35(1) of the RTS regarding secure communication we require the usage of QWACs only.

Statistics of KPIs (availability/performance) will be available until 15th of July 2019 for Q2.

In case of any questions please feel free to contact RBI's Support Desk available Mo - Fr from 08.00 – 18.00 CET

cashmanagementsupport@rsc.co.at

2 Services Supported

Use Case	Service	Role	Format Support
Initiation of a single payment (SEPA Credit)	Payment initiation service	PISP	Yes, XML and JSON Format
Initiation of a multiple / bulk payment (SEPA Credit)	Payment initiation service	PISP	Yes, XML
Establish account information consent	Account information service	AISP	Yes, JSON
Get list of reachable accounts	Account information service	AISP	Yes, JSON

Get account details of the list of accessible accounts	Account information service	AISP	Yes, JSON
Get balances for a given account	Account information service	AISP	Yes, JSON
Get transaction information for a given account	Account information service	AISP	Yes, XML or SWIFT (depends on the banks application)

3 Strong Customer Authentication

Each transaction needs to be approved by the Payment Service User (PSU). This approval (consent) requires Strong Customer Authentication.

Following the decoupled approach, the TPP generates the transaction and the PSU has to authenticate in a separate channel the transaction via a dedicated APP or application or device.

4 Service Catalogue

4.1 Consents

```
POST /v1/consents
GET /v1/consents/{consentId}
GET /v1/consents/{consentId}/status
DELETE /v1/consents/{consentId}
GET /v1/consents/{consentId}/authorisations
GET /v1/consents/{consentId}/authorisations/{authorisationId}
```

4.2 Account Information

```
GET /v1/accounts/{accountId}
GET /v1/accounts/{accountId}/balances
GET /v1/accounts/{accountId}/transactions?date_from=""&date_to= ""
```

4.3 Payments

```
POST /v1/payments/{payment-product}
POST /v1/bulk-payments/{payment-product}
GET /v1/payments/{payment-product}/{paymentId}
GET /v1/payments/{payment-product}/{paymentId}/status
POST /v1/payments/{payment-product}/{paymentId}/authorisations
GET /v1/payments/{payment-product}/{paymentId}/authorisations
GET /v1/payments/{payment-product}/{paymentId}/authorisations/{authorisationId}
DELETE /v1/payments/{payment-product}/{paymentId}
```

GET /v1/bulk-payments/{payment-product}/{paymentId}
 GET /v1/bulk-payments/{payment-product}/{paymentId}/status

POST /v1/bulk-payments/{payment-product}/{paymentId}/authorisations
 GET /v1/bulk-payments/{payment-product}/{paymentId}/authorisations
 GET /v1/bulk-payments/{payment-product}/{paymentId}/authorisations/{authorisationId}
 DELETE /v1/bulk-payments/{payment-product}/{paymentId}

4.3.1 Payment types supported

payments/sepa-credit-transfers
 payments/pain.001-sepa-credit-transfers
 bulk-payments/pain.001-sepa-credit-transfers

5 API Description

5.1 Certificate Information

Attribute	Type	Condition	Description
TPP Registration Number	String	Mandatory	If missing, System will response with 400/ FORMAT_ERROR / TPP Message: missing field: XXXX MaxLength 50
TPP Name	String	Optional	Used inside the Consent management / Identification of the TPP but not mandatory
TPP Role	String	Mandatory	If missing, System will response with 400/ FORMAT_ERROR / TPP Message: missing field: XXXX MaxLength 50
TPP National Competent Authority	String	Conditional	MaxLength 100; Not used in V1
Certificate FingerPrint	String	Mandatory	If missing, System will response with 400/ FORMAT_ERROR / TPP Message: missing field: XXXX MaxLength 50

5.2 Payment initiation / Payment status

5.2.1 Payment Information

As outlined above, the following payment products are supported:

Payment service: Single transfer /payments/
 Payment product: sepa-credit-transfers

	pain.001-sepa-credit-transfers
Payment service:	Bulk transfer /bulk-payments/
Payment product:	pain.001-sepa-credit-transfers

The payment initiation results – if successful – always in a response with

HTTP-Response code: 201 Created

The response body for JSON and XML formatted payments are always in JSON!

Sample:

POST /v1/payments/pain.001-sepa-credit-transfers

creates a payment initiation request for a single transaction based on the XML pain 001 scheme.

POST /v1/bulk-payments/pain.001-sepa-credit-transfers

creates a payment initiation request for more than one single transaction based on the XML pain 001 scheme.

Sample:

POST /v1/payments/sepa-credit-transfers/

Path	payment service
	payment product

Query Parameter	no
-----------------	----

Request Header

Attribute	Type	Condition	Description
Content-Type	String	Mandatory	application/json or application/xml pending on the payment-product 415 / Unsupported Media Type in case of wrong Content Type 400/ FORMAT_ERROR / TPP Message missing field: XXXX
X-Request-ID	UUID	Mandatory	If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
PSU-ID	String	Mandatory	Mandatory in this context If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX 401/ PSU_CREDENTIALS_INVALID (in case of attribute defined, but the ID cannot be matched or PSU is blocked) TPP Message: ID
PSU-ID-Type	String	Conditional	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility.
PSU-Corporate-ID	String	Conditional	Might be mandated in the ASPSP's documentation. Only used in a corporate context. Not used in V1
PSU-Corporate-ID-Type	String	Conditional	Might be mandated in the ASPSPs documentation. Only used in a corporate context. Not used in V1
Authorization	String	Conditional	Not used in this context
TPP-Certificate	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Signature	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Digest	String	Conditional	Not used in V1
TPP-Redirect-Preferred	Boolean	Optional	Based on the implemented cases Default=false
TPP-Redirect-URI	String	Conditional	URI of the TPP. Mandatory if the attribute TPP-Redirect-Preferred is set to true If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
TPP-Nok-Redirect-URI	String	Optional	Redirect in case of error (not used at the moment)

TPP-Explicit- Authorisation-Preferred	Boolean	Optional	Start authorisation process separately (if signing basket is supported)
			Default: false implicit authorisation is assumed (signing basket not supported)

Additional PSU related information

PSU-IP-Address	String	Mandatory	IP Address between PSU and TPP
PSU-Agent	String	Optional	For internal usage
PSU-Geolocation	String	Optional	For internal usage

Request Body

Content data based on the Berlin Group Framework Implementation Guidelines format description as defined in the Annex **Error! Reference source not found. Error! Reference source not found.** (minimum set of attributes required):

```
{
  "instructedAmount": {"currency": "EUR" , "content": ".50"},
  "debtorAccount": { "iban" : "AT123100001000975706"},
  "creditorName": "Merchant123" ,
  "creditorAccount": {"iban" : "AT123100001000975706"},
  "remittanceInformationUnstructured": "Ref Number Merchant"
}
```

Response of the System

Response code 201 Created

Response Header:

Attribute	Type	Condition	Description
Location	String	Mandatory	Location of the created resource (if created) Link of the URL for retrieval of details "https://xs2atest.rbinternational.com/v1/payments/sepa-credit-transfers/XXXXXXX"
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party (out of the request).
ASPSP-SCA-Approach	String	Conditional	"DECOUPLED"
Content-Type	String	Mandatory	application/json

Response Body:

decoupled approach:

```

{
  "transactionStatus": "RCVD",
  "paymentId": "XXXXXXX"
  "_links": {
    "self": { "href" : "v1/payments/ sepa-credit-transfers/XXXXXXX"},
    "status": { "href" : "v1/payments/ sepa-credit-transfers/XXXXXXX/status"}
    "scaStatus": { "href" : "v1/payments/ sepa-credit-transfers/XXXXXXX/authorisations/123auth456"}
  }
  "psuMessage": "text" //:"Max512Text - Additional explaining text
                    // Default always English
                    // "The transaction with the ID XXXXX is ready for approval"

  "tppMessages":[ {
    "category": "ERROR", // INFO, ERROR or WARNING - string max 35
    "code": "XXXX_INVALID", // Message code – Mandatory - string max 35
    "path": "XXXXXX" //optional MaxText140
    "text": "XXXXXXX" //Additional explaining text, always English max. Text140
  }
}

```

The paymentId is the reference for the later retrieval of the status or of the content of a transaction. Based on the processing logic of the Communication Platform the

paymentId is generated by a unique reference (intraId) concatenated with the PaymentInfId; String: Max70Text.

In the sample above the related user is able to authorize the transaction and the TPP is able to retrieve the status of the signature otherwise the scaStatus link will be not available.

The authorisation resource is automatically created because the PSU is allowed to authorise the transaction.

5.2.2 Pain.001 versus JSON

It is expected that for the pain.001 compliant XML-variants the fields are filled in accordance to the rules scheme. The **PaymentInfId** as well as the single transaction ID **EndtoEndId should be filled**. This is crucial for the generation of the status messages based on the pain.002.001.03.

PaymentInfID - unique reference of the logical data file

```
.....  
<PmtInf>  
<PmtInfId>PAYMENT-PSD2-20180511-111111</PmtInfId>  
<PmtMtd>TRF</PmtMtd>  
<BtchBookg>>false</BtchBookg>  
<NbOfTxes>1</NbOfTxes>  
<CtrlSum>1.00</CtrlSum>  
.....  
  
<CdtTrfTxInf>  
<PmtId>  
<EndtoEndId>MYUNIQUEID</EndtoEndId>  
</PmtId>
```

.....

Each SEPA-complaint payment order should contain always an EndtoEndId for each transaction. This ID is not mandatory in the Single Payment description of the Berlin Group Framework Implementation Guidelines, Chapter 10.1). The field will be auto generated by the System if it is not filled by the PSU resp. TPP.

In case of single transactions, the EndtoEndId is equal to PaymentInfId if the content is converted into XML for processing at the backend.

5.2.3 Restricted Validity of a transaction

If a new resource is created (e.g. a payment is generated), the default validity of the resource is 120 minutes. Pending onto the implementation the validity may differ.

5.2.4 GET /v1/{payment-service}/{payment-product}/{paymentId}

Retrieve transaction information

Defined in the Berlin Group Implementation Guidelines guidelines 1.2, chapter 5.5

Path	{payment-service} - supported: /payments / bulk-payments/
Path	{payment-product}
Path	paymentId
Query Parameter	n.a.
Request Body	n.a.

GET /v1/{payment-service}/{payment-product}/{paymentId}

Sample:

GET /v1/payments/sepa-credit-transfers/1234-wertiq-983

Request Header

Attribute	Type	Condition	Description
Content-Type	String	Mandatory	application/json or application/xml pending on the payment-product 415 / Unsupported Media Type in case of wrong Content Type 400/ FORMAT_ERROR / TPP Message missing field: XXXX
X-Request-ID	UUID	Mandatory	If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
PSU-ID	String	Mandatory	Mandatory in this context If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX 401/ PSU_CREDENTIALS_INVALID (in case of attribute defined, but the ID cannot be matched or PSU is blocked) TPP Message: ID
PSU-ID-Type	String	Conditional	

PSU-Corporate-ID	String	Conditional	Not used in this context
PSU-Corporate-ID-Type	String	Conditional	Not used in this context
Authorization Bearer	String	Conditional	Not used in this context
TPP-Certificate	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Signature	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Digest	String	Conditional	Not used in V1
TPP-Redirect-Preferred	Boolean	Optional	Not used in this context
TPP-Redirect-URI	String	Conditional	Not used in this context
TPP-Nok-Redirect-URI	String	Optional	Not used in this context
TPP-Explicit-Authorisation-Preferred	Boolean	Optional	Not used in this context

Additional PSU related information (subject to further changes)

PSU-IP-Address	String	Mandatory	Not used in this context
PSU-Agent	String	Optional	Not used in this context
PSU-Geolocation	String	Optional	Not used in this context

Response of the System

Response code 200 OK

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 (out of the request).
Content-Type	String	Mandatory	application/json or application/xml based on the payment-product

Response Body

Payment content as defined by the JSON or XML schema (XML-document in ZIP-container)

No additional status information will be delivered, the XML-schema doesn't allow any extension

5.2.5 GET /v1/{payment-service}/{payment-product}/{paymentId}/status

Retrieve the status of the transaction

Path	{payment-service} - supported: /payments / bulk-payments/
Path	{payment-product}
Path	paymentId
Query Parameter	n.a
Request Body	n.a.

GET /v1/{payment-service}/{payment-product}/{paymentId}/status

Sample:

GET /v1/payments/sepa-credit-transfers/1234-wertiq-983/status

Please refer to Chapter 5.4 of the Berlin Group Implementation Guidelines for further details.

Request Header

Attribute	Type	Condition	Description
Content-Type	String	Mandatory	application/json or application/xml pending on the payment-product

			415 / Unsupported Media Type in case of wrong Content Type 400/ FORMAT_ERROR / TPP Message missing field: XXXX
X-Request-ID	UUID	Mandatory	If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
PSU-ID	String	Mandatory	Mandatory in this context If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX 401 / PSU_CREDENTIALS_INVALID (in case of attribute defined, but the ID cannot be matched or PSU is blocked) TPP Message: ID
PSU-ID-Type	String	Conditional	Not used in this context
PSU-Corporate-ID	String	Conditional	Not used in this context
PSU-Corporate-ID-Type	String	Conditional	Not used in this context
Authorization Bearer	String	Conditional	Not used in this context
TPP-Certificate	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Signature	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Digest	String	Conditional	Not used in V1
TPP-Redirect-Preferred	Boolean	Optional	Not used in this context
TPP-Redirect-URI	String	Conditional	Not used in this context
TPP-Nok-Redirect-URI	String	Optional	Not used in this context
TPP-Explicit-Authorisation-Preferred	Boolean	Optional	Not used in this context

Additional PSU related information (subject to further changes)

PSU-IP-Address	String	Mandatory	Not used in this context
PSU-Agent	String	Optional	Not used in this context
PSU-Geolocation	String	Optional	Not used in this context

Response of the System

Response code 200 OK

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 (out of the request).
Content-Type	String	Mandatory	application/json or application/xml based on the payment-product

Response body

In case of JSON - based endpoint:

```
{
  "transactionStatus" : "RCVD"
}
```

In case of XML based endpoint (delivered in a ZIP-Container):

```
<Document
xmlns="urn:iso:std:iso:2002:tech:xsd:pain.002.001.03">
  <CstmrPmtStsRpt>
    <GrpHdr>
      <MsgId>4572457256725689726906</MsgId>
      ...
    </GrpHdr>
  </CstmrPmtStsRpt>
</Document>
```

The ZIP-File may contain 1..n XML-files based on the logic for delivery of update information.

5.2.6 Transaction Authorisation

5.2.6.1 Overview

With the version 1.2 of the Berlin Group specification the handling of the authorisation changed significantly. Now dedicated authorisation endpoints are defined alongside with the transaction itself. It is possible to proceed with a multilevel signature for transactions. Please refer to the chapter 4.5 / chapter 7 of the implementation guidelines of the Berlin Group.

The actual version supports the multilevel authorisation of transactions via the TPP.

Valid status of a sub-resource:

received (i.e. created)

finalized (successful signature)

failed (authorisation was not successful)

PSD2 - NextGenPSD2 XS2A Framework

Initiation of a payment – explicit authorisation

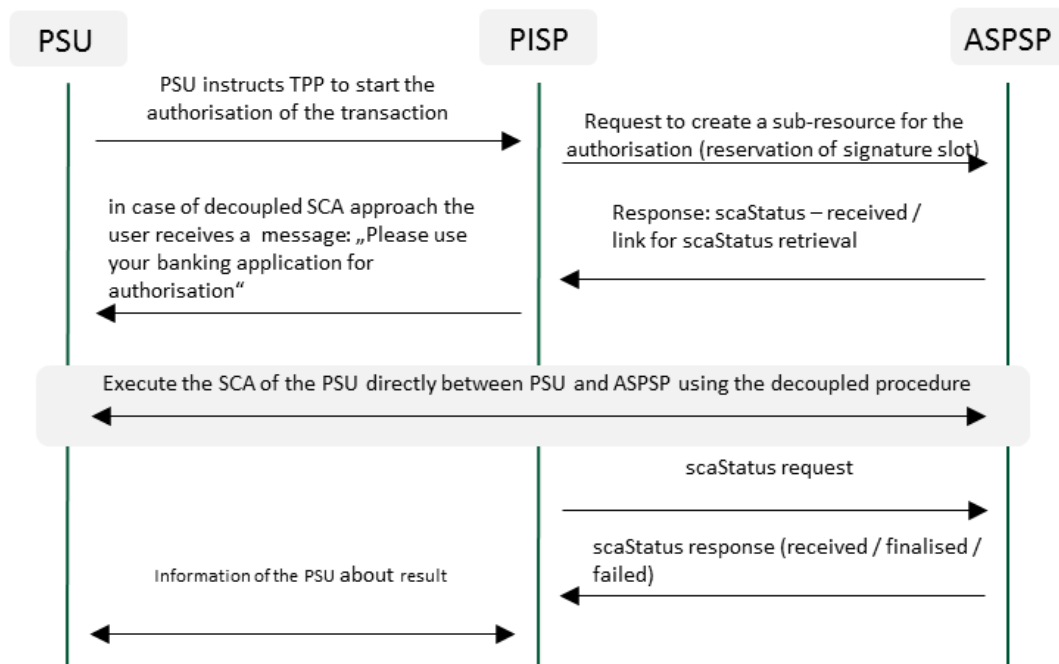


Diagram 5: Explicit Authorisation

In order to keep the workflow for a customer/ user as simple as possible the system will create the authorisation resources implicit during the initiation of the transaction at the first step as long as the user is allowed to authorize. It is the assumption that the user who initiates the transaction can also authorize the transaction. If one authorisation is not sufficient, further authorisations are defined explicitly.

PSD2 - NextGenPSD2 XS2A Framework
Initiation of a payment (implicit authorisation)

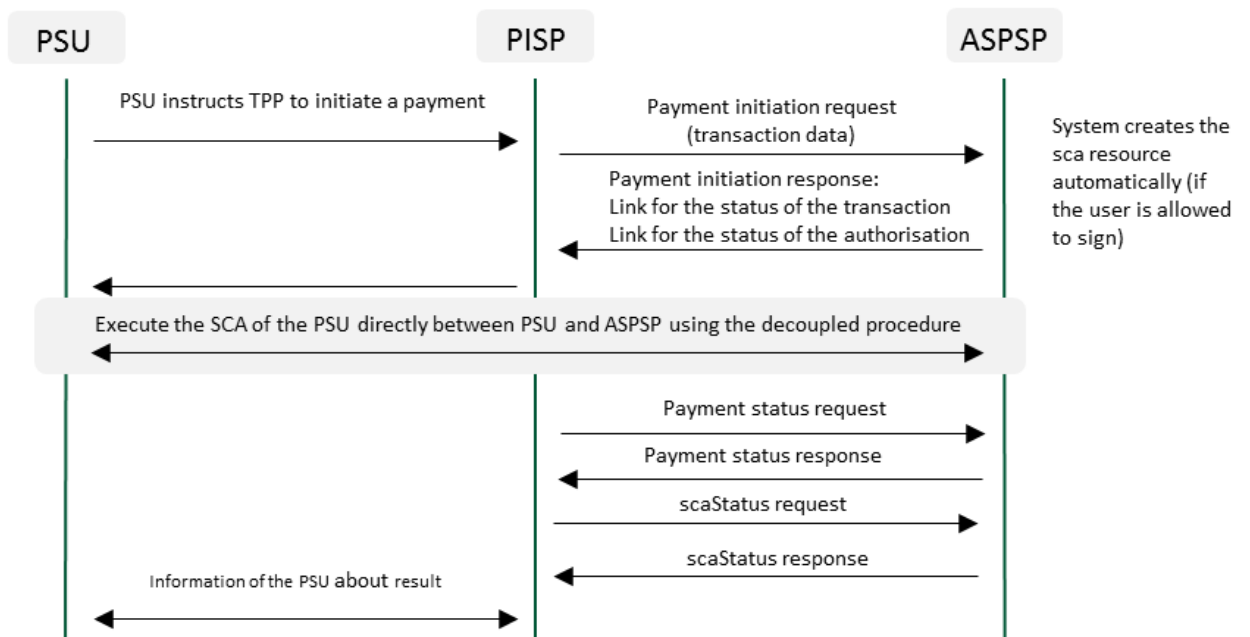


Diagram 6: Implicit Authorisation

Sample of the workflow:

Case 1: User who creates the transaction is able to authorize the transaction, but requires an additional approval:

Step 1:

The transaction is generated in the context of a certain user and could be signed directly after the creation of the transaction (based on the decoupled approach):

Request: POST /v1/payments/sepa-credit-transfers

Response:

Response body:

```
{
  "transactionStatus": "RCVD",
```

```
"paymentId": "1234-wertiq-983"  
"_links": {  
  "self": { "href" : "/v1/payments/sepa-credit-transfers/1234-wertiq-983"},  
  "status": { "href" : "/v1/payments/sepa-credit-transfers/1234-wertiq-983/status"}  
  "scaStatus": { "href": "/v1/payments/sepa-credit-transfers/1234-wertiq-983/authorisations/123auth456"}  
}  
}
```

The user is allowed to authorize the transaction and therefore the scaStatus link is enabled.

At the very beginning of the authorisation procedure the status will be "received", i.e. the authorisation process is started.

Step 2:

The next step will be the authentication and authorisation by the user. For the decoupled approach the user will use the online banking or app and authorise the transaction.

In case the authorisation of the user is sufficient, the transaction will be processed. The transaction status will change from "received" to "accepted" and the authorisation status will change from "received" to "finalised" (chapter 14.14 Berlin Group guidelines).

In case a further signature by another user is required, the status of the transaction is still "RCVD".

The system indicates the requirement for a further authorisation resource by a specific TPP message in the response to the scaStatus request:

To be defined

```
GET/v1/payments/sepa-credit-transfers/1234-wertiq-983/authorisations/123auth456
```

// Deprecated – the distributed signature status is only available using the request for authorisation status like:

```
// GET/v1/payments/sepa-credit-transfers/1234-wertiq-983/authorisations/123auth456
```

```
// reason : To avoid a mixture of XML and JSON content body
```

~~Also in the response to the payment status request such a TPP Message will be generated.~~

GET /v1/payments/sepa-credit-transfers/1234-wertiq-983/status

In a next step the TPP has to generate explicitly an authorisation resource for the second user:

Request: POST /v1/payments/sepa-credit-transfers/1234-wertiq-983/authorisations

(in the context of another user)

Result:

Body

```
{
  "scaStatus": "received",
  "psuMessage": " Dear customer, please login to your online banking.",
  "_links":{
    "self": { "href" : "/v1/payments/sepa-credit-transfers/1234-wertiq-983"},           //Link added
    "status": {"href" : "/v1/payments/sepa-credit-transfers/1234-wertiq-983/status"}, //Link added
    "scaStatus":{"href":"/v1/payments/sepa-credit-transfers/1234-wertig-983/authorisations/789auth021"}
  }
}
```

Please note, that the scaStatus (like a signature slot) is linked to the second user.

This step might be repeated until the transaction is completely signed.

With the option

GET /.../{payment-service}/{payment-product}/{paymentId}/authorisations

the TPP is able to collect an array of created authorisation resources and may retrieve per authorisation resource the scaStatus.

Further Cases:

User who initiated the transaction is not allowed to sign but another user is able to approve

After creation of the transaction the system will generate a message for the TPP (Warning). The user is not allowed to authorise the transaction and the TPP may start the authorisation within another user-context or has to delete the transaction.

Cases to be defined

In order to create an authorisation resource the TPP has to apply the function

POST /v1/{payment-service}/{payment-product}/{paymentId}/authorisations, for the sample above:

POST /v1/payments/sepa-credit-transfers/1234-wertiq-983/authorisations

5.2.6.2 POST /v1/{payment-service}/{payment-product}/{paymentId}/authorisations

Creates a new authorisation sub-resource.

Please refer to Chapter 5 and 7 of the Berlin Group Implementation Guidelines (V 1.2) for further details.

Path Parameter	payment-service
Path Parameter	payment-product
Path	paymentId
Query Parameter	no
Body	no

POST /v1/{payment-service}/{payment-product}/{paymentId}/authorisations

Sample:

POST /v1/payments/sepa-credit-transfers/1234-wertiq-983/authorisations

Request Header

Attribute	Type	Condition	Description
Content-Type	String	Optional	application/json 415 / Unsupported Media Type in case of wrong Content Type
X-Request-ID	UUID	Mandatory	If missing, System will response with

			400/ FORMAT_ERROR / TPP Message missing field: XXXX
PSU-ID	String	Mandatory	Mandatory in this context If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX 401/ PSU_CREDENTIALS_INVALID (in case of attribute defined, but the ID cannot be matched or PSU is blocked) TPP Message: ID
PSU-ID-Type	String	Conditional	Not used in this context
PSU-Corporate-ID	String	Conditional	Not used in this context
PSU-Corporate-ID-Type	String	Conditional	Not used in this context
Authorization Bearer	String	Conditional	Not used in this context
TPP-Certificate	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Signature	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Digest	String	Conditional	Not used in V1
TPP-Redirect-Preferred	Boolean	Optional	Based on the implemented cases Default=false
TPP-Redirect-URI	String	Conditional	URI of the TPP. Mandatory if the attribute TPP-Redirect-Preferred is set to true If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
TPP-Nok-Redirect-URI	String	Optional	Redirect in case of error (not used at the moment)
TPP-Explicit-Authorisation-Preferred	Boolean	Optional	Not used in this context (explicit creation of the authorisation assumed)

Additional PSU related information (subject to further changes)

PSU-IP-Address	String	Mandatory	Not used in this context
PSU-Agent	String	Optional	Not used in this context
PSU-Geolocation	String	Optional	Not used in this context

Response of the System

Response code 201 CREATED

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 (out of the request).
ASPSP-SCA-Approach	String	Conditional	"DECOUPLED"
Content Type	String	Mandatory	application/json

Body:

Response Body:

decoupled approach:

```
{
  "scaStatus": "received",
  "_links": {
    "self": { "href" : "/v1/payments/sepa-credit-transfers/1234-wertiq-983"},
    "status": {"href" : "/v1/payments/sepa-credit-transfers/1234-wertiq-983/status"},
    "scaStatus":{"href":"/v1/payments/sepa-credit-transfers/1234-wertiq-983/authorisations/123auth456"}
  },
  "psuMessage": "text"
  //:"Max512Text - Additional explaining text
  // Default always English
  // "The transaction with the ID XXXXX is ready for approval"
}
```

5.2.6.3 GET /v1/{payment-service}/{payment-product}/{paymentId}/authorisations

Retrieves the ids of the already created authorisation sub-resources.

Please refer to Chapter 5 and 7 of the Berlin Group Implementation Guidelines (V 1.2) for further details.

Path Parameter	payment-service
Path Parameter	payment-product
Path	paymentId

Query Parameter	no
Body	no

GET /v1/{payment-service}/{payment-product}/{paymentId}/authorisations

Sample:

GET/v1/payments/sepa-credit-transfers/1234-wertiq-983/authorisations

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
Content-Type	String	Optional	application/json 415 / Unsupported Media Type in case of wrong Content Type
PSU-ID	String	Mandatory	Mandatory in this context If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX 401/ PSU_CREDENTIALS_INVALID (in case of attribute defined, but the ID cannot be matched or PSU is blocked) TPP Message: ID
PSU-ID-Type	String	Conditional	Not used in this context
PSU-Corporate-ID	String	Conditional	Not used in this context
PSU-Corporate-ID-Type	String	Conditional	Not used in this context
Authorization Bearer	String	Conditional	Not used in this context
TPP-Certificate	String	Conditional	A signature of the request by the TPP on application level. Not used in V1

Signature	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Digest	String	Conditional	Not used in V1
TPP-Redirect-Preferred	Boolean	Optional	Not used in this context
TPP-Redirect-URI	String	Conditional	Not used in this context
TPP-Nok-Redirect-URI	String	Optional	Not used in this context
TPP-Explicit-Authorisation-Preferred	Boolean	Optional	Not used in this context

Additional PSU related information (subject to further changes)

PSU-IP-Address	String	Mandatory	Not used in this context
PSU-Agent	String	Optional	Not used in this context
PSU-Geolocation	String	Optional	Not used in this context

No Request Body

Response of the System: Array of authorisation Ids

Response code 200 OK

Response Header

Attribute	Type	Condition	Description
Content-Type	String	Mandatory	application/json
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party (out of the request).

Response Body:

```
{
  "authorisationIds": ["123auth456", "789auth0023"]
}
```


Remark: In case no authorisationIds are available, the system will create a response body with an empty array

```
{
  "authorisationIds": []
}
```

Error Condition:

The path / transaction cannot be referenced by the TPP or PSU the system will response with

Response code 401 Unauthorized

5.2.6.4 GET /v1/{payment-service}/{payment-product}/{paymentId}/authorisations/{authorisationId}

Checks the status of a single sub-resource

Path Parameter	payment-service
Path Parameter	payment-product
Path	paymentId
Path	authorisations
Query Parameter	n.a
Request Body	n.a.

GET /v1/{payment-service}/{payment-product}/{paymentId}/authorisations/{authorisationId}

Sample:

GET /v1/payments/sepa-credit-transfer/1234-wertiq-983/authorisations/123auth456

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
Content-Type	String	Optional	application/json 415 / Unsupported Media Type in case of wrong Content Type
PSU-ID	String	Mandatory	Mandatory in this context If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX 401/ PSU_CREDENTIALS_INVALID (in case of attribute defined, but the ID cannot be matched or PSU is blocked) TPP Message: ID
PSU-ID-Type	String	Conditional	Not used in this context
PSU-Corporate-ID	String	Conditional	Not used in this context
PSU-Corporate-ID-Type	String	Conditional	Not used in this context
Authorization Bearer	String	Conditional	Not used in this context
TPP-Certificate	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Signature	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Digest	String	Conditional	Not used in V1
TPP-Redirect-Preferred	Boolean	Optional	Not used in this context
TPP-Redirect-URI	String	Conditional	Not used in this context
TPP-Nok-Redirect-URI	String	Optional	Not used in this context
TPP-Explicit-Authorisation-Preferred	Boolean	Optional	Not used in this context

Additional PSU related information (subject to further changes)

PSU-IP-Address	String	Mandatory	Not used in this context
PSU-Agent	String	Optional	Not used in this context
PSU-Geolocation	String	Optional	Not used in this context

Response of the System

Response code 200 OK

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 (out of the request).

Response body

```
{
  "scaStatus" : "finalised"
}
```

Error Condition:

If the path / transaction cannot be referenced by the TPP or PSU the system will response with

Response code 404 Not found

Category: "ERROR"

Message code: TPP_NOT_PERMITTED or
 PSU_NOT_PERMITTED

5.2.7 DELETE /v1/{payment-service}/{payment-product}/{paymentId}

Deactivation of a transaction

The deactivation of the transaction doesn't require an authorisation. The originator of this request might be the user or the TPP.

Path Parameter {payment-service} - supported: /payments / bulk-payments/

Path Parameter {payment-product}

Path paymentId

Query Parameter	n.a
Request Body	n.a.

Please refer to Chapter 5.6 of the Berlin Group Implementation Guidelines for further details.

Assumption: The user has not to authorize this function.

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
PSU-ID	String	Mandatory	Mandatory in this context If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX 401 / PSU_CREDENTIALS_INVALID (in case of attribute defined, but the ID cannot be matched or PSU is blocked) TPP Message: ID XXXX (Test cases to be defined)
PSU-ID-Type	String	Conditional	Not used in this context
PSU-Corporate-ID	String	Conditional	Not used in this context
PSU-Corporate-ID-Type	String	Conditional	Not used in this context
Authorization Bearer	String	Conditional	Not used in this context
TPP-Certificate	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Signature	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Digest	String	Conditional	Not used in V1
TPP-Redirect-Preferred	Boolean	Optional	Not used in this context
TPP-Redirect-URI	String	Conditional	Not used in this context
TPP-Nok-Redirect-URI	String	Optional	Not used in this context
TPP-Explicit-Authorisation-Preferred	Boolean	Optional	Not used in this context

Additional PSU related information (subject to further changes)

PSU-IP-Address	String	Mandatory	Not used in this context
PSU-Agent	String	Optional	Not used in this context
PSU-Geolocation	String	Optional	Not used in this context

Response of the System

Response code 204 OK (no authorization of the cancellation is required, therefore 204 is used)

Body

```
{
  "transactionStatus": " CANC"
}
```

Please note that no authorisation is required for this service.

5.3 Consent Management

5.3.1 Management of the consent by the TPP

The online maintenance by a TPP is possible with the following services:

POST /v1/consents	creation of the consent
GET /v1/consents/{consentId}	content retrieval with details
GET /v1/consents/{consentId}/Status	
DELETE /v1/consents/{consentId}	

It is not permitted to modify an existing consent (service not defined by the Berlin Group).

With the version 1.2 of the specification the scaStatus and the transaction status (consentStatus) are completely separated.

During the generation of a consent the authorisation resource is generated implicitly.

Each user who has the permission to collect statement / pre-posted items for one or more accounts is allowed to create and authorize a consent.

The authorization takes place either with the signature mechanism which is in use also for transaction. If the user doesn't own any signature right and therefore do not hold a signature mechanism, the system accepts just a plain "release" button for authorization.

If the user who is linked to a consent has no permission rights for the collection of account information, the system will refuse the creation of the consent with Return code 401

It is possible to retrieve the authorisation resource with the endpoint

GET /v1/ consents/{consentId}/authorisations

It is possible to retrieve the scaStatus with the new endpoint

GET /v1/ consents/{consentId}/authorisations/{authorisationId}

5.3.2 Account information consent

5.3.2.1 Option 1: consent request contains a set of accounts inside the body

POST /v1/consents/

Create Account Consent for defined accounts

Based on the Berlin Group Framework 1.2 Implementation Guidelines, Chapter 6.4.1.1.

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
PSU-ID	String	Mandatory	Mandatory in this context If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX 401 / PSU_CREDENTIALS_INVALID (in case of attribute defined, but the ID cannot be matched or PSU is blocked) TPP Message: ID

PSU-ID-Type	String	Conditional	Not used in this context
PSU-Corporate-ID	String	Conditional	Not used in this context
PSU-Corporate-ID-Type	String	Conditional	Not used in this context
Authorization Bearer	String	Conditional	Not used in this context
TPP-Certificate	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Signature	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Digest	String	Conditional	Not used in V1
TPP-Redirect-Preferred	Boolean	Optional	Based on the implemented cases Default=false
TPP-Redirect-URI	String	Conditional	URI of the TPP. Mandatory if the tppRedirectPreferred parameter is set to true If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
TPP-Nok-Redirect-URI	String	Optional	Not used in this context
TPP-Explicit- Authorisation-Preferred	Boolean	Optional	Not used in this context

Additional PSU related information (subject to further changes)

PSU-IP-Address	String	Mandatory	For the initiation expected
PSU-Agent	String	Optional	
PSU-Geolocation	String	Optional	

Request Body

Attribute	Type	Condition	Description
access	Account Access	Mandatory	If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX If wrong attributes are used:
recurringIndicator	Boolean	Mandatory	If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX

bban and bbank (both mandatory), currency (optional) or
 pan (mandatory) or
 masked pan (mandatory)

Valid examples:

```
{ "iban": "AT123100001000975706", "currency": "EUR", "bic":
"ABNANL2A" }
```

```
{ "bban": "1000975706", "currency": "EUR", "bbank": "37100000" }
```

Body: example

```
{
  "access":
  { "balances" :
    [ { "iban": "AT123100001000975706" },
      { "iban": "AT123100001000975706",
        "currency": "USD" },
      { "iban": "AT123100001000975706" } ],
    "transactions" :
      [ { "iban": "AT123100001000975706" },
        { "maskedPan": "123456xxxxxx1234" } ]

    "accounts" :
      [ { "iban": "AT123100001000975706" },
        { "maskedPan": "123456xxxxxx1234" } ]

  }
  "recurringIndicator": "true",
  "validUntil": "2017-11-01",
  "frequencyPerDay" : "4"
  "combinedService": "false"
}
```

Response code 201 Created

Response Header

Attribute	Type	Condition	Description
Location	String	Mandatory	Location of the created resource (if created) Link of the URL for retrieval of details "https://xs2atest.rbinational.com/v1/consents/XXXXXXX"
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party (out of the request).
ASPSP-SCA-Approach	String	Conditional at least one of the three options should be generated	"DECOUPLED"
Content-Type	String	Mandatory	application/json

Response Body

```

consentStatus
consentId
links

```

Decoupled approach

```

{
  "consentStatus": "received",
  "consentId": "1234-wertig-983"
  "_links": {
    "self": { "href": "/v1/consents/1234-wertig-983"},
    "status": { "href": "/v1/consents/1234-wertig-983/status"},
    "delete": { "href": "/v1/consents/1234-wertig-983"},

    "scaStatus": { "href": "/v1/consents/1234-wertig-
      983/authorisations/123-auth-456"}
  }
}

```

5.3.2.2 Option 2: consent request contains no accounts inside the body

POST /v1/consents (account information)

Create Account Consent for all accounts (Global consent for all account information services)

Based on Berlin Group Framework 1.2 Implementation Guidelines, Chapter 6.4.1.2.

(tppRedirectPreferred is now part of the HTTP header)

Request Body

```
access specific option: { "access":
                        {"allPsd2": "allAccounts"}
                        }
recurringIndicator
validUntil
frequencyPerDay
combinedService (default: false) – only supported
```

```
{"access":
  {"allPsd2": "allAccounts"},
  "recurringIndicator": "false",
  "validUntil": "2017-08-06",
  "frequencyPerDay": "1",
  "combinedService": "false"
}
```

allPsd2: All account related services – balances transactions, accounts are allowed for all accounts of the PSU (service wildcard – account wildcard).

5.3.2.3 Option 3: consent request on Account list without Indication of accounts

Only account access rights

POST /v1/consents (account information)

Create Account Consent for all accounts

Based on Berlin Group Framework 1.2 Implementation Guidelines Chapter 6.4.1.2.

tppRedirectPreferred is part of the header

Body

recurringIndicator

validUntil

frequencyPerDay

combinedService (default: false) – only supported

```

corrected
    {
      "access":
        {
          "availableAccounts": "allAccounts",
          "recurringIndicator": "false",
          "validUntil": "2019-06-14",
          "frequencyPerDay": "4",
          "combinedService": = "false" // wrong status
        }
    }

```

With this consent the TPP is allowed to use the account service only (accounts with details).

Allowed Service: GET /v1/accounts/
Result: List of accounts {Array of account details}

Second option: (New)

```

corrected
    {
      "access":
        {
          "availableAccounts":
            "allAccountsWithBalances",
          "recurringIndicator": "false",
          "validUntil": "2017-11-01",
          "frequencyPerDay": "4",
          "combinedService": = "false" // wrong status
        }
    }

```

Allowed Service: GET /v1/accounts/{query-parameters}
Result: List of accounts {Array of account details}
Query option: withBalance available

5.3.2.4 GET /v1/consents/{consentId} - content retrieval with details

Details are based on the Berlin Group Framework 1.2 Implementation Guidelines, Chapter 6.4.

GET /v1/consents/1234-wertig-983

consentId	String	Mandatory	Mandatory in this context If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX 400/ CONSENT_UNKNOWN
-----------	--------	-----------	--

Query Parameter	n.a
Request Body	n.a.

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
PSU-ID	String	Mandatory	Mandatory in this context If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX 401/ PSU_CREDENTIALS_INVALID (in case of attribute defined, but the ID cannot be matched or PSU is blocked) TPP Message: ID
PSU-ID-Type	String	Conditional	Not used in this context
PSU-Corporate-ID	String	Conditional	Not used in this context
PSU-Corporate-ID-Type	String	Conditional	Not used in this context
Authorization Bearer	String	Conditional	Not used in this context

TPP-Certificate	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Signature	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Digest	String	Conditional	Not used in V1
TPP-Redirect-Preferred	Boolean	Conditional	Based on the implemented cases Default=false Not used in this context
TPP-Redirect-URI	String	Conditional	URI of the TPP. Mandatory if the tppRedirectPreferred parameter is set to true If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
TPP-Nok-Redirect-URI	String	Optional	Not used in this context
TPP-Explicit- Authorisation-Preferred	Boolean	Optional	Not used in this context

Additional PSU related information (subject to further changes)

PSU-IP-Address	String	Optional	Not used in this context
PSU-Agent	String	Optional	Not used in this context
PSU-Geolocation	String	Optional	Not used in this context

Request Body

No request body

Response of the System

Response code 200 OK

Response Header

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 (out of the request).
Content-Type	String	Mandatory	application/json

Response Body

Attribute	Type	Condition	Description
Access	Account Access	Mandatory	Follows standard
recurringIndicator	Boolean	Mandatory	Follows standard
validUntil	ISODate	Mandatory	Standard ISO format 2017-11-30
frequencyPerDay	Integer	Mandatory	Standard
lastActionDate	ISO Date	Mandatory	This date is containing the date of the last action on the consent object either through the XS2A interface or the PSU/ASPSP interface having an impact on the status
ScaStatus	String	n.a.	With the Version 1.2 no longer supported
consentStatus	String	Mandatory	See description Error! Reference source not found. Error! Reference source not found.

Body: Example

```

{
  "access":
  {"balances" :
    [{"iban": "AT123100001000975706"}],
    {"iban": "AT123100001000975706",
     "currency": "USD"},
    {"iban": "AT123100001000975706"}],
  "transactions" :
    [{"iban": "AT123100001000975706"},
     {"maskedPan": "123456xxxxxx1234"}]

  "accounts" :

```



```

        [{"iban": "AT123100001000975706"},
        {"maskedPan": "123456xxxxxx1234"}]

    }
    "recurringIndicator": "true",
    "validUntil"          : "2017-11-01",
    "frequencyPerDay"    : "4",
    "lastActionDate"     : "2017-11-01",          //pagination
corrected
    "consentStatus"      : "received",

    "_links": {
        "self": { "href": "/v1/consents/1234-wertig-983"},
        "status": { "href": "/v1/consents/1234-wertig-983/status"},
        "delete": { "href": "/v1/consents/1234-wertig-983"},

        "scaStatus": { "href": "/v1/consents/1234-wertig-
983/authorisations/1234auth567" }
    }
}

```

5.3.2.5 GET /v1/consents/{consentId}/authorisations/{authorisationId}

Status support:	received	-	authorisation resource created
	Finalized	-	authorisation successfully completed
	Failed	-	signature was wrong

GET /v1/consents/1234-wertig-983/authorisations/1234auth567

Path Parameter	consents
	consentId

Query Parameter	no
-----------------	----

Body	no
------	----

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
PSU-ID	String	Mandatory	Mandatory in this context If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX 401/ PSU_CREDENTIALS_INVALID (in case of attribute defined, but the ID cannot be matched or PSU is blocked) TPP Message: ID
PSU-ID-Type	String	Conditional	Not used in this context
PSU-Corporate-ID	String	Conditional	Not used in this context
PSU-Corporate-ID-Type	String	Conditional	Not used in this context
Authorization Bearer	String	Conditional	Not used in this context
TPP-Certificate	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Signature	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Digest	String	Conditional	Not used in V1
TPP-Redirect-Preferred	Boolean	Optional	Not used in this context
TPP-Redirect-URI	String	Conditional	Not used in this context
TPP-Nok-Redirect-URI	String	Optional	Not used in this context
TPP-Explicit-Authorisation-Preferred	Boolean	Optional	Not used in this context

Additional PSU related information (subject to further changes)

PSU-IP-Address	String	Mandatory	Not used in this context
PSU-Agent	String	Optional	Not used in this context
PSU-Geolocation	String	Optional	Not used in this context

Response of the System

Response code 200 OK

Response Header

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 (out of the request).
Content-Type	String	Mandatory	application/json

Response Body

Attribute	Type	Condition	Description
ScaStatus	String	Mandatory	Introduced with the Version 1.2

Response body

```
{
  "scaStatus" = "finalised"
}
```

5.3.2.6 GET /v1/consents/{consentId}/authorisations

Retrieve the array of existing authorisationIds for the consent

GET /v1/consents/1234-wertig-983/authorisations

Path Parameter consents
 consentId

Query Parameter no

Body no

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
PSU-ID	String	Mandatory	Mandatory in this context If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX 401/ PSU_CREDENTIALS_INVALID (in case of attribute defined, but the ID cannot be matched or PSU is blocked) TPP Message: ID
PSU-ID-Type	String	Conditional	Not used in this context
PSU-Corporate-ID	String	Conditional	Not used in this context
PSU-Corporate-ID-Type	String	Conditional	Not used in this context
Authorization Bearer	String	Conditional	Not used in this context
TPP-Certificate	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Signature	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Digest	String	Conditional	Not used in V1
TPP-Redirect-Preferred	Boolean	Optional	Not used in this context
TPP-Redirect-URI	String	Conditional	Not used in this context
TPP-Nok-Redirect-URI	String	Optional	Not used in this context
TPP-Explicit-Authorisation-Preferred	Boolean	Optional	Not used in this context

Additional PSU related information (subject to further changes)

PSU-IP-Address	String	Mandatory	Not used in this context
PSU-Agent	String	Optional	Not used in this context
PSU-Geolocation	String	Optional	Not used in this context

Response of the System

Response code 200 OK

Response Header

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 (out of the request).
Content-Type	String	Mandatory	application/json

Response Body

Attribute	Type	Condition	Description
authorisationIds	String	Mandatory	Array of Ids, each Id defines a authorisation resource

Response body

```
{
  "authorisationIds" : ["123auth567"]
}
```

5.3.2.7 GET /v1/consents/{consentId}/Status

Details are based on the Berlin Group Framework 1.2 Implementation Guidelines, Chapter 6.4.2.

ConsentId	String	Mandatory	Mandatory in this context If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX 400/ CONSENT_UNKNOWN
-----------	--------	-----------	--

Query Parameter	n.a.
Request body	n.a.

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
PSU-ID	String	Mandatory	Mandatory in this context If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX 401/ PSU_CREDENTIALS_INVALID (in case of attribute defined, but the ID cannot be matched or PSU is blocked) TPP Message: ID
PSU-ID-Type	String	Conditional	Not used in this context
PSU-Corporate-ID	String	Conditional	Not used in this context
PSU-Corporate-ID-Type	String	Conditional	Not used in this context
Authorization Bearer	String	Conditional	Not used in this context
TPP-Certificate	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Signature	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Digest	String	Conditional	Not used in V1
TPP-Redirect-Preferred	Boolean	Conditional	Based on the implemented cases Default=false Not used in this context
TPP-Redirect-URI	String	Conditional	URI of the TPP. Mandatory if the tppRedirectPreferred parameter is set to true If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
TPP-Nok-Redirect-URI	String	Optional	Not used in this context
TPP-Explicit-Authorisation-Preferred	Boolean	Optional	Not used in this context

Additional PSU related information (subject to further changes)

PSU-IP-Address	String	Optional	Not used in this context
PSU-Agent	String	Optional	Not used in this context
PSU-Geolocation	String	Optional	Not used in this context

Request Body

No request body

Response of the System

Response code 200 OK

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 (out of the request).
Content-Type	String	Mandatory	application/json

Response Body

Attribute	Type	Condition	Description
consentStatus	String	Mandatory	Status of the consent, see Error! Reference source not found. Error! Reference source not found.

```
{
  "consentStatus"      : "received"
}
```

5.3.2.8 DELETE /v1/consents/{consentId}

Details are based on the Berlin Group Framework 1.2 Implementation Guidelines, Chapter 6.5.

ConsentId	String	Mandatory	Mandatory in this context If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX 400/ CONSENT_UNKNOWN 401/ CONSENT_INVALID 401/ CONSENT_EXPIRED
-----------	--------	-----------	--

Query Parameter n.a.

Request Body n.a.

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
PSU-ID	String	Conditional	Not used in this context
PSU-ID-Type	String	Conditional	Not used in this context
PSU-Corporate-ID	String	Conditional	Not used in this context
PSU-Corporate-ID-Type	String	Conditional	Not used in this context
Authorization Bearer	String	Conditional	Not used in this context
TPP-Certificate	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Signature	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Digest	String	Conditional	Not used in V1
TPP-Redirect-Preferred	Boolean	Optional	Based on the implemented cases Default=false Not used in the context
TPP-Redirect-URI	String	Conditional	URI of the TPP. Mandatory if the tppRedirectPreferred parameter is set to true If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
TPP-Nok-Redirect-URI	String	Optional	Not used in this context

TPP-Explicit- Authorisation-Preferred	Boolean	Optional	Not used in this context
--	---------	----------	--------------------------

Additional PSU related information (subject to further changes)

PSU-IP-Address	String	Optional	Not used in this context
PSU-Agent	String	Optional	Not used in this context
PSU-Geolocation	String	Optional	Not used in this context

Request Body

No request body

Response of the System

Response code 204 No Content

Response Body n.a.

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 (out of the request).

Remark: For this function it is not required to start an implicit or explicit authorisation.

5.3.3 Read account data

5.3.3.1 Basic principles

- Account information/ Balances are defined in JSON.
- Account information will be formatted in UTF-8 (Standard for camt messages).
- Transactions follow one type of formatting rules, either TXT/SWIFT which is indicated by the following Content-Type:

Content-Type : application/text

and in case of camt-based account information :

Content-Type : application/xml

- The TPP can indicate the priority of transaction information format using the Accept tag in the http header.

Sample – The TPP creates the following Accept tag with a specified weight, highest priority is application text

Accept: application/text; q=1.0, application/xml; q=0.8

In the response the system indicates the real content type of the delivered information Content-Type = application/text. If the system is not able to offer the text-format the system will deliver the xml instead (fall-back).

The system does not check the requested content type, so it will not answer with return code 415 in case of requested media types which are not supported by the System.

- It might happen that the account information service was switched at a certain time from TXT to camt XML. It depends on the time period of the request for historical information if the system offers either the XML or the TXT format. A mixture of both is not supported. The system will respond with an error in case of a period which contains TXT as well as XML based account information.
- It is expected that the account information is related to current accounts. Specific account information like statements of security deposits which follow completely other formatting rules will be implemented on demand with another RestAPI and/or should indicate it the account form and account attributes.

5.3.3.2 Get /v1/accounts {query-parameters}

Related to the consentID

Request Header: Consent-ID mandatory

Result: List of accounts {Array of account details}

Option: withBalance

See the Berlin Group Framework 1.2 Implementation Guidelines, Chapter 6.6.1 for further details.

Result: Account list with account details as available

Optional: with or without balances

Query Parameter withBalance / type. Boolean (last booking balance)
 withBalance Option: If for an account no balance is available, the account
 information is will be still forwarded, the balance will be empty

Error handling

404 Not found // used in case RESOURCE_UNKNOWN – accountId is unknown in the context of the TPP

400 Bad Request // syntax error

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
Consent-ID	String	Mandatory	Mandatory in this context If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX 400/ CONSENT_UNKNOWN 401/ CONSENT_INVALID 401/ CONSENT EXPIRED
PSU-ID	String	Mandatory	Mandatory in this context If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX 401/ PSU_CREDENTIALS_INVALID (in case of attribute defined, but the ID cannot be matched or PSU is blocked) TPP Message: ID
PSU-ID-Type	String	Conditional	Not used in this context
PSU-Corporate-ID	String	Conditional	Not used in this context
PSU-Corporate-ID-Type	String	Conditional	Not used in this context
Authorization Bearer	String	Conditional	Not used in this context
TPP-Certificate	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Signature	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Digest	String	Conditional	Not used in V1
TPP-Redirect-Preferred	Boolean	Optional	Based on the implemented cases Default=false

TPP-Redirect-URI	String	Conditional	Not used in the context URI of the TPP. Mandatory if the tppRedirectPreferred parameter is set to true If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX Not used in the context
TPP-Nok-Redirect-URI	String	Optional	Not used in this context
TPP-Explicit-Authorisation-Preferred	Boolean	Optional	Not used in this context

Additional PSU related information (subject to further changes)

PSU-IP-Address	String	Optional	Used to indicate the presence of the user (for counting the access to an account)
PSU-Agent	String	Optional	Not used in this context
PSU-Geolocation	String	Optional	Not used in this context

Response Code 200 OK

Response Header

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 (out of the request.
Content-Type	String	Mandatory	application/json

Response Body

Array of accounts details / JSON

In addition all valid links (optional)

```
{ "accounts":
[ { "resourceId": "3dc3d5b3-7023-4848-9853-f5400a64e80f",
```

```

"iban": "AT123100001000975706",
"currency": "EUR",
"accountType": "Girokonto",
"cashAccountType": "CurrentAccount",
"name": "Main Account",
"_links" : {
"balances": { "href" : "/v1/accounts/3dc3d5b3-7023-4848-9853-
f5400a64e80f/balances"},
"transactions" : { "href" : "/v1/accounts/3dc3d5b3-7023-4848-
9853-f5400a64e80f/transactions"}}
},

{"resourceId" : "3dc3d5b3-7023-4848-9853-f5400a64e81g",
"iban": "AT123100001000975706",
"currency" : "USD",
"accountType": "ForeignCurrencyAccount",
"cashAccountType" : "CurrentAccount",
"name" : "US Dollar Account",
"_links" : {
"balances" : { "href" : "/v1/accounts/3dc3d5b3-7023-4848-9853-
f5400a64e81g/balances"}}
} ]
}

```

5.3.3.3 GET /v1/accounts/{account-id}/{query-parameters}

&withBalance=true

Account details - Related to the consentID

Result: for a particular account the details

Based on Chapter 6.6.2 of the Berlin Group Framework 1.2 Implementation Guidelines.

Path	account-id
Query Parameter	withBalance / type. Boolean (last booking balance)

Request Header Consent-ID mandatory

Result code 200 OK

Response body Account details + balances

Error handling

404/ RESOURCE_UNKNOWN – accountId is unknown in the context of the TPP

400/ Bad Request (syntax error)

Balance Option: If for an account no balance is available, the account information is will be still forwarded, the balance will be empty

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
Consent-ID	String	Mandatory	Mandatory in this context If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX 400/ CONSENT_UNKNOWN 401/ CONSENT_INVALID 401/ CONSENT EXPIRED
PSU-ID	String	Mandatory	Mandatory in this context If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX 401/ PSU_CREDENTIALS_INVALID (in case of attribute defined, but the ID cannot be matched or PSU is blocked) TPP Message: ID
PSU-ID-Type	String	Conditional	Not used in this context
PSU-Corporate-ID	String	Conditional	Not used in this context
PSU-Corporate-ID-Type	String	Conditional	Not used in this context
Authorization Bearer	String	Conditional	Not used in this context
TPP-Certificate	String	Conditional	A signature of the request by the TPP on application level. Not used in V1

Signature	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Digest	String	Conditional	Not used in V1
TPP-Redirect-Preferred	Boolean	Optional	Based on the implemented cases Default=false Not used in the context
TPP-Redirect-URI	String	Conditional	URI of the TPP. Mandatory if the tppRedirectPreferred parameter is set to true If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX Not used in this context
TPP-Nok-Redirect-URI	String	Optional	Not used in this context
TPP-Explicit- Authorisation-Preferred	Boolean	Optional	Not used in this context

Additional PSU related information (subject to further changes)

PSU-IP-Address	String	Optional	Used to indicate the presence of the user (for counting the access to an account)
PSU-Agent	String	Optional	Not used in this context
PSU-Geolocation	String	Optional	Not used in this context

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 (out of the request.
Content-Type	String	Mandatory	application/json

Response Body

Account / account details / JSON

```
{
  "account" :
  {
    "resourceId" : "3dc3d5b3-7023-4848-9853-f5400a64e80f",
    "iban" : "AT123100001000975706",
    "currency" : "EUR"},
  "accountType" : "Girokonto",
```

```

    "cashAccountType" : "CurrentAccount",
    "name" : "Main Account",
    "_links" : {
        "balances": {"href": "/v1/accounts/3dc3d5b3-7023-4848-9853-
f5400a64e80f/balances"},
        "transactions": {"href": "/v1/accounts/3dc3d5b3-7023-4848-9853-
f5400a64e80f/transactions"}}
    }
}

```

Response Body

Account / account details and balances / JSON

```

{"account :
{"resourceId" : "3dc3d5b3-7023-4848-9853-f5400a64e80f",
{"iban" : "AT123100001000975706",
"currency" : "EUR"},
"accountType" : "Girokonto",
"cashAccountType" : "CurrentAccount",
"name" : "Main Account",
{
"balances" :
[{"closingBooked":
{
"amount": {"currency" : "EUR", "content": "500.00"},
"date" : "2017-10-25"
},
"expected":
{
"amount": {"currency" : "EUR", "content" : "900.00"},
"lastActionDateTime" : "2017-10-25T15:30:35.035Z"
}
}
]}
}
}

```

5.3.3.4 GET /v1/accounts/{account-id}/balances

Related to the consentID

Read balances for a given account (list of balances); default "closingBooked" balance.
Based on Berlin Group Framework 1.2 Implementation Guidelines, Chapter 6.6.3.

Path	account-id
Request Header	Consent-ID mandatory
Result code	200 OK
Response body	balances

Error handling

404/ RESOURCE_UNKNOWN – accountId is unknown in the context of the TPP

400/ Bad Request (syntax error)

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
Consent-ID	String	Mandatory	Mandatory in this context If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX 400/ CONSENT_UNKNOWN 401/ CONSENT_INVALID 401/ CONSENT EXPIRED
PSU-ID	String	Mandatory	Mandatory in this context If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX 401/ PSU_CREDENTIALS_INVALID (in case of attribute defined, but the ID cannot be matched or PSU is blocked) TPP Message: ID
PSU-ID-Type	String	Conditional	Not used in this context
PSU-Corporate-ID	String	Conditional	Not used in this context
PSU-Corporate-ID-Type	String	Conditional	Not used in this context
Authorization Bearer	String	Conditional	Not used in this context
TPP-Certificate	String	Conditional	A signature of the request by the TPP on application level. Not used in V1

Signature	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Digest	String	Conditional	Not used in V1
TPP-Redirect-Preferred	Boolean	Optional	Based on the implemented cases Default=false Not used in the context
TPP-Redirect-URI	String	Conditional	URI of the TPP. Mandatory if the tppRedirectPreferred parameter is set to true If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
TPP-Nok-Redirect-URI	String	Optional	Not used in this context
TPP-Explicit- Authorisation-Preferred	Boolean	Optional	Not used in this context

Additional PSU related information (subject to further changes)

PSU-IP-Address	String	Optional	Used to indicate the presence of the user (for counting the access to an account)
PSU-Agent	String	Optional	Not used in this context
PSU-Geolocation	String	Optional	Not used in this context

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 (out of the request.
Content-Type	String	Mandatory	application/json

Response Body (for the request for a single account)

Account – Optional

Balances - Mandatory

```
{
  "account": {"resourceId" : "3dc3d5b3-7023-4848-9853-
f5400a64e80f"},
  "balances":
```

```

    {"balanceType": "closingBooked",
     "balanceAmount": {"currency": "EUR", "amount": "500.00"},
     "referenceDate": "2017-10-25"
    }
  }

```

By default, the system supports the booked balances.

Depending on the specific back office implementation, the service level will be different: some banks offer the XFI Job (available balance or other kind of balances), others only statements, others balances including pre-posted items and the current closing balance from the last batch booking.

```

{
  "account": {"resourceId" : "3dc3d5b3-7023-4848-9853-
f5400a64e80f"},
  "balances":
  [{"balanceType": "closingBooked",
   "balanceAmount": {"currency": "EUR", "amount": "500.00"},
   "referenceDate": "2017-10-25"
  },
  {"balanceType": "expected",
   "balanceAmount": {"currency": "EUR", "amount": "900.00"},
   "lastChangeDateTime": "2017-10-25T15:30:35.035Z"
  }]
}

```

5.3.3.5 GET /v1/accounts/{account-id}/transactions?date from=""&date to="" (mandatory)

&withBalance=true&bookingStatus=booked

Related to the consentID

Reads account data from a given account

Based on the Berlin Group Framework 1.1 Implementation Guidelines, Chapter 6.6.4.

Path account-id

PSU-ID	String	Mandatory	Mandatory in this context If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX 401/ PSU_CREDENTIALS_INVALID (in case of attribute defined, but the ID cannot be matched or PSU is blocked) TPP Message: ID
PSU-ID-Type	String	Conditional	Not used in this context
PSU-Corporate-ID	String	Conditional	Not used in this context
PSU-Corporate-ID-Type	String	Conditional	Not used in this context
Authorization Bearer	String	Conditional	Not used in this context
TPP-Certificate	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Signature	String	Conditional	A signature of the request by the TPP on application level. Not used in V1
Digest	String	Conditional	Not used in V1
TPP-Redirect-Preferred	Boolean	Optional	Based on the implemented cases Default=false Not used in the context
TPP-Redirect-URI	String	Conditional	URI of the TPP. Mandatory if the tppRedirectPreferred parameter is set to true If missing, System will response with 400/ FORMAT_ERROR / TPP Message missing field: XXXX
TPP-Nok-Redirect-URI	String	Optional	Not used in this context
TPP-Explicit-Autho- risation-Preferred	Boolean	Optional	Not used in this context

Additional PSU related information (subject to further changes)

PSU-IP-Address	String	Mandatory	used to indicate the presence of the user (for counting the access to an account)
PSU-Agent	String	Optional	Not used in this context
PSU-Geolocation	String	Optional	Not used in this context

Response Header

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 (out of the request).
Content-Type	String	Mandatory	application/xml or application/text optional : additional information: charset=ISO-8859-5 in case of application/text

Response Body camt.052/camt.053 / SWIFT MT940/SWIFT MT942

The system will deliver always ZIP-container with one or more XML-documents, for SWIFT a text file with MT940/MT942 will be created (concatenation is possible)