



**PSD2 – Technical Design TPP**

---

Version: 1.7.3.1

14/01/2021

## Authorisations and version control

Version	Date	Affects	Brief description of the change
1.6.0	February 2019	EVERYTHING	Initial Version
1.7.0	November	3. DESCRIPTION OF CORE SERVICES 3.1.6 New functionality Cancelling a payment initiation 5.17 remittanceInformationUnstructured	New API 3.4 FCS support: Establish consent for the fund confirmation service  Added new functionality Cancel a payment initiation  Information on the counterpart BIC is added within this field
1.7.0.1	February	4.2 New SVA functionality Starting payments with account list  5.17 new fields mandateID and check_ID	New functionality that allows the TPP to initiate payments without indicating the originating account.  New fields mandateID and checkID are added
1.7.3	December	3.3.4 Reading of transactions 3.3.4.1 Request  3.3.4 Reading of transactions 3.3.4.3 Examples  3.5.1 Obtain authorisation 3.5.1.1 Request  5. Definition of types of composite data  5.1 AccountAccess  5.4 AccountReport  5.20 Transactions	New value "information" in the field bookingStatus.  Added example for list of standing orders  Added new endpoints for biometric authentication in pre-step with app-to-app redirection: personal and business  Added procedure for accessing Sandbox applications to test app-to-app redirects  New data objects: 5.5 AdditionalInformationAccess 5.17 StandingOrderDetails 5.18 StructuredAdditionalInformationDataType  Added new field additionalInformation.  Added new field information for the support of the list of standing orders  Added new field additionalInformationStructured Editorial enhancement in bankTransactionCode
1.7.3.1	January	3.5.1 Obtain authorisation 3.5.1.1 Request	Added links to download Sandbox apps for app-to-app redirect tests

---

**CONTENTS**

<b>1. INTRODUCTION</b>	<b>6</b>
<b>1.1 SCOPE</b>	<b>6</b>
<b>1.2 GLOSSARY</b>	<b>6</b>
<b>2. GENERAL DESCRIPTION OF THE SYSTEM</b>	<b>7</b>
<b>3. DESCRIPTION OF CORE SERVICES</b>	<b>9</b>
<b>3.1 PIS: PAYMENT INITIATION SERVICE</b>	<b>9</b>
3.1.1 PAYMENT INITIATION	9
3.1.1.1 Request	9
3.1.1.2 Response	13
3.1.1.3 Examples	14
3.1.2 FUTURE PAYMENT INITIATION	17
3.1.2.1 Request	17
3.1.2.2 Response	20
3.1.2.3 Examples	21
3.1.3 INITIATION OF STANDING ORDERS FOR RECURRING / PERIODIC PAYMENTS	22
3.1.3.1 Request	23
3.1.3.2 Response	27
3.1.3.3 Examples	28
3.1.4 OBTAIN PAYMENT STATUS	28
3.1.4.1 Request	29
3.1.4.2 Response	31
3.1.4.3 Examples	32
3.1.5 RETRIEVE INFORMATION FROM THE START OF THE PAYMENT	32
3.1.5.1 Request	33
3.1.5.2 Response	35
3.1.5.3 Examples	36
3.1.6 CANCELLING A PAYMENT INITIATION	37
3.1.6.1 Request	37
3.1.6.2 Response	39
3.1.6.1 Examples	40
<b>3.2 AIS: SERVICE TO ESTABLISH CONSENT TO ACCOUNT INFORMATION</b>	<b>41</b>
3.2.1 CHARACTERISTICS OF THE DIFFERENT TYPES OF CONSENTS	41
3.2.1.1 Consent model	41
3.2.1.2 Recurring access	42
3.2.2 CONSENT TO INFORMATION ON PAYMENT ACCOUNTS	42
3.2.2.1 Request	42
3.2.2.2 Response	46
3.2.2.3 Examples	47
3.2.3 GET CONSENT STATUS	51
3.2.3.1 Request	51
3.2.3.2 Response	53
3.2.3.3 Examples	54
3.2.4 RETRIEVE INFORMATION ON THE CONSENT	55
3.2.4.1 Request	55
3.2.4.2 Response	57
3.2.4.3 Examples	58

3.2.5	REMOVE CONSENT	60
3.2.5.1	Request	60
3.2.5.2	Response	62
3.2.5.3	Examples	62
<b>3.3</b>	<b>AIS: ACCOUNT INFORMATION SERVICE</b>	<b>63</b>
3.3.1	READING OF THE ACCOUNT LIST	63
3.3.1.1	Request	64
3.3.1.2	Response	66
3.3.1.3	Examples	67
3.3.2	READING OF THE ACCOUNT DETAILS	69
3.3.2.1	Request	69
3.3.2.2	Response	71
3.3.2.3	Examples	72
3.3.3	READING OF BALANCES	73
3.3.3.1	Request	74
3.3.3.2	Response	76
3.3.3.3	Examples	77
3.3.4	READING OF THE TRANSACTIONS	78
3.3.4.1	Request	79
3.3.4.2	Response	81
3.3.4.3	Examples	82
<b>3.4</b>	<b>FCS: FUND CONFIRMATION SERVICE</b>	<b>85</b>
3.4.1	FUND QUERY	85
3.4.1.1	Request	85
3.4.1.2	Response	86
3.4.1.3	Examples	87
<b>3.5</b>	<b>OAuth2 AS A PRE-STEP</b>	<b>88</b>
3.5.1	GET AUTHORISATION	88
3.5.1.1	Request	88
3.5.1.2	OK Response	90
3.5.1.3	Error Response	91
3.5.1.4	Examples	91
3.5.2	OBTAINING THE ACCESS TOKEN	92
3.5.2.1	Request	92
3.5.2.2	OK Response	93
3.5.2.3	Error Response	94
3.5.2.4	Examples	94
<b>3.6</b>	<b>REFRESH TOKEN REQUEST</b>	<b>95</b>
3.6.1	REQUEST	95
3.6.2	RESPONSE	96
3.6.3	EXAMPLES	96
<b>3.7</b>	<b>COMMON PROCESSES IN THE SERVICES</b>	<b>97</b>
3.7.1	INITIATE AUTHORISATION PROCESS (EXPLICIT)	97
3.7.1.1	Request	97
3.7.1.2	Response	99
3.7.1.3	Examples	100
3.7.2	OBTAIN AUTHORISATION SUB-RESOURCES	102
3.7.2.1	Request	102
3.7.2.2	Response	104
3.7.2.3	Examples	105
3.7.3	OBTAIN SCA STATUS	105
3.7.3.1	Request	105

3.7.3.2	Response	108
3.7.3.3	Examples	108
<b>4.</b>	<b>DESCRIPTION OF VALUE-ADDED SERVICES</b>	<b>109</b>
<b>4.1</b>	<b>ASPSP SERVICES AVAILABLE</b>	<b>109</b>
4.1.1	VERSION 1	110
4.1.1.1	Request	110
4.1.1.2	Response	111
4.1.1.3	Examples	111
4.1.2	VERSION 2	111
4.1.2.1	Request	112
4.1.2.2	Response	113
4.1.2.3	Examples	113
<b>4.2</b>	<b>SVA: PAYMENT INITIATION WITH LIST OF AVAILABLE ACCOUNTS FOR PISP</b>	<b>113</b>
4.2.1	PAYMENT INITIATION	114
4.2.1.1	Request	114
4.2.1.2	Response	118
4.2.1.3	Examples	120
<b>4.3</b>	<b>SVA: PAYMENT INITIATION WITH LIST OF AVAILABLE ACCOUNTS FOR PISP</b>	<b>121</b>
4.3.1	PAYMENT INITIATION	121
4.3.1.1	Request	121
4.3.1.2	Response	126
4.3.1.3	Examples	128
<b>5.</b>	<b>DEFINITION OF COMPOSITE DATA</b>	<b>129</b>
<b>5.1</b>	<b>ACCOUNTACCESS</b>	<b>129</b>
<b>5.2</b>	<b>ACCOUNTDETAILS</b>	<b>130</b>
<b>5.3</b>	<b>ACCOUNTREFERENCE</b>	<b>131</b>
<b>5.4</b>	<b>ACCOUNTREPORT</b>	<b>131</b>
<b>5.5</b>	<b>ADDITIONALINFORMATIONACCESS</b>	<b>132</b>
<b>5.6</b>	<b>ADDRESS</b>	<b>132</b>
<b>5.7</b>	<b>AMOUNT</b>	<b>133</b>
<b>5.8</b>	<b>AUTHENTICATIONOBJECT</b>	<b>133</b>
<b>5.9</b>	<b>ASPSP</b>	<b>133</b>
<b>5.10</b>	<b>BALANCE</b>	<b>134</b>
<b>5.11</b>	<b>EXCHANGERATE</b>	<b>134</b>
<b>5.12</b>	<b>HREF</b>	<b>134</b>
<b>5.13</b>	<b>LINKS</b>	<b>134</b>
<b>5.14</b>	<b>PAYMENTEXCHANGERATE</b>	<b>135</b>
<b>5.15</b>	<b>REPORTEXCHANGERATE</b>	<b>136</b>
<b>5.16</b>	<b>SINGLEPAYMENT</b>	<b>136</b>
<b>5.19</b>	<b>TPPMESSAGE</b>	<b>140</b>
<b>5.20</b>	<b>TRANSACTIONS</b>	<b>140</b>
<b>6.</b>	<b>ANNEXES</b>	<b>141</b>
<b>6.1</b>	<b>SIGNATURE</b>	<b>141</b>
6.1.1	"DIGEST" HEADER MANDATORY	141
6.1.2	SIGNATURE REQUIREMENTS	141
6.1.3	EXAMPLE	142
6.1.3.1	Generation of the "Digest" header	143
6.1.3.2	Generation of the "Signature" header	143

---

6.1.3.3	Generation of the "TPP-Signature-Certificate" header	144
6.1.3.4	Definitive headers to send	144
<b>6.2</b>	<b>HTTP RESPONSE CODES</b>	<b>145</b>
<b>6.3</b>	<b>RETURN CODES</b>	<b>146</b>
<b>6.4</b>	<b>TRANSACTION STATUS</b>	<b>149</b>
<b>6.5</b>	<b>CONSENT STATUS</b>	<b>150</b>
<b>6.6</b>	<b>BALANCE TYPES</b>	<b>151</b>
<b>6.7</b>	<b>TYPES OF SHARING COMMISSIONS</b>	<b>151</b>
<b>6.8</b>	<b>GOOD PRACTICE GUIDE</b>	<b>151</b>
6.8.1	LIFETIME OF THE SCAREREDIRECT LINK	152

## 1. INTRODUCTION

### 1.1 Scope

This document provides the Technical Design of the interface with Third-Party Providers (TPPs) and the HUB in order to comply with the PSD2 directive. The functions which Banco de Sabadell (hereinafter, ASPSP) makes available will be published in it.

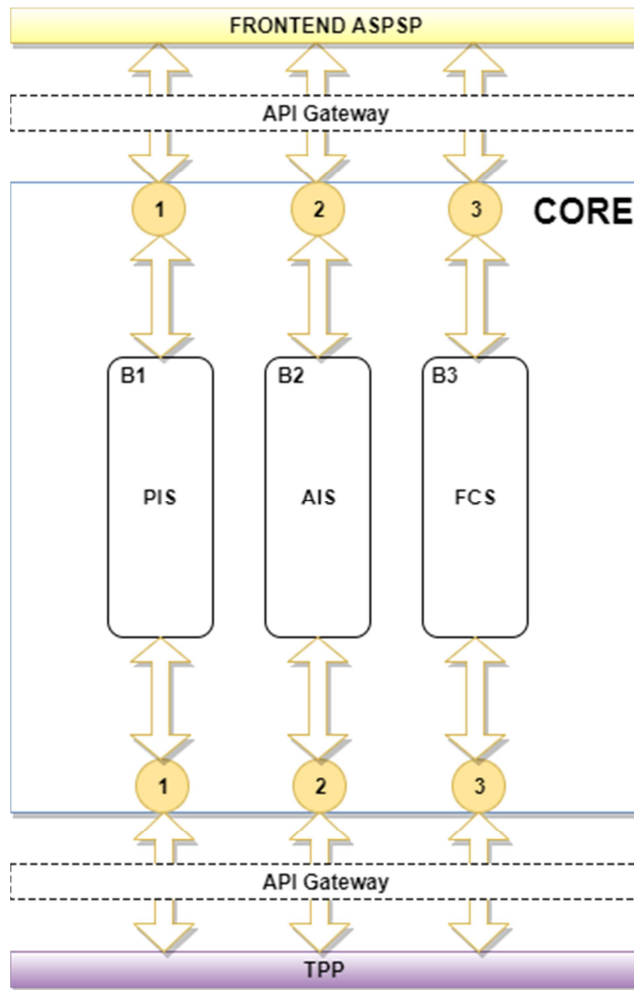
### 1.2 Glossary

The acronyms and definitions used throughout the document are set forth in the table below.

Acronym	Definition
ASPSP	Account Servicing Payment Service Provider  Provides and maintains customer accounts from which payments can be made.
PISP	Payment Initiation Service Provider  It initiates a payment order at the user's request, from a payment account from another provider.
AISP	Account Information Service Provider  It provides customer information on accounts from other providers.
TPP	Third-party provider  It exercises services defined by PSD2 on behalf of a PSU. If it is necessary to provide the service, it accesses the PSU's account(s) which are managed by an ASPSP using the ASPSP's XS2A Interface. It sends request messages to the ASPSP's XS2A interface and receives the corresponding response messages from that ASPSP.
PIISP	Payment Instrument Issuers Service Provider  It provides the user with a payment instrument to initiate and process payment transactions.
PSU	This could be either a natural or legal person according to the PSD2 legislation. This is the person who implicitly or explicitly instructs the TPP to perform any ASPSP service.

**2. GENERAL DESCRIPTION OF THE SYSTEM**

Below, in the Figure 1: Core Module Diagram, the different Functional Modules that make up the system are displayed, which will be subsequently detailed.



**Figure 1: Core Module Diagram**



Service	Functionality	Status	
CORE	Start simple payment single signature	Available	
	Start recurring payments	Available	
	PIS	Start future payments	Available
		Check payment status	Available
		Retrieve information from the start of the payment	Available
		Payment cancellation (Pending consultation Redsys)	Available
	AIS	Request consent	Available
		Retrieve information on consent	Available
		Check payment status	Available
		Remove consent	Available
		Reading of list of accounts available without balances	Available
		Reading of accounts details without balances	Available
		Reading of balances	Available
		Reading of transactions without balances	Available
		Reading of transaction details	Not supported
		FCS	Cleared funds
	SCA by redirection flow		Available
	SCA	SCA by decoupled flow	Under development
		Embedded SCA	Not supported
	OAUTH	Obtaining the access token	Available
Renewal of the access token		Available	
Common processes	Initiate explicit authorization	Available	
	SCA status query	Available	
	Obtain authorisation data	Available	
	Update authorisation sub-resources	Available	

**Table 1: CORE Services**

Service	Functionality	Status	
SVA	DIR. ASPSPs	List of available ASPSPs	Available
	PIS	Payment initiation with a list of accounts available for the PISP	Under development

**Table 2: Value-Added Services**

### 3. DESCRIPTION OF CORE SERVICES

#### 3.1 PIS: Payment Initiation Service

##### 3.1.1 Payment initiation

Message sent by the TPP to the ASPSP through the Hub to create a payment initiation.

##### 3.1.1.1 Request

###### Endpoint

POST {provider}/{aspsp}/v1/payments/{payment-product}

###### Path

Field	Description	Type	Mand.	Format
<b>Provider</b>	URL of the HUB where the service is published.	String	OB	E.g.: www.hub.com
<b>Aspsp</b>	Name of the ASPSP to which the request is made.	String	OB	E.g.: aspsp-name
<b>payment-product</b>	Payment product to use. List of supported products: <ul style="list-style-type: none"> <li>• sepa-credit-transfers</li> <li>• instant-sepa-credit-transfers</li> <li>• target-2-payments</li> <li>• cross-border-credit-transfers</li> </ul>	String	OB	E.g.: {provider}/{aspsp}/v1/payments/sepa-credit-transfers/

###### Query parameters

Additional parameters for this request are not specified.

###### Header

Field	Description	Type	Mand.	Format
<b>Content-Type</b>	Value: application/json	String	OB	Content-Type: application/json
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the transaction.	String	OB	<b>UUID</b> ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$  E.g.: X-Request-ID:

				1b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>Authorization</b>	Bearer Token. Obtained in a pre-authentication on OAuth2.	String	OB	E.g.: Authorization : Bearer 2YotnFZFEjr1zCsicMWpAA
<b>PSU-IP-Address</b>	IP Address of the HTTP request between the PSU and the TPP.  If it is not available, the TPP must use the IP address used by the TPP when it sends this request.	String	OB	^[0-9]{1,3}.[0-9]{1,3}.[0-9]{1,3}.[0-9]{1,3}\$  E.g.: PSU-IP-Address: 192.168.16.5
<b>PSU-IP-Port</b>	IP Port of the HTTP request between the PSU and the TPP, if available.	String	OP	^.{1,5}\$  E.g.: PSU-IP-Port: 443
<b>PSU-Accept</b>	Accept header of the HTTP request between the PSU and the TPP.	String	OP	^.{1,50}\$  E.g.: PSU-Accept: application/javascript
<b>PSU-Accept-Charset</b>	Accept charset header of the HTTP request between the PSU and the TPP.	String	OP	^.{1,50}\$  E.g.: PSU-Accept-Charset: utf-8
<b>PSU-Accept-Encoding</b>	Accept encoding header of the HTTP request between the PSU and the TPP.	String	OP	^.{1,50}\$  E.g.: PSU-Accept-Encoding: gzip
<b>PSU-Accept-Language</b>	Accept language header of the HTTP request between the PSU and the TPP.	String	OP	^.{1,50}\$  E.g.: PSU-Accept-Language: es-ES
<b>PSU-User-Agent</b>	Browser or operating system of the HTTP request between the PSU and the TPP.	String	OP	E.g.: PSU-User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.1.5) Gecko/20091

				102 Firefox/3.5.5 (.NET CLR 3.5.30729)
<b>PSU-Http-Method</b>	<p>HTTP method used in the interface between the PSU and the TPP. Allowed values:</p> <ul style="list-style-type: none"> <li>• POST</li> <li>• GET</li> <li>• PUT</li> <li>• PATCH</li> <li>• DELETE</li> </ul>	String	OP	E.g.: PSU-Http-Method: POST
<b>PSU-Device-ID</b>	<p>UUID (Universally Unique Identifier) for a device.</p> <p>The UUID identifies the device or an installation of an application on a device. This ID must not be modified until the application has been uninstalled from the device.</p>	String	OP	<p><b>UUID</b></p> <p><code>^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$</code></p> <p>E.g.:</p> <p>PSU-Device-ID: 5b3ab8e8-0fd5-43d2-946e-d75958b172e7</p>
<b>PSU-Geo-Location</b>	<p>Corresponding location of the HTTP request between the PSU and the TPP.</p>	String	OP	<p><b>RFC 2426</b></p> <p><code>^GEO:[\d]*.[\d]*;[\d]*.[\d]*\$</code></p> <p>E.g.:</p> <p>PSU-Geo-Location: GEO:90.023856;25.345963</p>
<b>TPP-Redirect-Preferred</b>	<p>If it is “true”, the TPP has informed the HUB that it prefers the SCA redirection.</p> <p>If it is “false”, the TPP has informed the HUB that it prefers not to be redirected to the SCA and the procedure will be carried out by a decoupled flow.</p> <p>If the parameter is not used, the ASPSP will choose the SCA flow to apply, depending on the SCA method chosen by the TPP/PSU.</p>	Boolean	OP	E.g.: TPP-Redirect-Preferred: true

**EMBEDDED AND DECOUPLED ARE NOT SUPPORTED IN THIS VERSION**

<b>TPP-Redirect-URI</b>	<p>The TPP’s URI, where the transaction flow should be redirected to after some of the SCA phases.</p> <p>It is recommended to use this header field at all times.</p> <p>In the future, this field could become mandatory.</p>	String	COND	<p>^.{1,250}\$</p> <p>E.g.: TPP-Redirect-URI:"https://tpp.example.es/cb"</p>
<b>TPP-Nok-Redirect-URI</b>	<p>If this URI is contained, the TPP is requesting that the transaction flow is redirected in this direction instead of to the TPP-Redirect-URI in the event of a negative result from the SCA redirection method.</p>	String	OP	<p>^.{1,250}\$</p> <p>E.g.: TPP-Nok-Redirect-URI:"https://tpp.example.es/cb/nok"</p>
<b>TPP-Explicit-Authorisation-Preferred</b>	<p>If it is “true”, the TPP prefers to start the authorisation process separately, E.g.: given the need for the authorisation of a set of simultaneous transactions.</p> <p>If it is “false” or the parameter is not used, the TPP has no preference. The TPP accepts a direct authorisation of the transaction in the next step.</p> <p><b>Note:</b> NOT SUPPORTED</p>	Boolean	OP	<p>E.g.: TPP-Explicit-Authorisation-Preferred: false</p>
<b>Digest</b>	<p>It is content if it goes in the Signature field.</p> <p>See 6.1 Signature for more information.</p>	String	OB	<p>^.{1,100}\$</p> <p>E.g.: Digest: SHA-256=NzdmZjA4YjY5M2M2NDYyMmVjOWFmMGNmYTZiNTU3MjVmNi4NTRIMzjkYzE3ZmNmMDE3ZGFmMjh hNTc5OTU3OQ==</p>
<b>Signature</b>	<p>Signature of the request for the TPP.</p> <p>See 6.1 Signature for more information.</p>	String	OB	See annexes
<b>TPP-Signature-Certificate</b>	<p>TPP certificate used to sign the request in base64.</p>	String	OB	<p>^.{1,5000}\$</p> <p>E.g.: TPP-Signature-Certificate: MIIHgZCCBmugAwIBAgIIZzZvBQIt0UcwDQYJ.....KoZlHvcNAQELBQAawSTELMAK</p>

## Body

The content of the Body is defined in 5.16 SinglePayment.

### 3.1.1.2 Response

#### Header

Field	Description	Type	Mand.	Format
<b>Location</b>	It contains the generated link to the resource.	String	OB	$^{\{1,5\}}12\{1,2\}$ E.g.: Location: /v1/payments/{payment-product}/{payment-id}
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the transaction.	String	OB	<b>UUID</b> $^{\{0-9a-fA-F\}}8\{0-9a-fA-F\}4\{0-9a-fA-F\}4\{0-9a-fA-F\}4\{0-9a-fA-F\}12\{1,2\}$ E.g.: X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>ASPSP-SCA-Approach</b>	Returned value if the SCA method has been set. Possible values: <ul style="list-style-type: none"> <li>• REDIRECT</li> </ul> The SCA based on OAuth will be taken as a REDIRECT.	String	COND	E.g.: ASPSP-SCA-Approach: REDIRECT

#### Body

Field	Description	Type	Mand.	Format
<b>transactionStatus</b>	Status of the transaction. Values defined in Annexes in 6.4 Transaction status	String	OB	<b>ISO 20022</b> E.g.: "transactionStatus": "RCVD"
<b>paymentId</b>	Resource identifier referred to the payment initiation.	String	OB	$^{\{1,36\}}$ E.g.: "paymentId": "1b3ab8e8-0fd5-43d2-946e-d75958b172e7"
<b>_links</b>	List of hyperlinks to be recognised by the TPP. Types supported in this response: <ul style="list-style-type: none"> <li>• scaRedirect: in the event of the SCA</li> </ul>	Links	OB	E.g.: "_links": {...}

redirect. Link where the PSU's browser must be redirected by the TPP.

- self: link to the resource created by this request.
- status: link to retrieve the transaction status.

<b>psuMessage</b>	Text to be displayed to the PSU.	String	OP	^{1,512}\$ E.g.: "psuMessage": "Information for the PSU"
<b>tppMessages</b>	Message for the TPP.	List<TppMessage>	OP	E.g.: "tppMessages": [...]

### 3.1.1.3 Examples

#### Example of an SCA redirection request

POST <https://www.hub.com/aspsp-name/v1/payments/sepa-credit-transfers>

Content-Encoding: gzip

Content-Type: application/json

X-Request-ID: 10391c7e-ad88-49ec-a2ad-00aacb1f6541

Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA

PSU-IP-Address: 192.168.8.16

PSU-IP-Port: 443

PSU-Accept: application/json

PSU-Accept-Charset: utf-8

PSU-Accept-Encoding: gzip

PSU-Accept-Language: es-ES

PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0

PSU-Http-Method: POST

PSU-Device-ID: f8b3feda-6fe3-11e8-adc0-fa7ae01bbebc

PSU-GEO-Location: GEO:12.526347;54.649862

TPP-Redirect-Preferred: true

TPP-Redirect-URI: https://www.tpp.com/cb

TPP-Nok-Redirect-URI: https://www.tpp.com/cb/nok

Date: Sun, 26 Sep 2017 15:02:37 GMT

```
{
  "instructedAmount": {
    "currency": "EUR",
    "amount": "153.50"
  },
  "debtorAccount": {
```

```
        "iban": "ES11111111111111111111111111111111"
    },
    "creditorAccount": {
        "iban": "ES22222222222222222222222222222222"
    },
    "creditorName": "Name123",
    "remittanceInformationUnstructured": "Additional information"
}
```

**Example of a response in the event that the SCA redirection with an implicitly created authorisation sub-resource**

HTTP/1.1 201 Created

X-Request-ID: 10391c7e-ad88-49ec-a2ad-00aacb1f6541

ASPSP-SCA-Approach: REDIRECT

Date: Sun, 26 Sep 2017 15:02:43 GMT

Location: </v1/payments/sepa-credit-transfers/123-qwe-456>

Content-Type: application/json

```
{
    "transactionStatus": "RCVD",
    "paymentId": "123-qwe-456",
    "_links": {
        "scaRedirect": {
            "href": "https://hub.example.es/authorize"
        },
        "self": {
            "href": "/v1/payments/sepa-credit-transfers/123-qwe-456",
            "status": {
                "href": "/v1/payments/sepa-credit-transfers/123-qwe-456/status"
            }
        },
        "scaStatus": {
            "href": "/v1/payments/sepa-credit-transfers/123-qwe-456/authorisations/123auth456"
        }
    }
}
```



**Example of a request for the SCA decoupled (NOT CURRENTLY DEVELOPED)**POST <https://hub.example.es/asp-name/v1/payments/sepa-credit-transfers>

Content-Encoding: gzip

Content-Type: application/json

X-Request-ID: 10391c7e-ad88-49ec-a2ad-00aacb1f6541

Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA

PSU-IP-Address: 192.168.8.16

PSU-IP-Port: 443

PSU-Accept: application/json

PSU-Accept-Charset: utf-8

PSU-Accept-Encoding: gzip

PSU-Accept-Language: es-ES

PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0

PSU-Http-Method: POST

PSU-Device-ID: f8b3feda-6fe3-11e8-adc0-fa7ae01bbebc

PSU-GEO-Location: GEO:12.526347;54.649862

TPP-Redirect-Preferred: false

Date: Sun, 26 Sep 2017 15:02:37 GMT

```
{
  "instructedAmount": {
    "currency": "EUR",
    "amount": "153.50"
  },
  "debtorAccount": {
    "iban": "ES1111111111111111111111"
  },
  "creditorAccount": {
    "iban": "ES2222222222222222222222"
  },
  "creditorName": "Name123",
  "remittanceInformationUnstructured": "Additional information"
}
```

### 3.1.2 Future payment initiation

Message sent by the TPP to the ASPSP through the Hub to create a future payment initiation.

#### 3.1.2.1 Request

##### Endpoint

POST {provider}/{aspsp}/v1/payments/{payment-product}

##### Path

Field	Description	Type	Mand.	Format
<b>provider</b>	URL of the HUB where the service is published.	String	OB	E.g.: hub.example.es
<b>aspsp</b>	Name of the ASPSP to which the request is made.	String	OB	E.g.: aspsp-name
<b>payment-product</b>	Payment product to use. List of supported products: <ul style="list-style-type: none"> <li>sepa-credit-transfers</li> </ul>	String	OB	E.g.: {provider}/{aspsp}/v1/payments/sepa-credit-transfers/

##### Query parameters

Additional parameters for this request are not specified.

##### Header

Field	Description	Type	Mand.	Format
<b>Content-Type</b>	Value: application/json	String	OB	Content-Type: application/json
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the transaction.	String	OB	<b>UUID</b> $^{[0-9a-fA-F]\{8\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{12\}}\$$ E.g.: X-Request-ID: 1b3ab8e8-Ofd5-43d2-946e-d75958b172e7
<b>Authorization</b>	Bearer Token. Obtained in a pre-authentication on OAuth2.	String	OB	E.g.: Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA
<b>PSU-IP-Address</b>	IP Address of the HTTP request between the PSU and the TPP.  If it is not available, the TPP must use the IP address used by the TPP when it sends this	String	OB	$^{[0-9]\{1,3\}.[0-9]\{1,3\}.[0-9]\{1,3\}.[0-9]\{1,3\}}\$$ E.g.: PSU-IP-Address: 192.168.16.5

	request.			
<b>PSU-IP-Port</b>	IP Port of the HTTP request between the PSU and the TPP, if available.	String	OP	$\wedge.\{1,5\}\$$ E.g.: PSU-IP-Port: 443
<b>PSU-Accept</b>	Accept header of the HTTP request between the PSU and the TPP.	String	OP	$\wedge.\{1,50\}\$$ E.g.: PSU-Accept: application/json
<b>PSU-Accept-Charset</b>	Accept charset header of the HTTP request between the PSU and the TPP.	String	OP	$\wedge.\{1,50\}\$$ E.g.: PSU-Accept-Charset: utf-8
<b>PSU-Accept-Encoding</b>	Accept encoding header of the HTTP request between the PSU and the TPP.	String	OP	$\wedge.\{1,50\}\$$ E.g.: PSU-Accept-Encoding: gzip
<b>PSU-Accept-Language</b>	Accept language header of the HTTP request between the PSU and the TPP.	String	OP	$\wedge.\{1,50\}\$$ E.g.: PSU-Accept-Language: es-ES
<b>PSU-User-Agent</b>	Browser or operating system of the HTTP request between the PSU and the TPP.	String	OP	E.g.: PSU-User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.1.5) Gecko/20091102 Firefox/3.5.5 (.NET CLR 3.5.30729)
<b>PSU-Http-Method</b>	HTTP method used in the interface between the PSU and the TPP. Allowed values: <ul style="list-style-type: none"> <li>• POST</li> <li>• GET</li> <li>• PUT</li> <li>• PATCH</li> <li>• DELETE</li> </ul>	String	OP	E.g.: PSU-Http-Method: POST
<b>PSU-Device-ID</b>	UUID (Universally Unique Identifier) for a device.  The UUID identifies the device or an installation of an application on a device. This ID must not be modified until the application has been uninstalled from the device.	String	OP	<b>UUID</b> $\wedge[0-9a-fA-F]\{8\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{12\}\$$ E.g.: PSU-Device-ID: 5b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>PSU-Geo-Location</b>	Corresponding location of the HTTP request between the PSU and the TPP.	String	OP	<b>RFC 2426</b> $\wedge\text{GEO}:[\wedge d]^*.[\wedge d]^*[:;][\wedge d]^*.[\wedge d]^*\$$ E.g.: PSU-Geo-Location: GEO:90.023856;25.345963

<b>TPP-Redirect-Preferred</b>	<p>If it is “true”, the TPP has informed the HUB that it prefers the SCA redirection.</p> <p>If it is “false”, the TPP has informed the HUB that it prefers not to be redirected to the SCA and the procedure will be carried out by a decoupled flow.</p> <p>If the parameter is not used, the ASPSP will choose the SCA flow to apply, depending on the SCA method chosen by the TPP/PSU.</p> <p><b>EMBEDDED AND DECOUPLED ARE NOT SUPPORTED IN THIS VERSION</b></p>	Boolean	OP	E.g.: TPP-Redirect-Preferred: true
<b>TPP-Redirect-URI</b>	<p>The TPP’s URI, where the transaction flow should be redirected to after some of the SCA phases.</p> <p>It is recommended to use this header field at all times.</p> <p>In the future, this field could become mandatory.</p>	String	COND	<p>^{1,250}\$</p> <p>E.g.: TPP-Redirect-URI:"https://tpp.example.es/cb"</p>
<b>TPP-Nok-Redirect-URI</b>	<p>If this URI is contained, the TPP is requesting that the transaction flow is redirected in this direction instead of to the TPP-Redirect-URI in the event of a negative result from the SCA redirection method.</p>	String	OP	<p>^{1,250}\$</p> <p>E.g.: TPP-Nok-Redirect-URI:"https://tpp.example.es/cb/nok"</p>
<b>TPP-Explicit-Authorisation-Preferred</b>	<p>If it is “true”, the TPP prefers to start the authorisation process separately, E.g.: given the need for the authorisation of a set of simultaneous transactions.</p> <p>If it is “false” or the parameter is not used, the TPP has no preference. The TPP accepts a direct authorisation of the transaction in the next step.</p> <p><b>Note:</b> NOT SUPPORTED.</p>	Boolean	OP	E.g.: TPP-Explicit-Authorisation-Preferred: false
<b>Digest</b>	<p>It is content if it goes in the Signature field.</p> <p>See 6.1 Signature for more information.</p>	String	OB	<p>^{1,100}\$</p> <p>E.g.: Digest: SHA-256=NzdmZJA4YjY5M2M2NDYyMmVjOWFmMGNmYTZiNTU3MjVmNDI4NTRIMzJkYzE3ZmNmMDE3ZGFmMjhhNTc5O</p>

Field	Description	Type	Mand.	Format
<b>Signature</b>	Signature of the request for the TPP.  See 6.1 Signature for more information.	String	OB	TU3OQ==  See annexes
<b>TPP-Signature-Certificate</b>	TPP certificate used to sign the request in base64.	String	OB	^.{1,5000}\$  E.g.: TPP-Signature-Certificate: MIIHgZCCBmugAwIBAgIIzZvBQlt0UcwDQYJ.....KoZlhvcNAQELBQAwSTELMAkGA1UEBhMCMVVMxEzARBgNVBA

### Body

The Body's content is defined in 5.16 SinglePayment and the following parameter must also be reported:

Field	Description	Type	Mand.	Format
<b>requestedExecutionDate</b>	The payment will be executed on the reported date.  <b>Note:</b> this field must be reported.	String	OP	<b>ISODate</b>  E.g.: "requestedExecutionDate": "2019-01-12"

### 3.1.2.2 Response

#### Header

Field	Description	Type	Mand.	Format
<b>Location</b>	It contains the generated link to the resource.	String	OB	<b>Max512Text</b>  E.g.: Location: /v1/payments/{payment-product}/{payment-id}
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the transaction.	String	OB	<b>UUID</b>  ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$  E.g.: X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>ASPSP-SCA-Approach</b>	Returned value if the SCA method has been set. Possible values:  • REDIRECT  The SCA based on OAuth will be taken as a REDIRECT.	String	COND	E.g.: ASPSP-SCA-Approach: REDIRECT

**Body**

Field	Description	Type	Mand.	Format
<b>transactionStatus</b>	Status of the transaction. Values defined in Annexes in 6.4 Transaction status	String	OB	<b>ISO 20022</b> E.g.: "transactionStatus": "RCVD"
<b>paymentId</b>	Resource identifier referred to the payment initiation.	String	OB	^{1,36}\$ E.g.: "paymentId": "1b3ab8e8-0fd5-43d2-946e-d75958b172e7"
<b>_links</b>	List of hyperlinks to be recognised by the HUB. Types supported in this response: <ul style="list-style-type: none"> <li>scaRedirect: in the event of the SCA redirect. Link where the PSU's browser must be redirected by the HUB.</li> <li>self: link to the resource created by this request.</li> <li>status: link to retrieve the transaction status.</li> </ul>	Links	OB	E.g.: "_links": {...}
<b>psuMessage</b>	Text sent to the TPP through the HUB to be displayed to the PSU.	String	OP	^{1,512}\$ E.g.: "psuMessage": "Information for the PSU"
<b>tppMessages</b>	Message for the TPP sent though the HUB.	List<TppMessage>	OP	E.g.: "tppMessages": [...]

### 3.1.2.3 Examples

#### Example of an SCA redirection request

POST <https://hub.example.es/aspsp-name/v1/payments/sepa-credit-transfers>

Content-Encoding: gzip

Content-Type: application/json

X-Request-ID: 10391c7e-ad88-49ec-a2ad-00aacb1f6541

Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA

PSU-IP-Address: 192.168.8.16

PSU-IP-Port: 443

PSU-Accept: application/json

PSU-Accept-Charset: utf-8

PSU-Accept-Encoding: gzip

PSU-Accept-Language: es-ES

PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0

PSU-Http-Method: POST

PSU-Device-ID: f8b3feda-6fe3-11e8-adc0-fa7ae01bbebc

PSU-GEO-Location: GEO:12.526347;54.649862

TPP-Redirect-Preferred: true

TPP-Redirect-URI: https://tpp.example.es/cb

TPP-Nok-Redirect-URI: https://tpp.example.es/cb/nok

Date: Sun, 26 Sep 2017 15:02:37 GMT

```
{
  "instructedAmount": {
    "currency": "EUR",
    "amount": "153.50"
  },
  "debtorAccount": {
    "iban": "ES1111111111111111111111"
  },
  "creditorAccount": {
    "iban": "ES2222222222222222222222"
  },
  "creditorName": "Name123",
  "remittanceInformationUnstructured": "Additional information",
  "requestedExecutionDate": "2019-01-12"
}
```

### 3.1.3 Initiation of standing orders for recurring / periodic payments

Message sent by the TPP to the ASPSP through the Hub to create a recurring / periodic payment initiation.

The initiation of recurring payments functionality is specifically covered by the Berlin Group as the initiation of a specific standing order.

A TPP can send an initiation of a recurring payment in which the start date, frequency and the end date must all be provided.

Once authorised by the PSU, the payment will be executed by the ASPSP, if possible, following the "standing order" as it was sent by the TPP. No further action is needed by the TPP.

In this context, this payment is considered a periodic payment to differentiate it from other types of recurring payments where third parties initiate the same amount of money.

**Note:** to initiate standing order payments, the ASPSP will always request the SCA with Dynamic linking. No exemptions are allowed.

### Rules for the dayOfExecution field

- **Daily payments:** the “dayOfExecution” field is not necessary. The first payment is on the “startDate”, and from then on, the payment is made every day.
- **Weekly payments:** if the “dayOfExecution” is required, the possible values are 01=Monday to 07=Sunday. If the “dayOfExecution” is not required, the “startDate” will be the day of the week on which the payment is made. (If the “startDate” is Thursday, the payment will be made every Thursday).
- **Fortnightly payments:** the same rule applies as for weekly payments.
- **Monthly payments or longer payment periods:** the possible values range from 01 to 31. Using the 31st is used as the last day of the month (only for monthly payments). For longer periods an error will be returned.

#### 3.1.3.1 Request

##### Endpoint

POST {provider}/{aspsp}/v1/periodic-payments/{payment-product}

##### Path

Field	Description	Type	Mand.	Format
<b>provider</b>	URL of the HUB where the service is published.	String	OB	E.g.: hub.example.es
<b>aspsp</b>	Name of the ASPSP to which the request is made.	String	OB	E.g.: aspsp-name
<b>payment-product</b>	Payment product to use. List of supported products: sepa-credit-transfers	String	OB	E.g.: {provider}/{aspsp-name}/v1/periodic-payments/sepa-credit-transfers/

##### Query parameters

Additional parameters for this request are not specified.

##### Header

Field	Description	Type	Mand.	Format
<b>Content-Type</b>	Value: application/json	String	OB	Content-Type: application/json
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the transaction.	String	OB	<b>UUID</b> ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$ E.g.: X-Request-ID: 1b3ab8e8-



				Ofd5-43d2-946e-d75958b172e7
<b>Authorization</b>	Bearer Token. Obtained in a pre-authentication on OAuth2.	String	OB	E.g.: Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA
<b>PSU-IP-Address</b>	IP Address of the HTTP request between the PSU and the TPP.  If it is not available, the TPP must use the IP address used by the TPP when it sends this request.	String	OB	^[0-9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}\$  E.g.: PSU-IP-Address: 192.168.16.5
<b>PSU-IP-Port</b>	IP Port of the HTTP request between the PSU and the TPP, if available.	String	OP	^.{1,5}\$  E.g.: PSU-IP-Port: 443
<b>PSU-Accept</b>	Accept header of the HTTP request between the PSU and the TPP.	String	OP	^{1,50}\$  E.g.: PSU-Accept: application/json
<b>PSU-Accept-Charset</b>	Accept charset header of the HTTP request between the PSU and the TPP.	String	OP	^{1,50}\$  E.g.: PSU-Accept-Charset: utf-8
<b>PSU-Accept-Encoding</b>	Accept encoding header of the HTTP request between the PSU and the TPP.	String	OP	^{1,50}\$  E.g.: PSU-Accept-Encoding: gzip
<b>PSU-Accept-Language</b>	Accept language header of the HTTP request between the PSU and the TPP.	String	OP	^{1,50}\$  E.g.: PSU-Accept-Language: es-ES
<b>PSU-User-Agent</b>	Browser or operating system of the HTTP request between the PSU and the TPP.	String	OP	E.g.: PSU-User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.1.5) Gecko/20091102 Firefox/3.5.5 (.NET CLR 3.5.30729)
<b>PSU-Http-Method</b>	HTTP method used in the interface between the PSU and the TPP. Allowed values: <ul style="list-style-type: none"> <li>• POST</li> <li>• GET</li> <li>• PUT</li> <li>• PATCH</li> <li>• DELETE</li> </ul>	String	OP	E.g.: PSU-Http-Method: POST
<b>PSU-Device-ID</b>	UUID (Universally Unique Identifier) for a device.  The UUID identifies the device or an installation of an application on a device. This	String	OP	<b>UUID</b>  ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$

	ID must not be modified until the application has been uninstalled from the device.			E.g.: PSU-Device-ID: 5b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>PSU-Geo-Location</b>	Corresponding location of the HTTP request between the PSU and the TPP.	String	OP	<b>RFC 2426</b> ^GEO:[\\d]*.[\\d]*[;][\\d]*.[\\d]*\$ E.g.: PSU-Geo-Location: GEO:90.023856;25.345963
<b>TPP-Redirect-Preferred</b>	<p>If it is “true”, the TPP has informed the HUB that it prefers the SCA redirection.</p> <p>If it is “false”, the TPP has informed the HUB that it prefers not to be redirected to the SCA and the procedure will be carried out by a decoupled flow.</p> <p>If the parameter is not used, the ASPSP will choose the SCA flow to apply, depending on the SCA method chosen by the TPP/PSU.</p> <p><b>EMBEDDED AND DECOUPLED ARE NOT SUPPORTED IN THIS VERSION</b></p>	Boolean	OP	E.g.: TPP-Redirect-Preferred: true
<b>TPP-Redirect-URI</b>	<p>The TPP’s URI, where the transaction flow should be redirected to after some of the SCA phases.</p> <p>It is recommended to use this header field at all times.</p> <p>In the future, this field could become mandatory.</p>	String	COND	^.{1,250}\$ E.g.: TPP-Redirect-URI:"https://tpp.example.es/cb"
<b>TPP-Nok-Redirect-URI</b>	If this URI is contained, the TPP is requesting that the transaction flow is redirected in this direction instead of to the TPP-Redirect-URI in the event of a negative result from the SCA redirection method.	String	OP	^.{1,250}\$ E.g.: TPP-Nok-Redirect-URI:"https://tpp.example.es/cb/nok"
<b>Digest</b>	<p>It is content if it goes in the Signature field.</p> <p>See 6.1 Signature for more information.</p>	String	OB	^.{1,100}\$ E.g.: Digest: SHA-256=NzdmZjA4YjY5M2M2NDYyMmVjOWFmMGNmYTZiNTU3MjVmNDI4NTRIMzJkYzE3ZmNmMDE3ZGFmMjhhNTc5OU3OQ==

<b>Signature</b>	Signature of the request for the TPP.  See 6.1 Signature for more information.	String	OB	See annexes
<b>TPP-Signature-Certificate</b>	TPP certificate used to sign the request in base64.	String	OB	$\wedge\{1,5000\}\$$ E.g.: TPP-Signature-Certificate: MIIHgZCCBmugAwIBAgIIzZvBQlt0UcwDQYJ.....KoZlhv cNAQELBQAuSTELMAkGA1U EBhMCVVMxEzARBgNVBA

### Body

The Body's content is defined in 5.16 SinglePayment along with as the definitions listed below:

Field	Description	Type	Mand.	Format
<b>startDate</b>	The first applicable execution day from this date is the first payment.	String	OB	<b>ISODate</b> E.g.: "startDate":"2018-12-20"
<b>endDate</b>	The last applicable execution day.  If there is nothing entered it is a standing order with no end.	String	OP	<b>ISODate</b> E.g.: "endDate":"2019-01-20"
<b>frequency</b>	The frequency of the recurring payment resulting from this standing order.  Allowed values: <ul style="list-style-type: none"> <li>• Daily</li> <li>• Weekly</li> <li>• EveryTwoWeeks</li> <li>• Monthly</li> <li>• EveryTwoMonths</li> <li>• Quarterly</li> <li>• SemiAnnual</li> <li>• Annual</li> </ul>	String	OB	<b>EventFrequency7Code de ISO 2002</b> E.g.: "frequency":"monthly"
<b>dayOfExecution</b>	"31" is last. Only if the frequency is monthly  The regular expression $\{d\{1,2\}$ follows.  The date refers to the ASPSP's time zone.	String	COND	$\{d\{1,2\}$ E.g.: "dayOfExecution":"01"

### 3.1.3.2 Response

#### Header

Field	Description	Type	Mand.	Format
<b>Location</b>	It contains the generated link to the resource.	String	OB	^.{1,512}\$ E.g.: Location: /v1/periodic-payments/{payment-product}/{payment-id}
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the transaction.	String	OB	<b>UUID</b> ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$ E.g.: X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>ASPSP-SCA-Approach</b>	Returned value if the SCA method has been set. Possible values: <ul style="list-style-type: none"> <li>• REDIRECT</li> </ul> The SCA based on OAuth will be taken as a REDIRECT.	String	COND	E.g.: ASPSP-SCA-Approach: REDIRECT

#### Body

Field	Description	Type	Mand.	Format
<b>transactionStatus</b>	Status of the transaction. Values defined in Annexes in 6.4 Transaction status	String	OB	<b>ISO 20022</b> E.g.: "transactionStatus": "RCVD"
<b>paymentId</b>	Resource identifier which references the periodic payment.	String	OB	^.{1,36}\$ E.g.: "paymentId": "1b3ab8e8-0fd5-43d2-946e-d75958b172e7"
<b>_links</b>	List of hyperlinks to be recognised by the TPP. Types supported in this response: <ul style="list-style-type: none"> <li>• scaRedirect: in the event of the SCA redirect. Link where the PSU's browser must be redirected by the TPP.</li> <li>• self: link to the resource created by this request.</li> <li>• status: link to retrieve the transaction status.</li> </ul>	Links	OB	E.g.: "_links": {...}

---

<b>psuMessage</b>	Text sent to the TPP through the HUB to be displayed to the PSU.	String	OP	^{1,512}\$ E.g.: "psuMessage": "Information for the PSU"
<b>tppMessages</b>	Message for the TPP sent though the HUB.	List<TppMessage>	OP	E.g.: "tppMessages": [...]

### 3.1.3.3 Examples

#### Example of an SCA redirection request

POST <https://hub.example.es/{aspsp-name}/v1/periodic-payments/sepa-credit-transfers>

Content-Encoding: gzip

Content-Type: application/json

X-Request-ID: 10391c7e-ad88-49ec-a2ad-00aacb1f6541

Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA

PSU-IP-Address: 192.168.8.16

TPP-Redirect-Preferred: true

TPP-Redirect-URI: https://tpp.example.es/cb

TPP-Nok-Redirect-URI: https://tpp.example.es/cb/nok

Date: Sun, 26 Sep 2017 15:02:37 GMT

```
{
  "instructedAmount": {
    "currency": "EUR",
    "amount": "153.50"
  },
  "creditorAccount": {
    "iban": "ES2222222222222222222222"
  },
  "creditorName": "Name123", "remittanceInformationUnstructured": "Additional Information",
  "startDate": "2018-03-01",
  "frequency": "monthly",
  "dayOfExecution": "01"
}
```

### 3.1.4 Obtain payment status

This message is sent by the TPP to the HUB to request information on the status of the payment initiation requested by the TPP.

### 3.1.4.1 Request

#### Endpoint

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

#### Path

Field	Description	Type	Mand.	Format
<b>provider</b>	URL of the HUB where the service is published.	String	OB	E.g.: www.hub.com
<b>aspsp</b>	Name of the ASPSP to which the request is made.	String	OB	E.g.: aspsp-name
<b>payment-service</b>	Possible values are: <ul style="list-style-type: none"> <li>payments</li> <li>periodic-payments</li> </ul>	String	OB	E.g.: {provider}/{aspsp}/v1/payments
<b>payment-product</b>	Payment product to use. List of supported products: <ul style="list-style-type: none"> <li>sepa-credit-transfers</li> <li>instant-sepa-credit-transfers</li> <li>target-2-payments</li> <li>cross-border-credit-transfers</li> </ul>	String	OB	E.g.: {provider}/{aspsp}/v1/payments/sepa-credit-transfers/
<b>paymentId</b>	Resource identifier referred to the payment initiation.  Sent previously as a response to a payment initiation from the TPP to the HUB.	String	OB	^.{1,36}\$  E.g.: 1234-qwer-5678

#### Query parameters

No additional fields are specified.

#### Header

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the request.	String	OB	<b>UUID</b>  ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$  E.g.:  X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>Authorization</b>	Bearer Token. Obtained in a pre-authentication on OAuth2.	String	OB	E.g.:  Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA

<b>Accept</b>	Format supported of the response. Supported values: <ul style="list-style-type: none"> <li>• application/json</li> </ul>	String	OP	$^{\{1,50\}}\$$ E.g.: Accept: application/json
<b>PSU-IP-Address</b>	IP Address of the HTTP request between the PSU and the TPP.	String	OP	$^{\{0-9\}\{1,3\}.\{0-9\}\{1,3\}.\{0-9\}\{1,3\}.\{0-9\}\{1,3\}}\$$ E.g.: PSU-IP-Address: 192.168.16.5
<b>PSU-IP-Port</b>	IP Port of the HTTP request between the PSU and the TPP, if available.	String	OP	$^{\d\{1,5\}}\$$ E.g.: PSU-IP-Port: 443
<b>PSU-Accept</b>	Accept header of the HTTP request between the PSU and the TPP.	String	OP	$^{\{1,50\}}\$$ E.g.: PSU-Accept: application/json
<b>PSU-Accept-Charset</b>	Accept charset header of the HTTP request between the PSU and the TPP.	String	OP	$^{\{1,50\}}\$$ E.g.: PSU-Accept-Charset: utf-8
<b>PSU-Accept-Encoding</b>	Accept encoding header of the HTTP request between the PSU and the TPP.	String	OP	$^{\{1,50\}}\$$ E.g.: PSU-Accept-Encoding: gzip
<b>PSU-Accept-Language</b>	Accept language header of the HTTP request between the PSU and the TPP.	String	OP	$^{\{1,50\}}\$$ E.g.: PSU-Accept-Language: es-ES
<b>PSU-User-Agent</b>	Browser or operating system of the HTTP request between the PSU and the TPP.	String	OP	E.g.: PSU-User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.1.5) Gecko/20091102 Firefox/3.5.5 (.NET CLR 3.5.30729)
<b>PSU-Http-Method</b>	HTTP method used in the interface between the PSU and the TPP. Allowed values: <ul style="list-style-type: none"> <li>• POST</li> <li>• GET</li> <li>• PUT</li> <li>• PATCH</li> <li>• DELETE</li> </ul>	String	OP	E.g.: PSU-Http-Method: GET
<b>PSU-Device-ID</b>	<p>UUID (Universally Unique Identifier) for a device.</p> <p>The UUID identifies the device or an installation of an application on a device. This ID must not be modified until the application has been uninstalled from the device.</p>	String	OP	<b>UUID</b> $^{\{0-9a-fA-F\}\{8\}-\{0-9a-fA-F\}\{4\}-\{0-9a-fA-F\}\{4\}-\{0-9a-fA-F\}\{4\}-\{0-9a-fA-F\}\{12\}}\$$ E.g.: PSU-Device-ID: 5b3ab8e8-Ofd5-43d2-946e-

Field	Description	Type	Mand.	Format
<b>PSU-Geo-Location</b>	Corresponding location of the HTTP request between the PSU and the TPP.	String	OP	d75958b172e7 <b>RFC 2426</b> ^GEO:[\\d]*.[\\d]*[;][\\d]*.[\\d]*\$ E.g.: PSU-Geo-Location: GEO:90.023856;25.345963
<b>Digest</b>	It is content if it goes in the Signature field.  See 6.1 Signature for more information.	String	OB	^{1,100}\$ E.g.: Digest: SHA-256=NzdmZjA4YjY5M2M2NDYyMmVjOWFmMGNmYTZiNTU3MjVmNDI4NTRIMzjkYzE3ZmNmMDE3ZGFmMjhhNTc5O TU3OQ==
<b>Signature</b>	Signature of the request for the TPP.  See 6.1 Signature for more information.	String	OB	See annexes
<b>TPP-Signature-Certificate</b>	TPP certificate used to sign the request in base64.	String	OB	^{1,5000}\$ E.g.: TPP-Signature-Certificate: MIIHgZCCBmugAwIBAgIIzZvBQlt0UcwDQYJ.....KoZlhw cNAQELBQAwSTELMAkGA1UEBhMCMCVVMxEzARBgNVBA

### Body

No additional data is specified.

### 3.1.4.2 Response

#### Header

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the request.	String	OB	<b>UUID</b> ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$ E.g.: X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7

#### Body

Field	Description	Type	Mand.	Format
<b>transactionStatus</b>	Status of the payment transaction.  Values defined in 6.4 Transaction	String	OB	<b>ISO20022</b> E.g.: "transactionStatus": "A"



	status			CCP"
<b>psuMessage</b>	Text to be displayed to the PSU.	String	OP	^.{1,512}\$ E.g.: "psuMessage": "Information for the PSU"
<b>tppMessages</b>	Message for the TPP.	List<TppMessage>	OP	E.g.: "tppMessages": [...]

### 3.1.4.3 Examples

#### Example of a request

GET <https://www.hub.com/aspsp-name/v1/payments/sepa-credit-transfer/123asdf456/status>

Accept: application/json

X-Request-ID: 96201400-6ff9-11e8-adc0-fa7ae01bbebc

Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA

PSU-IP-Address: 192.168.8.16

PSU-IP-Port: 443

PSU-Accept: application/json

PSU-Accept-Charset: utf-8

PSU-Accept-Encoding: gzip

PSU-Accept-Language: es-ES

PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0

PSU-Http-Method: GET

PSU-Device-ID: f8b3feda-6fe3-11e8-adc0-fa7ae01bbebc

PSU-GEO-Location: GEO:12.526347;54.649862

Date: Sun, 26 Sep 2017 15:02:48 GMT

#### Example of a response

HTTP/1.1 200 OK

X-Request-ID: 96201400-6ff9-11e8-adc0-fa7ae01bbebc

Date: Sun, 26 Sep 2017 15:02:50 GMT

Content-Type: application/json

```
{
  "transactionStatus": "ACCP"
}
```

### 3.1.5 Retrieve information from the start of the payment

This message is sent by the TPP through the HUB to the ASPSP to obtain information on the payment initiation.

### 3.1.5.1 Request

#### Endpoint

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

#### Path

Field	Description	Type	Mand.	Format
<b>provider</b>	URL of the HUB where the service is published.	String	OB	E.g.: www.hub.com
<b>aspsp</b>	Name of the ASPSP to which the request is made.	String	OB	E.g.: aspsp-name
<b>payment-service</b>	Possible values are: <ul style="list-style-type: none"> <li>payments</li> <li>periodic-payments</li> </ul>	String	OB	E.g.: {provider}/{aspsp}/v1/payments
<b>payment-product</b>	Payment product to use. List of supported products: <ul style="list-style-type: none"> <li>sepa-credit-transfers</li> <li>instant-sepa-credit-transfers</li> <li>target-2-payments</li> <li>cross-border-credit-transfers</li> </ul>	String	OB	E.g.: {provider}/{aspsp}/v1/payments/sepa-credit-transfers/
<b>paymentId</b>	Resource identifier referred to the payment initiation.  Sent previously as a response to a payment initiation from the TPP to the HUB.	String	OB	^.{1,36}\$  E.g.: 1234-qwer-5678

#### Query parameters

No additional fields are specified.

#### Header

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the request.	String	OB	<b>UUID</b>  ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$  E.g.:  X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>Authorization</b>	Bearer Token. Obtained in a	String	OB	E.g.:

	pre-authentication on OAuth2.			Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA
<b>PSU-IP-Address</b>	IP Address of the HTTP request between the PSU and the TPP.	String	OP	$^{[0-9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}}\$$ E.g.: PSU-IP-Address: 192.168.16.5
<b>PSU-IP-Port</b>	IP Port of the HTTP request between the PSU and the TPP, if available.	String	OP	$^{\d{1,5}}\$$ E.g.: PSU-IP-Port: 443
<b>PSU-Accept</b>	Accept header of the HTTP request between the PSU and the TPP.	String	OP	$^{\{1,50}}\$$ E.g.: PSU-Accept: application/json
<b>PSU-Accept-Charset</b>	Accept charset header of the HTTP request between the PSU and the TPP.	String	OP	$^{\{1,50}}\$$ E.g.: PSU-Accept-Charset: utf-8
<b>PSU-Accept-Encoding</b>	Accept encoding header of the HTTP request between the PSU and the TPP.	String	OP	$^{\{1,50}}\$$ E.g.: PSU-Accept-Encoding: gzip
<b>PSU-Accept-Language</b>	Accept language header of the HTTP request between the PSU and the TPP.	String	OP	$^{\{1,50}}\$$ E.g.: PSU-Accept-Language: es-ES
<b>PSU-User-Agent</b>	Browser or operating system of the HTTP request between the PSU and the TPP.	String	OP	E.g.: PSU-User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.1.5) Gecko/20091102 Firefox/3.5.5 (.NET CLR 3.5.30729)
<b>PSU-Http-Method</b>	HTTP method used in the interface between the PSU and the TPP. Allowed values: <ul style="list-style-type: none"> <li>• POST</li> <li>• GET</li> <li>• PUT</li> <li>• PATCH</li> <li>• DELETE</li> </ul>	String	OP	E.g.: PSU-Http-Method: GET
<b>PSU-Device-ID</b>	UUID (Universally Unique Identifier) for a device.  The UUID identifies the device or an installation of an application on a device. This ID must not be modified until the application has been uninstalled from the device.	String	OP	<b>UUID</b> $^{[0-9a-fA-F]{8}\-[0-9a-fA-F]{4}\-[0-9a-fA-F]{4}\-[0-9a-fA-F]{4}\-[0-9a-fA-F]{12}}\$$ E.g.: PSU-Device-ID: 5b3ab8e8-0fd5-43d2-946e-d75958b172e7

Field	Description	Type	Mand.	Format
<b>PSU-Geo-Location</b>	Corresponding location of the HTTP request between the PSU and the TPP.	String	OP	<b>RFC 2426</b> ^GEO:[\\d]*.[\\d]*:[;][\\d]*.[\\d]*\$ E.g.: PSU-Geo-Location: GEO:90.023856;25.345963
<b>Digest</b>	It is content if it goes in the Signature field. See 6.1 Signature for more information.	String	OB	^.{1,100}\$ E.g.: Digest: SHA-256=NzdmZjA4YjY5M2M2NDYyMmVjOWFmMGNmYTZiNTU3MjVmNDI4NTRIMzJkYzE3ZmNmMDE3ZGFmMjhNTc5OTU3OQ==
<b>Signature</b>	Signature of the request for the TPP. See 6.1 Signature for more information.	String	OB	See annexes
<b>TPP-Signature-Certificate</b>	TPP certificate used to sign the request in base64.	String	OB	^.{1,5000}\$ E.g.: TPP-Signature-Certificate: MIIHgzCCBmugAwIBAgIIzZvBQlt0UcwDQYJ.....K oZlhvcNAQELBQAwSTELMAkGA1UEBhMCVVMxEzARBgNVBA

## Body

No additional data is specified.

### 3.1.5.2 Response

#### Header

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the request.	String	OB	<b>UUID</b> ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$ E.g.: X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7

## Body

The fields to be returned are those of the original payment initiation request:

- 3.1.1 Payment initiation
- 3.1.2 Future payment initiation
- 3.1.3 Initiation of standing orders for recurring / periodic payments

In addition to the following:

Field	Description	Type	Mand.	Format
<b>transactionStatus</b>	Status of the transaction. Values defined in annexes. Short code.	String	OB	<b>ISO 20022</b> E.g.: "transactionStatus": "ACCP"
<b>psuMessage</b>	Text sent to the TPP through the HUB to be displayed to the PSU.	String	OP	^{1,512}\$ E.g.: "psuMessage": "Information for the PSU"
<b>tppMessages</b>	Message for the TPP sent though the HUB.	List<TppMessage>	OP	E.g.: "tppMessage": [...]

### 3.1.5.3 Examples

#### Example of a request

GET <https://www.hub.com/aspsp-name/v1/payments/sepa-credit-transfers/123-asdf-456>

Accept: application/json

X-Request-ID: 96201400-6ff9-11e8-adc0-fa7ae01bbebc

Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA

PSU-IP-Address: 192.168.8.16

PSU-IP-Port: 443

PSU-Accept: application/json

PSU-Accept-Charset: utf-8

PSU-Accept-Encoding: gzip

PSU-Accept-Language: es-ES

PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0

PSU-Http-Method: GET

PSU-Device-ID: f8b3feda-6fe3-11e8-adc0-fa7ae01bbebc

PSU-GEO-Location: GEO:12.526347;54.649862

Date: Sun, 26 Sep 2017 15:02:48 GMT

#### Example of a response

HTTP/1.1 200 OK

X-Request-ID: 96201400-6ff9-11e8-adc0-fa7ae01bbebc

Date: Sun, 26 Sep 2017 15:02:50 GMT

Content-Type: application/json

```
{
  "instructedAmount": {
    "currency": "EUR",
    "amount": "153.50"
  }
}
```

```

    },
    "debtorAccount": {
      "iban": "ES1111111111111111111111"
    },
    "creditorAccount": {
      "iban": "ES2222222222222222222222"
    },
    "creditorName": "Name123",
    "remittanceInformationUnstructured": "Additional information",
    "transactionStatus": "ACCP"
  }
}

```

### 3.1.6 Cancelling a payment initiation

This request is sent by the TPP to the ASPSP through the Hub and allows the payment initiation to be cancelled. Depending on the payment service, the payment product and ASPSP's implementation, this request may be sufficient to cancel the payment or an authorisation may be required.

#### 3.1.6.1 Request

##### Endpoint

DELETE {provider}/{aspsp}/v1/{payment-service}/{payment-product}/{paymentId}

##### Path

Field	Description	Type	Mand.	Format
<b>provider</b>	URL of the ASPSP where the service is published.	String	OB	E.g.: www.hub.com
<b>aspsp</b>	Name of the ASPSP to which the request is made.	String	OB	E.g.: aspsp-name
<b>payment-service</b>	Possible values are: <ul style="list-style-type: none"> <li>payments</li> <li>periodic-payments</li> </ul>	String	OB	E.g.: {provider}/v1/payments
<b>payment-product</b>	Payment product to use. List of supported products: <ul style="list-style-type: none"> <li>sepa-credit-transfers</li> <li>target-2-payments</li> <li>cross-border-credit-transfers</li> </ul>	String	OB	E.g.: {provider}/{aspsp}/v1/payments/sepa-credit-transfers/
<b>paymentId</b>	Resource identifier referred to the payment initiation.  Sent previously as a response to a payment	String	OB	^.{1,36}\$ E.g.: 123-qwe-456

initiation from the HUB to the ASPSP.

### Query parameters

No additional fields are specified.

### Header

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the request and sent through the HUB to the ASPSP	String	OB	<b>UUID</b> $^{[0-9a-fA-F]\{8\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{12\}}\$$ E.g.: X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>Authorization</b>	Bearer Token. Obtained in a pre-authentication on OAuth2.	String	OB	E.g.: Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA
<b>PSU-IP-Address</b>	IP Address of the HTTP request between the PSU and the TPP.	String	OP	$^{[0-9]\{1,3\}\. [0-9]\{1,3\}\. [0-9]\{1,3\}\. [0-9]\{1,3\}}\$$ E.g.: PSU-IP-Address: 192.168.16.5
<b>PSU-IP-Port</b>	IP Port of the HTTP request between the PSU and the TPP, if available.	String	OP	$^{\d\{1,5\}}\$$ E.g.: PSU-IP-Port: 443
<b>PSU-Accept</b>	Accept header of the HTTP request between the PSU and the TPP.	String	OP	$^{\. \{1,50\}}\$$ E.g.: PSU-Accept: application/json
<b>PSU-Accept-Charset</b>	Accept charset header of the HTTP request between the PSU and the TPP.	String	OP	$^{\. \{1,50\}}\$$ E.g.: PSU-Accept-Charset: utf-8
<b>PSU-Accept-Encoding</b>	Accept encoding header of the HTTP request between the PSU and the TPP.	String	OP	$^{\. \{1,50\}}\$$ E.g.: PSU-Accept-Encoding: gzip
<b>PSU-Accept-Language</b>	Accept language header of the HTTP request between the PSU and the TPP.	String	OP	$^{\. \{1,50\}}\$$ E.g.: PSU-Accept-Language: es-ES
<b>PSU-User-Agent</b>	Browser or operating system of the HTTP request between the PSU and the TPP.	String	OP	E.g.: PSU-User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.1.5) Gecko/20091102 Firefox/3.5.5 (.NET CLR 3.5.30729)
<b>PSU-Http-Method</b>	HTTP method used in the interface between the PSU	String	OP	E.g.: PSU-Http-Method: DELETE

and the TPP. Allowed values:

- POST
- GET
- PUT
- PATCH
- DELETE

<b>PSU-Device-ID</b>	<p>UUID (Universally Unique Identifier) for a device.</p> <p>The UUID identifies the device or an installation of an application on a device. This ID must not be modified until the application has been uninstalled from the device.</p>	String	OP	<p><b>UUID</b></p> <p><math>^{[0-9a-fA-F]\{8\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{12\}}\\$</math></p> <p>E.g.:</p> <p>PSU-Device-ID: 5b3ab8e8-Ofd5-43d2-946e-d75958b172e7</p>
<b>PSU-Geo-Location</b>	<p>Corresponding location of the HTTP request between the PSU and the TPP</p>	String	OP	<p><b>RFC 2426</b></p> <p><math>^{GEO:[\d]*\.[\d]*;[\d]*\.[\d]*}\\$</math></p> <p>E.g.:</p> <p>PSU-Geo-Location: GEO:90.023856;25.345963</p>
<b>Digest</b>	<p>It is content if it goes in the Signature field.</p> <p>See 6.1 Signature for more information.</p>	String	OB	<p><math>^{.\{1,100\}}\\$</math></p> <p>E.g.: Digest: SHA-256=NzdmZjA4YjY5M2M2NDYyMmVjOWFmMGNmYTZiNTU3MjVmNDI4NTRIMzJkYzE3ZmNmMDE3ZGFmMjhhNTc5OTU3OQ==</p>
<b>Signature</b>	<p>Signature of the request for the TPP.</p> <p>See 6.1 Signature for more information.</p>	String	OB	See annexes
<b>TPP-Signature-Certificate</b>	<p>TPP certificate used to sign the request in base64.</p>	String	OB	<p><math>^{.\{1,5000\}}\\$</math></p> <p>E.g.: TPP-Signature-Certificate: MIIHgzCCBmugAwIBAgIIzZvBQlt0UcwDQYJ.....KoZlhvcNAQELBQAwwSTELMAkGA1UEBhMCVVMxEzARBgNVBA</p>

**Body**

No additional data is specified.

**3.1.6.2 Response**

**Header**

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the transaction and sent through the HUB to	String	OB	<p><b>UUID</b></p> <p><math>^{[0-9a-fA-F]\{8\}-[0-9a-fA-F]\{4\}-</math></p>



the ASPSP.

[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-  
[0-9a-fA-F]{12}\$

E.g.:

X-Request-ID: 1b3ab8e8-0fd5-  
43d2-946e-d75958b172e7

## Body

Field	Description	Type	Mand.	Format
<b>transactionStatus</b>	Status of the transaction. Values defined in Annexes in 6.4 Transaction status	String	OB	<b>ISO 20022</b> E.g.: "transactionStatus": "CANC"
<b>_links</b>	List of hyperlinks to be recognised by the TPP. These depend on the decision made by the ASPSP to evaluate the translation. Types supported in this response.	Links	COND	E.g.: "_links": {...}
<b>psuMessage</b>	Text sent to the TPP through the HUB to be displayed to the PSU.	String	OP	^{1,512}\$ E.g.: "psuMessage": "Information for the PSU"
<b>tppMessages</b>	Message for the TPP sent through the HUB.	List<TppMessage>	OP	E.g.: "tppMessages": [...]

### 3.1.6.1 Examples

#### Example of a request

DELETE <https://www.hub.com/aspsp-name/v1/payments/sepa-credit-transfers/123-qwe-456>

X-Request-ID: 96201400-6ff9-11e8-adc0-fa7ae01bbebc

Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA

PSU-IP-Address: 192.168.8.16

PSU-IP-Port: 443

PSU-Accept: application/json

PSU-Accept-Charset: utf-8

PSU-Accept-Encoding: gzip

PSU-Accept-Language: es-ES

PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0

PSU-Http-Method: GET

PSU-Device-ID: f8b3feda-6fe3-11e8-adc0-fa7ae01bbebc

PSU-GEO-Location: GEO:12.526347;54.649862

Content-Type: application/json

Date: Sun, 26 Sep 2017 15:02:48 GMT

### Example of response when authorisation of the cancellation by the PSU is required

HTTP/1.1 200 OK

X-Request-ID: 0ee25bf4-6ff1-11e8-adc0-fa7ae01bbebc

Date: Sun, 26 Sep 2017 15:02:47 GMT

```
{
  "transactionStatus": "ACTC",
  "_links": {
    "startAuthorisation": {
      "href": "/v1/payments/sepa-credit-transfers/123-qwe-456/cancellation-
authorisations"
    }
  }
}
```

## 3.2 AIS: Service to establish consent to account information

### 3.2.1 Characteristics of the different types of consents

#### 3.2.1.1 Consent model

Model	Description
Detailed consent	<p><b>Request for consent about the accounts specified</b></p> <p>Creates a consent which must be stored by the ASPSP, requesting access to the specified accounts and the requested access.</p> <p>If there was already consent in place, it will expire and the new one will enter into force once it has been authorised by the PSU.</p> <p>The accounts for which consent is requested to access “balances” and/or “transactions” will automatically also have access to “accounts”.</p>
	<p><b>Request consent to gain access to all the access to all accounts for the AIS services of the PSD2</b></p> <p>Requests access to all the PSU’s available accounts of PSU for all the AIS services of the PSD2.</p> <p>The accounts are not specified by the TPP.</p> <p>In the request the access accounts that you want to have access to, are not specified. “All PSD2 accounts” is specified in the request, using “allPsd2” in the “allAccounts” value.</p> <p>Through the HUB, the TPP can retrieve the said information handled by the ASPSP and the PSU with a request to retrieve information on the consent.</p>
Global consent	

**Request consent without specifying the accounts**

Request consent to access “accounts”, “balances”, and/or “transactions” without specifying the accounts. In other words, the attributes “accounts”, “balances” and “transactions” will go in a blank array.

To select the accounts to be provided, access must be obtained bilaterally between the ASPSP and the PSU through the ASPSP interface in the redirect flow from OAuth.

In the redirection process the ASPSP will show the PSU their accounts on which it wants to give consent to the TPP.

Through the HUB, the TPP can retrieve the said information handled by the ASPSP and the PSU with a request to retrieve information on the consent.

**3.2.1.2 Recurring access****Recurrent consents**

If there is a prior consent for recurring access (recurringIndicator:true) in place and a new request for recurring access is made, as soon as the new consent is accepted by the PSU, the old one will expire and the new requested consent will be the valid one.

A consent with recurring access can have one or more accounts with different types of access (“accounts”, “balances”, “transactions”).

Note: giving access to “balances” and/or “transactions” automatically gives access to these “accounts”.

**Non-recurrent consents**

A request for consent for a non-recurring access (for one access only with the recurringIndicator:false) will be treated as a new consent (new consentId) without affecting the previously given existing consents.

**3.2.2 Consent to information on payment accounts**

With this service, through the HUB, a TPP can request a consent to access the accounts of the PSU. This request may be for specific accounts but this is not a requirement.

Therefore, the request for consent has the following variations:

- Set up consent to account information for specified accounts.
- Set up consent to account information without specifying which accounts.
- Set up consent to account information for all the AIS access types of the PSD2: “accounts”, “balances” and/or “transactions”.

**Note:** each consent to information will generate a new resource, i.e. a new consentId.

**3.2.2.1 Request****Endpoint**

POST {provider}/{aspsp}/v1/consents

**Path**

Field	Description	Type	Mand.	Format
<b>provider</b>	URL of the HUB where the service is published.	String	OB	E.g.: www.hub.com
<b>aspsp</b>	Name of the ASPSP to which the request is made.	String	OB	E.g.: aspsp-name

#### Query parameters

No additional fields are specified.

#### Header

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the transaction.	String	OB	<b>UUID</b> ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$ E.g.: X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>Authorization</b>	Bearer Token. Obtained in a pre-authentication on OAuth2.	String	OB	E.g.: Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA
<b>PSU-IP-Address</b>	IP Address of the HTTP request between the PSU and the TPP.	String	OP	^[0-9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}\$ E.g.: PSU-IP-Address: 192.168.16.5
<b>PSU-IP-Port</b>	IP Port of the HTTP request between the PSU and the TPP, if available.	String	OP	^\\d{1,5}\$ E.g.: PSU-IP-Port: 443
<b>PSU-Accept</b>	Accept header of the HTTP request between the PSU and the TPP.	String	OP	^.{1,50}\$ E.g.: PSU-Accept: application/json
<b>PSU-Accept-Charset</b>	Accept charset header of the HTTP request between the PSU and the TPP.	String	OP	^.{1,50}\$ E.g.: PSU-Accept-Charset: utf-8
<b>PSU-Accept-Encoding</b>	Accept encoding header of the HTTP request between the PSU and the TPP.	String	OP	^.{1,50}\$ E.g.: PSU-Accept-Encoding: gzip
<b>PSU-Accept-Language</b>	Accept language header of the HTTP request between the PSU and the TPP.	String	OP	^.{1,50}\$ E.g.: PSU-Accept-Language: es-ES
<b>PSU-User-Agent</b>	Browser or operating system of the HTTP request between the PSU and the	String	OP	E.g.: PSU-User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-

	TPP.			US; rv:1.9.1.5) Gecko/20091102 Firefox/3.5.5 (.NET CLR 3.5.30729)
<b>PSU-Http-Method</b>	<p>HTTP method used in the interface between the PSU and the TPP. Allowed values:</p> <ul style="list-style-type: none"> <li>• POST</li> <li>• GET</li> <li>• PUT</li> <li>• PATCH</li> <li>• DELETE</li> </ul>	String	OP	E.g.: PSU-Http-Method: POST
<b>PSU-Device-ID</b>	<p>UUID (Universally Unique Identifier) for a device.</p> <p>The UUID identifies the device or an installation of an application on a device. This ID must not be modified until the application has been uninstalled from the device.</p>	String	OP	<p><b>UUID</b></p> <p><code>^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$</code></p> <p>E.g.:</p> <p>PSU-Device-ID: 5b3ab8e8-0fd5-43d2-946e-d75958b172e7</p>
<b>PSU-Geo-Location</b>	<p>Corresponding location of the HTTP request between the PSU and the TPP.</p>	String	OP	<p><b>RFC 2426</b></p> <p><code>^GEO:[\d]*.[\d]*[:][\d]*.[\d]*\$</code></p> <p>E.g.:</p> <p>PSU-Geo-Location: GEO:90.023856;25.345963</p>
<b>TPP-Redirect-Preferred</b>	<p>If it is “true”, the TPP has informed the HUB that it prefers the SCA redirection.</p> <p>If it is “false”, the TPP has informed the HUB that it prefers not to be redirected to the SCA and the procedure will be carried out by a decoupled flow.</p> <p>If the parameter is not used, the ASPSP will choose the SCA flow to apply, depending on the SCA method chosen by the TPP/PSU.</p> <p><b>EMBEDDED IS NOT SUPPORTED IN THIS VERSION</b></p> <p><b>DECOUPLED CURRENTLY NOT SUPPORTED</b></p>	Boolean	OP	E.g.: TPP-Redirect-Preferred: true
<b>TPP-Redirect-</b>	The TPP’s URI, where the	String	COND	<code>^{1,250}\$</code>

<b>URI</b>	<p>transaction flow should be redirected to after some of the SCA phases.</p> <p>It is recommended to use this header field at all times.</p> <p>In the future, this field could become mandatory.</p>			E.g.: TPP-Redirect-URI:"https://tpp.example.es/cb"
<b>TPP-Nok-Redirect-URI</b>	<p>If this URI is contained, the TPP is requesting that the transaction flow is redirected in this direction instead of to the TPP-Redirect-URI in the event of a negative result from the SCA redirection method.</p>	String	OP	<p>^.{12,50}\$</p> <p>E.g.: TPP-Nok-Redirect-URI:"https://tpp.example.es/cb/nok"</p>
<b>TPP-Explicit-Authorisation-Preferred</b>	<p>If it is "true", the TPP prefers to start the authorisation process separately, e.g.: given the need for the authorisation of a set of simultaneous transactions.</p> <p>If it is "false" or the parameter is not used, the TPP has no preference. The TPP accepts a direct authorisation of the transaction in the next step.</p> <p><b>Note:</b> IT ONLY ALLOWS THE FALSE OPTION</p>	Boolean	OP	E.g.: TPP-Explicit-Authorisation-Preferred: false
<b>Digest</b>	<p>It is content if it goes in the Signature field.</p> <p>See 6.1 Signature for more information.</p>	String	OB	<p>^.{1,100}\$</p> <p>E.g.: Digest: SHA-256=NzdmZjA4YjY5M2M2NDYyMmVjOWFmMGNmYTZiNTU3MjVmNDI4NTRIMzJkYzE3ZmNmMDE3ZGFmMjhNTc5OTU3OQ==</p>
<b>Signature</b>	<p>Signature of the request for the TPP.</p> <p>See 6.1 Signature for more information.</p>	String	OB	See annexes
<b>TPP-Signature-Certificate</b>	<p>TPP certificate used to sign the request in base64.</p>	String	OB	<p>^.{1,5000}\$</p> <p>E.g.: TPP-Signature-Certificate: MIIHgzCCBmugAwIBAgIIzZvBQltOUcwDQYJ.....KoZlhvcNAQELBQAwSTELMAkGA1UEBhMVCVVMxEzARBgNVBA</p>

**Body**

Field	Description	Type	Mand.	Format
<b>access</b>	Access requested to the services. Only sub-attributes with the tags: "accounts", "balances" and "transactions" are accepted. Additionally, the ASPSP can support the sub-attributes:"allPsd2" with the value "allAccounts".	AccountAccess	OB	E.g.: "access":{...}
<b>recurringIndicator</b>	Possible values: <ul style="list-style-type: none"> <li>• true: recurring access to the account.</li> <li>• false: one access only.</li> </ul>	Boolean	OB	E.g.: "recurringIndicator":true
<b>validUntil</b>	Date to which the consent requests access.  To create the maximum possible access period, the value to be used is: 9999-12-31  When the consent is retrieved, the maximum possible date will be returned having been adjusted.	String	OB	<b>ISODate</b>  E.g.: "validUntil":"2018-05-17"
<b>frequencyPerDay</b>	Indicates the frequency of accessing the account per day.  1 if it is one single use.	Integer	OB	E.g.: "frequencyPerDay":4
<b>combinedServiceIndicator</b>	Indicator that a payment will be made in the same session.	Boolean	OB	E.g.: "combinedServiceIndicator":false

### 3.2.2.2 Response

#### Header

Field	Description	Type	Mand.	Format
<b>Location</b>	It contains the generated hyperlink to the resource	String	OB	<b>Max512Text</b>  E.g.: Location: /v1/consents/{consentId}
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the transaction.	String	OB	<b>UUID</b>  $^{\wedge}[0-9a-fA-F]\{8\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{12\}\$$  E.g.: X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7

<b>ASPSP-SCA-Approach</b>	Returned value if the SCA method has been set. Possible values: <ul style="list-style-type: none"> <li>• REDIRECT</li> </ul> <p>The SCA based on OAuth will be taken as a REDIRECT.</p>	String	COND	E.g.: ASPSP-SCA-Approach: REDIRECT
---------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------	------	------------------------------------

### Body

Field	Description	Type	Mand.	Format
<b>consentStatus</b>	Authentication status of the consent. See the defined values in 6.5 Consent status	String	OB	E.g.: "consentStatus": "received"
<b>consentId</b>	Resource identifier which references the consent. It must be content if it generated a consent.	String	OB	^.{1,36}\$ E.g.: "consentId": "123-QWE-456"
<b>_links</b>	List of hyperlinks to be recognised by the TPP. Types supported in this response: <ul style="list-style-type: none"> <li>• scaRedirect: in the event of the SCA redirect. Link where the PSU's browser must be redirected by the TPP.</li> <li>• self: link to the resource created by this request.</li> <li>• status: link to retrieve the transaction status.</li> <li>•</li> </ul>	Links	OB	E.g.: "_links": {...}
<b>psuMessage</b>	Text to be displayed to the PSU.	String	OP	^.{1,512}\$ E.g.: "psuMessage": "Information for the PSU"
<b>tppMessages</b>	Message for the TPP.	List<Tpp Message >	OP	E.g.: "tppMessages": [...]

### 3.2.2.3 Examples

#### Example of a request for consent on specified accounts with SCA redirection

POST <https://www.hub.com/aspsp-name/v1/consents>

Content-Encoding: gzip



Content-Type: application/json

X-Request-ID: 10391c7e-ad88-49ec-a2ad-00aacb1f6541

Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA

PSU-IP-Address: 192.168.8.16

PSU-IP-Port: 443

PSU-Accept: application/json

PSU-Accept-Charset: utf-8

PSU-Accept-Encoding: gzip

PSU-Accept-Language: es-ES

PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0

PSU-Http-Method: POST

PSU-Device-ID: f8b3feda-6fe3-11e8-adc0-fa7ae01bbebc

PSU-GEO-Location: GEO:12.526347;54.649862

TPP-Redirect-Preferred: true

TPP-Redirect-URI: https://www.tpp.com/cb

TPP-Nok-Redirect-URI: https://www.tpp.com/cb/nok

Date: Sun, 26 Sep 2017 15:02:37 GMT

```
{
  "access": {
    "balances": [
      {
        "iban": "ES1111111111111111111111"
      },
      {
        "iban": "ES2222222222222222222222",
      },
      {
        "iban": "ES3333333333333333333333"
      }
    ],
    "transactions": [
      {
        "iban": "ES1111111111111111111111"
      }
    ]
  },
  "recurringIndicator": true,
  "validUntil": "17/05/2018",
  "frequencyPerDay": 4
}
```

**Example of a request for consent of a list of available accounts with SCA redirection**

POST <https://www.hub.com/aspsp-name/v1/consents>

Content-Encoding: gzip

Content-Type: application/json

X-Request-ID: 10391c7e-ad88-49ec-a2ad-00aacb1f6541

Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA

PSU-IP-Address: 192.168.8.16

PSU-IP-Port: 443

PSU-Accept: application/json

PSU-Accept-Charset: utf-8

PSU-Accept-Encoding: gzip

PSU-Accept-Language: es-ES

PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0

PSU-Http-Method: POST

PSU-Device-ID: f8b3feda-6fe3-11e8-adc0-fa7ae01bbebc

PSU-GEO-Location: GEO:12.526347;54.649862

TPP-Redirect-Preferred: true

TPP-Redirect-URI: <https://www.tpp.com/cb>

TPP-Nok-Redirect-URI: <https://www.tpp.com/cb/nok>

Date: Sun, 26 Sep 2017 15:02:37 GMT

```
{
  "access": {
    "availableAccounts": "allAccounts"
  },
  "recurringIndicator": false,
  "validUntil": "17/05/2018",
  "frequencyPerDay": 1
}
```

**Example of a request for consent without specifying the accounts with SCA decoupled (NOT CURRENTLY SUPPORTED)**

POST <https://www.hub.com/aspsp-name/v1/consents>

Content-Encoding: gzip

Content-Type: application/json

X-Request-ID: 10391c7e-ad88-49ec-a2ad-00aacb1f6541

Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA

PSU-IP-Address: 192.168.8.16

PSU-IP-Port: 443

PSU-Accept: application/json

PSU-Accept-Charset: utf-8

PSU-Accept-Encoding: gzip

PSU-Accept-Language: es-ES

PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0

PSU-Http-Method: POST

PSU-Device-ID: f8b3feda-6fe3-11e8-adc0-fa7ae01bbebc

PSU-GEO-Location: GEO:12.526347;54.649862

TPP-Redirect-Preferred: false

Date: Sun, 26 Sep 2017 15:02:37 GMT

```
{
  "access": {
    "balances": [],
    "transactions": []
  },
  "recurringIndicator": true,
  "validUntil": "17/05/2018",
  "frequencyPerDay": 4
}
```

**Example of a response in the event that the SCA redirection with an implicitly generated authorisation sub-resource**

HTTP/1.1 201 Created

X-Request-ID: 10391c7e-ad88-49ec-a2ad-00aacb1f6541

ASPSP-SCA-Approach: REDIRECT

Date: Sun, 26 Sep 2017 15:02:43 GMT

Location: [/v1/consents/123-asdf-456](#)

Content-Type: application/json

```
{
  "consentStatus": "received",
  "consentId": "123-asdf-456",
  "_links": {
    "scaRedirect": {
      "href": "https://hub.example.es/authorize"
    },
    "self": {
      "href": "/v1/consents/123-asdf-456",
    },
    "status": {
      "href": "/v1/consents/123-asdf-456/status"
    }
  }
}
```

```

    }
}

```

### 3.2.3 Get consent status

This service allows the TPP to find out the status of a request for consent initiated beforehand.

#### 3.2.3.1 Request

##### Endpoint

GET {provider}/{aspsp}/v1/consents/{consent-id}/status

##### Path

Field	Description	Type	Mand.	Format
<b>provider</b>	URL of the HUB where the service is published.	String	OB	E.g.: www.hub.com
<b>aspsp</b>	Name of the ASPSP to which the request is made.	String	OB	E.g.: aspsp-name
<b>consentId</b>	Resource identifier which references the consent.  Sent previously as a response to a request for consent message from the TPP to the HUB.	String	OB	^{1,36}\$  E.g.:123-qwe-456

##### Query parameters

No additional fields are specified.

##### Header

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the request.	String	OB	<b>UUID</b>  ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$  E.g.:  X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7

<b>Authorization</b>	Bearer Token. Obtained in a pre-authentication on OAuth2.	String	OB	E.g.: Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA
<b>PSU-IP-Address</b>	IP Address of the HTTP request between the PSU and the TPP.	String	OP	^[0-9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}\$ E.g.: PSU-IP-Address: 192.168.16.5
<b>PSU-IP-Port</b>	IP Port of the HTTP request between the PSU and the TPP, if available.	String	OP	^\d{1,5}\$ E.g.: PSU-IP-Port: 443
<b>PSU-Accept</b>	Accept header of the HTTP request between the PSU and the TPP.	String	OP	^{1,50}\$ E.g.: PSU-Accept: application/json
<b>PSU-Accept-Charset</b>	Accept charset header of the HTTP request between the PSU and the TPP.	String	OP	^{1,50}\$ E.g.: PSU-Accept-Charset: utf-8
<b>PSU-Accept-Encoding</b>	Accept encoding header of the HTTP request between the PSU and the TPP.	String	OP	^{1,50}\$ E.g.: PSU-Accept-Encoding: gzip
<b>PSU-Accept-Language</b>	Accept language header of the HTTP request between the PSU and the TPP.	String	OP	^{1,50}\$ E.g.: PSU-Accept-Language: es-ES
<b>PSU-User-Agent</b>	Browser or operating system of the HTTP request between the PSU and the TPP.	String	OP	E.g.: PSU-User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.1.5) Gecko/20091102 Firefox/3.5.5 (.NET CLR 3.5.30729)
<b>PSU-Http-Method</b>	HTTP method used in the interface between the PSU and the TPP. Allowed values: <ul style="list-style-type: none"> <li>• POST</li> <li>• GET</li> <li>• PUT</li> <li>• PATCH</li> <li>• DELETE</li> </ul>	String	OP	E.g.: PSU-Http-Method: GET
<b>PSU-Device-ID</b>	UUID (Universally Unique Identifier) for a device.  The UUID identifies the device or an installation of an application on a device. This ID must not be modified until the application has been uninstalled from the device.	String	OP	<b>UUID</b> ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$ E.g.: PSU-Device-ID: 5b3ab8e8-0fd5-43d2-946e-

Field	Description	Type	Mand.	Format
<b>PSU-Geo-Location</b>	Corresponding location of the HTTP request between the PSU and the TPP.	String	OP	d75958b172e7 <b>RFC 2426</b> ^GEO:[\\d]*\\.\\d*[:;][\\d]*\\.\\d* \\d]*\$ E.g.: PSU-Geo-Location: GEO:90.023856;25.345963
<b>Digest</b>	It is content if it goes in the Signature field.  See 6.1 Signature for more information.	String	OB	^.{1,100}\$ E.g.: Digest: SHA- 256=NzdmZjA4YjY5M2M2ND YyMmVjOWFmMGNmYTZiNT U3MjVmNDI4NTRIMzjkYzE3Z mNmMDE3ZGFmMjhhNTc5O TU3OQ==
<b>Signature</b>	Signature of the request for the TPP.  See 6.1 Signature for more information.	String	OB	See annexes
<b>TPP-Signature-Certificate</b>	TPP certificate used to sign the request in base64.	String	OB	^.{1,5000}\$ E.g.: TPP-Signature- Certificate: MIIHgZCCBmugAwIBAgIIzZv BQlt0UcwDQYJ.....KoZlhv cNAQELBQAwSTELMAkGA1U EBhMCMVVMxEzARBgNVBA

### Body

There is no additional data sent.

### 3.2.3.2 Response

This message is returned to the TPP by the HUB as a response to the consent status request message.

#### Header

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the request.	String	OB	<b>UUID</b> ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$ E.g.: X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7

#### Body

Field	Description	Type	Mand.	Format
-------	-------------	------	-------	--------

---

<b>consentStatus</b>	Authentication status of the consent. See the defined values in 6.5 Consent status	String	OB	E.g.: "consentStatus":"valid"
<b>psuMessage</b>	Text to be displayed to the PSU.	String	OP	^{1,512}\$ E.g.: "psuMessage":"Information for the PSU"
<b>tppMessages</b>	Message for the TPP.	List<TppMessage>	OP	E.g.: "tppMessages":[...]

### 3.2.3.3 Examples

#### Example of a request

GET <https://www.hub.com/aspsp-name/v1/consents/123asdf456/status>

Accept: application/json

X-Request-ID: 96201400-6ff9-11e8-adc0-fa7ae01bbebc

Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA

PSU-IP-Address: 192.168.8.16

PSU-IP-Port: 443

PSU-Accept: application/json

PSU-Accept-Charset: utf-8

PSU-Accept-Encoding: gzip

PSU-Accept-Language: es-ES

PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0

PSU-Http-Method: GET

PSU-Device-ID: f8b3feda-6fe3-11e8-adc0-fa7ae01bbebc

PSU-GEO-Location: GEO:12.526347;54.649862

Date: Sun, 26 Sep 2017 15:02:48 GMT

#### Example of a response

HTTP/1.1 200 OK

X-Request-ID: 96201400-6ff9-11e8-adc0-fa7ae01bbebc

Date: Sun, 26 Sep 2017 15:02:50 GMT

Content-Type: application/json

```
{
  "consentStatus": "valid"
}
```

## 3.2.4 Retrieve information on the consent

### 3.2.4.1 Request

This message is sent by the TPP to the HUB as a request to retrieve information from a consent which had been previously created.

#### Endpoint

GET {provider}/{aspsp}/v1/consents/{consentId}

#### Path

Field	Description	Type	Mand.	Format
<b>provider</b>	URL of the HUB where the service is published.	String	OB	E.g.: www.hub.com
<b>aspsp</b>	Name of the ASPSP to which the request is made.	String	OB	E.g.: aspsp-name
<b>consentId</b>	Resource identifier which references the consent.  Sent previously as a response to a request for consent message from the TPP to the HUB.	String	OB	^{1,36}\$  E.g.: 7890-asdf-4321

#### Query parameters

No additional fields are specified.

#### Header

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the request.	String	OB	<b>UUID</b>  ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$  E.g.:  X-Request-ID: 1b3ab8e8-Ofd5-43d2-946e-d75958b172e7
<b>Authorization</b>	Bearer Token. Obtained in a pre-authentication on OAuth2.	String	OB	E.g.:  Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA
<b>PSU-IP-Address</b>	IP Address of the HTTP request between the PSU and the TPP.	String	OP	^[0-9]{1,3}.[0-9]{1,3}.[0-9]{1,3}.[0-9]{1,3}\$  E.g.:  PSU-IP-Address: 192.168.16.5



<b>PSU-IP-Port</b>	IP Port of the HTTP request between the PSU and the TPP, if available.	String	OP	<code>^\d{1,5}\$</code> E.g.: PSU-IP-Port: 443
<b>PSU-Accept</b>	Accept header of the HTTP request between the PSU and the TPP.	String	OP	<code>^{1,50}\$</code> E.g.: PSU-Accept: application/json
<b>PSU-Accept-Charset</b>	Accept charset header of the HTTP request between the PSU and the TPP.	String	OP	<code>^{1,50}\$</code> E.g.: PSU-Accept-Charset: utf-8
<b>PSU-Accept-Encoding</b>	Accept encoding header of the HTTP request between the PSU and the TPP.	String	OP	<code>^{1,50}\$</code> E.g.: PSU-Accept-Encoding: gzip
<b>PSU-Accept-Language</b>	Accept language header of the HTTP request between the PSU and the TPP.	String	OP	<code>^{1,50}\$</code> E.g.: PSU-Accept-Language: es-ES
<b>PSU-User-Agent</b>	Browser or operating system of the HTTP request between the PSU and the TPP.	String	OP	E.g.: PSU-User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.1.5) Gecko/20091102 Firefox/3.5.5 (.NET CLR 3.5.30729)
<b>PSU-Http-Method</b>	HTTP method used in the interface between the PSU and the TPP. Allowed values: <ul style="list-style-type: none"> <li>• POST</li> <li>• GET</li> <li>• PUT</li> <li>• PATCH</li> <li>• DELETE</li> </ul>	String	OP	E.g.: PSU-Http-Method: GET
<b>PSU-Device-ID</b>	UUID (Universally Unique Identifier) for a device.  The UUID identifies the device or an installation of an application on a device. This ID must not be modified until the application has been uninstalled from the device.	String	OP	<b>UUID</b> <code>^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$</code> E.g.: PSU-Device-ID: 5b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>PSU-Geo-Location</b>	Corresponding location of the HTTP request between the PSU and the TPP.	String	OP	<b>RFC 2426</b> <code>^GEO:[\d]*.[\d]*;.[\d]*.[\d]*\$</code> E.g.: PSU-Geo-Location: GEO:90.023856;25.345963

<b>Digest</b>	It is content if it goes in the Signature field.  See 6.1 Signature for more information.	String	OB	^{1,100}\$  E.g.: Digest: SHA-256=NzdmZjA4YjY5M2M2NDYyMmVjOWFmMGNmY TZiNTU3MjVmNDI4NTRIM zJkYzE3ZmNmMDE3ZGFm MjhhNTc5OTU3OQ==
<b>Signature</b>	Signature of the request for the TPP.  See 6.1 Signature for more information.	String	OB	See annexes
<b>TPP-Signature-Certificate</b>	TPP certificate used to sign the request in base64.	String	OB	^{1,5000}\$  E.g.: TPP-Signature-Certificate: MIIHgZCCBmugAwIBAgIIzZvBQlt0UcwDQYJ.....K oZlhvcNAQELBQAwSTELM AkGA1UEBhMCVVMxEzAR BgNVBA

#### Body

There is no additional data sent.

#### 3.2.4.2 Response

This message is returned to the TPP by the HUB as a response to the message to retrieve information on the consent.

#### Header

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the request.	String	OB	<b>UUID</b>  ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$  E.g.:  X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7

#### Body

Field	Description	Type	Mand.	Format
<b>access</b>	Access requested to the services. Only sub-attributes with the tags: "accounts", "balances" and "transactions" are accepted. Additionally, the ASPSP can support the sub-attributes "allPsd2" with the value	Account Access	OB	E.g.: "access": {...}

	"allAccounts".			
<b>recurringIndicator</b>	Possible values: <ul style="list-style-type: none"> <li>• true: recurring access to the account.</li> <li>• false: one access only.</li> </ul>	Boolean	OB	E.g.: "recurringIndicator": true
<b>validUntil</b>	Date to which the consent requests access.  To create the maximum possible access period, the value to be used is: 9999-12-31  When the consent is retrieved, the maximum possible date will be returned having been adjusted.	String	OB	<b>ISODate</b> E.g.: "validUntil": "17/05/2018"
<b>frequencyPerDay</b>	Indicates the frequency of accessing the account per day.  1 if it is one access only.	Integer	OB	E.g.: "frequencyPerDay":4
<b>lastActionDate</b>	Date on which the last modification was made on the consent.	String	OB	<b>ISODate</b> E.g.: "lastActionDate": "2018-01-01"
<b>consentStatus</b>	Authentication status of the consent. Values defined in annexes.	String	OB	E.g.: "consentStatus": "valid"
<b>psuMessage</b>	Text to be displayed to the PSU	String	OP	$\wedge.\{1,512\}\$$ E.g.: "psuMessage": "Information for the PSU"
<b>tppMessages</b>	Message for the TPP.	List<Tpp Message>	OP	E.g.: "tppMessages": [...]

### 3.2.4.3 Examples

#### Example of a request

GET <https://www.hub.com/aspsp-name/v1/consents/7890-asdf-4321/>

Accept: application/json

X-Request-ID: 96201400-6ff9-11e8-adc0-fa7ae01bbebc

Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA

PSU-IP-Address: 192.168.8.16

PSU-IP-Port: 443

PSU-Accept: application/json

PSU-Accept-Charset: utf-8

PSU-Accept-Encoding: gzip

PSU-Accept-Language: es-ES

PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0

PSU-Http-Method: GET

PSU-Device-ID: f8b3feda-6fe3-11e8-adc0-fa7ae01bbebc

PSU-GEO-Location: GEO:12.526347;54.649862

Date: Sun, 26 Sep 2017 15:02:48 GMT

**Example of a response on the consent of the specified accounts**

HTTP/1.1 200 Ok

X-Request-ID: 96201400-6ff9-11e8-adc0-fa7ae01bbebc

Date: Sun, 26 Sep 2017 15:02:50 GMT

Content-Type: application/json

```
{
  "access": {
    "balances": [
      {
        "iban": "ES1111111111111111111111"
      },
      {
        "iban": "ES2222222222222222222222",
      },
      {
        "iban": "ES3333333333333333333333"
      }
    ],
    "transactions": [
      {
        "iban": "ES1111111111111111111111"
      }
    ]
  },
  "recurringIndicator": true,
  "validUntil": "17/05/2018",
  "frequencyPerDay": 4,
  "lastActionDate": "17/01/2018",
  "consentStatus": "valid"
}
```

### 3.2.5 Remove consent

#### 3.2.5.1 Request

This request may be sent by a TPP to the HUB to request that a previously created consent be removed.

#### Endpoint

DELETE {provider}/{aspsp}/v1/consents/{consentId}

#### Path

Field	Description	Type	Mand.	Format
<b>provider</b>	URL of the HUB where the service is published.	String	OB	E.g.: <a href="http://www.hub.com">www.hub.com</a>
<b>aspsp</b>	Name of the ASPSP to which the request is made.	String	OB	E.g.: aspsp-name
<b>consentId</b>	Resource identifier which references the consent.  Sent previously as a response to a request for consent message from the TPP to the HUB.	String	OB	^{1,36}\$  E.g.: 7890-asdf-4321

#### Query parameters

No additional fields are specified.

#### Header

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the request.	String	OB	<b>UUID</b>  ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$  E.g.:  X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>Authorization</b>	Bearer Token. Obtained in a pre-authentication on OAuth2.	String	OB	E.g.:  Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA
<b>PSU-IP-Address</b>	IP Address of the HTTP request between the PSU and the TPP.	String	OP	^[0-9]{1,3}.[0-9]{1,3}.[0-9]{1,3}.[0-9]{1,3}\$  E.g.:

				PSU-IP-Address: 192.168.16.5
<b>PSU-IP-Port</b>	IP Port of the HTTP request between the PSU and the TPP, if available.	String	OP	^\d{1,5}\$ E.g.: PSU-IP-Port: 443
<b>PSU-Accept</b>	Accept header of the HTTP request between the PSU and the TPP.	String	OP	^{1,50}\$ E.g.: PSU-Accept: application/json
<b>PSU-Accept-Charset</b>	Accept charset header of the HTTP request between the PSU and the TPP.	String	OP	^{1,50}\$ E.g.: PSU-Accept-Charset: utf-8
<b>PSU-Accept-Encoding</b>	Accept encoding header of the HTTP request between the PSU and the TPP.	String	OP	^{1,50}\$ E.g.: PSU-Accept-Encoding: gzip
<b>PSU-Accept-Language</b>	Accept language header of the HTTP request between the PSU and the TPP.	String	OP	^{1,50}\$ E.g.: PSU-Accept-Language: es-ES
<b>PSU-User-Agent</b>	Browser or operating system of the HTTP request between the PSU and the TPP.	String	OP	E.g.: PSU-User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.1.5) Gecko/20091102 Firefox/3.5.5 (.NET CLR 3.5.30729)
<b>PSU-Http-Method</b>	HTTP method used in the interface between the PSU and the TPP. Allowed values: <ul style="list-style-type: none"> <li>• POST</li> <li>• GET</li> <li>• PUT</li> <li>• PATCH</li> <li>• DELETE</li> </ul>	String	OP	E.g.: PSU-Http-Method: DELETE
<b>PSU-Device-ID</b>	UUID (Universally Unique Identifier) for a device.  The UUID identifies the device or an installation of an application on a device. This ID must not be modified until the application has been uninstalled from the device.	String	OP	<b>UUID</b> ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$ E.g.: PSU-Device-ID: 5b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>PSU-Geo-Location</b>	Corresponding location of the HTTP request between the PSU and the TPP.	String	OP	<b>RFC 2426</b> ^GEO:[\d]*.[\d]*;.[\d]*.[\d]*\$ E.g.: PSU-Geo-Location:

GEO:90.023856;25.345963

<b>Digest</b>	It is content if it goes in the Signature field.  See 6.1 Signature for more information.	String	OB	$^{\wedge}\{1,100\}\$$  E.g.: Digest: SHA-256=NzdmZjA4YjY5M2M2NDYyMmVjOWFmMGNmY TZiNTU3MjVmNDI4NTRIM zJkYzE3ZmNmMDE3ZGFm MjhhNTc5OTU3OQ==
<b>Signature</b>	Signature of the request for the TPP.  See 6.1 Signature for more information.	String	OB	See annexes
<b>TPP-Signature-Certificate</b>	TPP certificate used to sign the request in base64.	String	OB	$^{\wedge}\{1,5000\}\$$  E.g.: TPP-Signature-Certificate: MIIHgZCCBmugAwIBAgIIZzZvBQlt0UcwDQYJ.....K oZlhvcNAQELBQAwSTELM AkGA1UEBhMVCVVMxEzAR BgNVBA

**Body**

There is no additional data sent.

**3.2.5.2 Response**

This message is sent by the HUB to the TPP as a response to the consent removal request.

**Header**

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the request.	String	OB	<b>UUID</b>  $^{\wedge}[0-9a-fA-F]\{8\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{12\}\$$  E.g.:  X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7

**Body**

No additional fields are specified.

**3.2.5.3 Examples**

**Example of a request**

DELETE <https://www.hub.com/aspsp-name/v1/consents/7890-asdf-4321>

Accept: application/json

X-Request-ID: 96201400-6ff9-11e8-adc0-fa7ae01bbebc

Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA

PSU-IP-Address: 192.168.8.16

PSU-IP-Port: 443

PSU-Accept-Charset: utf-8

PSU-Accept-Encoding: gzip

PSU-Accept-Language: es-ES

PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0

PSU-Http-Method: DELETE

PSU-Device-ID: f8b3feda-6fe3-11e8-adc0-fa7ae01bbebc

PSU-GEO-Location: GEO:12.526347;54.649862

Date: Sun, 26 Sep 2017 15:02:48 GMT

#### **Example of a response**

HTTP/1.1 204 Ok

X-Request-ID: 96201400-6ff9-11e8-adc0-fa7ae01bbebc

Date: Sun, 26 Sep 2017 15:02:50 GMT

### **3.3 AIS: Account information service**

#### **3.3.1 Reading of the account list**

This service enables a list of the PSU's accounts to be obtained.

As a requirement, it is assumed that the PSU has consented to this access and it has been stored by the ASPSP.

Functioning of the service:

---

<b>Access type</b>	<b>Description</b>
account	If the consent associated with the request has this type of access, the account balances included in the consent with "account" access can be listed.
balances	If the consent associated with the request has this type of access, the accounts included in the consent with the "balances" access can be listed and their balances can be obtained if the ASPSP supports this function.
transactions	If the consent has accounts with this type of access, the said accounts can be listed with the "account" access. This type of access does not entail access to "balances".

---



allPsd2

If the consent associated with the request has this type of access, the accounts included in the consent can be listed and their balances can be obtained.

Note: allPsd2 provides all three types of access.

### 3.3.1.1 Request

#### Endpoint

GET {provider}/{aspsp}/v1/accounts{query-parameters}

#### Path

Field	Description	Type	Mand.	Format
<b>provider</b>	URL of the HUB where the service is published	String	OB	E.g.: www.hub.com
<b>aspsp</b>	Name of the ASPSP to which the request is made.	String	OB	E.g.: aspsp-name

#### Header

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the transaction.	String	OB	<b>UUID</b> ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$ E.g.: X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>Authorization</b>	Bearer Token. Obtained in a pre-authentication on OAuth2.	String	OB	E.g.: Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA
<b>Consent-ID</b>	Consent identifier obtained in the transaction to request consent.	String	OB	^{1,36}\$ E.g.: Consent-ID: 7890-asdf-4321
<b>PSU-IP-Address</b>	IP Address of the HTTP request between the PSU and the TPP. It must be included if, and only if this request was actively initiated by the PSU.	String	COND	^[0-9]{1,3}.[0-9]{1,3}.[0-9]{1,3}.[0-9]{1,3}\$ E.g.:

				PSU-IP-Address: 192.168.16.5
<b>PSU-IP-Port</b>	IP Port of the HTTP request between the PSU and the TPP, if available.	String	OP	^\\d{1,5}\$ E.g.: PSU-IP-Port: 443
<b>PSU-Accept</b>	Accept header of the HTTP request between the PSU and the TPP.	String	OP	^{1,50}\$ E.g.: PSU-Accept: application/json
<b>PSU-Accept-Charset</b>	Accept charset header of the HTTP request between the PSU and the TPP.	String	OP	^{1,50}\$ E.g.: PSU-Accept-Charset: utf-8
<b>PSU-Accept-Encoding</b>	Accept encoding header of the HTTP request between the PSU and the TPP.	String	OP	^{1,50}\$ E.g.: PSU-Accept-Encoding: gzip
<b>PSU-Accept-Language</b>	Accept language header of the HTTP request between the PSU and the TPP.	String	OP	^{1,50}\$ E.g.: PSU-Accept-Language: es-ES
<b>PSU-User-Agent</b>	Browser or operating system of the HTTP request between the PSU and the TPP.	String	OP	E.g.: PSU-User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.1.5) Gecko/20091102 Firefox/3.5.5 (.NET CLR 3.5.30729)
<b>PSU-Http-Method</b>	HTTP method used in the interface between the PSU and the TPP. Allowed values: <ul style="list-style-type: none"> <li>• POST</li> <li>• GET</li> <li>• PUT</li> <li>• PATCH</li> <li>• DELETE</li> </ul>	String	OP	E.g.: PSU-Http-Method: GET
<b>PSU-Device-ID</b>	UUID (Universally Unique Identifier) for a device.  The UUID identifies the device or an installation of an application on a device. This ID must not be modified until the application has been uninstalled from the device.	String	OP	<b>UUID</b> ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$

				E.g.: PSU-Device-ID: 5b3ab8e8-0fd5- 43d2-946e- d75958b172e7
<b>PSU-Geo-Location</b>	Corresponding location of the HTTP request between the PSU and the TPP.	String	OP	<b>RFC 2426</b> ^GEO:[\\d]*.[\\d]*[;][\\d]*.[\\d]*\$ E.g.: PSU-Geo-Location: GEO:90.023856; 25.345963
<b>Digest</b>	It is content if it goes in the Signature field. See 6.1 Signature for more information.	String	OB	^{1,100}\$ E.g.: Digest: SHA- 256=NzdmZjA4Y jY5M2M2NDYy MmVjOWFmM GNmYTziNTU3 MjVmNDI4NTRI MzJkYzE3ZmNm MDE3ZGFmMjh hNTc5OTU3OQ ==
<b>Signature</b>	Signature of the request for the TPP. See 6.1 Signature for more information.	String	OB	See annexes
<b>TPP-Signature-Certificate</b>	TPP certificate used to sign the request in base64.	String	OB	^{1,5000}\$ E.g.: TPP-Signature-Certificate: MIIHgZCCBmug AwIBAgIIzZvBQ lt0UcwDQYJ..... .....KoZlhvcNA QELBQAwSTEL MAKGA1UEBhM CVVMxEzARBgN VBA

### Body

No data goes in the body of this request.

### 3.3.1.2 Response

#### Header

Field	Description	Type	Mand.	Format
-------	-------------	------	-------	--------

<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the transaction.	String	OB	<b>UUID</b> $^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}$$ E.g.: X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7
---------------------	------------------------------------------------------------	--------	----	------------------------------------------------------------------------------------------------------------------------------------------------

**Body**

Field	Description	Type	Mand.	Format
<b>accounts</b>	List of available accounts.	List<AccountDetails>	OB	E.g.: "accounts": []
<b>psuMessage</b>	Text to be displayed to the PSU.	String	OP	$^{\{1,512\}}$$ E.g.: "psuMessage": "Information for the PSU"
<b>tppMessages</b>	Message for the TPP.	List<TppMessage>	OP	E.g.: "tppMessages": [...]

**3.3.1.3 Examples**
**Example of a request to a obtain list of available accounts from the PSU**

GET <https://www.hub.com/aspsp-name/v1/accounts>

Content-Encoding: gzip

Content-Type: application/json

X-Request-ID: 96201400-6ff9-11e8-adc0-fa7ae01bbebc

Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA

Consent-ID: 7890-asdf-4321

PSU-IP-Address: 192.168.8.16

PSU-IP-Port: 443

PSU-Accept: application/json

PSU-Accept-Charset: utf-8

PSU-Accept-Encoding: gzip

PSU-Accept-Language: es-ES

PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0

PSU-Http-Method: GET

PSU-Device-ID: f8b3feda-6fe3-11e8-adc0-fa7ae01bbebc

PSU-GEO-Location: GEO:12.526347;54.649862

Date: Sun, 26 Sep 2017 15:02:48 GMT

**Example of a response to obtain list of the PSU's accessible accounts**

Response in which the consent has been given for two distinct IBANs.

HTTP/1.1 200 Ok

X-Request-ID: 96201400-6ff9-11e8-adc0-fa7ae01bbebc

Date: Sun, 26 Sep 2017 15:02:50 GMT

Content-Type: application/json

```
{
  "accounts": [
    {
      "resourceId": "3dc3d5b3-7023-4848-9853-f5400a64e80f",
      "iban": "ES1111111111111111111111",
      "currency": "EUR",
      "product": "Girokonto",
      "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": "ES2222222222222222222222",
      "currency": "USD",
      "name": "US Dollar Account",
      "_links": {
        "balances": {
          "href": "/v1/accounts/3dc3d5b3-7023-4848-9853-f5400a64e81g/balances"
        }
      }
    }
  ]
}
```

### 3.3.2 Reading of the account details

This service allows an account's details to be read.

As a requirement, it is assumed that the PSU has consented to this access and it has been stored by the ASPSP.

Operation of the service according to the type of access specified in the consent:

Access type	Description
account	If the consent associated with the request has this type of access to the account, it can be queried.
balances	If the consent associated with the request has this type of access to the account, it can be queried and its balances can be obtained, provided that the ASPSP supports this function.
transactions	If the consent has accounts with this type of access, the said account can be queried with the "account" access type. This type of access does not entail access to "balances".
allPsd2	If the consent associated with the request has this type of access to the account, it can be queried and its balances can be obtained. Note: allPsd2 provides all three types of access.

#### 3.3.2.1 Request

##### Endpoint

GET {provider}/{aspsp}/v1/accounts/{account-id}

##### Path

Field	Description	Type	Mand.	Format
provider	URL of the HUB where the service is published	String	OB	E.g.: www.hub.com
aspsp	Name of the ASPSP to which the request is made.	String	OB	E.g.: aspsp-name
account-id	Unique identifier assigned by the ASPSP for the account.	String	OB	^{1,100}\$ E.g.: account-id=a1q5w

##### Header

Field	Description	Type	Mand.	Format
X-Request-ID	Unique identifier assigned by the TPP for the transaction.	String	OB	<b>UUID</b> ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$ E.g.:

				X-Request-ID: 1b3ab8e8-Ofd5-43d2-946e-d75958b172e7
<b>Authorization</b>	Bearer Token. Obtained in a pre-authentication on OAuth2.	String	OB	E.g.: Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA
<b>Consent-ID</b>	Consent identifier obtained in the transaction to request consent.	String	OB	^.{1,36}\$ E.g.: Consent-ID: 7890-asdf-4321
<b>PSU-IP-Address</b>	IP Address of the HTTP request between the PSU and the TPP. It must be included if, and only if this request was actively initiated by the PSU.	String	COND	^[0-9]{1,3}.[0-9]{1,3}.[0-9]{1,3}.[0-9]{1,3}\$ E.g.: PSU-IP-Address: 192.168.16.5
<b>PSU-IP-Port</b>	IP Port of the HTTP request between the PSU and the TPP, if available.	String	OP	^\d{1,5}\$ E.g.: PSU-IP-Port: 443
<b>PSU-Accept</b>	Accept header of the HTTP request between the PSU and the TPP.	String	OP	^.{1,50}\$ E.g.: PSU-Accept: application/json
<b>PSU-Accept-Charset</b>	Accept charset header of the HTTP request between the PSU and the TPP.	String	OP	^.{1,50}\$ E.g.: PSU-Accept-Charset: utf-8
<b>PSU-Accept-Encoding</b>	Accept encoding header of the HTTP request between the PSU and the TPP.	String	OP	^.{1,50}\$ E.g.: PSU-Accept-Encoding: gzip
<b>PSU-Accept-Language</b>	Accept language header of the HTTP request between the PSU and the TPP.	String	OP	^.{1,50}\$ E.g.: PSU-Accept-Language: es-ES
<b>PSU-User-Agent</b>	Browser or operating system of the HTTP request between the PSU and the TPP.	String	OP	E.g.: PSU-User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.1.5) Gecko/20091102 Firefox/3.5.5 (.NET CLR 3.5.30729)
<b>PSU-Http-Method</b>	HTTP method used in the interface between the PSU and the TPP. Allowed values: <ul style="list-style-type: none"> <li>• POST</li> <li>• GET</li> <li>• PUT</li> <li>• PATCH</li> <li>• DELETE</li> </ul>	String	OP	E.g.: PSU-Http-Method: GET
<b>PSU-Device-ID</b>	UUID (Universally Unique	String	OP	<b>UUID</b>

	Identifier) for a device. The UUID identifies the device or an installation of an application on a device. This ID must not be modified until the application has been uninstalled from the device.			^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$ E.g.: PSU-Device-ID: 5b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>PSU-Geo-Location</b>	Corresponding location of the HTTP request between the PSU and the TPP.	String	OP	<b>RFC 2426</b> ^GEO:[\\d]*.[\\d]*[;][\\d]*.[\\d]*\$ E.g.: PSU-Geo-Location: GEO:90.023856;25.345963
<b>Digest</b>	It is content if it goes in the Signature field. See 6.1 Signature for more information.	String	OB	^.{1,100}\$ E.g.: Digest: SHA-256=NzdmZjA4YjY5M2M2NDYyMmVjOWFmMGNmYTZiNTU3MjVmNDI4NTRIMzJkYzE3ZmNmMDE3ZGFmMjhhNTc5O TU3OQ==
<b>Signature</b>	Signature of the request for the TPP. See 6.1 Signature for more information.	String	OB	See annexes
<b>TPP-Signature-Certificate</b>	TPP certificate used to sign the request in base64.	String	OB	^.{1,5000}\$ E.g.: TPP-Signature-Certificate: MIIHgZCCBmugAwIBAgIIzZvBQlt0UcwDQYJ.....KoZihv cNAQELBQA wSTELMAkGA1UEBhMCMVVMxEzARBGNVBA

**Body**

No data goes in the body of this request.

**3.3.2.2 Response**

**Header**

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the transaction.	String	OB	<b>UUID</b> ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$ E.g.: X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7



**Body**

Field	Description	Type	Mand.	Format
<b>account</b>	Detailed information of the account	AccountDetails	OB	E.g.: "account": {...}
<b>psuMessage</b>	Text to be displayed to the PSU	String	OP	^{1,512}\$ E.g.: "psuMessage": "Information for the PSU"
<b>tppMessages</b>	Message for the TPP.	List<TppMessage>	OP	E.g.: "tppMessages": [...]

**3.3.2.3 Examples****Example of a request**

GET <https://www.hub.com/aspsp-name/v1/accounts/3dc3d5b3-7023-4848-9853-f5400a64e80f>

Content-Encoding: gzip

Content-Type: application/json

X-Request-ID: 96201400-6ff9-11e8-adc0-fa7ae01bbebc

Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA

Consent-ID: 7890-asdf-4321

PSU-IP-Address: 192.168.8.16

PSU-IP-Port: 443

PSU-Accept: application/json

PSU-Accept-Charset: utf-8

PSU-Accept-Encoding: gzip

PSU-Accept-Language: es-ES

PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0

PSU-Http-Method: GET

PSU-Device-ID: f8b3feda-6fe3-11e8-adc0-fa7ae01bbebc

PSU-GEO-Location: GEO:12.526347;54.649862

Date: Sun, 26 Sep 2017 15:02:48 GMT

**Example of a response for an account with just one currency**

HTTP/1.1 200 Ok

X-Request-ID: 96201400-6ff9-11e8-adc0-fa7ae01bbebc

Date: Sun, 26 Sep 2017 15:02:50 GMT

Content-Type: application/json

```
{  
  "account": {  
    "resourceId": "3dc3d5b3-7023-4848-9853-f5400a64e80f",  
    "iban": "ES1111111111111111111111",
```

```
"currency": "EUR",
"product": "Girokonto",

"name": "Main Account",
"_links": {
  "balances": {
    "href": "/v1/accounts/3dc3d5b3-7023-4848-9853-
f5400a64e80f/balances"
  },
  "transactions": {
    "href": "/v1/accounts/3dc3d5b3-7023-4848-9853--
5400a64e80f/transactions"
  }
}
}
```

### 3.3.3 Reading of balances

This service allows the balances of a particular account to be obtained by its identifier.

As a requirement, it is assumed that the PSU has consented to this access and it has been stored by the ASPSP.

Operation of the service according to the type of access specified in the consent:

Access type	Description
account	This service cannot be used with this type of access.
balances	If the consent associated with the request has this type of access to the account balances, they can be queried.
transactions	This service cannot be used with this type of access.
allPsd2	If the consent associated with the request has this type of access to the account balances, they can be queried. Note: allPsd2 provides all three types of access.

### 3.3.3.1 Request

#### Endpoint

GET {provider}/{aspsp}/v1/accounts/{account-id}/balances

#### Path

Field	Description	Type	Mand.	Format
<b>provider</b>	URL of the HUB where the service is published	String	OB	E.g.: www.hub.com
<b>aspsp</b>	Name of the ASPSP to which the request is made.	String	OB	E.g.: aspsp-name
<b>account-id</b>	Account identifier to be used to read the data. Previously obtained in the reading of the list of accounts. It must be valid at least for the duration of the consent. This ID can be tokenised.	String	OB	^{1,100}\$ E.g.: account-id=a1q5w

#### Query parameters

No additional fields are specified.

#### Header

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the transaction.	String	OB	<b>UUID</b> ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$ E.g.: X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>Authorization</b>	Bearer Token. Obtained in a pre-authentication on OAuth2.	String	OB	E.g.: Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA
<b>Consent-ID</b>	Consent identifier obtained in the transaction to request consent.	String	OB	^{1,36}\$ E.g.: Consent-ID: 7890-asdf-4321

<b>PSU-IP-Address</b>	IP Address of the HTTP request between the PSU and the TPP. It must be included if, and only if this request was actively initiated by the PSU.	String	COND	$^{\{0-9\}\{1,3\}.\{0-9\}\{1,3\}.\{0-9\}\{1,3\}.\{0-9\}\{1,3\}}\$$ E.g.: PSU-IP-Address: 192.168.16.5
<b>PSU-IP-Port</b>	IP Port of the HTTP request between the PSU and the TPP, if available.	String	OP	$^{\backslash\{d\}\{1,5\}}\$$ E.g.: PSU-IP-Port: 443
<b>PSU-Accept</b>	Accept header of the HTTP request between the PSU and the TPP.	String	OP	$^{\{1,50}\}}\$$ E.g.: PSU-Accept: application/json
<b>PSU-Accept-Charset</b>	Accept charset header of the HTTP request between the PSU and the TPP.	String	OP	$^{\{1,50}\}}\$$ E.g.: PSU-Accept-Charset: utf-8
<b>PSU-Accept-Encoding</b>	Accept encoding header of the HTTP request between the PSU and the TPP.	String	OP	$^{\{1,50}\}}\$$ E.g.: PSU-Accept-Encoding: gzip
<b>PSU-Accept-Language</b>	Accept language header of the HTTP request between the PSU and the TPP.	String	OP	$^{\{1,50}\}}\$$ E.g.: PSU-Accept-Language: es-ES
<b>PSU-User-Agent</b>	Browser or operating system of the HTTP request between the PSU and the TPP.	String	OP	E.g.: PSU-User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.1.5) Gecko/20091102 Firefox/3.5.5 (.NET CLR 3.5.30729)
<b>PSU-Http-Method</b>	HTTP method used in the interface between the PSU and the TPP. Allowed values: <ul style="list-style-type: none"> <li>• POST</li> <li>• GET</li> <li>• PUT</li> <li>• PATCH</li> <li>• DELETE</li> </ul>	String	OP	E.g.: PSU-Http-Method: GET
<b>PSU-Device-ID</b>	UUID (Universally Unique Identifier) for a device.  The UUID identifies the device or an installation of an application on a device. This ID must not be modified until the application has been uninstalled from the device.	String	OP	<b>UUID</b> $^{\{0-9a-fA-F\}\{8\}-\{0-9a-fA-F\}\{4\}-\{0-9a-fA-F\}\{4\}-\{0-9a-fA-F\}\{4\}-\{0-9a-fA-F\}\{12\}}\$$ E.g.: PSU-Device-ID: 5b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>PSU-Geo-Location</b>	Corresponding location of the HTTP request between the PSU and the TPP.	String	OP	<b>RFC 2426</b> $^{\text{GEO}:[\backslash d]^*.[\backslash d]^*[:][\backslash d]^*.[\backslash d]^*}\$$

Field	Description	Type	Mand.	Format
<b>Digest</b>	It is content if it goes in the Signature field.  See 6.1 Signature for more information.	String	OB	E.g.: PSU-Geo-Location: GEO:90.023856;25.345963  ^.{1,100}\$  E.g.: Digest: SHA- 256=NzdmZjA4YjY5M2M2ND YyMmVjOWFmMGNmYTZiNT U3MjVmNDI4NTRIMzjkYzE3Z mNmMDE3ZGFmMjhhNTc5O TU3OQ==
<b>Signature</b>	Signature of the request for the TPP.  See 6.1 Signature for more information.	String	OB	See annexes
<b>TPP-Signature-Certificate</b>	TPP certificate used to sign the request in base64.	String	OB	^.{1,5000}\$  E.g.: TPP-Signature-Certificate: MIIHgZCCBmugAwIBAgIIzZv BQlt0UcwDQYJ.....KoZlHv cNAQELBQAwSTELMAkGA1U EBhMCMVVMxEzARBgNVBA

## Body

No data goes in the body of this request.

### 3.3.3.2 Response

#### Header

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the transaction.	String	OB	<b>UUID</b>  ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$  E.g.: X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7

#### Body

Field	Description	Type	Mand.	Format
<b>account</b>	Identifier of the account being queried.  Note: recommended to	AccountReference	OP	E.g.: "account": {...}



```
    },
    "balances": [
      {
        "balanceType": "closingBooked",
        "balanceAmount": {
          "currency": "EUR",
          "amount": "500.00"
        }
      },
      {
        "balanceType": "expected",
        "balanceAmount": {
          "currency": "EUR",
          "amount": "900.00"
        }
      }
    ]
  }
}
```

### 3.3.4 Reading of the transactions

This service allows for transactions of a particular account to be obtained via its identifier.

As a requirement, it is assumed that the PSU has consented to this access and it has been stored by the ASPSP.

Operation of the service according to the type of access specified in the consent:

Access type	Description
account	This service cannot be used with this type of access.
balances	If the consent associated with the request has this type of access it will allow the balances to be requested, provided that the ASPSP supports this.
transactions	If the consent associated with the request has this type of access to the account movements, they can be queried.
allPsd2	If the consent associated with the request has this type of access to the account balances, they can be queried. Note: allPsd2 provides all three types of access.

### 3.3.4.1 Request

#### Endpoint

GET {provider}/{aspsp}/v1/accounts/{account-id}/transactions{query-parameters }

#### Path

Field	Description	Type	Mand.	Format
<b>provider</b>	URL of the HUB where the service is published	String	OB	E.g.: www.hub.com
<b>aspsp</b>	Name of the ASPSP to which the request is made.	String	OB	E.g.: aspsp-name
<b>account-id</b>	Account identifier to be used to read the data. Previously obtained in the reading of the list of accounts. It must be valid at least for the duration of the consent. This ID can be tokenised.	String	OB	^{1,100}\$ E.g.: account-id=a1q5w

#### Query parameters

Field	Description	Type	Mand.	Format
<b>dateFrom</b>	Query start date. It is included if the "deltaList" is not included.	String	COND	<b>ISODate</b> E.g.: dateFrom=2017-10-25
<b>dateTo</b>	Query end date. The default value is the current date if nothing is entered.	String	OP	<b>ISODate</b> E.g.: dateTo=2017-11-05
<b>entryReferenceFrom</b>	If specified, it will give us the results from the call with the preceding entryReferenceFrom given. If it is content, the dateFrom and dateTo attributes are ignored.	String	OP	E.g.: entryReferenceFrom=1234-asdf-567
<b>bookingStatus</b>	Permitted codes are "booked", "pending", "both" and "information". Currently the booking status "information" only covers standing orders.	String	OB	E.g.: bookingStatus=booked

#### Header

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the transaction.	String	OB	<b>UUID</b> ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$ E.g.:



				X-Request-ID: 1b3ab8e8-Ofd5-43d2-946e-d75958b172e7
<b>Authorization</b>	Bearer Token. Obtained in a pre-authentication on OAuth2.	String	OB	E.g.: Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA
<b>Consent-ID</b>	Consent identifier obtained in the transaction to request consent.	String	OB	^{1,36}\$ E.g.: Consent-ID: 7890-asdf-4321
<b>Accept</b>	Formats supported by the ASPSP. The TPP can specify the order and type. Supported values: application/json	String	OP	^{1,50}\$ E.g.: Accept: application/json
<b>PSU-IP-Address</b>	IP Address of the HTTP request between the PSU and the TPP. It must be included if, and only if this request was actively initiated by the PSU.	String	COND	^[0-9]{1,3}.[0-9]{1,3}.[0-9]{1,3}.[0-9]{1,3}\$ E.g.: PSU-IP-Address: 192.168.16.5
<b>PSU-IP-Port</b>	IP Port of the HTTP request between the PSU and the TPP, if available.	String	OP	^\d{1,5}\$ E.g.: PSU-IP-Port: 443
<b>PSU-Accept</b>	Accept header of the HTTP request between the PSU and the TPP.	String	OP	^{1,50}\$ E.g.: PSU-Accept: application/json
<b>PSU-Accept-Charset</b>	Accept charset header of the HTTP request between the PSU and the TPP.	String	OP	^{1,50}\$ E.g.: PSU-Accept-Charset: utf-8
<b>PSU-Accept-Encoding</b>	Accept encoding header of the HTTP request between the PSU and the TPP.	String	OP	^{1,50}\$ E.g.: PSU-Accept-Encoding: gzip
<b>PSU-Accept-Language</b>	Accept language header of the HTTP request between the PSU and the TPP.	String	OP	^{1,50}\$ E.g.: PSU-Accept-Language: es-ES
<b>PSU-User-Agent</b>	Browser or operating system of the HTTP request between the PSU and the TPP.	String	OP	E.g.: PSU-User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.1.5) Gecko/20091102 Firefox/3.5.5 (.NET CLR 3.5.30729)
<b>PSU-Http-Method</b>	HTTP method used in the interface between the PSU and the TPP. Allowed values: <ul style="list-style-type: none"> <li>• POST</li> <li>• GET</li> </ul>	String	OP	E.g.: PSU-Http-Method: GET

- PUT
- PATCH
- DELETE

<b>PSU-Device-ID</b>	<p>UUID (Universally Unique Identifier) for a device.</p> <p>The UUID identifies the device or an installation of an application on a device. This ID must not be modified until the application has been uninstalled from the device.</p>	String	OP	<p><b>UUID</b></p> <p><math>^{[0-9a-fA-F]\{8\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{12\}}\\$</math></p> <p>E.g.:</p> <p>PSU-Device-ID: 5b3ab8e8-0fd5-43d2-946e-d75958b172e7</p>
<b>PSU-Geo-Location</b>	<p>Corresponding location of the HTTP request between the PSU and the TPP.</p>	String	OP	<p><b>RFC 2426</b></p> <p><math>^{GEO:[\d]*\.[\d]*;[\d]*\.[\d]*}\\$</math></p> <p>E.g.:</p> <p>PSU-Geo-Location: GEO:90.023856;25.345963</p>
<b>Digest</b>	<p>It is content if it goes in the Signature field.</p> <p>See 6.1 Signature for more information.</p>	String	OB	<p><math>^{\{1,100\}}\\$</math></p> <p>E.g.: Digest: SHA-256=NzdmZjA4YjY5M2M2NDYyMmVjOWFmMGNmYTZiNTU3MjVmNDI4NTRIMzJkYzE3ZmNmMDE3ZGFmMjhhNTc5O TU3OQ==</p>
<b>Signature</b>	<p>Signature of the request for the TPP.</p> <p>See 6.1 Signature for more information.</p>	String	OB	See annexes
<b>TPP-Signature-Certificate</b>	<p>TPP certificate used to sign the request in base64.</p>	String	OB	<p><math>^{\{1,5000\}}\\$</math></p> <p>E.g.: TPP-Signature-Certificate: MIIHgzCCBmugAwIBAgIIzZvBQlt0UcwDQYJ.....KoZlhv cNAQELBQA wSTELMAkGA1UEBhMCMCVVMxEzARBgNVBA</p>

**Body**

No data goes in the body of this request.

**3.3.4.2 Response**

**Header**

Field	Description	Type	Mand.	Format
<b>Content-Type</b>	Possible values:	String	OB	E.g.: Content-Type: application/json

application/json

**X-Request-ID**

Unique identifier assigned by the TPP for the transaction.

String

OB

**UUID**

$^{[0-9a-fA-F]\{8\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{12\}}$

E.g.:

X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7

**Body**

Field	Description	Type	Mand.	Format
<b>account</b>	Identifier of the account being queried.  Note: recommended to be used as it could become a mandatory parameter in future versions.	AccountReference	OP	E.g.: "account": {...}
<b>transactions</b>	The data is returned in JSON format, when the returned data is small in size.	AccountReport	OP	E.g.: "transactions": {...}
<b>_links</b>	List of hyperlinks to be recognised by the TPP.  Types supported in this response:	Links	OP	E.g.: "_links": {...}
<b>psuMessage</b>	Text to be displayed to the PSU	String	OP	$^{\{1,512\}}$ E.g.: "psuMessage": "Information for the PSU"
<b>tppMessages</b>	Message for the TPP.	List<TppMessage>	OP	E.g.: "tppMessages": [...]

**3.3.4.3 Examples**

**Example of search request sending search criteria including dateTo and dateFrom**

GET

<https://www.hub.com/aspsp-name/v1/accounts/qwer3456tzui7890/transactions?dateFrom=2017-10-25&dateTo=2017-11-05&bookingStatus=booked>

Accept: application/json

X-Request-ID: 96201400-6ff9-11e8-adc0-fa7ae01bbebc

Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA

Consent-ID: 7890-asdf-4321

PSU-IP-Address: 192.168.8.16

PSU-IP-Port: 443

PSU-Accept: application/json

PSU-Accept-Charset: utf-8

PSU-Accept-Encoding: gzip

PSU-Accept-Language: es-ES

PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0

PSU-Http-Method: GET

PSU-Device-ID: f8b3feda-6fe3-11e8-adc0-fa7ae01bbebc

PSU-GEO-Location: GEO:12.526347;54.649862

Date: Sun, 26 Sep 2017 15:02:48 GMT

**Example of a search request with the search entryReferenceFrom criterion**

GET

<https://www.hub.com/aspsp-name/v1/accounts/qwer3456tzui7890/transactions?entryReferenceFrom=1234-asd-4564700&bookingStatus=booked>

Accept: application/json

X-Request-ID: 96201400-6ff9-11e8-adc0-fa7ae01bbebc

Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA

Consent-ID: 7890-asdf-4321

PSU-IP-Address: 192.168.8.16

PSU-IP-Port: 443

PSU-Accept: application/json

PSU-Accept-Charset: utf-8

PSU-Accept-Encoding: gzip

PSU-Accept-Language: es-ES

PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0

PSU-Http-Method: GET

PSU-Device-ID: f8b3feda-6fe3-11e8-adc0-fa7ae01bbebc

PSU-GEO-Location: GEO:12.526347;54.649862

Date: Sun, 26 Sep 2017 15:02:48 GMT

**Example of response with pagination**

HTTP/1.1 200 Ok

X-Request-ID: 96201400-6ff9-11e8-adc0-fa7ae01bbebc

Date: Sun, 26 Sep 2017 15:02:50 GMT

Content-Type: application/json

```
{
  "account": {
    "iban": "ES11111111111111111111"
  }
}
```

```
    },
    "transactions": {
      "booked": [
        {
          "entryReference": "1234567",
          },
          "transactionAmount": {
            "currency": "EUR",
            "amount": "256.67"
          },
          },
          "bookingDate": "25/10/2017",
          "valueDate": "26/10/2017",
          "remittanceInformationUnstructured": "Example for Remittance Information"
        },
        {
          "entryReference": "1234568",
          },
          "transactionAmount": {
            "currency": "EUR",
            "content": "343.01"
          },
          },
          "bookingDate": "25/10/2017",
          "valueDate": "26/10/2017",
          "remittanceInformationUnstructured": "Another example for Remittance
Information"
        }
      ],
      "_links": {
        "account": {
          "href": "/v1/accounts/qwer3456tzui7890"
        },
        "first": {
          "href": "/v1/accounts/qwer3456tzui7890/transactions?"
        },
        "next": {
          "href": "/v1/accounts/qwer3456tzui7890/transactions?"
        },
      }
    }
  }
```

```
}

```

#### Example of response with error

```
{
  "tppMessages": [{
    "category": "ERROR",
    "code": "ACCESS_EXCEEDED"
  }
]
}
```

### 3.4 FCS: Fund confirmation service

#### 3.4.1 Fund query

This type of message is used in the fund query service. The TPP sends the request to the HUB to check for funds for a specified amount on the specified account.

The HUB communicates with the ASPSP to ask whether the funds are available, and after checking, it answers the TPP.

##### 3.4.1.1 Request

#### Endpoint

POST {provider}/{aspsp}/v1/funds-confirmations

#### Path

Field	Description	Type	Mand.	Format
<b>provider</b>	URL of the HUB where the service is published	String	OB	E.g.: www.hub.com
<b>aspsp</b>	Name of the ASPSP to which the request is made.	String	OB	E.g.: aspsp-name

#### Header

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the	String	OB	<b>UUID</b> ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-

	transaction.			9a-fA-F}{4}-[0-9a-fA-F]{12}\$
				E.g.: X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>Digest</b>	It is content if it goes in the Signature field. See 6.1 Signature for more information.	String	OB	^{1,100}\$ E.g.: Digest: SHA-256=NzdmZjA4YjY5M2M2NDYyMmVjOWFmMGNmYTZiNTU3MjVmNDI4NTRIMzJkYzE3ZmNmMDE3ZGFmMjhhNTc5OTU3OQ==
<b>Signature</b>	Signature of the request for the TPP. See 6.1 Signature for more information.	String	OB	See annexes
<b>TPP-Signature-Certificate</b>	TPP certificate used to sign the request in base64.	String	OB	^{1,512}\$ E.g.: TPP-Signature-Certificate: MIIHgZCCBmugAwlBAglIzZvBQlt0UcwDQYJ..... .....KoZlhvcNAQELBQAwSTELMAkGA1UEBhMCVVMxEzARBgNVBA

### Body

Field	Description	Type	Mand.	Format
<b>cardNumber</b>	Card number issued by the PIISP. This must be sent if it is available.	String	OP	E.g.: "cardNumber": "1111-1111-1111-1111"
<b>account</b>	PSU account number.	Account Reference	OB	E.g.: "account": {"iban": "ES11111111111111111111"}
<b>payee</b>	Business in which the card is accepted as information for the PSU.	String	OP	^{1,70}\$ E.g.: "payee": "Commercial name"
<b>instructedAmount</b>	This contains the amount and currency to be queried.	Amount	OB	E.g.: "instructedAmount": {...}

#### 3.4.1.2 Response

This message is returned to the TPP by the HUB as a response to the message to confirm funds.

### Header

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the transaction and sent through the HUB to the ASPSP.	String	OB	<b>UUID</b> ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$ E.g.: X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7

#### Body

Field	Description	Type	Mand.	Format
<b>fundsAvailable</b>	Takes the "true" value "true" if sufficient funds are available at the time of the request, otherwise it will be "false".	Boolean	OB	E.g.: "fundsAvailable": true
<b>tppMessages</b>	Message for the TPP.	List<TppMessage>	OP	E.g.: "tppMessages": [...]

#### 3.4.1.3 Examples

##### Example of a request

POST <https://www.hub.com/aspsp-name/v1/funds-confirmations>

Content-Encoding: gzip

Content-Type: application/json

X-Request-ID: 96201400-6ff9-11e8-adc0-fa7ae01bbebc

Date: Sun, 17 Oct 2017 13:15:17 GMT

```
{
  "cardNumber": "87432569872156",
  "account": {
    "iban": "ES1111111111111111111111"
  },
  "payee": "Name123",
  "instructedAmount": {
    "currency": "EUR",
    "amount": "153.50"
  }
}
```



**Example of response with available funds**

HTTP/1.1 200 Ok

X-Request-ID: 0ee25bf4-6ff1-11e8-adc0-fa7ae01bbebc

Date: Sun, 26 Sep 2017 15:02:47 GMT

Content-Type: application/json

```
{
  "fundsAvailable": true
}
```

**3.5 OAuth2 as a pre-step****3.5.1 Get authorisation****3.5.1.1 Request**

The TPP redirects the PSU so that it carries out the following request to the HUB:

- Web authentication
- Biometric authentication with app-to-app redirection

**Endpoint for web authentication**

GET

```
{aspsp}/authorize?response_type={response_type}&client_id={client_id}&scope={scope}&state={state}&redirect_uri={redirect_uri}&code_challenge={code_challenge}&code_challenge_method={code_challenge_method}
```

**Endpoint for biometric authentication with app-to-app redirection (personal)**

GET

```
{aspsp}/biometric/app-to-app/personal/authorize?response_type={response_type}&client_id={client_id}&scope={scope}&state={state}&redirect_uri={redirect_uri}&code_challenge={code_challenge}&code_challenge_method={code_challenge_method}
```

**Endpoint for biometric authentication with app-to-app redirection (business)**

GET

```
{aspsp}/biometric/app-to-app/business/authorize?response_type={response_type}&client_id={client_id}&scope={scope}&state={state}&redirect_uri={redirect_uri}&code_challenge={code_challenge}&code_challenge_method={code_challenge_method}
```

Either of the two biometric endpoints can be used interchangeably because in both cases it is redirected to the same mobile application.

## Sandbox application access for app-to-app redirect testing

There are sandbox applications available for iOS and Android for both BancSabadell and ActivoBank. These applications are intended to test app-to-app redirection in the Sandbox environment. To download, access the compressed files in "zip" from the following links:

### Android

[https://images.comunicaciones.bancsabadell.com/Web/BANCODESABADELLSA/{56586c33-bb16-436a-b5b4-58b2bb15995b}\\_PSD2AppSandbox-Android.zip](https://images.comunicaciones.bancsabadell.com/Web/BANCODESABADELLSA/{56586c33-bb16-436a-b5b4-58b2bb15995b}_PSD2AppSandbox-Android.zip)

### iOS

[https://images.comunicaciones.bancsabadell.com/Web/BANCODESABADELLSA/{190ed11d-1e8f-4f42-bf27-d713da93db21}\\_PSD2AppSandbox-iOS.zip](https://images.comunicaciones.bancsabadell.com/Web/BANCODESABADELLSA/{190ed11d-1e8f-4f42-bf27-d713da93db21}_PSD2AppSandbox-iOS.zip)

### Path

Field	Description	Type	Mand.	Format
<b>provider</b>	URL of the HUB where the service is published.	String	OB	E.g.: www.hub.com
<b>aspsp</b>	Name of the ASPSP to which the request is made.	String	OB	E.g.: aspsp-name

### Query parameters

Field	Description	Type	Mand.	Format
<b>response_type</b>	The value should be set as "code".	String	OB	E.g.: response_type=code
<b>client_id</b>	<p>"organizationIdentifier" provided in the eIDAS certificate made up of:</p> <ul style="list-style-type: none"> <li>- PSD</li> <li>- 2 characters of the NCA country code according to the ISO 3166</li> <li>- Character "-"</li> <li>- 2-8 characters for the NCA identifier (A-Z in upper case)</li> <li>- Character "-"</li> <li>- PSP identifier</li> </ul>	String	OB	<p>^.{1,70}\$</p> <p>E.g.: client_id=PSDES-BDE-3DFD246</p>
<b>scope</b>	<p>Possible Scopes:</p> <ul style="list-style-type: none"> <li>• PIS</li> <li>• AIS</li> <li>• SVA</li> </ul>	String	OB	<p>^.{1,64}\$</p> <p>E.g.: scope=PIS%20AIS%20SVA</p>

	More than one can be specified separating it by a space (%20).			
<b>state</b>	Opaque value, generated by the TPP. Used to prevent “cross-site request forgery” (XSRF) attacks.	String	OB	$^{\{1,64\}}$ E.g.: state=XYZ
<b>redirect_uri</b>	URL returned to the HUB which will provide the authorisation code that will be subsequently used to obtain the access token.	String	OB	$^{\{1,250\}}$ E.g.: redirect_uri=https%3A%2F%2Fwww%2Etp%2Ecom%2Fcb
<b>code_challenge</b>	PKCE challenge used to prevent code injection attacks. According to RFC 7636.	String	OB	$^{\{1,128\}}$ E.g.: code_challenge=E9Melhoa2OwvFrEMTJguCHaoeK1t8URWbuGJSstw-cM
<b>code_challenge_method</b>	Method for checking the code which could be “plain” or “S256”. Preferred S256 (SHA 256)	String	OP	$^{\{1,120\}}$ E.g.: code_challenge_method=S256

#### Header

No additional fields are specified.

#### Body

No data goes in the body of this response.

### 3.5.1.2 OK Response

Response if the request has been processed correctly. This is the result from the redirection initiated by the HUB from the PSU’s browser to the return URL provided by the TPP.

#### Path

No additional fields are specified.

#### Query Parameters

Field	Description	Type	Mand.	Format
<b>Location</b>	This contains the URI where the redirection to the TPP is performed.	String	OB	E.g.: Location: <a href="https://www.tpp.com/cb">https://www.tpp.com/cb</a>
<b>code</b>	Authorisation Code for single use generated by the HUB. The recommended duration of the code should not exceed 10	String	OB	$^{\{1,64\}}$ E.g.: code=SpIxIOBeZQQYbYS6WxSbIA

<b>state</b>	minutes. Opaque value, generated by the TPP. Used to maintain the state between the request and response. The HUB will include it when PSU's browser is redirected back to the TPP. Used to prevent "cross-site request forgery" attacks.	String	OB	^{1,64}\$ E.g.: state=XYZ
--------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------	----	------------------------------

### Body

No data goes in the body of this request.

### 3.5.1.3 Error Response

Response if an error has occurred in the request. This is the result from the redirection initiated by the HUB from the PSU's browser to the return URL provided by the TPP.

### Path

No additional fields are specified.

### Query Parameters

Field	Description	Type	Mand.	Format
<b>Location</b>	This contains the URI where the redirection to the TPP is performed.	String	OB	E.g.: Location: https://www.tpp.com/cb
<b>error</b>	Code indicating an error has occurred.	String	OB	E.g.: error=invalid_request
<b>state</b>	Value generated by the TPP. Used to maintain the state between the request and response. The HUB will send back the response.	String	OB	E.g.: state=XYZ

### Body

No data goes in the body of this request.

### 3.5.1.4 Examples

#### Example of a request

GET [https://www.hub.com/aspsp-name/authorize?response\\_type=code&client\\_id=PSDES-BDE-3DFD246&scope=PIS%20AIS%20SVA&state=xyz&redirect\\_uri=https%3A%2F%2Fwww%2Ehub%2Ecom%2Fcb&code\\_challenge=E9Melhoa2OwvFrEMTJguCHaoeK1t8URWbuGJSstw-cM&code\\_challenge\\_method=S256](https://www.hub.com/aspsp-name/authorize?response_type=code&client_id=PSDES-BDE-3DFD246&scope=PIS%20AIS%20SVA&state=xyz&redirect_uri=https%3A%2F%2Fwww%2Ehub%2Ecom%2Fcb&code_challenge=E9Melhoa2OwvFrEMTJguCHaoeK1t8URWbuGJSstw-cM&code_challenge_method=S256)

### Example OK response

HTTP/1.1 302 Found

Location: <https://www.tpp.com/cb?code=SpIxIOBeZQQYbYS6WxSbIA&state=xyz>

### Example NOK response

HTTP/1.1 302 Found

Location: [https://www.tpp.com/cb?error=access\\_denied&state=xyz](https://www.tpp.com/cb?error=access_denied&state=xyz)

## 3.5.2 Obtaining the access token

This message is sent by the HUB to ASPSP to exchange the authorization code obtained in the previous step and get the access and refresh tokens.

### 3.5.2.1 Request

#### Endpoint

POST {provider}/{aspsp}/token

#### Path

Field	Description	Type	Mand.	Format
<b>provider</b>	URL of the HUB where the service is published.	String	OB	E.g.: www.hub.com
<b>aspsp</b>	Name of the ASPSP to which the request is made.	String	OB	E.g.: aspsp-name

#### Request Parameters

Field	Description	Type	Mand.	Format
<b>grant_type</b>	It must have the value of "authorization_code"	String	OB	E.g.: grant_type=authorization_code
<b>client_id</b>	"organizationIdentifier" provided in the eIDAS certificate made up of: <ul style="list-style-type: none"> <li>- PSD</li> <li>- 2 characters of the NCA country code according to the ISO 3166</li> <li>- Character "-"</li> <li>- 2-8 characters for the NCA identifier (A-Z in</li> </ul>	String	OB	^.{1,70}\$ E.g.: client_id=PSDES-BDE-3DFD246

- upper case)
- Character "-"
- PSP identifier

<b>code</b>	Authorisation code returned by the ASPSP in the previous authorisation code returned.	String	OB	$\wedge.\{1,64\}\$$ E.g.: code=SplxIOBeZQQY bYS6WxSbIA
<b>redirect_uri</b>	The URL returned to the TPP where the authorisation code is reported. It must be the same as that reported in the request for the authorisation code.	String	OB	$\wedge.\{1,250\}\$$ E.g.: redirect_uri=https%3A%2F%2Fwww%2Etp%2Ecom%2Fcb
<b>code_verifier</b>	The proof key code, PKCE, used to prevent code injection attacks. Based on RFC 7636.	String	OB	E.g.: code_verifier=dBjftJeZ4CVP- mB92K27uhbUJU1p1r_w W1gFWFOEjXk

#### Header

No additional fields are specified.

#### Body

Fields do not go in the Body.

### 3.5.2.2 OK Response

Response if the request has been processed correctly. This result is given to the request to obtain an access token sent by the HUB to the PSU.

#### Body

Field	Description	Type	Mand.	Format
<b>access_token</b>	Access token issued by the HUB and attached to the scope asked for in the requested and confirmed by the PSU.	String	OB	$\wedge.\{1,64\}\$$ E.g.: "access_token": "2YotnFZFEjr1zCsicMWpAA"
<b>token_type</b>	Type of token issued. It will take the value of "Bearer".	String	OB	E.g.: "token_type": "Bearer"
<b>expires_in</b>	Duration of the access token in	Integer	OP	E.g.: "expires_in": 300

seconds.

<b>refresh_token</b>	Refresh token. It can be used to obtain a new access token if it expires.	String	OP	$\wedge.\{1,64\}\$$ E.g.: "refresh_token": "tGzv3JOKFOXG5Qx2TIKWIA"
----------------------	---------------------------------------------------------------------------	--------	----	---------------------------------------------------------------------------

### 3.5.2.3 Error Response

Response if an error has occurred in the request. This result is given to the request for an access token sent by the TPP to the HUB.

#### Body

Field	Description	Type	Mand.	Format
<b>error</b>	Code indicating an error has occurred. See more return codes in the annexes.	String	OB	E.g.: "error": "invalid_request"

### 3.5.2.4 Examples

#### Example of a request

POST /token HTTP/1.1

Host: <https://www.hub.com/aspsp-name>

Content-Type: application/x-www-form-urlencoded

grant\_type=authorization\_code&client\_id=PSDES-BDE-3DFD246&code=SpIxIOBeZQQYbYS6WxSbIA&redirect\_uri=https%3A%2F%2Fwww%2Etp%2Ecom%2Fcb&code\_verifier=dBjftJeZ4CVP-mB92K27uhbUJU1p1r\_wW1gFWFOEjXk

#### Example OK response

HTTP/1.1 200 OK

Content-Type: application/json; charset=UTF-8

Cache-Control: no-store

Pragma: no-cache

```
{
  "access_token": "2YotnFZFEjr1zCsicMWpAA",
  "token_type": "Bearer",
  "expires_in": 3600,
  "refresh_token": "tGzv3JOKFOXG5Qx2TIKWIA"
}
```

#### Example NOK response

HTTP/1.1 400 Bad Request

Content-Type: application/json;charset=UTF-8

Cache-Control: no-store

Pragma: no-cache

```
{
  "error": "invalid_request"
}
```

### 3.6 Refresh token request

This service is used when the HUB reports that the access\_token has expired. We can refresh the access\_token by sending the refresh\_token associated with the expired access\_token through this request.

#### 3.6.1 Request

##### Endpoint

POST {provider}/{aspsp}/token

##### Path

Field	Description	Type	Mand.	Format
<b>provider</b>	URL of the HUB where the service is published.	String	OB	E.g.: www.hub.com
<b>aspsp</b>	Name of the ASPSP to which the request is made.	String	OB	E.g.: aspsp-name
<b>grant_type</b>	It must have the value of "refresh_token"	String	OB	E.g.: grant_type=refresh_token
<b>client_id</b>	"organizationIdentifier" provided in the eIDAS certificate made up of: <ul style="list-style-type: none"><li>- PSD</li><li>- 2 characters of the NCA country code according to the ISO 3166</li><li>- Character "-"</li><li>- 2-8 characters for the NCA identifier (A-Z in upper case)</li><li>- Character "-"</li><li>- PSP identifier</li></ul>	String	OB	^{1,70}\$ E.g.: client_id=PSDES-BDE-3DFD246
<b>refresh_token</b>	Refresh token to obtain a valid access_token.	String	OB	^{1,64}\$ E.g.: refresh_token=tGzv3JOKF0XG5Qx2TIKWIA



**Header**

No additional data is specified.

**Body**

No additional data is specified.

**3.6.2 Response**

Field	Description	Type	Mand.	Format
<b>access_token</b>	Access token issued by the HUB and attached to the scope asked for in the requested and confirmed by the PSU.	String	OB	^{1,64}\$ E.g.: "access_token":"83kdFZFEjr1zCsicMWBB"
<b>token_type</b>	Type of token issued. It will take the value of "Bearer".	String	OB	E.g.: "token_type":"Bearer"
<b>expires_in</b>	Duration of the access token in seconds.	Integer	OP	E.g.: "expires_in":300
<b>refresh_token</b>	Refresh token. It can be used to obtain a new access token if it expires.	String	OP	^{1,64}\$ E.g.: "refresh_token":"28JD3JOKF0NM5Qx2TICCC"

**3.6.3 Examples**

POST /token HTTP/1.1

Host: <https://www.hub.com>

Content-Type: application/x-www-form-urlencoded

grant\_type=refresh\_token&client\_id=PSDES-BDE-3DFD246&refresh\_token=tGzv3JOKF0XG5Qx2TIKWIA

**Example OK response**

HTTP/1.1 200 OK

Content-Type: application/json;charset=UTF-8

Cache-Control: no-store

Pragma: no-cache

{

  "access\_token": "83kdFZFEjr1zCsicMWBB",

  "token\_type": "Bearer",

  "expires\_in": 300,

```
"access_token": "28JD3JOKF0NM5Qx2TICCC"
}
```

### 3.7 Common processes in the services

#### 3.7.1 Initiate authorisation process (explicit)

##### Use

The process of initiating the authorisation is necessary to be able to create an authorisation sub-resource (if it has not been created implicitly). It applies in the following scenarios:

- The ASPSP specifies with a "startAuthorisation" link in the response to a request to cancel a payment that an explicit initiation of the authorisation process is required by the TPP.

##### 3.7.1.1 Request

##### Endpoint in the event of a Payment Cancellation

POST {provider}/{aspsp}/v1/{payment-service}/{payment-product}/{paymentId}/cancellation-authorisations

##### Path

Field	Description	Type	Mand.	Format
<b>provider</b>	URL of the HUB where the service is published.	String	OB	E.g.: hub.example.es
<b>aspsp</b>	Name of the ASPSP to which the request is made.	String	OB	E.g.: aspsp-name
<b>payment-service</b>	Possible values are: <ul style="list-style-type: none"> <li>• payments</li> <li>• periodic-payments</li> </ul>	String	COND	E.g.: {provider}/v1/payments
<b>payment-product</b>	Payment product to use. List of supported products: <ul style="list-style-type: none"> <li>• sepa-credit-transfers</li> </ul>	String	COND	E.g.: {provider}/v1/payments/sepa-credit-transfers/
<b>paymentId</b>	Resource identifier referred to the payment initiation.	String	OB	^{1,36}\$ E.g.:123-qwe-456

##### Query parameters

Additional parameters for this request are not specified.

##### Header

Field	Description	Type	Mand.	Format
<b>Content-Type</b>	Value: application/json	String	OB	Content-Type: application/json
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the transaction and sent through the HUB to	String	OB	UUID ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-

	the ASPSP			[0-9a-fA-F]{4}-[0-9a-fA-F]{4}- [0-9a-fA-F]{12}\$
				E.g.: X-Request-ID: 1b3ab8e8-0fd5- 43d2-946e-d75958b172e7
<b>Authorization</b>	Bearer Token. Obtained in a pre-authentication on OAuth2.	String	OB	E.g.: Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA
<b>PSU-IP-Address</b>	IP Address of the HTPP request between the PSU and the TPP.  If it is not available, the TPP must use the IP address used by the TPP when it sends this request.	String	OP	^[0-9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}\$  E.g.: PSU-IP-Address: 192.168.16.5
<b>PSU-IP-Port</b>	IP Port of the HTPP request between the PSU and the TPP, if available.	String	OP	^\d{1,5}\$  E.g.: PSU-IP-Port: 443
<b>PSU-Accept</b>	Accept header of the HTPP request between the PSU and the TPP.	String	OP	^{1,50}\$  E.g.: PSU-Accept: application/json
<b>PSU-Accept-Charset</b>	Accept charset header of the HTPP request between the PSU and the TPP.	String	OP	^{1,50}\$  E.g.: PSU-Accept-Charset: utf-8
<b>PSU-Accept-Encoding</b>	Accept encoding header of the HTPP request between the PSU and the TPP.	String	OP	^{1,50}\$  E.g.: PSU-Accept-Encoding: gzip
<b>PSU-Accept-Language</b>	Accept language header of the HTPP request between the PSU and the TPP.	String	OP	^{1,50}\$  E.g.: PSU-Accept-Language: es-ES
<b>PSU-User-Agent</b>	Browser or operating system of the HTTP request between the PSU and the TPP.	String	OP	E.g.:  PSU-User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.1.5) Gecko/20091102 Firefox/3.5.5 (.NET CLR 3.5.30729)
<b>PSU-Http-Method</b>	HTTP method used in the interface between the PSU and the TPP. Allowed values:  <ul style="list-style-type: none"> <li>• POST</li> <li>• GET</li> <li>• PUT</li> <li>• PATCH</li> <li>• DELETE</li> </ul>	String	OP	E.g.: PSU-Http-Method: POST
<b>PSU-Device-ID</b>	UUID (Universally Unique Identifier) for a device.  The UUID identifies the device	String	OP	UUID  ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}- [0-9a-fA-F]{4}-[0-9a-fA-F]{4}-

	or an installation of an application on a device. This ID must not be modified until the application has been uninstalled from the device.			[0-9a-fA-F]{12}\$ E.g.: PSU-Device-ID: 5b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>PSU-Geo-Location</b>	Corresponding location of the HTTP request between the PSU and the TPP.	String	OP	RFC 2426 ^GEO:[\\d]*.[\\d]*[;][\\d]*.[\\d]*\$ E.g.: PSU-Geo-Location: GEO:90.023856;25.345963
<b>Digest</b>	It is content if it goes in the Signature field. See 6.1 Signature for more information.	String	OB	^{1,100}\$ E.g.: Digest: SHA-256=NzdmZjA4YjY5M2M2NDYyMmVjOWFmMGNmYTZiNTU3MjVmNDI4NTRIMzJkYzE3ZmNmMDE3ZGFmMjhhNTc5OTU3OQ==
<b>Signature</b>	Signature of the request for the TPP. See 6.1 Signature for more information.	String	OB	See annexes
<b>TPP-Signature-Certificate</b>	TPP certificate used to sign the request in base64.	String	OB	^{1,5000}\$ E.g.: TPP-Signature-Certificate: MIIHgZCCBmugAwIBAgIIzZvBQlt0UcwDQYJ.....KoZlhvcNAQELBQAwSTELMAKGA1UEBhMCVVMxEzARBgNVBA

### Body

No additional fields are specified.

### 3.7.1.2 Response

#### Header

Field	Description	Type	Mand.	Format
<b>Location</b>	It contains the generated link relating to the resource.	String	OB	E.g.: Location: /v1/payments/{payment-product}/{paymentId}/authorizations/123qwerty/456
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the transaction and sent through the HUB to the ASPSP.	String	OB	UUID ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$ E.g.: X-Request-ID: 1b3ab8e8-0fd5-

43d2-946e-d75958b172e7

**ASPSP-SCA-Approach**

Returned value if the SCA method has been set. Possible values:

- REDIRECT

The SCA based on OAuth2 will be taken as a REDIRECT.

String

COND

E.g.: ASPSP-SCA-Approach: REDIRECT

**Body**

Field	Description	Type	Mand.	Format
<b>scaStatus</b>	SCA Status	String	OB	E.g.: "scaStatus": "received"
<b>authorisationId</b>	Resource identifier referring to the created authorisation sub-resource.	String	OB	^.{1,36}\$ E.g.: "authorisationId": "1b3ab8e8-0fd5-43d2-946e-d75958b172e7"
<b>scaMethods</b>	This element is content if the SCA is required and the PSU can choose between different authentication methods.  Note: Provided that the ASPSP supports the SCA selection method.	List<AuthenticationObject>	COND	E.g.: "scaMethods": [...]
<b>_links</b>	List of hyperlinks to be recognised by the TPP. Types supported in this response:  <ul style="list-style-type: none"> <li>• scaRedirect: in the event of the SCA redirect. Link where the PSU's browser must be redirected by the TPP.</li> <li>• scaStatus: link to check the SCA status corresponding to the authorisation sub-resource.</li> </ul>	Links	OB	E.g.: "_links": {...}
<b>psuMessage</b>	Text sent to the TPP through the HUB to be displayed to the PSU.	String	OP	^.{1,512}\$ E.g.: "psuMessage": "Information for the PSU"
<b>tppMessages</b>	Message for the TPP sent through the HUB.	List<Tpmessage>	OP	E.g.: "tppMessages": [...]

**3.7.1.3 Examples**

**Example of a request for a Payment Cancellation**

POST <https://hub.example.es/aspsp-name/v1/payments/sepa-credit-transfers/qwert1234tzui7890/cancellation-authorisations>

Content-Encoding: gzip

Content-Type: application/json

X-Request-ID: 10391c7e-ad88-49ec-a2ad-00aacb1f6541

Authorization: Bearer 2YotnFZFEjrlzCsicMWpAA

PSU-IP-Address: 192.168.8.16

PSU-IP-Port: 443

PSU-Accept: application/json

PSU-Accept-Charset: utf-8

PSU-Accept-Encoding: gzip

PSU-Accept-Language: es-ES

PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0

PSU-Http-Method: POST

PSU-Device-ID: f8b3feda-6fe3-11e8-adc0-fa7ae01bbebc

PSU-GEO-Location: GEO:12.526347;54.649862

Date: Sun, 26 Sep 2017 15:02:37 GMT

#### Example of a response in the event of the SCA redirect

HTTP/1.1 201 Created

X-Request-ID: 10391c7e-ad88-49ec-a2ad-00aacb1f6541

ASPSP-SCA-Approach: REDIRECT

Date: Sun, 26 Sep 2017 15:02:43 GMT

Location: </v1/payments/sepa-credit-transfers/123-qwe-456/cancellation-authorisations/123auth456>

Content-Type: application/json

```
{
  "scaStatus": "received",
  "authorisationId": "123auth456",
  "_links": {
    "scaRedirect": {
      "href": "https://hub.example.es/authorize "
    },
    "scaStatus": {
      "href": "/v1/payments/sepa-credit-transfers/123-qwe-456/cancellation-authorisations/123auth456"
    }
  }
}
```

### 3.7.2 Obtain authorisation sub-resources

This will provide an array of resource identifiers for all the authorization sub-resources generated.

#### 3.7.2.1 Request

##### Endpoint in the event of a Payment Cancellation

GET {provider}/{aspsp}/v1/{payment-service}/{payment-product}/{paymentId}/cancellation-authorisations

##### Path

Field	Description	Type	Mand.	Format
<b>provider</b>	URL of the ASPSP where the service is published.	String	OB	E.g.: hub.example.es
<b>aspsp</b>	Name of the ASPSP to which the request is made.	String	OB	E.g.: aspsp-name
<b>payment-service</b>	Possible values are: <ul style="list-style-type: none"> <li>• payments</li> <li>• bulk-payments</li> <li>• periodic-payments</li> </ul>	String	COND	E.g.: {provider}/v1/payments
<b>payment-product</b>	Payment product to use. List of supported products: <ul style="list-style-type: none"> <li>• sepa-credit-transfers</li> <li>• instant-sepa-credit-transfers</li> <li>• target-2-payments</li> <li>• cross-border-credit-transfers</li> </ul>	String	COND	E.g.: {provider}/v1/payments/sepa-credit-transfers/
<b>paymentId</b>	Resource identifier referred to the payment initiation.	String	OB	^{1,36}\$ E.g.:123-qwe-456

##### Query parameters

No additional fields are specified.

##### Header

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by	String	OB	UUID

	the TPP for the transaction and sent through the HUB to the ASPSP				$^{[0-9a-fA-F]\{8\}}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{12\}\$$ E.g.: X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>TPP-HUB-ID</b>	TPP identifier reported through the HUB. TPP registration number.	String	OP		$^{\{1,70\}}\$$ E.g.: TPP-HUB-ID: PSDES-BDE-3DFD21
<b>Authorization</b>	Bearer Token. Obtained in a pre-authentication on OAuth2.	String	OB		E.g.: Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA
<b>PSU-IP-Address</b>	IP Address of the HTTP request between the PSU and the TPP.	String	OP		$^{[0-9]\{1,3\}}\.[0-9]\{1,3\}\.[0-9]\{1,3\}\.[0-9]\{1,3\}\$$ E.g.: PSU-IP-Address: 192.168.16.5
<b>PSU-IP-Port</b>	IP Port of the HTTP request between the PSU and the TPP, if available.	String	OP		$^{\d\{1,5\}}\$$ E.g.: PSU-IP-Port: 443
<b>PSU-Accept</b>	Accept header of the HTTP request between the PSU and the TPP.	String	OP		$^{\{1,50\}}\$$ E.g.: PSU-Accept: application/json
<b>PSU-Accept-Charset</b>	Accept charset header of the HTTP request between the PSU and the TPP.	String	OP		$^{\{1,50\}}\$$ E.g.: PSU-Accept-Charset: utf-8
<b>PSU-Accept-Encoding</b>	Accept encoding header of the HTTP request between the PSU and the TPP.	String	OP		$^{\{1,50\}}\$$ E.g.: PSU-Accept-Encoding: gzip
<b>PSU-Accept-Language</b>	Accept language header of the HTTP request between the PSU and the TPP.	String	OP		$^{\{1,50\}}\$$ E.g.: PSU-Accept-Language: es-ES
<b>PSU-User-Agent</b>	Browser or operating system of the HTTP request between the PSU and the TPP.	String	OP		E.g.: PSU-User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.1.5) Gecko/20091102 Firefox/3.5.5 (.NET CLR 3.5.30729)
<b>PSU-Http-Method</b>	HTTP method used in the interface between the PSU and the TPP. Allowed values: <ul style="list-style-type: none"> <li>• POST</li> <li>• GET</li> <li>• PUT</li> <li>• PATCH</li> <li>• DELETE</li> </ul>	String	OP		E.g.: PSU-Http-Method: DELETE
<b>PSU-Device-ID</b>	UUID (Universally Unique	String	OP		UUID



Identifier) for a device.

The UUID identifies the device or an installation of an application on a device. This ID must not be modified until the application has been uninstalled from the device.

$^{[0-9a-fA-F]\{8\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{12\}}\$$

E.g.:

PSU-Device-ID: 5b3ab8e8-0fd5-43d2-946e-d75958b172e7

**PSU-Geo-Location**

Corresponding location of the HTTP request between the PSU and the TPP

String

OP

RFC 2426

$^{GEO:[\d]*.[\d]*[;,:][\d]*.[\d]*}\$$

E.g.:

PSU-Geo-Location:  
GEO:90.023856;25.345963

**Digest**

It is content if it goes in the Signature field.

String

OB

$^{.\{1,100\}}\$$

See 6.1 Signature for more information.

E.g.: Digest: SHA-

256=NzdmZjA4YjY5M2M2NDYyMmVjOWFmMGNmYTZiNTU3MjVmNDI4NTRIMzJkYzE3ZmNmMDE3ZGFmMjhhNTc5OTU3OQ==

**Signature**

Signature of the request for the TPP.

String

OB

See annexes

See 6.1 Signature for more information.

**TPP-Signature-Certificate**

TPP certificate used to sign the request in base64.

String

OB

$^{.\{1,5000\}}\$$

E.g.: TPP-Signature-Certificate:  
MIIHgZCCBmugAwIBAgIIzZvBQlt0UcwDQYJ.....KoZlhvcNAQELBQAwSTELMAKGA1UEBhMCVVMxEzARBgNVBA

**Body**

No additional data is specified.

**3.7.2.2 Response**

**Header**

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the transaction and sent through the HUB to the ASPSP.	String	OB	<p>UUID</p> <p><math>^{[0-9a-fA-F]\{8\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{12\}}\\$</math></p> <p>E.g.:</p> <p>X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7</p>

**Body**

Field	Description	Type	Mand.	Format
-------	-------------	------	-------	--------

<b>cancellationIds</b>	Array of cancellationIds connected to the payment resource.  Note: mandatory if it is a cancellation.	Array<String>	COND	E.g.: "cancellationIds": [...]
<b>psuMessage</b>	Text sent to the TPP through the HUB to be displayed to the PSU.	String	OP	^{1,512}\$ E.g.: "psuMessage": "Information for the PSU"
<b>tppMessages</b>	Message for the TPP sent through the HUB.	List<TppMessage>	OP	E.g.: "tppMessages": [...]

### 3.7.2.3 Examples

#### Example of a request

GET <https://hub.example.es/asp-name/v1/payments/sepa-credit-transfers/123-qwe-456/cancellation-authorisations>

X-Request-ID: 96201400-6ff9-11e8-adc0-fa7ae01bbebc

Authorization: Bearer 2YotnFZFEjrlzCsicMWpAA

PSU-IP-Address: 192.168.8.16

Content-Type: application/json

Date: Sun, 26 Sep 2017 15:02:48 GMT

#### Example of a response

HTTP/1.1 200 Ok

X-Request-ID: 0ee25bf4-6ff1-11e8-adc0-fa7ae01bbebc

Date: Sun, 26 Sep 2017 15:02:47 GMT

```
{
  "cancellationIds": ["123auth456"]
}
```

### 3.7.3 Obtain SCA status

Message sent by the TPP to the ASPSP through the Hub to create an authorisation sub-resource.

#### 3.7.3.1 Request

##### Endpoint in the event of a Payment Cancellation

GET {provider}/{aspsp}/v1/{payment-service}/{payment-product}/{paymentId}/cancellation-authorisations/{cancellationId}

#### Path

Field	Description	Type	Mand.	Format
-------	-------------	------	-------	--------

<b>provider</b>	URL of the HUB where the service is published.	String	OB	E.g.: hub.example.es
<b>aspsp</b>	Name of the ASPSP to which the request is made.	String	OB	E.g.: aspsp-name
<b>payment-service</b>	Possible values are: <ul style="list-style-type: none"> <li>• payments</li> <li>• bulk-payments</li> <li>• periodic-payments</li> </ul>	String	COND	E.g.: {provider}/v1/payments
<b>payment-product</b>	Payment product to use. List of supported products: <ul style="list-style-type: none"> <li>• sepa-credit-transfers</li> <li>• instant-sepa-credit-transfers</li> <li>• target-2-payments</li> <li>• cross-border-credit-transfers</li> </ul>	String	COND	E.g.: {provider}/v1/payments/sepa-credit-transfers/
<b>paymentId</b>	Resource identifier referred to the payment initiation.	String	OB	^{1,36}\$ E.g.:123-qwe-456
<b>cancellationId</b>	Sub-resource identifier associated with the payment cancellation.	String	COND	^{1,36}\$

#### Query parameters

No additional fields are specified.

#### Header

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the transaction and sent through the HUB to the ASPSP	String	OB	UUID ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$ E.g.: X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>Authorization</b>	Bearer Token. Obtained in a pre-authentication on OAuth2.	String	OB	E.g.: Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA
<b>PSU-IP-Address</b>	IP Address of the HTTP request between the PSU and the TPP.	String	OP	^[0-9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}\$ E.g.: PSU-IP-Address: 192.168.16.5
<b>PSU-IP-Port</b>	IP Port of the HTTP request between the PSU and the TPP, if available.	String	OP	^\d{1,5}\$ E.g.: PSU-IP-Port: 443

<b>PSU-Accept</b>	Accept header of the HTTP request between the PSU and the TPP.	String	OP	$\wedge.\{1,50\}\$$ E.g.: PSU-Accept: application/json
<b>PSU-Accept-Charset</b>	Accept charset header of the HTTP request between the PSU and the TPP.	String	OP	$\wedge.\{1,50\}\$$ E.g.: PSU-Accept-Charset: utf-8
<b>PSU-Accept-Encoding</b>	Accept encoding header of the HTTP request between the PSU and the TPP.	String	OP	$\wedge.\{1,50\}\$$ E.g.: PSU-Accept-Encoding: gzip
<b>PSU-Accept-Language</b>	Accept language header of the HTTP request between the PSU and the TPP.	String	OP	$\wedge.\{1,50\}\$$ E.g.: PSU-Accept-Language: es-ES
<b>PSU-User-Agent</b>	Browser or operating system of the HTTP request between the PSU and the TPP.	String	OP	E.g.: PSU-User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.1.5) Gecko/20091102 Firefox/3.5.5 (.NET CLR 3.5.30729)
<b>PSU-Http-Method</b>	HTTP method used in the interface between the PSU and the TPP. Allowed values: <ul style="list-style-type: none"> <li>• POST</li> <li>• GET</li> <li>• PUT</li> <li>• PATCH</li> <li>• DELETE</li> </ul>	String	OP	E.g.: PSU-Http-Method: GET
<b>PSU-Device-ID</b>	UUID (Universally Unique Identifier) for a device.  The UUID identifies the device or an installation of an application on a device. This ID must not be modified until the application has been uninstalled from the device.	String	OP	UUID $\wedge[0-9a-fA-F]\{8\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{12\}\$$ E.g.: PSU-Device-ID: 5b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>PSU-Geo-Location</b>	Corresponding location of the HTTP request between the PSU and the TPP	String	OP	RFC 2426 $\wedge\text{GEO}:[\wedge\d]*.[\wedge\d]*[;,:][\wedge\d]*.[\wedge\d]*\$$ E.g.: PSU-Geo-Location: GEO:90.023856;25.345963
<b>Digest</b>	It is content if it goes in the Signature field.  See 6.1 Signature for more information.	String	OB	$\wedge.\{1,100\}\$$ E.g.: Digest: SHA-256=NzdmZjA4YjY5M2M2NDYyMmVjOWFmMGNmYTZiNTU3MjVmNDI4NTRIMzJkYzE3ZmNmMDE3ZGFmMjhhNTc5OTU3OQ==

<b>Signature</b>	Signature of the request for the TPP.  See 6.1 Signature for more information.	String	OB	See annexes
<b>TPP-Signature-Certificate</b>	TPP certificate used to sign the request in base64.	String	OB	$\wedge\{1,5000\}\$$  E.g.: TPP-Signature-Certificate: MIIHgZCCBmugAwIBAgIIzZvBQlt0UcwDQYJ.....KoZlhvcNAQELBQAwwSTELMAkGA1UEBhMCVVMMxEzARBgNVBA

### Body

No additional data is specified.

### 3.7.3.2 Response

#### Header

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the transaction and sent through the HUB to the ASPSP.	String	OB	UUID  $\wedge[0-9a-fA-F]\{8\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{12\}\$$  E.g.:  X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7

#### Body

Field	Description	Type	Mand.	Format
<b>scaStatus</b>	SCA Status	String	OB	E.g.: "scaStatus": "finalised"
<b>psuMessage</b>	Text sent to the TPP through the HUB to be displayed to the PSU.	String	OP	$\wedge\{1,512\}\$$  E.g.: "psuMessage": "Information for the PSU"
<b>tppMessages</b>	Message for the TPP sent though the HUB.	List<TppMessage>	OP	E.g.: "tppMessages": [...]

### 3.7.3.3 Examples

#### Example of a request

GET <https://hub.example.es/asp-sp-name/v1/payments/sepa-credit-transfers/123-qwe-456/cancellation-authorisations/123asd456>

X-Request-ID: 96201400-6ff9-11e8-adc0-fa7ae01bbebc

Authorization: Bearer 2YotnFZFEjrlzCsicMWpAA

PSU-IP-Address: 192.168.8.16

PSU-IP-Port: 443

PSU-Accept: application/json

PSU-Accept-Charset: utf-8

PSU-Accept-Encoding: gzip

PSU-Accept-Language: es-ES

PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0)  
Gecko/20100101 Firefox/54.0

PSU-Http-Method: GET

PSU-Device-ID: f8b3feda-6fe3-11e8-adc0-fa7ae01bbebc

PSU-GEO-Location: GEO:12.526347;54.649862

Date: Sun, 26 Sep 2017 15:02:48 GMT

#### **Example of a response**

HTTP/1.1 200 Ok

X-Request-ID: 96201400-6ff9-11e8-adc0-fa7ae01bbebc

Date: Sun, 26 Sep 2017 15:02:50 GMT

Content-Type: application/json

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

## **4. DESCRIPTION OF VALUE-ADDED SERVICES**

### **4.1 ASPSP services available**

This message is sent by the TPP to the HUB to receive information about the ASPSPs which are available in the system.

#### 4.1.1 Version 1

##### 4.1.1.1 Request

###### Endpoint

GET {provider}/v1/sva/aspsps

###### Path

Field	Description	Type	Mand.	Format
<b>provider</b>	URL of the HUB where the service is published.	String	OB	E.g.: www.hub.com

###### Header

Field	Description	Type	Mand.	Format
<b>X-Request-ID</b>	Unique identifier assigned by the TPP for the transaction.	String	OB	<p><b>UUID</b></p> <p>^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$</p> <p>E.g.:</p> <p>X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7</p>
<b>Digest</b>	It is content if it goes in the Signature field. See 6.1 Signature for more information.	String	OB	<p>E.g.: Digest: SHA-256=NzdmZjA4YjY5M2M2NDYyMmVjOWFmMGNmYTZiNTU3MjVmNDI4NTRIMzJkYzE3ZmNmMDE3ZGFmMjhhNTc5OTU3OQ==</p>
<b>Signature</b>	Signature of the request for the TPP. See 6.1 Signature for more information.	String	OB	See annexes
<b>TPP-Signature-Certificate</b>	TPP certificate used to sign the request in base64.	String	OB	<p><b>eIDAS</b></p> <p>E.g.: TPP-Signature-Certificate: MIIHgZCCBmugAwIBAgIIzZvBQIt0UcwDQYJ .....KoZlhvcNAQELBQAwSTELMAkGA1UE BhMCMVVMxEzARBgNVBA</p>

###### Body

No additional fields are specified.

**4.1.1.2 Response**

Field	Description	Type	Mand.	Format
<b>aspsps</b>	List of ASPSPs available on the system. The list returned shall be made up of relevant information of the ASPSP.	List<Aspsp >	OB	E.g.: "aspsps":[]
<b>tppMessages</b>	Contains the message type and the code associated with it	Tppmessage	OB	E.g.: "tppMessages":{}

**4.1.1.3 Examples****Example of a request**

GET <https://www.hub.com/v1/sva/aspsps>

Content-Encoding: gzip

Content-Type: application/json

X-Request-ID: 29391c7e-ad88-49ec-a2ad-99ddcb1f7721

Date: Sun, 27 Oct 2017 13:15:17 GMT

**Example of a response**

HTTP/1.1 200 OK

```
{
  "aspsps": [
    {
      "bic": "XXXYESMMXXX",
      "name": "aspsp1"
    },
    {
      "bic": "YYYYESMMXXX",
      "name": "aspsp2"
    }
  ]
}
```

**4.1.2 Version 2**

This version includes the name of the API for each ASPSP.



#### 4.1.2.1 Request

##### Endpoint

GET {provider}/v2/sva/aspsps

##### Path

Field	Description	Type	Man.	Format
<b>provider</b>	URL of the HUB where the service is published.	String	MAN	E.g. www.hub.com

##### Header

Field	Description	Type	Man.	Format
<b>X-Request-ID</b>	ID of the request, unique to the call, as determined by the initiating party.	String	MAN	<b>UUID</b>  $^{[0-9a-fA-F]\{8\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{4\}-[0-9a-fA-F]\{12\}}\$$ E.g. X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>Digest</b>	Is contained if and only if the "Signature" element is contained in the header of the request.  See 6.1 Signature for more information.	String	MAN	E.g. Digest: SHA-256=NzdmZjA4YjY5M2M2NDYyMmVjOWFmMGNmYTZiNTU3MjVmNDI4NTRIMzJkYzE3ZmNmMDE3ZGFmMjhhNTc5OTU3OQ==
<b>Signature</b>	A signature of the request by the TPP on application level.  See 6.1 Signature for more information.	String	MAN	See annexes
<b>TPP-Signature-Certificate</b>	The certificate used for signing the request, in base64 encoding.	String	MAN	<b>eIDAS</b>  E.g. TPP-Signature-Certificate: MIIHgZCCBmugAwIBAgIIzZzVbQIt0UcwDQYJ.....KoZlhvcNAQELBQAwSTELMAkGA1UEBhMCVVMxEzARBgNVBA

##### Body

No additional fields are specified.

#### 4.1.2.2 Response

Field	Description	Type	Man.	Format
<b>aspsps</b>	List of ASPSPs available in the system. The returned list will be made up of relevant information on the ASPSP.	List<Aspsp >	MAN	E.g. "aspsps":[]
<b>tppMessages</b>	Contains the type of message and the code associated with it	Tppmessage	MAN	E.g. "tppMessages":{}

#### 4.1.2.3 Examples

##### Example of request

GET <https://www.hub.com/v2/sva/aspsps>

Content-Encoding: gzip

Content-Type: application/json

X-Request-ID: 29391c7e-ad88-49ec-a2ad-99ddcb1f7721

Date: Sun, 27 Oct 2017 13:15:17 GMT

##### Example of response

HTTP/1.1 200 Ok

```
{
  "aspsps": [
    {
      "bic": "XXXYESMMXXX",
      "name": "Bank name",
      "apiName": "nombreBanco1"
    },
    {
      "bic": "YYYYESMMXXX",
      "name": "Bank 2 name",
      "apiName": "nombreBanco2"
    }
  ]
}
```

## 4.2 SVA: payment initiation with list of available accounts for PISP

This service allows the TPP to initiate a payment without entering information on the debtor's account "debtorAccount" and provides the list of accounts during the SCA flow so that the PSU can select one.

This value service complements the payment API payment and uses the CORE services to:

- Obtain payment status
- Recover payment initiation information
- Cancel payment initiation

#### 4.2.1 Payment initiation

This message is sent by the TPP to the HUB to initiate payment without entering information on the debtor's account.

##### 4.2.1.1 Request

###### Endpoint

POST {provider}/{aspsp}/v1/sva/payments/{payment-product}

###### Path

Field	Description	Type	Man.	Format
<b>provider</b>	URL of the HUB where the service is published.	String	MAN	E.g. www.hub.com
<b>aspsp</b>	Name of the ASPSP to which the request is made.	String	MAN	E.g. aspsp-name
<b>payment-product</b>	Payment product to be used. List of supported products: <ul style="list-style-type: none"> <li>• sepa-credit-transfers</li> <li>• instant-sepa-credit-transfers</li> <li>• target-2-payments</li> <li>• cross-border-credit-transfers</li> </ul>	String	MAN	E.g. {provider}/{aspsp}/v1/payments/sepa-credit-transfers/

###### Header

Field	Description	Type	Man.	Format
<b>Content-Type</b>	Value: application/json	String	MAN	Content-Type: application/json
<b>X-Request-ID</b>	ID of the request, unique to the call, as determined by the initiating party.	String	MAN	<b>UUID</b> ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$  E.g. X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7

<b>Authorisation</b>	Bearer Token. Obtained in a prior authentication on OAuth2.	String	MAN	E.g.  Authorisation: Bearer 2YotnFZFEjr1zCsicMWpAA
<b>Consent-ID</b>	This data element may be contained, if the payment initiation transaction is part of a session, i.e. combined AIS/PIS service. This then contains the "consentId" of the related AIS consent, which was performed prior to this payment initiation.	String	OPT	^.{1,36}\$  E.g. Consent-ID: 7890-asdf-4321
<b>PSU-IP-Address</b>	The forwarded IP Address header field consists of the corresponding HTTP request IP Address field  between PSU and TPP.  If not available, the TPP shall use the IP Address used by the TPP when submitting this request.	String	MAN	^[0-9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}.[0-9]{1,3}\$  E.g. PSU-IP-Address: 192.168.16.5
<b>PSU-IP-Port</b>	The forwarded IP Port header field consists of the corresponding HTTP request IP Port field between PSU and TPP, if available.	String	OPT	^\d{1,5}\$  E.g. PSU-IP-Port: 443
<b>PSU-Accept</b>	The forwarded Accept header fields consist of the corresponding HTTP request Accept header fields between PSU and TPP, if available.	String	OPT	^{1,50}\$  E.g. PSU-Accept: application/json
<b>PSU-Accept-Charset</b>	See above	String	OPT	^{1,50}\$  E.g. PSU-Accept-Charset: utf-8
<b>PSU-Accept-Encoding</b>	See above	String	OPT	^{1,50}\$  E.g. PSU-Accept-Encoding: gzip
<b>PSU-Accept-Language</b>	See above	String	OPT	^{1,50}\$  E.g. PSU-Accept-Language: es-ES
<b>PSU-User-Agent</b>	The forwarded Agent header field of the HTTP request between PSU and TPP, if available.	String	OPT	E.g.  PSU-User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.1.5) Gecko/20091102 Firefox/3.5.5 (.NET CLR 3.5.30729)

<b>PSU-Http-Method</b>	<p>HTTP method used at the PSU – TPP interface, if available.</p> <p>Valid values are:</p> <ul style="list-style-type: none"> <li>• GET</li> <li>• POST</li> <li>• PUT</li> <li>• PATCH</li> <li>• DELETE</li> </ul>	String	OPT	E.g. PSU-Http-Method: POST
<b>PSU-Device-ID</b>	<p>UUID (Universally Unique Identifier) for a device, which is used by the PSU, if available.</p> <p>UUID identifies either a device or a device dependant application installation. In case of an installation identification this ID need to be unaltered until removal from device.</p>	String	OPT	<p><b>UUID</b></p> <p><code>^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$</code></p> <p>E.g.</p> <p>PSU-Device-ID: 5b3ab8e8-0fd5-43d2-946e-d75958b172e7</p>
<b>PSU-Geo-Location</b>	<p>The forwarded Geo Location of the corresponding HTTP request between PSU and TPP if available.</p>	String	OPT	<p><b>RFC 2426</b></p> <p><code>^GEO:[\d]*.[\d]*[:;][\d]*.[\d]*\$</code></p> <p>E.g.</p> <p>PSU-Geo-Location: GEO:90.023856;25.345963</p>
<b>TPP-Redirect-Preferred</b>	<p>If it equals "true", the TPP prefers a redirect over an embedded SCA approach.</p> <p>If it equals "false", the TPP prefers not to be redirected for SCA. The ASPSP will then choose between the Embedded or the Decoupled SCA approach, depending on the choice of the SCA procedure by the TPP/PSU.</p> <p>If the parameter is not used, the ASPSP will choose the SCA approach to be applied depending on the SCA method chosen by the TPP/PSU.</p> <p><b>EMBEDDED AND DECOUPLED ARE NOT SUPPORTED IN THIS VERSION</b></p>	Boolean	OPT	E.g. TPP-Redirect-Preferred: true
<b>TPP-Redirect-URI</b>	<p>URI of the TPP, where the transaction flow shall be redirected to after a Redirect. Mandated for the Redirect</p>	String	COND	<p><code>^.{1,250}\$</code></p> <p>E.g. TPP-Redirect-URI:"https://tpp.exe</p>

	<p>SCA Approach, specifically when TPP-Redirect-Preferred equals "true".</p> <p>It is recommended to always use this header field.</p> <p><b>Remark for Future:</b> This field might be changed to mandatory in the next version of the specification.</p>			mple.es/cb"
<b>TPP-Nok-Redirect-URI</b>	<p>If this URI is contained, the TPP is asking to redirect the transaction flow to this address instead of the TPP-Redirect-URI in case of a negative result of the redirect SCA method. This might be ignored by the ASPSP.</p>	String	OPT	<p>^.{1,250}\$</p> <p>E.g. TPP-Nok-Redirect-URI:"https://tpp.example.es/cb/nok"</p>
<b>Digest</b>	<p>If it equals "true", the TPP prefers to start the authorisation process separately. This preference might be ignored by the ASPSP, if a signing basket is not supported as functionality.</p> <p>If it equals "false" or if the parameter is not used, there is no preference of the TPP. This especially indicates that the TPP assumes a direct authorisation of the transaction in the next step.</p> <p><b>Note:</b> the ASPSP may not take it into account if it does not support it.</p>	String	MAN	<p>^.{1,100}\$</p> <p>E.g. Digest: SHA-256=NzdmZjA4YjY5M2M2NDYyMmVjOWFmMGNmYTZiNTU3MjVmNDI4NTRIMzJkYzE3ZmNmMDE3ZGFmMjhhNTc5OTU3OQ==</p>
<b>Signature</b>	<p>Is contained if and only if the "Signature" element is contained in the header of the request.</p> <p>See 6.1 Signature for more information.</p>	String	MAN	See annexes
<b>TPP-Signature-Certificate</b>	<p>A signature of the request by the TPP on application level.</p> <p>See 6.1 Signature for more information.</p>	String	MAN	<p>^.{1,5000}\$</p> <p>E.g. TPP-Signature-Certificate: MIIHgZCCBmugAwlBAG IIZzZvBQlt0UcwDQYJ... .....KoZlhvcNAQELB QAwSTELMAkGA1UEB hMCMVVMxEzARBgNVB A</p>

**Body**

Field	Description	Type	Man.	Format
<b>instructedAmount</b>	Information on the transfer carried out.	Amount	MAN	E.g. "instructedAmount": {...}
<b>creditorAccount</b>	Creditor account	AccountReference	MAN	E.g. "creditorAccount": {"iban": "ES11111111111111111111"}
<b>creditorName</b>	Creditor's name	String	MAN	^{1,70}\$ E.g. "creditorName": "Name"
<b>creditorAgent</b>	BIC of the creditor account.	String	OPT	^{1,12}\$ E.g. "creditorAgent": "XSXHSMMXXX"
<b>creditorAddress</b>	Creditor's address	Address	OPT	E.g. "creditorAddress": {...}
<b>remittanceInformationUnstructured</b>	Additional information	String	OPT	^{1,140}\$ E.g. "remittanceInformationUnstructured": "Additional information"

#### 4.2.1.2 Response

##### Header

Field	Description	Type	Man.	Format
<b>Location</b>	Location of the created resource (if created)	String	MAN	E.g. Location: /v1/payments/{payment-product}/{payment-id}
<b>X-Request-ID</b>	ID of the request, unique to the call, as determined by the initiating party.	String	MAN	<b>UUID</b> ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$ E.g. X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>ASPSP-SCA-Approach</b>	This data element must be contained, if the SCA Approach is already fixed. Possible values are: <ul style="list-style-type: none"><li>REDIRECT</li></ul> The OAuth SCA approach will be subsumed by REDIRECT.	String	COND	E.g. ASPSP-SCA-Approach: REDIRECT

**Body**

Field	Description	Type	Man.	Format
<b>transactionStatus</b>	Status of the transaction.  Values defined in annexes in 6.4 Transaction status	String	MAN	<b>ISO 20022</b>  E.g. "transactionStatus": "RCVD"
<b>paymentId</b>	Identifier of the resource that references the payment initiation.	String	MAN	^.{1,36}\$  E.g. "paymentId": "1b3ab8e8-0fd5-43d2-946e-d75958b172e7"
<b>transactionFees</b>	Fees associated with the payment.	Amount	OPT	E.g. "transactionFees": {...}
<b>transactionFeeIndicator</b>	If equal to "true", the transaction will involve a fee depending on the ASPSP or what has been agreed between the ASPSP and the PSU.  If equal to "false", the transaction will not involve any additional fee for the PSU.	Boolean		E.g. "transactionFeeIndicator": true
<b>_links</b>	List of hyperlinks to be recognised by the TPP. Types supported in this response: <ul style="list-style-type: none"> <li>• scaRedirect: in case of SCA by redirection. Link where the PSU navigator must be redirected by the TPP.</li> <li>• self: link to the resource created by this request.</li> <li>• status: link to recover the transaction status.</li> </ul>	Links	MAN	E.g. "_links": {...}
<b>psuMessage</b>	Text to show to the PSU.	String	OPT	^.{1,512}\$  E.g. "psuMessage": "Information for the PSU"
<b>tppMessages</b>	Message for the TPP	List<TppMessage>	OPT	E.g. "tppMessages": [...]



#### 4.2.1.3 Examples

##### Example of request

```
POST https://www.hub.com/aspsp-name/v1/sva/payments/sepa-credit-transfers
Content-Encoding: gzip
Content-Type: application/json
X-Request-ID: 10391c7e-ad88-49ec-a2ad-00aacb1f6541
Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA
PSU-IP-Address: 192.168.8.16
PSU-IP-Port: 443
PSU-Accept: application/json
PSU-Accept-Charset: utf-8
PSU-Accept-Encoding: gzip
PSU-Accept-Language: es-ES
PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0
PSU-Http-Method: POST
PSU-Device-ID: f8b3feda-6fe3-11e8-adc0-fa7ae01bbebc
PSU-GEO-Location: GEO:12.526347;54.649862
TPP-Redirect-Preferred: true
TPP-Redirect-URI: https://www.tpp.com/cb
TPP-Nok-Redirect-URI: https://www.tpp.com/cb/nok
Date: Sun, 26 Sep 2017 15:02:37 GMT
{
  "instructedAmount": {
    "currency": "EUR",
    "amount": "153.50"
  },
  "creditorAccount": {
    "iban": "ES2222222222222222222222"
  },
  "creditorName": "Name123",
  "remittanceInformationUnstructured": "Additional information"
}
```

##### Example of response

```
HTTP/1.1 201 Created
X-Request-ID: 10391c7e-ad88-49ec-a2ad-00aacb1f6541
ASPSP-SCA-Approach: REDIRECT
```

Date: Sun, 26 Sep 2017 15:02:43 GMT

Location: /v1/payments/sepa-credit-transfers/1234-qwer-5678

```
{
  "transactionStatus": "RCVD",
  "paymentId": "123-qwe-456",
  "_links": {
    "scaRedirect": {
      "href": "https://www.hub.com/aspsp-name/authorize"
    },
    "self": {
      "href": "/v1/payments/sepa-credit-transfers/123-qwe-456",
      "status": {
        "href": "/v1/payments/sepa-credit-transfers/123-qwe-456/status"
      }
    }
  }
}
```

### 4.3 SVA: payment initiation with list of available accounts for PISP

This service allows the TPP to initiate a payment without entering information on the debtor's account "debtorAccount" and provides the list of accounts during the SCA flow so that the PSU can select one.

This value service complements the payment API payment and uses the CORE services to:

- Obtain payment status
- Recover payment initiation information
- Cancel payment initiation

#### 4.3.1 Payment initiation

This message is sent by the TPP to the HUB to initiate payment without entering information on the debtor's account.

##### 4.3.1.1 Request

###### Endpoint

POST {provider}/{aspsp}/v1/sva/payments/{payment-product}

###### Path

Field	Description	Type	Man.	Format
provider	URL of the HUB where the service is published.	String	MAN	E.g. www.hub.com

<b>aspsp</b>	Name of the ASPSP to which the request is made.	String	MAN	E.g. aspsp-name
<b>payment-product</b>	Payment product to be used. List of supported products: <ul style="list-style-type: none"> <li>• sepa-credit-transfers</li> <li>• instant-sepa-credit-transfers</li> <li>• target-2-payments</li> <li>• cross-border-credit-transfers</li> </ul>	String	MAN	E.g. {provider}/{aspsp}/v1/payments/sepa-credit-transfers/

## Header

Field	Description	Type	Man.	Format
<b>Content-Type</b>	Value: application/json	String	MAN	Content-Type: application/json
<b>X-Request-ID</b>	ID of the request, unique to the call, as determined by the initiating party.	String	MAN	<b>UUID</b> ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$ E.g. X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>Authorisation</b>	Bearer Token. Obtained in a prior authentication on OAuth2.	String	MAN	E.g. Authorisation: Bearer 2YotnFZFEjr1zCsicMWpAA
<b>Consent-ID</b>	This data element may be contained, if the payment initiation transaction is part of a session, i.e. combined AIS/PIS service. This then contains the "consentId" of the related AIS consent, which was performed prior to this payment initiation.	String	OPT	^.{1,36}\$ E.g. Consent-ID: 7890-asdf-4321
<b>PSU-IP-Address</b>	The forwarded IP Address header field consists of the corresponding HTTP request IP Address field  between PSU and TPP.  If not available, the TPP shall use the IP Address used by the TPP when submitting this request.	String	MAN	^[0-9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}\.[0-9]{1,3}\$ E.g. PSU-IP-Address: 192.168.16.5
<b>PSU-IP-Port</b>	The forwarded IP Port header field consists of the	String	OPT	^\\d{1,5}\$

	corresponding HTTP request IP Port field between PSU and TPP, if available.			E.g. PSU-IP-Port: 443
<b>PSU-Accept</b>	The forwarded Accept header fields consist of the corresponding HTTP request Accept header fields between PSU and TPP, if available.	String	OPT	<p>^.{1,50}\$</p> <p>E.g. PSU-Accept: application/json</p>
<b>PSU-Accept-Charset</b>	See above	String	OPT	<p>^.{1,50}\$</p> <p>E.g. PSU-Accept-Charset: utf-8</p>
<b>PSU-Accept-Encoding</b>	See above	String	OPT	<p>^.{1,50}\$</p> <p>E.g. PSU-Accept-Encoding: gzip</p>
<b>PSU-Accept-Language</b>	See above	String	OPT	<p>^.{1,50}\$</p> <p>E.g. PSU-Accept-Language: es-ES</p>
<b>PSU-User-Agent</b>	The forwarded Agent header field of the HTTP request between PSU and TPP, if available.	String	OPT	<p>E.g.</p> <p>PSU-User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.1.5) Gecko/20091102 Firefox/3.5.5 (.NET CLR 3.5.30729)</p>
<b>PSU-Http-Method</b>	<p>HTTP method used at the PSU – TPP interface, if available.</p> <p>Valid values are:</p> <ul style="list-style-type: none"> <li>• GET</li> <li>• POST</li> <li>• PUT</li> <li>• PATCH</li> <li>• DELETE</li> </ul>	String	OPT	E.g. PSU-Http-Method: POST
<b>PSU-Device-ID</b>	<p>UUID (Universally Unique Identifier) for a device, which is used by the PSU, if available.</p> <p>UUID identifies either a device or a device dependant application installation. In case of an installation identification this ID need to be unaltered until removal from device.</p>	String	OPT	<p><b>UUID</b></p> <p>^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$</p> <p>E.g.</p> <p>PSU-Device-ID: 5b3ab8e8-0fd5-43d2-946e-d75958b172e7</p>
<b>PSU-Geo-Location</b>	The forwarded Geo Location of the corresponding HTTP request between PSU and TPP if available.	String	OPT	<p><b>RFC 2426</b></p> <p>^GEO:[\\d]*.[\\d]*[:;\\d]*.[\\d]*\$</p>

				E.g. PSU-Geo-Location: GEO:90.023856;25.34 5963
<b>TPP-Redirect-Preferred</b>	<p>If it equals "true", the TPP prefers a redirect over an embedded SCA approach.</p> <p>If it equals "false", the TPP prefers not to be redirected for SCA. The ASPSP will then choose between the Embedded or the Decoupled SCA approach, depending on the choice of the SCA procedure by the TPP/PSU.</p> <p>If the parameter is not used, the ASPSP will choose the SCA approach to be applied depending on the SCA method chosen by the TPP/PSU.</p> <p><b>EMBEDDED NOT SUPPORTED IN THIS VERSION</b></p>	Boolean	OPT	E.g. TPP-Redirect-Preferred: true
<b>TPP-Redirect-URI</b>	<p>URI of the TPP, where the transaction flow shall be redirected to after a Redirect. Mandated for the Redirect SCA Approach, specifically when TPP-Redirect-Preferred equals "true".</p> <p>It is recommended to always use this header field.</p> <p><b>Remark for Future:</b> This field might be changed to mandatory in the next version of the specification.</p>	String	COND	<p>^.{1,250}\$</p> <p>E.g. TPP-Redirect-URI:"https://tpp.example.es/cb"</p>
<b>TPP-Nok-Redirect-URI</b>	<p>If this URI is contained, the TPP is asking to redirect the transaction flow to this address instead of the TPP-Redirect-URI in case of a negative result of the redirect SCA method. This might be ignored by the ASPSP.</p>	String	OPT	<p>^.{1,250}\$</p> <p>E.g. TPP-Nok-Redirect-URI:"https://tpp.example.es/cb/nok"</p>
<b>Digest</b>	<p>If it equals "true", the TPP prefers to start the authorisation process separately. This preference might be ignored by the ASPSP, if a signing basket is not supported as functionality.</p>	String	MAN	<p>^.{1,100}\$</p> <p>E.g. Digest: SHA-256=NzdmZjA4YjY5M2M2NDYyMmVjOWFmMGNmYTZiNTU3MjVmNDI4NTRIMzJkYzE3ZmNmMDE3ZGFmMjhhN</p>

	<p>If it equals "false" or if the parameter is not used, there is no preference of the TPP. This especially indicates that the TPP assumes a direct authorisation of the transaction in the next step.</p> <p><b>Note:</b> the ASPSP may not take it into account if it does not support it.</p>			Tc5OTU3OQ==
<b>Signature</b>	<p>Is contained if and only if the "Signature" element is contained in the header of the request.</p> <p>See 6.1 Signature for more information.</p>	String	MAN	See annexes
<b>TPP-Signature-Certificate</b>	<p>A signature of the request by the TPP on application level.</p> <p>See 6.1 Signature for more information.</p>	String	MAN	$\wedge.\{1,5000\}\$$ E.g. TPP-Signature-Certificate: MIIHgZCCBmugAwIBAg IIZzZvBQIt0UcwDQYJ... .....KoZlhvcNAQELB QAwSTELMAkGA1UEB hMCMVVMxEzARBgNVB A

### Body

Field	Description	Type	Man.	Format
<b>instructedAmount</b>	Information on the transfer carried out.	Amount	MAN	E.g. "instructedAmount": {...}
<b>creditorAccount</b>	Creditor account	AccountReference	MAN	E.g. "creditorAccount": {"iban": "ES11111111111111111111"}
<b>creditorName</b>	Creditor's name	String	MAN	$\wedge.\{1,70\}\$$ E.g. "creditorName": "Name"
<b>creditorAgent</b>	BIC of the creditor account.	String	OPT	$\wedge.\{1,12\}\$$ E.g. "creditorAgent": "XSXHSMM XXX"
<b>creditorAddress</b>	Creditor's address	Address	OPT	E.g. "creditorAddress": {...}
<b>remittanceInformationUnstructured</b>	Additional information	String	OPT	$\wedge.\{1,140\}\$$ E.g. "remittanceInformationUnstructured": "Additional information"

### 4.3.1.2 Response

#### Header

Field	Description	Type	Man.	Format
<b>Location</b>	Location of the created resource (if created)	String	MAN	E.g. Location: /v1/payments/{payment-product}/{payment-id}
<b>X-Request-ID</b>	ID of the request, unique to the call, as determined by the initiating party.	String	MAN	<b>UUID</b>  ^[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}\$  E.g.  X-Request-ID: 1b3ab8e8-0fd5-43d2-946e-d75958b172e7
<b>ASPSP-SCA-Approach</b>	This data element must be contained, if the SCA Approach is already fixed. Possible values are: <ul style="list-style-type: none"> <li>EMBEDDED</li> <li>DECOUPLED</li> <li>REDIRECT</li> </ul> <p>The OAuth SCA approach will be subsumed by REDIRECT.</p>	String	COND	E.g. ASPSP-SCA-Approach: REDIRECT

#### Body

Field	Description	Type	Man.	Format
<b>transactionStatus</b>	Status of the transaction.  Values defined in annexes in 6.4 Transaction status	String	MAN	<b>ISO 20022</b>  E.g. "transactionStatus": "RCVD"
<b>paymentId</b>	Identifier of the resource that references the payment initiation.	String	MAN	^.{1,36}\$  E.g. "paymentId": "1b3ab8e8-0fd5-43d2-946e-d75958b172e7"
<b>transactionFees</b>	Fees associated with the payment.	Amount	OPT	E.g. "transactionFees": {...}
<b>transactionFeeIndicator</b>	If equal to "true", the transaction will involve a fee depending on the ASPSP or what has been agreed between the	Boolean		E.g. "transactionFeeIndicator": true

ASPSP and the PSU.

If equal to "false", the transaction will not involve any additional fee for the PSU.

**\_links**

List of hyperlinks to be recognised by the TPP. Types supported in this response:

Links

MAN

E.g. "\_links": {...}

- **scaRedirect**: in case of SCA by redirection. Link where the PSU navigator must be redirected by the TPP.
  - **startAuthorisation**: if an explicit initiation of the transaction authorisation is necessary (there is no selection of the SCA method)
  - **startAuthorisationWithAuthenticationMethodSelection**: link to the authorisation endpoint where the authorisation sub-resource has to be generated while the SCA method is selected. This link is contained under the same conditions as the "scaMethods" field
  - **self**: link to the resource created by this request.
  - **status**: link to recover the transaction status.
  - **scaStatus**: link to query the SCA status corresponding to the authorisation sub-resource. This
-





```

    },
    "creditorName": "Name123",
    "remittanceInformationUnstructured": "Additional information"
}

```

### Example of response

HTTP/1.1 201 Created

X-Request-ID: 10391c7e-ad88-49ec-a2ad-00aacb1f6541

ASPSP-SCA-Approach: REDIRECT

Date: Sun, 26 Sep 2017 15:02:43 GMT

Location: </v1/payments/sepa-credit-transfers/1234-qwer-5678>

```

{
  "transactionStatus": "RCVD",
  "paymentId": "123-qwe-456",
  "_links": {
    "scaRedirect": {
      "href": "https://www.hub.com/aspsp-name/authorize"
    },
    "self": {
      "href": "/v1/payments/sepa-credit-transfers/123-qwe-456",
      "status": {
        "href": "/v1/payments/sepa-credit-transfers/123-qwe-456/status"
      }
    }
  }
}

```

## 5. DEFINITION OF COMPOSITE DATA

The various types of composite data used in the requests and responses used in the system are defined below.

### 5.1 AccountAccess

Field	Description	Type	Mand.	Format
<b>accounts</b>	This specifies the accounts for which detailed information can be requested.  If the list is empty, the TPP is requesting all accessible accounts and they will be	List<Account Reference>	OP	E.g.: "accounts": [...]

questioned through a dialogue between the PSU and the ASPSP. Additionally, the list of balances and transactions must also be left blank if they are used.

<b>balances</b>	Specifies the accounts for which the balances can be requested.  If the list is empty, the TPP is requesting all accessible accounts and they will be questioned through a dialogue between the PSU and the ASPSP. Additionally, the list of accounts and transactions must also be left blank if they are used.	List<Account Reference>	OP	E.g.: "balances": [...]
<b>transactions</b>	Specifies the accounts for which transactions can be requested.  If the list is empty, the TPP is requesting all accessible accounts and they will be questioned through a dialogue between the PSU and the ASPSP. Additionally, the list of balances and accounts must also be left blank if they are used.	List<Account Reference>	OP	E.g.: "transactions": [...]
<b>additionalInformation</b>	This attribute will be ignored by the ASPSP	AdditionalInformationAccess	OP	Ej: "additionalInformation": {...}
<b>availableAccounts</b>	Only the value "allAccounts" is admitted.	String	OP	E.g. "availableAccounts": "allAccounts"
<b>availableAccountsWithBalances</b>	Only the value "allAccounts" is admitted	String	OP	E.g. "availableAccountsWithBalances": "allAccounts"
<b>allPsd2</b>	Only the value "allAccounts" is allowed.	String	OP	E.g.: "allPsd2": "allAccounts"

## 5.2 AccountDetails

Field	Description	Type	Mand.	Format
<b>resourceId</b>	Account identifier to be used in the PATH when data is requested on a dedicated account.	String	COND	^{1,100}\$  E.g.: "resourceId":"3dc3d5b3702348489853f5400a64e80f"
<b>iban</b>	Account IBAN.	String	OP	E.g.: "iban":"ES1111111111111111111111"

<b>bban</b>	BBAN of the account, when it doesn't have an IBAN.	String	OP	E.g.: "bban": "20385778983000760236"
<b>currency</b>	Account's currency type.	String	OB	<b>ISO 4217</b> E.g.: "currency": "EUR"
<b>name</b>	Name given by the bank or the PSU to the online banking account.	String	OP	^.{1,35}\$ E.g.: "name": "Name"
<b>product</b>	Name of the product given by ASPSP to this account.	String	OP	^.{1,35}\$ E.g.: "product": "Main Account"
<b>bic</b>	Account BIC.	String	OP	^.{1,12}\$ E.g.: "bic": "XSXHXSMXXX"
<b>_links</b>	Links to the account to retrieve balance and/or transaction information of the account.  Links are only supported when the corresponding consent has been given to the account.	Links	OP	E.g.: "links": {...}

### 5.3 AccountReference

Field	Description	Type	Mand.	Format
<b>iban</b>	Account IBAN	String	COND	E.g.: "iban": "ES1111111111111111111111"
<b>bban</b>	BBAN of the account, when it doesn't have an IBAN.	String	COND	E.g.: "bban": "20385778983000760236"
<b>maskedPan</b>	Masked Primary Account Number of the card.	String	COND	^.{1,35}\$ E.g.: "maskedPan": "123456*****4567"
<b>msisdn</b>	Alias for access to a payment account through a registered mobile telephone number. <b>NOT SUPPORTED</b>	String	COND	^.{1,35}\$ E.g.: "msisdn": "..."
<b>currency</b>	Currency type.	String	OP	<b>ISO 4217</b> E.g.: "currency": "EUR"

### 5.4 AccountReport

Field	Description	Type	Mand.	Format
-------	-------------	------	-------	--------

<b>booked</b>	Latest Transactions (annotations) known to the account.  It must be included if the bookingStatus parameter is set as "booked" or "both".	List<Transactions>	COND	E.g.: "booked":{[..]}
<b>pending</b>	Pending account transactions.  No content if the bookingStatus parameter is set to "booked".	List<Transactions>	OP	E.g.: "pending":{[..]}
<b>information</b>	List of standing orders.	List<Transactions>	OP	Ej: "information":{[...]}
<b>_links</b>	The following links are accepted in this object: <ul style="list-style-type: none"> <li>• account (OB)</li> <li>• first (OP)</li> <li>• next (OP)</li> </ul>	Links	OB	E.g.: "_links":{[..]}

## 5.5 AdditionalInformationAccess

Campo	Descripción	Tipo	Oblig.	Formato
<b>trustedBeneficiaries</b>	This attribute Will be ignored by the ASPSP	List<Account Reference>	OP	trustedBeneficiaries
<b>OwnerName</b>	This attribute Will be ignored by the ASPSP	List<Account Reference>	OP	Ej: "ownerName": {...}

## 5.6 Address

Field	Description	Type	Mand.	Format
<b>street</b>	Street	String	OP	^{1,70}\$ E.g.: "street": "Street example"
<b>buildingNumber</b>	Number	String	OP	E.g.: "buildingNumber": "5"
<b>city</b>	City	String	OP	E.g.: "city": "Cordoba"
<b>postalCode</b>	Postcode	String	OP	E.g.: "postalCode": "14100"
<b>country</b>	Country code	String	OB	<b>ISO 3166</b> E.g.: "country": "ES"

## 5.7 Amount

Field	Description	Type	Mand.	Format
<b>currency</b>	Currency of the amount.	String	OB	<b>ISO 4217</b>  E.g.: "currency":"EUR"
<b>amount</b>	The amount.  The decimal point is used as the separator.	String	OB	<b>ISO 4217</b>  E.g.: "amount":"500.00"

## 5.8 AuthenticationObject

Field	Description	Type	Mand.	Format
<b>authenticationType</b>	Type of authentication method. Possible values: <ul style="list-style-type: none"> <li>SMS_OTP</li> <li>PUSH_OTP</li> </ul> <p>See annex <a href="#">¡Error! No se encuentra el origen de la referencia. ¡Error! No se encuentra el origen de la referencia.</a> for more information.</p>	String	MAN	E.g. "authenticationType":"SMS_OTP"
<b>authenticationVersion</b>	Version of the tool associated with the authenticationType.	String	COND	E.g. "authenticationVersion":"1.0"
<b>authenticationMethodId</b>	Id of the authentication method provided by the ASPSP.	String	MAN	^{1,35}\$
<b>name</b>	Name of the authentication method defined by the PSU in the ASPSP online banking.  It may also be a description provided by the ASPSP.  If the TPP has it available, it must present it to the PSU.	String	MAN	E.g. "name":"SMS OTP to phone 666777888"
<b>explanation</b>	Detailed information about the SCA method for the PSU	String	OPT	

## 5.9 Aspssp

Field	Description	Type	Mand.	Format
<b>bic</b>	The ASPSP's BIC code.	String	OB	E.g.: "bic":"XXXXXXXXXX"

<b>name</b>	ASPSP Name	String	OP	E.g.: "name": "Name ASPSP"
-------------	------------	--------	----	----------------------------

## 5.10 Balance

Field	Description	Type	Mand.	Format
<b>balanceAmount</b>	Amount and currency of the balance.	Amount	OB	E.g.: "balanceAmount": {...}
<b>balanceType</b>	Balance type. Values supported in annex 6.6 Balance types	String	OB	E.g.: "balanceType": "closingBooked"

## 5.11 ExchangeRate

Field	Description	Type	Mand.	Format
<b>currencyFrom</b>	Source currency.	String	OB	E.g.: "currencyFrom": "USD"
<b>rate</b>	Defines the exchange rate. E.g.: currencyFrom=USD, currencyTo=EUR: 1USD =0.8 EUR with an exchange rate of 0.8.	String	OB	E.g.: "rate": "0.8"
<b>currencyTo</b>	Target currency.	String	OB	E.g.: "currencyTo": "EUR"
<b>rateDate</b>	Rate date.	String	OB	<b>ISODateTime</b>
<b>rateContract</b>	Reference to the contract of the rate.	String	OP	

## 5.12 Href

Field	Description	Type	Mand.	Format
<b>href</b>	Contains a link to a resource.	String	OP	E.g.: "href": "/v1/payments/sepa-credit-transfers/asd-1234-jkl"

## 5.13 Links

Field	Description	Type	Mand.	Format
<b>scaRedirect</b>	The URL used to perform SCA, through a redirect of the PSU's browser.	Href	OP	E.g.: "scaRedirect": {...}
<b>startAuthorisat</b>	Link to endpoint where the	Href	OP	E.g.: "startAuthorisation": {...}

<b>ion</b>	authorisation of either the transaction or the cancellation must be initiated.			
<b>startAuthorisationWithAuthenticationMethodSelection</b>	Link to endpoint where the authorisation of either the transaction or the cancellation must be initiated, where the SCA method must be specified in the corresponding call.	Href	OP	E.g.: "startAuthorisationWithAuthenticationMethodSelection": {...}
<b>self</b>	The link to the resource created for the request. This link can be subsequently used to retrieve the transaction status.	Href	OP	E.g.: "self": {...}
<b>status</b>	The link to retrieve the transaction status. For example, the payment initiation status.	Href	OP	E.g.: "status": {...}
<b>account</b>	Link to the resource that provides the data on an account.	Href	OP	E.g.: "account": {...}
<b>balances</b>	Link to the resource that provides the account balances.	Href	OP	E.g.: "balances": {...}
<b>transactions</b>	Link to the resource that provides the account transactions.	Href	OP	E.g.: "transactions": {...}
<b>first</b>	Browser link for paginated accounts.	Href	OP	E.g.: "first": {...}
<b>next</b>	Browser link for paginated accounts.	Href	OP	E.g.: "next": {...}

## 5.14 PaymentExchangeRate

Field	Description	Type	Mand.	Format
<b>unitCurrency</b>	Currency in which the exchange rate is expressed in a foreign currency. In the following example EUR1 = xxxCUR, the currency is the EUR.	String	OP	<b>ISO 4217</b> E.g.: "unitCurrency": "EUR"
<b>exchangeRate</b>	Factor used to convert an amount from one currency to another. It reflects the price at which one currency was purchased with the other currency.	String	OP	E.g.: "exchangeRate": "1.3"



<b>contractIdentification</b>	Unique identification of the contract to exchange currencies	String	OP	E.g.: "contractIdentification": "1234-qeru-23"
<b>rateType</b>	Specifies the rate used to complete the currency exchange.  Allowed values: <ul style="list-style-type: none"> <li>• SPOT</li> <li>• SALE</li> <li>• AGRD</li> </ul>	String	OP	E.g.: "rateType": "SPOT"

### 5.15 ReportExchangeRate

Field	Description	Type	Mand.	Format
<b>sourceCurrency</b>	Currency from which an amount will be converted in a currency exchange.	String	OB	<b>ISO 4217</b> E.g.: "sourceCurrency": "EUR"
<b>exchangeRate</b>	Factor used to convert an amount from one currency to another. It reflects the price at which one currency was purchased with the other currency.	String	OB	E.g.: "exchangeRate": "1.3"
<b>unitCurrency</b>	Currency in which the exchange rate is expressed in a foreign currency. In the following example EUR1 = xxxCUR, the currency is the EUR.	String	OB	<b>ISO 4217</b> E.g.: "unitCurrency": "EUR"
<b>targetCurrency</b>	Currency into which the amount will be converted into in a currency exchange.	String	OB	<b>ISO 4217</b> E.g.: "targetCurrency": "USD"
<b>quotationDate</b>	Date on which the exchange rate is quoted.	String	OB	<b>ISODate</b> E.g.: "quotationDate": "24/01/2019"
<b>contractIdentification</b>	Unique identification of the contract to exchange currencies	String	OP	E.g.: "contractIdentification": "1234-qeru-23"

### 5.16 SinglePayment

Field	Description	Type	Mand.	Format
<b>instructedAmount</b>	Information on the transfer which has been made.	Amount	OB	E.g.: "instructedAmount": {...}

<b>debtorAccount</b>	The originator's account. <b>Note:</b> this field can be optional in some services such as bulk payments	AccountReference	OB	E.g.: "debtorAccount": {"iban": "ES111111111111111111111111111111"}
<b>creditorAccount</b>	Beneficiary's account	AccountReference	OB	E.g.: "creditorAccount": {"iban": "ES111111111111111111111111111111"}
<b>creditorName</b>	Beneficiary's name	String	OB	^. {1,70}\$ E.g.: "creditorName": "Name"
<b>creditorAgent</b>	BIC of the Beneficiary's account.	String	OP	E.g.: "creditorAgent": "XSXHXSMXX"
<b>creditorAddress</b>	Beneficiary's address	Address	OP	E.g.: "creditorAddress": {...}
<b>chargeBearer</b>	Only for payment-product: <ul style="list-style-type: none"> <li>target-2-payments</li> <li>cross-border-credit-transfers</li> </ul> Allowed values: <ul style="list-style-type: none"> <li>DEBT</li> <li>CRED</li> <li>SHAR</li> <li>SLEV</li> </ul>	String	OP	<b>ChargeBearerType1Code de ISO 20022</b> E.g.: "chargeBearer": "SLEV"
<b>remittanceInformationUnstructured</b>	Additional information. See annex 6.8 Good Practice Guide for recommendations for use.	String	OP	^. {1,140}\$ E.g.: "remittanceInformationUnstructured": "Additional information"
<b>requestedExecutionDate</b>	Execution date requested for future payments. <b>Note:</b> only if supported by the ASPSP	String	COND	<b>ISODate</b>
<b>requestedExecutionTime</b>	Execution time requested. <b>Note:</b> only if supported by the ASPSP	String	COND	<b>ISODateTime</b>

### 5.17 StandingOrderDetails

Campo	Descripción	Tipo	Oblig.	Formato
<b>startDate</b>	The first applicable day of execution starting from this date the first payment was/will be executed.	String	OB	<b>ISODate</b> Ej: "startDate": "2019-01-20"
<b>endDate</b>	The last applicable day of execution If not given, it is an infinite		OP	<b>ISODate</b> Ej: "endDate": "2019-01-20"

	standing order.			
<b>executionRule</b>	NOT SUPPORTED	String	OP	
<b>withinAMonthLag</b>	<p>Este elemento es solo usado en caso de que la frecuencia sea igual a "monthly".</p> <p>Si este elemento es igual a false, este no tiene efecto.</p> <p>Si es igual a true, entonces la regla de ejecución es anulada si el día de ejecución cae en un mes diferente.</p> <p>Nota: este atributo es usado raramente. used in case of frequency equals "monthly".</p> <p>If this element equals false it has no effect. If this element equals true, then the execution rule is overruled if the day of execution would fall into a different month using the execution rule.</p> <p>Example: executionRule equals "preceding", dayOfExecution equals "02" and the second of a month is a Sunday. In this case, the transaction date would be on the last day of the month before. This would be overruled if withinAMonthFlag equals true and the payment is processed on Monday the third of the Month.</p> <p>Remark: This attribute is rarely supported in the market.</p>	Boolean	OP	Ej: "withinAMonthFlag": true
<b>frequency</b>	<p>The frequency of the recurring payment resulting from this standing order.</p> <p>Allowed values:</p> <ul style="list-style-type: none"> <li>• Daily</li> <li>• Weekly</li> <li>• EveryTwoWeeks</li> <li>• Monthly</li> <li>• EveryTwoMonths</li> <li>• Quarterly</li> <li>• SemiAnnual</li> </ul>	String	OB	<p><b>EventFrequency7Code de ISO 20022</b></p> <p>Ej: "frequency"</p>

- Annual

<b>monthsOfExecution</b>	<p>The format is following the regular expression <math>\backslash d\{1,2\}</math>. The array is restricted to 11 entries. The values contained in the array entries shall all be different and the maximum value of one entry is 12.</p> <p>This attribute is contained if and only if the frequency equals "MonthlyVariable".</p> <p>Example: An execution on January, April and October each year is addressed by ["1", "4", "10"].</p>	List<String >	COND	Ej:"monthsOfExecution": ["1", "4", "10"]
<b>multiplicator</b>	<p>This is multiplying the given frequency resulting the exact frequency, e.g.</p> <p>Frequency=weekly and multiplicator=3 means every 3 weeks.</p> <p><b>Remark:</b> This attribute is rarely supported in the market.</p>	Integer	OP	multiplicator
<b>dayOfExecution</b>	<p>"31" is ultimo.</p> <p>The format is following the regular expression <math>\backslash d\{1,2\}</math>.</p> <p>Example: The first day is addressed by "1".</p> <p>The date is referring to the time zone of the ASPSP.</p>	String	COND	dayOfExecution
<b>limitAmount</b>	<p>Amount limit for fund skimming, e.g. skim all funds above this limit to savings account, i.e. typically a specific periodic payments with fixed remaining amount rather than fixed transaction amount. Amount may be zero as well as below zero, i.e. negative.</p> <p><b>Constraints:</b> transactionAmount needs to be zero and bankTransactionCode needs to specify PMNT-MCOP-OTHR</p>	Amount	COND	limitAmount

## 5.18 StructuredAdditionalInformation

Campo	Descripción	Tipo	Oblig.	Formato
<b>standingOrderDetails</b>	Details of underlying standing orders.	StandingOrderDetails	OB	Ej: "standingOrderDetails": {...}

## 5.19 TppMessage

Field	Description	Type	Mand.	Format
<b>category</b>	Category for the type of message received. Possible values: ERROR or WARNING	String	OB	E.g.: "category": "ERROR"
<b>code</b>	Response code. In annex 6.3 Return codes the return codes are listed by service.	String	OB	E.g.: "code": "CONSENT_INVALID"
<b>path</b>	Path to the error field.	String	COND	E.g.: "path": "..."
<b>text</b>	Additional explanatory text.	String	OP	E.g.: "text": "Text example"

## 5.20 Transactions

Field	Description	Type	Mand.	Format
<b>transactionId</b>	Can be used as access-ID in the API, where more details on a transaction is offered.	String	OP	E.g. "transactionId": "123-asdf-456"
<b>entryReference</b>	Identification of the transaction that can be used, for example, in delta queries.	String	OP	^{1,35}\$ E.g.: "entryReference": "1234-asdf-456"
<b>mandateId</b>	Identification of Mandates, e.g. a SEPA Mandate ID	String	OP	^{1,35}\$ E.g. "mandateId": "..."
<b>checkId</b>	Cheque identifier	String	OP	^{1,35}\$ E.g. "checkId": "..."
<b>bookingDate</b>	Date the transaction was recorded	String	OP	<b>ISODate</b> "bookingDate": "2017-10-23"
<b>valueDate</b>	Date on which the settlement becomes available to the account	String	OP	<b>ISODate</b> E.g.: "valueDate": "2017-10-23"

	owner in the case of a request for a loan or credit facility.			
<b>transactionAmount</b>	Transaction amount	Amount	OB	E.g.: "transactionAmount": {...}
<b>currencyExchange</b>	Currency exchange rate	List<ReportExchangeRate>	OP	E.g.: "currencyExchange": {...}
<b>remittanceInformationUnstructured</b>	Field to include additional information on the remittance.	String	OP	$^{\{1,140\}}\$$ E.g.: "remittanceInformationUnstructured": "Additional information"
<b>additionalInformationStructured</b>	Is used if and only if the bookingStatus entry equals "information". Every active standing order related to the dedicated payment account result into one entry.	StructuredAdditionalInformation	OP	Ej: "additionalInformationStructured": {...}
<b>_links</b>	Possible values:	Links	OP	E.g.: "_links": {...}
	<ul style="list-style-type: none"> <li>Transaction details</li> </ul>			

## 6. ANNEXES

### 6.1 Signature

#### 6.1.1 "Digest" header mandatory

The Digest field is mandatory in all requests.

This field contains a hash of the message body. If the message does not contain a body, the "Digest" field must contain a hash of an empty "bytelist". The hash algorithms that may be used to calculate the "Digest" in the context of this specification are SHA-256 and SHA-512.

#### 6.1.2 Signature requirements

The structure of the "Signature" field of the request header must have the following structure:

Item	Type	Mand.	Requirements	Additional requirements
<b>keyId</b>	String	OB	It is a chain that the HUB can use to find the component needed to validate the signature.	Serial number of the TPP certificate included in "TPP-Signature-Certificate". It must be in the following format: KeyId="SN=XXX,CA=YYYYYYYYYYYYYYYY" In which "XXX" is the certificate serial number encoded in hexadecimal format and "YYYYYYYYYYYYYYYY" is the full "Distinguished Name" of the

<b>Algorithm-ID</b>	String	OB	This is used to specify the algorithm used to generate the signature.	certifying authority. The algorithm must identify the same algorithm for the signature which is presented in the request's certificate. It should identify SHA-256 or SHA-512.
<b>Headers</b>	String	OP	These are used to specify the list of HTTP headers included when the signature for the message is generated. If specified, it should be a list within quotation marks and in lower case, separated by a blank space. If it is not specified it shall be understood that only one value has been specified. The said specified value is the "Date" attribute from the header of the request. The order of attributes is important and must be the same as the order specified in the list of HTTP headers in this field.	The mandatory fields to be signed are: <ul style="list-style-type: none"> <li>• digest</li> <li>• x-request-id</li> </ul> Optionally, if they can go there and are supported, they can include: <ul style="list-style-type: none"> <li>• psu-id</li> <li>• psu-corporate-id</li> <li>• tpp-redirect-uri</li> </ul>
<b>Signature</b>	String	OB	The "signature" parameter must be in Base64 according to RFC 4648. The TPP uses the header's algorithm and parameters to form the signature chain to be signed. The chain to sign is signed with the keyId and the corresponding algorithm. The content should go in Base64.	There are no additional requirements.

### 6.1.3 Example

You want to make a host-to-host request with the following text:

```
{
  "instructedAmount" : {
    "currency" : "EUR",
    "amount" : "16.00"
  },
  "debtorAccount" : {
    "iban" : "ES5140000001050000000001",
    "currency" : "EUR"
  },
  "creditorName" : "Cred. Name",
  "creditorAccount" : {
    "iban" : "ES6621000418401234567891",
    "currency" : "EUR"
  }
}
```

```
},  
"creditorAddress" : {  
  "street" : "Example of street",  
  "buildingNumber" : "15",  
  "city" : "Cordoba",  
  "postalCode" : "14100",  
  "country" : "ES"  
},  
"remittanceInformationUnstructured" : "Payment",  
"chargeBearer" : "CRED"  
}
```

And you must also add the following headers

- X-Request-ID=a13cbf11-b053-4908-bd06-517dfa3a1861

You must make the following transactions.

#### 6.1.3.1 Generation of the "Digest" header

To do so you must perform the hash of the message body that will be sent. It is vital to do so on the final content once serialised, as the following serialisation processes may introduce changes in the body of the message finally sent, making the signature invalid.

It is possible to use the SHA-256 and SHA-512 algorithms following the RFC 5843. In our example you will use SHA-256 on the body of the message, obtaining the following result:

- Hexadecimal: A5F1CF405B28E44ED29507E0F64495859BA877893D2A714512D16CE3BD8BE562
- Base64: pfHPQFso5E7SIQfg9kSVhZuod4k9KnFFEtFs472L5WI=

Thus the value of the "Digest" header to generate will be:

SHA256=pfHPQFso5E7SIQfg9kSVhZuod4k9KnFFEtFs472L5WI=

The headers you have so far are:

X-Request-ID=a13cbf11-b053-4908-bd06-517dfa3a1861f]

Digest=SHA256=pfHPQFso5E7SIQfg9kSVhZuod4k9KnFFEtFs472L5WI=

#### 6.1.3.2 Generation of the "Signature" header

The "Signature" header is the multi-value type, i.e. it contains within it various pairs of sub-headers of the attribute-value type

#### Establishment of the "keyId" value

This field is obtained based on a serial number of the certificate in hexadecimal and the DN of the certification authority that generates the certificate.



In our example you obtain the following result:

```
keyId="SN=-5d803f65,CA=CN=REDSYS-AC-EIDASt-C1,OU=PKI,O=REDSYS,C=ES"
```

#### Establishment of the "headers" attribute

You should note that this attribute and some others are shown in the Berlin Group document with the first character in upper case, but in the RFC used by the entity its content is always established in lower case, so we assume that it is an error.

This establishes the fields that will be taken into account signing.

```
headers="digest x-request-id"
```

#### Establishment of the "algorithm" attribute

```
algorithm="SHA-256"
```

#### Construction of the chain to be signed

The chain to be signed according to point 2.2.3 is as follows:

```
Digest: SHA256=pfHPQFso5E7SIQfg9kSVhZuod4k9KnFFEtFs472L5WI=
```

```
X-Request-ID: a13cbf11-b053-4908-bd06-517dfa3a1861f
```

#### Generation of the signature

We sign the chain obtained in the above point with the private key of our certificate and pass the result to Base64, obtaining in our specific case the following result:

```
la8LV3Fny2so4c40OkYFtZvr1mOkOVY1n87iKflggEkXQjZncyjp9fFkNtQc+5ZVNESdiqKG8xrawYa5gAm46CvcKCh  
NTPaakiEJHcXM5RZPWN0Ns5HjV5mUY2QzD+g5mwqcWvXtBr1vg0bZKN8Zt3+uJMN37NQg9tJNE2yKIIEPIAYOj  
C2PA/yzGSLodADnXQut9yRvxw8gMCjDtRaKdyWmwG6/crX293hGvBUeff1xvTluWhQzyfx4J6WG0v1ZmpnWdZ  
1LF68sToeDGTdu65aVKV2q6qcZzcm5aPV6+mVHX+21Vr6acxiLZdeYUHYJHrzErUN3KJrmt3w2AL7Dw==
```

#### 6.1.3.3 Generation of the "TPP-Signature-Certificate" header

This header contains the certificate we have used in Base64. For reasons of space only a part is established in the example:

```
TPP-Signature-Certificate="MIIETCCA0GgAwIBAgI...."
```

#### 6.1.3.4 Definitive headers to send

As seen in the above points the headers that must be sent in the request are:

```
X-Request-ID=a13cbf11-b053-4908-bd06-517dfa3a1861f
```

```
Digest=SHA256=pfHPQFso5E7SIQfg9kSVhZuod4k9KnFFEtFs472L5WI=
```

```
Signature=keyId="SN=-5d803f65,CA=CN=REDSYS-AC-EIDASt-C1,OU=PKI,O=REDSYS,C=ES",algorithm="SHA-  
256",headers="digest x-request-id",signature="  
la8LV3Fny2so4c40OkYFtZvr1mOkOVY1n87iKflggEkXQjZncyjp9fFkNtQc+5ZVNESdiqKG8xrawYa5gAm46CvcKCh  
NTPaakiEJHcXM5RZPWN0Ns5HjV5mUY2QzD+g5mwqcWvXtBr1vg0bZKN8Zt3+uJMN37NQg9tJNE2yKIIEPIAYOj  
C2PA/yzGSLodADnXQut9yRvxw8gMCjDtRaKdyWmwG6/crX293hGvBUeff1xvTluWhQzyfx4J6WG0v1ZmpnWdZ  
1LF68sToeDGTdu65aVKV2q6qcZzcm5aPV6+mVHX+21Vr6acxiLZdeYUHYJHrzErUN3KJrmt3w2AL7Dw=="
```

TPP-Signature-Certificate=MIIewTCCA0GgAwIBAgIEon/...

## 6.2 HTTP response codes

The HTTP codes followed by this specification and their uses are as follows:

HTTP code	Description
<b>200 OK</b>	<ul style="list-style-type: none"><li>• Response Code for PUT and GET requests.</li><li>• This code is allowed if the request was repeated due to a timeout. The response may be 200 or 201 depending on the implementation of the ASPSP.</li><li>• The POST request of the FCS also allows a 200 code to be returned as a new resource is not created.</li><li>• Response code for DELETE requests when the request has been carried out correctly and authorisation is not required.</li></ul>
<b>201 Created</b>	Response code for POST: requests Post where a new resource has been created correctly.
<b>202 Accepted</b>	Response code for DELETE: requests when a payment resource can be cancelled, but authorisation of the cancellation from the PSU is required.
<b>204 No Content</b>	Response code for DELETE: requests where the consent has been deleted successfully. The code indicates that the response was performed, but no content has been returned.  It is also used in DELETE requests for a payment initiation in which authentication is not required.
<b>400 Bad Request</b>	A validation error has occurred. This code covers syntax errors in the requests or when there is incorrect data in the payload.
<b>401 Unauthorized</b>	The PSU is not properly authorised to make the request. Try to make the request again with the correct authentication information.
<b>403 Forbidden</b>	Returned if the appeal was referenced in the existing path but cannot be accessed by the TPP or the PSU. This code must only be used for non-sensitive identifiers as it could reveal that the resource exists but that it cannot be accessed.
<b>404 Not found</b>	Returned if the resource or endpoint that was referenced in the path exists but cannot be accessed by the TPP or the PSU.  When there are any doubts as to whether a specific ID in the path is sensitive or not, use this code instead of 403.
<b>405 Method Not Allowed</b>	This code is sent only when the method (POST, PUT, GET...) is not supported in a specific endpoint.  Response code for DELETE in the event of a payment cancellation, where the payment initiation cannot be cancelled due to legal or other operational reasons.
<b>406 Not Acceptable</b>	The ASPSP cannot generate the content specified by the TPP in the Accept header field.
<b>408 Request Timeout</b>	The server is still working properly, but the request has reached the timeout limit.

<b>409 Conflict</b>	The request could not be completed due to a conflict with the current status of the referenced resource.
<b>415 Unsupported Media Type</b>	The TPP has requested a media type which is not supported by the ASPSP.
<b>429 Too Many Requests</b>	The TPP has exceeded the maximum number of requests allowed by the consent or by the RTS.
<b>500 Internal Server Error</b>	An internal error has occurred in the server.
<b>503 Service Unavailable</b>	The ASPSP server is currently unavailable. This is generally a temporary condition.

### 6.3 Return codes

Return codes and associated HTTP response codes allowed.

	HTTP code	Code	Description
<b>SIGNATURE CERTIFICATE</b>	401	CERTIFICATE_INVALID	The content of the signature certificate is not valid.
	401	CERTIFICATE_EXPIRED	The signature certificate has expired.
	401	CERTIFICATE_BLOCKED	The signature certificate has been blocked by the ASPSP.
	401	CERTIFICATE_REVOKED	The signature certificate has been revoked by the QTSP.
	401	CERTIFICATE_MISSING	The signature certificate was missing from the request.
<b>SIGNATURE</b>	401	SIGNATURE_INVALID	The signature is not valid.
	401	SIGNATURE_MISSING	The signature, when it is mandatory, is missing from in the message.
<b>GENERAL</b>	400	FORMAT_ERROR	The format of certain fields of the request is incorrect. The fields will be indicated.  This applies to fields in the body and the header. It also applies in cases where these entries refer to occasions when there is data that is missing or incorrect.
	400	PARAMETER_NOT_CONSISTENT	The parameters sent by the TPP are not consistent.  Only applies to query parameters.
	400	PARAMETER_NOT_SUPPORTED	The parameter is not supported by the ASPSP. It will only be used in those parameters whose support is optional for the ASPSP.
	401	PSU_CREDENTIALS_INVALID	The PSU-ID is not related to the ASPSP or is blocked, or the password or OTP as incorrect.

400 (payload) 405 (HTTP method)	SERVICE_INVALID	The requested service is not valid for the specified resource or the data sent.
403	SERVICE_BLOCKED	The service is not available for the PSU due to a block in the ASPSP channel.
401	CORPORATE_ID_INVALID	The PSU-Corporate-ID could not be associated in the ASPSP systems.
403 (if resource in path)	CONSENT_UNKNOWN	The requested Consent-ID does not coincide for the TPP and the ASPSP.
400 (if resource in payload)	CONSENT_INVALID	Consent was created by the TPP, but is not valid for the resource / service requested.  Or, the definition of the consent is incomplete or is invalid.
401	CONSENT_EXPIRED	The consent was created by the TPP but has expired and must be refreshed.
401	TOKEN_UNKNOWN	The token received is unknown to the TPP.
401	TOKEN_INVALID	The token is associated with the TPP, but it is not valid for the service / resource which are being accessed.
401	TOKEN_EXPIRED	The token is associated with the TPP, but it has expired and must be refreshed.
404 (if account-id is in the path) 403 (if another resource is in path) 400 (if it goes in payload)	RESOURCE_UNKNOWN	The resource requested is unknown to the TPP.
403 (if resource in path) 400 (if resource in payload)	RESOURCE_EXPIRED	The requested resource is associated with the TPP, but it has expired and will no longer be available.
400	RESOURCE_BLOCKED	The directed resource cannot be directed by the request. It may be blocked, for example by a grouping in the "signing basket".
400	TIMESTAMP_INVALID	The timestamp is not in the accepted period of time.
400	PERIOD_INVALID	The period of time requested is out of range.
400	SCA_METHOD_UNKNOWN	The SCA method selected in the

			authentication method selection request is unknown or cannot be associated with the PSU by the ASPSP.
	409	STATUS_INVALID	The directed resource does not allow additional authorisation.
<b>OAuth2</b>	302	invalid_request	The request has not been formed correctly as it has missing parameters, an unsupported value and/or repeated parameters.
	302	unauthorized_client	The authenticated client is not authorised to use this type of authorisation.
	302	access_denied	The resource owner or the authorisation server denies the request.
	302	unsupported_response_type	The authorisation server does not support the method used to obtain the authorisation code.
	302	invalid_scope	The requested scope is invalid, unknown or poorly formed.
	302	server_error	Error 500 that cannot be returned in a redirect, which is returned with this code.
	302	temporarily_unavailable	The authorisation server is unable to process the request at this time due to a temporary overload or due to maintenance being undertaken.
	400	invalid_request	The request has not been formed correctly as it has missing parameters, an unsupported value and/or repeated parameters, includes multiple credentials or uses more than one client authentication mechanism.
	401	invalid_client	Failure to authenticate the client.
	400	invalid_grant	The authorisation provided or the refresh token is invalid, has expired, has been revoked, does not match the URI redirection or was issued to another client.
	400	unauthorized_client	The authenticated client is not authorised to use this type of authorisation.
	400	unsupported_grant_type	The type of authorisation requested is not supported by the authorisation server.
	400	invalid_scope	The requested scope is invalid, unknown, badly formed or exceeds what is allowed.

PIS	403	PRODUCT_INVALID	The payment product requested is not available for the PSU.
	404	PRODUCT_UNKNOWN	The payment product requested is not supported by the ASPSP.
	400	PAYMENT_FAILED	The payment failed. For example, due to risk management reasons.
	400	EXECUTION_DATE_INVALID	The execution date requested is not a valid execution date for the ASPSP.
	405	CANCELLATION_INVALID	The directed payment cannot be cancelled. For example, a long time has passed or due to legal restrictions.
AIS	401	CONSENT_INVALID	Consent was created by the TPP, but is not valid for the resource / service requested.  Or, the definition of the consent is incomplete or is invalid.
	400	SESSIONS_NOT_SUPPORTED	The combined service indicator does not support the ASPSP which the request was sent to.
	429	ACCESS_EXCEEDED	The account accesses have exceeded the allowable accesses per day without the PSU being present.
	406	REQUESTED_FORMATS_INVALID	The format requested in the Accept field does not match those offered by the ASPSP.
FCS	400	CARD_INVALID	The card number is unknown to the ASPSP or is not associated with the PSU.
	400	NO_PIIS_ACTIVATION	The PSU has not activated the account to be used for the PIIS associated with the TPP.

#### 6.4 Transaction status

Code	Name	Description
ACCC	AcceptedSettlementCompleted	The settlement of the beneficiary's account has been completed.
ACCP	AcceptedCustomerProfile	The pre-check of the technical validation was correct. The client profile check was also correct.
ACFC	AcceptedFundsChecked	In addition to the client profile, the availability of funds has

		been checked and confirmed. Note: ISO 20022 approval is needed.
<b>ACSC</b>	AcceptedSettlementCompleted	The settlement of the originator's account has been completed.  Use: the use of the first agent (the originator's ASPSP through the HUB) to inform the originator that the transaction has been completed.  Important: the reason for this status is to provide the status of the transaction, not for financial information. It can only be used after a bilateral agreement has been entered into.
<b>ACSP</b>	AcceptedSettlementInProgress	The above controls such as technical validations and of the client's profile were correct and therefore, the payment initiation has been accepted to be processed.
<b>ACTC</b>	AcceptedTechnicalValidation	Syntactic and semantic authentication and validation are correct.
<b>ACWC</b>	AcceptedWithChange	The instruction has been accepted, but a modification is required, for example a date or another item of data which has not been sent.  It is also used to report that a change has been applied, for example, on a payment initiation and that the execution date has been changed.
<b>ACWP</b>	AcceptedWithoutPosting	The payment instruction included in the credit transfer has been accepted without being sent to the beneficiary client.
<b>RCVD</b>	Received	The initiation of payment has been received by the agent (the ASPSP through the HUB).
<b>PATC</b>	PartiallyAcceptedTechnicalCorrect	The payment initiations have been authorised by at least one PSU, but they have not yet been authorised by all the PSUs involved. (Multi-level SCA)  Note: ISO 20022 approval is needed.
<b>PDNG</b>	Pending	The payment initiation or the individual transaction included in the payment initiation is pending. Additional checks and status updates will be made.
<b>RJCT</b>	Rejected	The payment initiation or the individual transaction included in the payment initiation has been rejected.
<b>CANC</b>	Cancelled	The payment initiation was cancelled before it was executed.  Note: ISO 20022 approval is needed.

## 6.5 Consent status

Code	Description
<b>received</b>	The consent has been received and is technically correct. The data has not yet been authorised.
<b>rejected</b>	The consent has been rejected.

<b>partiallyAuthorised</b>	Due to a multi-level SCA, some, but not all of the necessary authorisations have been made.
<b>valid</b>	The consent is accepted and valid for requests to read the data and specified in the consent.
<b>revokedByPsu</b>	The consent has been revoked by the PSU to the ASPSP.
<b>expired</b>	The consent has expired.
<b>terminatedByTpp</b>	The corresponding TPP has terminated the consent by using the DELETE request on the created consent resource.

## 6.6 Balance types

Code	Description
<b>closingBooked</b>	The account balance at the end of the pre-agreed period for the report. The sum of the “openingBooked” balances at the beginning of the period and all entries listed in the account during the pre-agreed period for the report.
<b>expected</b>	Transactions made up of annotated entries and entries pending at the time of the request.
<b>openingBooked</b>	The account balance at the beginning of the pre-agreed period for the report. It is always the same as the “closingBooked” balance of the previous period’s report.
<b>interimAvailable</b>	Provisionally available balance. Calculated based on annotations of the credit and debit entries during the specified period of time.
<b>interimBooked</b>	The balance calculated during the working day, at the specified time and subject to change during the day. This balance is calculated including the credit and debit entries made during the specified time/period.
<b>forwardAvailable</b>	Future balance available to the account owner on the specified date.

## 6.7 Types of sharing commissions

Code	Description
<b>DEBT</b>	All transaction charges are paid by the originator.
<b>CRED</b>	All transaction charges are paid by the beneficiary.
<b>SHAR</b>	Shared charges. The originator and beneficiary pay the charges corresponding to each party.
<b>SLEV</b>	The charges to be applied follow the rules agreed at the service level and/or scheme.

## 6.8 Good Practice Guide



## 6.8.1 Lifetime of the scaRedirect link

The validity of the token is 5 minutes for this type of link.