Cedacri NextGenPSD2 XS2A Framework Implementation v1.2

Version 1.8.5

Index

1 Aim of the document

This document aims to detail Cedacri's implementation of the NextGenPSD2 XS2A Framework from a technical point of view.

2 References

The Cedacri PSD2 Gateway is implemented according to the NextGenPSD2 standard of the Berlin Group initiative.

The Berlin Group is a Joint Initiative on a PSD2 Compliant XS2A Interface operational at the pan-European level.

Our framework is fully compliant to Berlin Group Implementation Guidelines v1.3.6, it means that all mandatory and all the strongly recommended optional functionalities, have been implemented.

For any further information, please refer to the following original documents (available on the Berlin Group official website https://www.berlin-group.org/nextgenpsd2-downloads):

- NextGenPSD2 Access to Account Interoperability Framework - Implementation Guidelines V1.3_20181019.pdf
- NextGenPSD2 Access to Account Interoperability Framework - Implementation Guidelines V1.3.6_20200203.pdf
- NextGenPSD2 XS2A Interoperability Framework - Extended Services - Lean Push V1.0_20190301.pdf
- NextGenPSD2 XS2A Interoperability Framework - Extended IG Account Owner Name V1_20191125.pdf
- NextGenPSD2 XS2A Interoperability Framework - Extended Services - Consent CoF V2.0_20190301.pdf

3 Document History

Version	Change	Note	Date
1.0.0	First version API v1.2		16/06/2020
1.1.0	New Feature	Added the optional Request Headers for PSU Context Data in all request messages. For further details, please refer to Section 4.8 - Requirements on PSU Context Data of the original document: NextGenPSD2 Access to Account Interoperability Framework - Implementation Guidelines V1.3.6_20200203 https://www.berlin-group.org/nextgenpsd2-downloads	10/12/2020
	New Feature	Added the new optional field remittanceInformationUnstructuredArray in the response body of the Read Transactions API. For further details, please refer to Section 14.24 - Transactions of the original document: NextGenPSD2 Access to Account Interoperability Framework - Implementation Guidelines V1.3.6_20200203 https://www.berlin-group.org/nextgenpsd2-downloads	
	New Feature	Introduced a new calculation rule for the maximum number of unattended calls per day for Read Transactions API. For further details, please refer to Section 11.9 - Calculation rule for the maximum number of unattended calls per day	

1.2.0	New Feature	Introduced a new code ACSP for transactionStatus after a successful SCA completion.	21/01/2021
1.3.0	New Feature	Consents generated for the CIS scope are no longer limited to 90 days	18/02/2021
1.4.0	New Feature	Introduced Payment Status Notification Service	18/03/2021
1.5.0	New Feature	Field 'debtorAccount' changed to Conditional in Payment Initiation api	15/07/2021
	New Feature	Introduced 'instant-sepa-credit-transfer' payment product	
1.5.1	Errata Corrige	References update	22/07/2021
		The National Bank Code 05385 supports the value 'CORPORATE_IBK' for 'PSU-ID-Type' field	
1.5.2	Supported bank variation	Removed Banca CR Cento (06115) from Cedacri supported banks	28/07/2021
1.5.3	Errata Corrige	'PSU-IP-Address' description adapted to BG description	16/09/2021
1.5.4	Supported bank variation	Added notice of forthcoming bank disposal 'Cassa di Risparmio di Biella e Vercelli' (06090) from Cedacri supported banks	12/10/2021
1.5.5	Errata Corrige	'PSU-IP-Type' description revisited to clarify the 'CORPORATE_IBK' use case for National Bank Codes 05385 and 03440.	21/10/2021
		Fixed TPP Onboarding Base URL	
1.5.6	Clarification	'PSU-IP-Type' description for 'CORPORATE_IBK' use case for National Bank Codes 05385 and 03440 moved as note for each impacted section	08/11/2021
	Supported bank variation	Removed Cassa di Risparmio di Biella e Vercelli (06090) from Cedacri supported banks	
1.5.7	Supported bank variation	Added notice of forthcoming bank disposal 'Banca Leonardo' (03126) from Cedacri supported banks	19/11/2021
1.5.8	Supported bank variation	Removed 'Banca Leonardo' (03126) from Cedacri supported banks	06/12/2021

1.5.9	New Feature	Introduced Strong Customer Autentication (SCA) Status for payments and consents created by PSUs	16/12/2021
1.5.10	Clarification	Added SCA Status notes: not available for 'CORPORATE_IBK' PSU-ID-Type	02/08/2022
1.5.11	New Feature	Chapter 11.8 Read Transaction examples updated with the two new fields 'additionalInformation', 'valueDate'	22/09/2022
		Chapter 11.8 Read Transaction examples: value modification for the two fields 'remittanceInformationUnstructured' and 'remittanceInformationUnstructuredArray'	
1.6.0	New Feature	Introduced App Linking App-to-App for consent confirmation and payment confirmation	20/10/2022
1.6.1	Supported bank variation	Added notice of forthcoming bank disposal 'Rbc Investor Service Bank Sa' (03321) from Cedacri supported banks	29/12/2022
1.6.2	Supported bank variation	Removed 'Rbc Investor Service Bank Sa' (03321) from Cedacri supported banks	31/01/2023
1.6.3	Access token Lifetime variation	Access token generated for the AISP and CISP scope are no longer limited to 90 days for SANDBOX	24/02/2023
1.6.4	Supported bank variation	Added 'Banca Etica' (05018) to Cedacri supported banks	05/03/2023
1.6.5	New Feature	HTTP response status code "401 Unauthorized": new value of the field "status_message" in case of OAuth access token revoked by PSU	14/03/2023
1.6.6	Errata Corrige	expires_in parameter description for Access token revisited to clarify LIVE release date	20/03/2023

1.6.7	Supported bank variation	Added notice of forthcoming bank disposal 'Banca Popolare di Puglia e Basilicata' (05385) from Cedacri supported banks	13/04/2023
1.6.8	Access token Lifetime variation	Access token generated for the AISP and CISP scope are no longer limited to 90 days for LIVE	24/04/2023
1.6.9	Supported bank variation	Removed 'Banca Popolare di Puglia e Basilicata' (05385) from Cedacri supported banks	07/05/2023
1.7.0	Supported bank variation	Added 'Civibank - Banca di Cividale S.p.A.' (05484) to Cedacri supported banks	10/07/2023
1.7.1	Errata Corrige	Chapter 11.8: Read Transaction updated Response Example	26/07/2023
1.7.2	New Feature	payment resource's status set to RJCT if exceeded the maximum required timeframe of the SCA . For further details, please refer to Section 5.4 of the original document: NextGenPSD2 XS2A Framework Implementation Guidelines https://www.berlin-group.org/nextgenpsd2-downloads	12/01/2024
1.7.3	Supported bank variation	Added 'Igea Digital Bank S.p.A.' (05029) to Cedacri SANDBOX supported banks	18/01/2024
1.7.4	Addendum	Chapter 8.1: added a note about the field "status_message" described in step 1	21/03/2024

1.7.5	Supported bank variation	Bank 05424 changed description from 'Banca Popolare di Bari' into 'BDM BANCA S.p.A.'	29/04/2024
1.7.6	Supported bank variation	'Mediobanca Banca di Credito Finanziario S.p.A.' (03183) changes its ABI to 10631 (SANDBOX).	25/06/2024
1.7.7	Supported bank variation	Added 'Igea Digital Bank S.p.A.' (05029) to Cedacri supported banks	26/06/2024
1.7.8	Feature Change	Change to One-Off Consent, to allow one-time AISP calls to each API	11/07/2024
1.8.0	New Feature	- Chapter 10.5: introduced cancellation payment Strong Customer Authentication (SCA) and added new HTTP request header 'TPP-Redirect-URI' and 'TPP-Nok-Redirect-URI' - Chapter 13: added new APIs for cancellation payment Strong Customer Authentication (SCA) status check	18/07/2024
	Supported bank variation	Bank 03365 changed description from 'Banco delle Tre Venezie' into 'Cherry Bank S.p.A.'	
1.8.1	New Feature	Chapter 10.2: Introduced BG periodic payment type named 'MonthlyVariable'	19/09/2024
1.8.2	Supported bank variation	'Mediobanca Banca di Credito Finanziario S.p.A.' (03183) changes its ABI to 10631.	03/10/2024
1.8.3	New Feature	Chapter 10.6 and 10.7 added new API request Bulk List to access bulk payments signed and yet to be signed	05/12/2024
1.8.4	New Feature	Added new element in response (debtorName). API 10.4 Get Payment Request	15/05/2025
	Supported bank variation	Added 'Banca Popolare di Lajatico' (05232) to Cedacri supported banks (SANDBOX).	
		Added 'Ca Auto Bank ' (03445) to Cedacri supported banks (SANDBOX).	

1.8.5	Supported bank Variation	Bank 10630 changed description from 'Istituto per il Credito Sportivo' into 'Istituto per il Credito Sportivo e Culturale'	19/06/2025

4 Introduction

Cedacri has implemented the NextGenPSD2 XS2A Framework for several Italian Account Servicing Payment Service Providers (ASPSPs). The following table lists all the ASPSPs that rely on Cedacri's infrastructure, identified by their national bank code (codice ABI).

National Bank Code	Description
03048	Banca del Piemonte
03051	BARCLAYS BANK IRELAND PLC SEDE SECONDARIA
03105	Volkswagen Bank
03124	Banca del Fucino
10631	Mediobanca Banca di Credito Finanziario S.p.A.[1]
03205	Banca Ifis S.p.A.
03263	IBL Banca
03353	Banca del Sud
03365	Cherry Bank S.p.A.
03387	Banque Chaabi du Maroc
03388	Banca Stabiese
03440	Banco di Desio e della Brianza
03488	Cassa Lombarda
03598	Banca Ubae S.p.A.
05015	Banca Progetto S.p.A.
05018	Banca Etica
05029	Igea Digital Bank S.p.A.
05116	Banca Valsabbina
05424	BDM BANCA S.p.A.
05484	Civibank - Banca di Cividale S.p.A.
05824	Cassa di Sovvenzioni e Risparmio
06045	Cassa di Risparmio di Bolzano
06085	Cassa di Risparmio di Asti
06170	Cassa di Risparmio di Fossano S.p.A.
06220	Cassa di risparmio di Orvieto

[1] The National Bank Code 10631 will be applied in PRODUCTION environment starting from 6th of October 2024.

06370	Cassa di Risparmio di Volterra
10630	Istituto per il Credito Sportivo e Culturale
10680	Banca del Mezzogiorno – MedioCredito Centrale S.p.A.

Cedacri exposes PSD2 APIs for Payment Initiation Service Provider (PISP) TPP, Account Information Service Provider (AISP) TPP and Payment Instrument Issuing Service Provider (PIISP) TPP in two different URLs:

- https://api.cedacri.it
- https://sandbox.cedacri.it

The first URL is for all APIs of live environment where services work on real and actual data of users; the second URL is for all APIs of sandbox environment that replicates main functionalities of the production environment but is completely independent of it.

Cedacri provides a sandbox environment that allows TPP developers to validate their code before migrating it to the live environment.

For this reason, resources of the Cedacri XS2A Interface can be addressed under the following API endpoints[2]:

- https://api.cedacri.it/psd2/v1.2/bg/{national-bank-code}/{BG-version}/{service}{?query-parameters}
- https://sandbox.cedacri.it/psd2/v1.2/bg/{national-bank-code}/}/{BG-version}/{service}{?query-parameters}

using additional content parameters {parameters}

where

- {national-bank-code} is the identifier of the ASPSP as reported in the list above
- {BG-version} is denoting the adopted major version of the Berlin Group XS2A interface implementation Guidelines or major version of the Berlin Group XS2A Extended Service implementation guidelines confirmation of funds consent
- {service} has the values: consents, payments, accounts or funds-confirmation, eventually extended by more information on product types and request scope{?query-parameters} are parameters detailing GET based access methods, e.g. forfiltering content data
- {parameters} are content attributes defined in JSON encoding

[2] TPP registration endpoint doesn't follow the Cedacri XS2A interface API versioning. Refer to the specific chapter.

The structure of request/response is described according to the following categories:

- Path: attributes encoded in the path
- Query Parameters: attributes added to the path after the ? sign as process steering flags or filtering attributes for GET access methods
- Header: attributes encoded in the HTTP header of request or response
- Request: attributes within the content parameter set of the request
- Response: attributes within the content parameter set of the response, defined in JSON

The following table gives an overview on the HTTP access methods supported by the API endpoints and by resources created through this API:

Endpoints/Resources	Method
{payment-service}/{payment-product}	POST
{payment-service}/{payment-product}/{paymentId}	GET
{payment-service}/{payment-product}/{paymentId}/status	GET
{payment-service}/{payment-product}/{paymentId}	DELETE
{payment-service}/{payment- product}/{paymentId}/authorisations	GET
{payment-service}/{payment-product}/{paymentId}/authorisations/{authorisationId}	GET
{payment_service}/{payment_product}/{paymentId}/cancellation-authorisations	GET
{payment_service}/{payment_product}/{paymentId}/cancellation-authorisations/{authorisationId}	GET
accounts	GET
accounts/{accountId}	GET
accounts/{accountId}/balances	GET
accounts/{accountId}/transactions	GET
consents	POST
consents/{consentId}	GET
consents/{consentId}	DELETE
consents/{consentId}/status	GET
consents/{consentId}/authorisations	GET
consents/{consentId}/authorisations/{authorisationId}	GET
funds-confirmations	POST
consents/confirmation-of-funds	POST
consents/confirmation-of-funds/{consentId}/status	GET
consents/confirmation-of-funds/{consentId}	GET
consents/confirmation-of-funds/{consentId}	DELETE

The following table shows the possible HTTP response codes:

Status Code	Description
200 OK	PUT, GET Response Codes This return code is permitted if a request was repeateddue to a time-out. The POST for a Funds request will also return 200 since itdoes not create a new resource.
201 Created	POST response code where Payment Initiation or Consent Request was correctly performed.
204 No Content	DELETE response code where a consent resource was successfully deleted. The code indicates that the requestwas performed, but no content was returned.
400 Bad Request	Validation error occurred. This code will cover malformed syntax in request or incorrect data in payload.
401 Unauthorized	The TPP or the PSU is not correctly authorized to performthe request. Retry the request with correct authentication information.
404 Not found	Returned if the resource or endpoint that was referencedin the path does not exist or cannot be referenced by the TPP or the PSU.
405 Method Not Allowed	This code is only sent when the HTTP method (PUT, POST, DELETE, GET etc.) is not supported on a specific endpoint.
408 Request Timeout	The server is still working correctly, but an individual request has timed out.
429 Too Many Requests	The TPP has exceeded the number of requests allowedby the consent or by the RTS.
500 Internal Server Error	Internal server error occurred.
503 Service Unavailable	The server is currently unavailable. Generally, this is a temporary state.

Additional error information is transmitted following NextGenPSD2 XS2A specification, as reported in the JSON example below:

```
{
  "tppMessages": [
    {
      "category": "ERROR",
      "code": "TOKEN_INVALID",
      "text": "additional text information of the ASPSP up to 512 characters"
    }
  ]
}
```

In order to use the PSD2 APIs, each TPP should register itself using the dedicated onboarding API before calling production environment API.

- Onboarding API base url:https://api.cedacri.it/psd2/v1/

The onboarding API is protected by mutual authentication, like the other production APIs, therefore it requires a valid eIDAS certificate to extract the information used to identify the TPP itself and PSP roles.

The following table gives an overview on the HTTP access methods supported by the Onboarding API endpoints and by resources created through this API:

Endpoint	Method
tpp	POST
tpp/{uuid}	GET
tpp/{uuid}	PUT
tpp/{uuid}	DELETE
tpp/{uuid}/{client_id}/secret	POST

The following table shows the possible HTTP response codes:

Status Code	Description
200 OK	PUT, GET Response Codes This return code is permitted if a request was repeated due to a time-out.

204 No Content	DELETE response code where a TPP was successfully deleted. The code indicates that the request was performed, but no content was returned.
400 Bad Request	Validation error occurred. This code will cover malformed syntax in request or incorrect data in payload.
404 Not found	Returned if the resource or endpoint that was referenced in the path does not exist.
405 Method Not Allowed	This code is only sent when the HTTP method (PUT, POST, DELETE, GET etc.) is not supported on a specific endpoint.
408 Request Timeout	The server is still working correctly, but an individual request has timed out.
500 Internal Server Error	Internal server error occurred.
503 Service Unavailable	The server is currently unavailable. Generally, this is a temporary state.

If the mutual authentication verification is successful, a check on the EBA Payment Institutions Register is performed to validate the TPP and PSP roles extracted from the eIADS certificate. Any mismatch on the extracted data compared to what is present on thelast available EBA register[3] will be reported with the following error response:

http status code :400

```
{
  "tppMessages": [
    {
      "category": "ERROR",
      "code": "CERTIFICATE_INVALID",
      "text": "Check on EBA register failed."
    }
  ]
}
```

[3] EBA register is downloaded twice a day, if available on the EBA website.

5 Secure connection

The communication between the TPP and the Cedacri NextGenPSD2 XS2A is always secured via a TLS-connection using TLS version 1.2 or higher. The TPP has to set-up this TLS-connection, authenticating itself (client authentication) through the use of a qualified certificate for website authentication (QWAC). This qualified certificate has to be issued by a qualified trust service provider according to the eIDAS regulation.

The content of the certificate has to comply with the requirements of EBA – RTS on SCA and SCS, Article 34. The TPP certificate has to indicate all roles the TPP is authorized for.

In this first stage, exclusively for the sandbox environment, Cedacri has decided to offer to Third Party Providers an additional registration process within the Cedacri portal: through this process, an interested TPP that did not get an eIDAS certification or the NCA Authorization (or both) could access the Cedacri NextGenPSD2 XS2A for testing purposes.

6 Third Party Validation

Cedacri NextGenPSD2 XS2A has to validate the TPP identity and authorization status.

For identity validation, Cedacri NextGenPSD2 XS2A relies on eIDAS certificate information that are verified through the inquiry on the Certificate Status Service provided by the QTSP that issued the certification for the TPP (through CRL or OCSP). N.B. this step is discarded in case of a TPP registered within the portal in sandbox environment.

For authorization validation, Cedacri NextGenPSD2 XS2A has to verify online whether the authorization reported in the Certificate is still valid, through an online inquiry on NCA register (or equivalent source). N.B. this step is discarded in case a TPP is registered within the portal in sandbox environment.

7 TPP Onboarding

The TPP should perform the onboarding via API registration, before calling one of the production PSD2 APIs for the first time. Through the registration the TPP defines / receives the parameters needed to perform the OAuth2 steps described in the authentication process (chapter 8.1). The registration step via onboarding API is required only for the production environment.

In order to use PSD2 APIs in the sandbox environment, the TPP is required to register on the API Portal using the dedicated registration form displayed on the Sign-up page, as explained in the document "TPP Onboarding Sandbox".

After the production environment registration process, the TPP must call the PSD2 API using the eIDAS certificate which will be checked at each call.

Here below is the base URL to access the API for the onboarding process in production environment

[Base URL: api.cedacri.it/psd2/v1/tpp]

TPP registration is done using the roles described in the eIDAS certificate regardless of the input provided during the registration process via the onboarding API.

For example, by defining as input a redirect url for both AISP and PISP despite the fact that only the scope AISP is enabled according to the eIDAS certificate provided, the TPP will be registered only to operate on AISP and will receive the OAuth2 parameters related to AISP.

If the TPP performs onboarding with a certificate (which contains a specific AN[4] identifier) associated with the AISP scope and wants to upgrade to become a PISP, it must, after receiving the new certificate:

- Register again, if the new certificate contains a different AN;
- Perform the update with the PUT, if the new certificate contains the same AN.

The following sections describe how to use the onboarding API.

[4] This is a unique reference number (URN), identified by PSD2 as the authorization number (AN) which TPP has obtained from the NCA (National Centre Authority) in order to operate.

7.1 Register a new TPP via API

POST /tpp

Registers a new TPP via API.

Path Parameter

No specific path parameter defined.

Query Parameters

No specific query parameter defined.

Request Header

No request header

Request Body

Attribute	Type	Condition	Description
email	String	Mandatory	This field identifies the TPP's email, which the ASPSP can use for any communications.
redirect_url	redirect_object	Mandatory	TPP defines the callback urls on which it wants to receive the code to exchange to obtain the OAuth token (chapter 8.1, step 5).

cancel_link	String	Mandatory	TPP defines the call back url on which it wants to be redirect in case of cancelling the authorization of the OAuth token

Redirect Object

Attribute	Type	Condition	Description
AISP	Array of String	Mandatory	This field identifies the redirect urls
PISP	Array of String	Mandatory	This field identifies the redirect urls
CISP	Array of String	Mandatory	This field identifies the redirect urls

Response Code

The HTTP response code is 200.

Response Body

Attribute	Type	Condition	Description
uuid	UUID	Mandatory	Internal organization ID returned by the gateway
AISP	OAuth2 Credentials	Mandatory	This field identifies the redirect url
PISP	OAuth2 Credentials	Mandatory	This field identifies the redirect url
CISP	OAuth2 Credentials	Mandatory	This field identifies the redirect url

OAuth2 Credentials

Attribute	Type	Condition	Description
redirect_url	Array of String	Mandatory	The callback url chosen by TPP.
client_id	String	Mandatory	The client ID for TPP's application
client_secret	String	Mandatory	The client secret is a secret credential for TPP's application.
email	String	Mandatory	This field identifies the email chosen by the TPP, which the ASPSP can use for any communication.

Example

Request

```
POST https://api.cedacri.it/psd2/v1/tpp
{
  "email": "info@ttp.com",
  "redirect_url": {
    "AISP": ["https://www.ttp.com"],
    "PISP": ["https://www.ttp.com"],
    "CISP": ["https://www.ttp.com"]
  },
    "cancel_link": "https://www.test.com"
 }
```

Response

```
{
    "uuid": "f123456b-4bc6-331e-a8b6-ba806a549c62",
    "AISP": {
        "redirect_url": [“https://www.ttp.com”],
        "client_id": "8843e662-c45c-63c8-342e-123456f6bcef",
        "client_secret": "cb31234f-1b8a-3b45-a132-ad4be4efb4dc",
        "email": "info@ttp.com",
    },
    "PISP": {
        "redirect_url": [“https://www.ttp.com”],
```

```
      "client_id": "a6d12d3d-1324-53c4-b123-46c2a1234557",
      "client_secret": "12e32f89-13ce-67fb-ba89-d55cbea8431b",
      "email": "info@ttp.com"
   },
   "CISP": {
      "redirect_url": [“https://www.ttp.com”],
      "client_id": "c6d12d3d-1324-53c4-b123-46c2a1234000",
      "client_secret": "12e32f89-13ce-67fb-ba89-d55cbea8987c",
      "email": "info@ttp.com"
   }
}
```


7.2 TPP registration data

GET /tpp/{uuid}

Retrieves the TPP registration data.

Path Parameter

Attribute	Type	Description
uuid	UUID	Internal organization ID returned by the gateway

Query Parameters

No specific query parameter defined.

Request Header

No request header.

Request Body

No request body.

Response Code

The HTTP response code is 200.

Response Body

Attribute	Type	Condition	Description
uuid	UUID	Mandatory	Internal organization ID returned by the gateway
AISP	OAuth Credentials	Mandatory	This field identifies the redirect url
PISP	OAuth Credentials	Mandatory	This field identifies the redirect url
CISP	OAuth Credentials	Mandatory	This field identifies the redirect url

OAuth2 Credentials

Attribute	Type	Condition	Description
redirect_url	Array of String	Mandatory	The callback url chosen by TPP.
client_id	String	Mandatory	The client ID for the TPP's application
client_secret	String	Mandatory	The client secret is a secret credential for the TPP's application.
email	String	Mandatory	This field identifies the email chosen by the TPP, which the ASPSP can use for any communication.

Example

Request
GET https://api.cedacri.it/psd2/v1/tpp/f123456b-4bc6-331e-a8b6-ba806a549c62

Response
{ "uuid": "f123456b-4bc6-331e-a8b6-ba806a549c62", "AISP": { "redirect_url": [“https://www.ttp.com”], "client_id": "8843e662-c45c-63c8-342e-123456f6bcef", "client_secret": "cb31234f-1b8a-3b45-a132-ad4be4efb4dc", "email": "info@ttp.com", }, "PISP": { "redirect_url": [“https://www.ttp.com”], "client_id": "a6d12d3d-1324-53c4-b123-46c2a1234557", "client_secret": "12e32f89-13ce-67fb-ba89-d55cbea8431b", "email": "info@ttp.com" }, "CISP": { "redirect_url": [“https://www.ttp.com”], "client_id": "c6d12d3d-1324-53c4-b123-46c2a1234000", "client_secret": "12e32f89-13ce-67fb-ba89-d55cbea8987c", "email": "info@ttp.com" } }

7.3 Updated a TPP registration

PUT /tpp/{uuid}

Updates the TPP registration data.

Path Parameter

Attribute	Type	Description
uuid	UUID	Internal organization ID returned by the gateway

Query Parameters

No specific query parameters defined.

Request Header

No request header

Request Body

Attribute	Type	Condition	Description
email	String	Mandatory	This field identifies the TPP's email, which the ASPSP can use for any communication.
redirect_url	redirect_object	Mandatory	TPP defines the callback url on which to receive the code to exchange to obtain the OAuth token.
cancel_link	String	Mandatory	TPP defines the call back url on which it wants to be redirect in case of cancelling the authorization of the OAuth token

Redirect Object

Attribute	Type	Condition	Description
AISP	Array of String	Mandatory	This field identifies the redirect urls
PISP	Array of String	Mandatory	This field identifies the redirect urls
CISP	Array of String	Mandatory	This field identifies the redirect urls

Response Code

The HTTP response code is 200.

Response Body

Attribute	Type	Condition	Description
uuid	UUID	Mandatory	Internal organization ID returned by the gateway
AISP	OAuth2 Credentials	Mandatory	This field identifies the redirect url
PISP	OAuth2 Credentials	Mandatory	This field identifies the redirect url
CISP	OAuth2 Credentials	Mandatory	This field identifies the redirect url

OAuth2 Credentials

Attribute	Type	Condition	Description
redirect_url	Array of String	Optional	The callback url chosen by the TPP.
client_id	String	Optional	The client ID for the TPP's application
client_secret	String	Optional	The client secret is a secret credential for the TPP's application.
email	String	Optional	This field identifies the email chosen by the TPP, which the ASPSP can use for any communication.

Example

Request

PUT https://api.cedacri.it/psd2/v1/tpp/f123456b-4bc6-331e-a8b6-ba806a549c62
{
"email": "info@ttp.com",
"redirect_url": {

```
    "AISP": [“https://www.ttp.com”],
    "PISP": [“https://www.ttp.com”],
    "CISP": [“https://www.ttp.com”],
  },
    "cancel_link": "https://www.test.com"
}
```


Response


```
{
    "uuid": "f123456b-4bc6-331e-a8b6-ba806a549c62",
    "AISP": {
        "redirect_url": [“https://www.ttp.com”],
        "client_id": "8843e662-c45c-63c8-342e-123456f6bcef",
        "client_secret": "cb31234f-1b8a-3b45-a132-ad4be4efb4dc",
        "email": "info@ttp.com",
    },
    "PISP": {
        "redirect_url": [“https://www.ttp.com”],
        "client_id": "a6d12d3d-1324-53c4-b123-46c2a1234557",
        "client_secret": "12e32f89-13ce-67fb-ba89-d55cbea8431b",
        "email": "info@ttp.com"
    },
    "CISP": {
        "redirect_url": [“https://www.ttp.com”],
        "client_id": "c6d12d3d-1324-53c4-b123-46c2a1234000",
        "client_secret": "12e32f89-13ce-67fb-ba89-d55cbea8987c",
        "email": "info@ttp.com"
    }
}
```


7.4 Delete a TPP registration

DELETE /tpp/{uuid}

Deletes the registration of a TPP.

Path Parameter

Attribute	Type	Description
uuid	UUID	Internal organization ID returned by the gateway

Query Parameters

No specific query parameter defined.

Request Header

No request header

Request Body

No request body

Response Code

The HTTP response code is 204.

Response Body

No response body.

Example

Request
DELETE https://api.cedacri.it/psd2/v1/tpp/f123456b-4bc6-331e-a8b6-ba806a549c62
Response
HTTP/1.1 204 No Content

7.5 Refresh the client secret

POST /tpp/{uuid}/{client_id}/secret

Refreshes the client secret

Path Parameter

Attribute	Type	Description
uuid	UUID	Internal organization ID returned by the gateway
client_id	String	The client ID for the TPP's application

Query Parameters

No specific query parameter defined.

Request Header

No request header

Request Body

No request body

Response Code

The HTTP response code is 200.

Response Body

Attribute	Type	Condition	Description
client_secret	String	Mandatory	The client secret is a secret credential for the TPP's application.

Example

Request
POST https://api.cedacri.it/psd2/v1/tpp/f123456b-4bc6-331e-a8b6-ba806a549c62/8843e662-c45c-63c8-342e-123456f6bcef
Response
{ "client_secret": "cb31234f-1b8a-3b45-a132-ad4be4efb4dc", }

8 Usage of OAuth2 for PSU Authentication and Authorisation

Cedacri implements OAuth2 as a support for the authorization of the PSU towards the TPP for the payment initiation and/or account information service. In this case, the TPP is the client, the PSU the resource owner and the ASPSP is the resource server in the abstract OAuth2 model.

In particular, Cedacri supports it as an authentication of a PSU in a pre-step, translating this authentication into an access token to be used on the XS2A interface afterwards. By using OAuth2, the XS2A API calls work with an access token instead of using the PSU credentials.

8.1 Obtaining OAuth 2.0 access tokens

The following steps show how the TPP's application interacts with the Cedacri's OAuth 2.0 server to obtain a PSU's consent to perform an API request on behalf of the PSU. The TPP's

application must have that consent before it can execute a call to NextGenPSD2 XS2A API that requires the PSU authorization.

The list below quickly summarizes these steps:

1. The TPP's application identifies the permissions it needs.
2. The TPP's application redirects the PSU to ASPSP along with the requested permission.
3. The PSU decides whether to grant the permission to the TPP's application.
4. The TPP's application finds out what the PSU decided.
5. If the PSU grants the requested permissions, the TPP's application retrieves tokens needed to make API requests on behalf of the PSU.

Step 1: Set authorization parameters

The first step for the TPP is to create the authorization request. That request sets parameters that identify the application and define the permissions that the PSU will be asked to grant to the TPP's application.

In order to obtain Cedacri's OAuth 2.0 endpoint, the TPP has to call one the NextGenPSD2 XS2A APIs without a valid access token. In this case, Cedacri will return an HTTP 401 Unauthorized response similar to the following:

```
{
   "status": 401,
   "status_message": "Unauthorized",
   "url": "{endpoint}"
}
```

Field "status_message" values available starting from the 15th of June 2023:

- In case of OAuth access token revoked by PSU, the value of the field "status_message" within the API response is "Token Revoked"
  Note: When the revoked OAuth token expires, this case will be handled as the following
- In other cases of invalid OAuth access token, the value of the field "status_message" within the API response is "Unauthorized"

The url attribute will contain an endpoint accessible only over HTTPS. Plain HTTP connections are rejected. This endpoint will be different based on the type of environment in which the TPP operates: production or sandbox.

The TPP has to redirect PSU's web browser to this endpoint, adding the following query string parameters; when specified, the parameters are retrieved differently depending on the environment:

Parameter	Description
client_id	Required. PRODUCTION: the client id returned by the request for registration from the TPP via API (chapter 7.1) SANDBOX: the client id generated by the TPP Onboarding Sandbox (document "Cedacri Sandbox - TPP Onboarding Procedure", chapter 3)
redirect_uri	Required. PRODUCTION: the call back URL chosen by TPP (chapter 7.1). SANDBOX: the redirect uri chosen by TPP in the client id creation in TPP Onboarding Sandbox (document "Cedacri Sandbox - TPP Onboarding Procedure", chapter 3).
scope	Required. One of the scopes that identify the resources that the TPP's application could access on behalf of the PSU. Acceptable scopes are: • "pisp.pagamento": to access Payment Initiation Service • "aisp.base": to access Account Information Service
state	Recommended. Specifies any string value that the TPP's application uses to maintain state between its authorization request and the authorization server's response. The server returns the exact value that the TPP sends as a name=value pair in the hash (#) fragment of the redirect_uri after the PSU consents to or denies application's access request. TPPs can use this parameter for several

	purposes, such as directing the PSU to the correct resource in their application, sending nonces, and mitigating cross-site request forgery. Since the redirect_uri can be guessed, using a state value can further ensure that an incoming connection is the result of an authentication request. If TPPs generate a random string or encode the hash of a cookie or another value that captures the client's state, they can validate the response to additionally ensure that the request and response originated in the same browser, providing protection against attacks such as cross-site request forgery.

The PSU is redirected on the ASPSP page where it will authenticate to allow the TPP to generate the OAuth token. The ASPSP page has a button that allows the PSU to exit the authentication process and return to the TPP page: this is the "cancel link" as described in the document "Cedacri Sandbox - TPP Onboarding Procedure", chapter 3.

Step 2: Redirect to Cedacri's OAuth 2.0 server

The TPP redirects the PSU to the Cedacri's OAuth 2.0 server to initiate the authentication and authorization process.

Step 3: Cedacri prompts user for consent

In this step, the PSU decides whether to grant the requested access to the TPP's application. At this stage, Cedacri's OAuth 2.0 server authenticates the PSU and obtains consent from the PSU for the TPP's application to access the requested scope.

TPP's application doesn't need to do anything at this stage as it waits for the response from Cedacri's OAuth 2.0 server indicating whether the access was granted. That response is explained in the following step.

In this step, the "PSU-ID-Type" is a conditional header parameter to be managed as described in the following chapters:

- PISP API in sections 10.1, 10.2, 10.3

- "Consent request on dedicated accounts" API in section 11.1

Step 4: Handle the OAuth 2.0 server response

The OAuth 2.0 server responds to the TPP's application's access request by using the URL specified in the request.

If the PSU approves the access request, then the response contains an authorization code. If the PSU does not approve the request, the response contains an error message. The authorization code that is returned to the web server appears on the query string, as shown below:

{redirect_uri}?code=4/P7q7W91a-oMsCeLvIaQm6bTrgtp7&state={state}

where:

redirect_uri and state are the query string parameters set by the TPP and described above.

If PSU denies the access request, the API server redirects the PSU to the cancel redirect URI configured by the TPP in the API Portal.

Step 5: Exchange authorization code for refresh and access tokens

After the TPP receives the authorization code, it can exchange the authorization code for an access token within 30 seconds, after which the authorization code expires.

To exchange an authorization code for an access token, the TPP has to call (with a POST) the specific endpoint (that depends on the type of environment in which the TPP operates)

- Production: https://api.cedacri.it:9090/oauth/token
- Sandbox: https://sandbox.cedacri.it:9091/oauth/token

and set the following form parameters; when specified, the parameters are retrieved differently depending on the environment:

Parameter	Description
code	The authorization code returned from the initial request.
client_id	PRODUCTION: the client id returned by the request for registration from the TPP via API (chapter 7.1)

	SANDBOX: the client id generated by the TPP Onboarding Sandbox (document "Cedacri Sandbox - TPP Onboarding Procedure", chapter 3)
client_secret	Required if TPP chooses a confidential application type. PRODUCTION: the client secret returned by the request for registration of the TPP via API (chapter 7.1) SANDBOX: the client secret generated by the client id creation in TPP Onboarding Sandbox (document "Cedacri Sandbox - TPP Onboarding Procedure", chapter 3)
redirect_uri	PRODUCTION: the call back URL chosen by TPP (chapter 7.1). SANDBOX: the redirect uri chosen by TPP in the client id creation in TPP Onboarding Sandbox (document "Cedacri Sandbox - TPP Onboarding Procedure", chapter 3).
grant_type	As defined in the OAuth 2.0 specification, this field must contain a value of "authorization_code".

The Content-Type must be "application/x-www-form-urlencoded", that is the default content type defined by RFC1738.

The following snippet shows a sample request:

```
POST /oauth/token HTTP/1.1

code=4/P7q7W91a-oMsCeLvIaQm6bTrgtp7&
client_id={tpp_client_id}&
client_secret={tpp_client_secret}&
redirect_uri={redirect_uri}&
grant_type=authorization_code
```

Cedacri responds to this request by returning a JSON object that contains an access token. This response is in the request body.

The response contains the following fields:

Parameter	Description
access_token	The token that TPP's application sends to authorize a request.
expires_in	The remaining lifetime of the access token in seconds. - for the AISP scope access tokens lifetime is 180 days - for the PISP scope access tokens lifetime is 180 days - for the CISP scope there is no expiry
token_type	The type of token returned. At this time, this field's value is always set to Bearer.

The following snippet shows an example of response:

```
{
  "access_token":"1/fFAGRNJru1FTz70BzhT3Zg",
  "expires_in":3920,
  "token_type":"Bearer"
}
```

9 Redirect SCA Approach with Implicit Start of the Authorisation Process

The supported flow for the Payment Initiation Service and the Account Information Service, is the Redirect SCA Approach with Implicit Start of the Authorization Process.

Within this flow, the Account Information Consent and Payment Initiation Requests are followed by a redirection to the ASPSP SCA authorization website.

The URL of the ASPSP SCA authorization website are contained in the "scaRedirect" attribute of "_links" attribute of responses of both calls.

The TPP has to redirect the PSU's web browser to the URL and wait for the PSU SCA authentication. Note that, exclusively for the Payment Initiation Service, ASPSP SCA website prevents the authorization from the PSU if more than 60 seconds passed between the start of the flow and the redirection to the URL.

Once the PSU has authorized or rejected, the TPP will receive a redirect on one of the URI defined in the TPP-Redirect-URI and TPP-Nok-Redirect-URI headers of the request.

10 Payment Initiation Service

The Payment Initiation Flow that Cedacri has adopted is the Redirect SCA Approach with Implicit Start of the Authorization Process. With this flow, the Account Information Consent Request is followed by a redirection to the ASPSP SCA authorization website.

Here below is the base URL to access the API for the payment process in production environment.

[Base URL: api.cedacri.it/psd2/v1.2/bg/{national bank code}]

10.1 Payment Initiation with JSON encoding of the Payment Instruction

POST /v1/payments/{payment-product}

This creates a payment initiation request at the ASPSP.

Path Parameters

Attribute	Type	Description
payment- product	String	The addressed payment product endpoint, e.g. for SEPA Credit Transfers (SCT). The list of products supported by Cedacri is: sepa-credit-transfers target-2-payments cross-border-credit-transfers instant-sepa-credit-transfers

Query Parameters

No specific query parameter defined.

Request Header

Attribute	Type	Condition	Description
Content-Type	String	Mandatory	application/json

X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
Authorization	String	Mandatory	Bearer Token.
PSU-IP-Address	String	Mandatory	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.
TPP-Redirect-URI	String	Mandatory	TPP's URI, where the transaction flow shall be redirected after a Redirect.
TPP-Nok-Redirect-URI	String	Optional	If this URI appears, 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.
PSU-ID-Type	String	Conditional[5]	Type of the PSU-ID, needed in scenarios

[5] Some ASPSPs offer alternative corporate platforms, technically based on different systems. If national bank code is 03440, possible values are: RETAIL, CORPORATE or CORPORATE_IBK.
To ensure the service correctly, if national bank code is 03440, it is mandatory that the TPP specify which type of corporate platform the PSU needs to access. In order to correctly identify which type of corporate platform the PSU needs, the TPP has to specify CORPORATE or CORPORATE_IBK.

			where PSUs have several PSU-IDs as access possibility and the TPP wants to specify which one the user should use to authenticate. Possible values are: RETAIL or CORPORATE.
PSU-Device-ID	String	Optional	UUID (Universally Unique Identifier) of the device used by the PSU. UUID can identify a fisical device or an application installed on the device.
PSU-Ip-Port	String	Optional	The Port used in the communication between PSU and TPP
PSU-Accept	String	Optional	The Accept request HTTP header advertises which content types, expressed as MIME types, the client is able to understand
PSU-Accept-Charset	String	Optional	The Accept-Charset request HTTP header advertises which character encodings the client understands
PSU-Accept-Encoding	String	Optional	The Accept-Encoding request HTTP header advertises which content encoding, usually a compression algorithm, the client is able to understand
PSU-Accept-Language	String	Optional	The Accept-Language request HTTP header advertises which languages the client is

			able to understand, and which locale variant is preferred
PSU-User-Agent	String	Optional	The User-Agent request header is a characteristic string that lets servers and network peers identify the application, operating system, vendor, and/or version of the requesting user agent.
PSU-Http-Method	String	Optional	HTTP method used in the communication between PSU and TPP. Accepted values are: • GET • POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.
TPP-Notification-URI	String	Optional	URI for the Endpoint of the TPP-API to which the status of the payment initiation should be sent. URIs which are provided by TPPs in TPP-Notification-URI shall comply with the domain secured by the eIDAS QWAC certificate of the TPP in the field CN or SubjectAltName of the certificate.

TPP-Notification-Content-Preferred	String	Optional	String value is PROCESS or LAST. The usage of the constants supports the following semantics: • PROCESS: A notification on all changes on transactionStatus attributes is preferred by the TPP. • LAST: Only a notification on the last transactionStatus as available in the XS2A interface is preferred by the TPP.

Request Body

Attribute	Type	Condition	Description
requestedExecutionDate	ISODate	Conditional	If the payment is a future type one, this field will be filled. If contained, the payment will be executed at the addressed date.

Note: future payments are supported for SCT and target-2-payments products.

The following table gives an overview on the JSON structures of standard SEPA payment products for single and future payments:

Data Element	Type	SCT EU Core	Target2 Paym. Core	Cross Border CT Core
debtorAccount (incl. type)	Account Reference	Conditional[1]	Conditional[6]	Conditional[6]
instructedAmount (inc. Curr.)	Amount	Mandatory	Mandatory	Mandatory
creditorAccount	Account Reference	Mandatory	Mandatory	Mandatory
creditorName	Max70Text	Mandatory	Mandatory	Mandatory
creditorAgent	BICFI	Optional	Optional	Mandatory
creditorAddress	Address (valorized with parameters "country" and "city")	Optional	Optional	Mandatory
remittance Information Unstructured	Max140Text	Mandatory	Mandatory	Mandatory

The country code required as input in the case of a foreign bank transfer is not the ISO code requested by the Berlin Group but the numeric one, the Bdl code, specified by the Bank of Italy at [https://infostat.bancaditalia.it/GIAVAInquiry-public/antit.html], that isrepresented by parameter "country" in creditorAddress.

6 According to item 36 of the EBA Opinion of June 2020.

The debtor account can be selected later by the PSUs, directly from the ASPSP's interface.

In case a PSU has a unique PSD2 account, the selection of this account will occur automatically. This means that no other action will be required to the PSUs, effectively making their customer journey identical to the current one.

If National Bank Code is '03440' and 'PSU-ID-Type' is CORPORATE_IBK, field 'debtorAccount' is Mandatory.

Response Code

The HTTP response code is 201.

Response Header

Attribute	Type	Condition	Description
Location	String	Mandatory	Location of the created resource (if created)
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
ASPSP-SCA-Approach	String	Mandatory	REDIRECT
ASPSP-Notification-Support	Boolean	Conditional	true if the ASPSP supports resource status notification services. false if the ASPSP supports resource status notification in general, but not for the current request
ASPSP-Notification-String	String	Conditional	This field must be provided if the ASPSP-Notification-Support =true. The ASPSP might

			consider the notification content as preferred by the TPP, but can also respond independently of the preferred request.

Response Body

Attribute	Type	Condition	Description
transactionStatus	Transaction Status	Mandatory	Possible values are: RCVD, ACTC, CANC, RJCT, ACSC, ACCC, ACSP, PNDG ACSP is set after a successful SCA ACCC status is not managed for payments abroad (cross-border-credit-transfer payment product). PNDG is only for SCT Instant Payment in doubt status and can be setted only after a successful SCA
paymentId	String	Mandatory	Resource identification of the generated payment initiation resource.
transactionFees	Amount	Mandatory	It can be used by the ASPSP to

			transport transaction fees relevant for the payments in question.
_links	Links	Mandatory	A list of hyperlinks to be recognized by the TPP. "scaRedirect": The link the PSU's browser is redirected to, according to the SCA Redirect Approach. PSU lands on the ASPSP page in which it is shown a button to exit the payment initiation process and return to the TPP page; this is the "payment cancel link", as described in the document "Cedacri Sandbox - TPP Onboarding Procedure", chapter 3 "self": The link to the payment initiation resource created by this request. This link can be used to

			retrieve the resource data. "status": The link to retrieve the transaction status of the payment initiation. "scaStatus"[7] : The link to retrieve the scaStatus of the corresponding authorisation sub-resource. This link is only contained, if an authorisation sub-resource has been already created.

Example

Request

POST https://api.cedacri.it/psd2/v1.2/bg/06085/v1/payments/cross-border-credit-transfers
X-Request-ID: request-0001
PSU-IP-Address: 91.198.174.192
Content-Type: application/json
Authorization: Bearer ldiS526vZhi74oUZw2iJ6td4p5zR39mZ94tAy1vYqmFOKmtXl6SOpJ
{
"debtorAccount": {
"iban": "IT42Z0608500100000000100001"
},
"instructedAmount": {
"currency": "EUR",

[7] Strong Customer Authentication (SCA) Status for payments and consents currently is not available for 'CORPORATE_IBK' PSU-ID-Type, therefore in this case the scaStatus link will not be returned in response.

```
   "amount": "1.00"
  },
  "creditorAccount": {
   "iban": "TR7800062611187151422976 63"
  },
  "creditorName": "Name",
  "creditorAgent": "AKBKTRIS005",
  "creditorAddress": {
   "city": "Ankara",
   "country": "076"
  },
  "remittanceInformationUnstructured": "Test 122345",
}
```


Response


```
HTTP/1.x 201 Created
X-Request-ID: request-0001
ASPSP-SCA-Approach: REDIRECT
Location: https://api.cedacri.it/psd2/v1.2/06085/v1/payments/cross-border-credit-
transfers/8c929c62-53f3-4543-97c0-0aed02b1d9bc
{
  "transactionStatus": "ACTC",
  "paymentId": "Id-f718885c2c5e13b83dd689f4",
  "transactionFees": {
      "currency": "EUR",
      "amount": "5.160"
    },
  "_links": {
    "scaRedirect": {
    "href": "
https://api.cedacri.it:9090/payment/confirm?abi=06085&lang=IT&d=eyJlbmMiOiJBMTI4Q0JDL
UhTMjU2IiwiYWxnIjoiUlNBLU9BRVAtMjU2In0.cXJ3FK8eiYEyIhqD-
af54hYFb5jKkTR45eUgIITIdvFRjxan6fgY uQX5vI4QxhqwDK2fBkbTylnpLRxYS9KTtDEA5we-
XJhTs4ZsO8QAZ6rC_J9AJ7597kTeH2lTtLyw1u4KRPg6R8RzgBByrD3WhpiDvL4T5Rncl_nByncHi1A
UuqGm1c9U1dbCUG61fGly74EpxIc2mP1NvvUKMk9wlJf6HZFJQWmAeMz2wptoFr6M_stpQflvHC
u41bx7kB-kQTLtyf0ssuDaTNZBnvxHpb3_kVgY6UGEDPj1mZbRLaaLTkK0YM-
Fm1voaj4wHm43xo03rLJxAS1t85vLtMkg.GdXxHtITSh0DHnGgXUtq9A.Yc-
TVVclmg73jxQsmK637UUzrA9UI_6SEiL8zHHI9-_W05aqHks0-
dlJPQBoHAlIUCF47aViGGGxip8IKSWuFkn7DwKw5-
7fsXZYAeDkPhdBJYiJ71suv3yunX2CZysOdPursNT4DoJSJtZdzENzSdgMi0VxOPT8Q_DgDi68L6dl4Ek
```

```
hhsj066z9xhOILLoOQymEJKObfF8hh6pFsdtTvlBR3kqdS0JcPDdGyuRLgemHT9HcABp1J8AqheXEd
oS-
b2X5owFoWdFwxFA40vBE0vVz0dfJlztYhhJBFX2V8W4f6si9nXg_zbQfH0mlARoiOp86EciBx2EUw3
kXDKIIPLGEx0ZnXLEBhRo9b_xkmhSRoVjMtDJfr_WeqVhNxALGL2V2NhCG_5v3YtOFvObPHQ.yUE
k5B0uK4VxV7aGdclVPg"
   },
   "scaStatus": {
     "href": "https://api.cedacri.it/psd2/v1.2/bg/06085/v1/payments/cross-border-credit-
transfers/Id-f718885c2c5e13b83dd689f4/authorisations/e63cf977-77ac-462d-a8a1-
761d64a9bda0"
      }
 }
}
```


10.2 Initiation for Standing Orders for Recurring/Periodic Payments

The recurring payments initiation function will be covered in this specification as a specific standing order initiation: The TPP can submit a recurring payment initiation where the starting date, frequency and conditionally an end date is provided. Once authorized by the PSU, the payment then will be executed by the ASPSP, if possible, following this "standing order" as submitted by the TPP.

POST /periodic-payments/{payment-product}

Path Parameters

Attribute	Type	Description
payment- product	String	The addressed payment product endpoint, e.g. for SEPA Credit Transfers (SCT). The list of products supported by Cedacri is: sepa-credit-transfers

Query Parameters

No specific query parameters defined.

Request Header

Attribute	Type	Condition	Description
Content-Type	String	Mandatory	application/json
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
Authorization	String	Mandatory	Bearer Token.
PSU-IP-Address	String	Mandatory	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.
TPP-Redirect-URI	String	Mandatory	URI of the TPP, where the transaction flow shall be redirected to after a Redirect.
TPP-Nok-Redirect-URI	String	Optional	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.
PSU-ID-Type	String	Conditional[8]	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility and the TPP wants to specify which one the user should use to authenticate. Possible values are: RETAIL or CORPORATE.
PSU-Device-ID	String	Optional	UUID (Universally Unique Identifier) of the device used by the PSU. UUID can identify a fisical device or an application installed on the device.
PSU-Ip-Port	String	Optional	The Port used in the communication between PSU and TPP
PSU-Accept	String	Optional	The Accept request HTTP header advertises which content types,

[8] Some ASPSPs offer alternative corporate platforms, technically based on different systems. If national bank code is 03440, possible values are: RETAIL, CORPORATE or CORPORATE_IBK.
To ensure the service correctly, if national bank code is 03440, it is mandatory that the TPP specify which type of corporate platform the PSU needs to access. In order to correctly identify which type of corporate platform the PSU needs, the TPP has to specify CORPORATE or CORPORATE_IBK.

			expressed as MIME types, the client is able to understand
PSU-Accept-Charset	String	Optional	The Accept-Charset request HTTP header advertises which character encodings the client understands
PSU-Accept-Encoding	String	Optional	The Accept-Encoding request HTTP header advertises which content encoding, usually a compression algorithm, the client is able to understand
PSU-Accept-Language	String	Optional	The Accept-Language request HTTP header advertises which languages the client is able to understand, and which locale variant is preferred
PSU-User-Agent	String	Optional	The User-Agent request header is a characteristic string that lets servers and network peers identify the application, operating system, vendor, and/or version of the

			requesting user agent.
PSU-Http-Method	String	Optional	HTTP method used in the communication between PSU and TPP. Accepted values are: • GET • POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.

Request Body

The following table gives an overview on the JSON structures of standard SEPA payment products for periodic payments:

Data Element	Type	SCT EU Core	Target2 Paym. Core
debtorAccount (incl. type)	Account Reference	Conditional[1]	Conditional[1]
instructedAmount (inc. Curr.)	Amount	Mandatory	Mandatory
creditorAccount	Account Reference	Mandatory	Mandatory
creditorName	Max70Text	Mandatory	Mandatory
creditorAgent	BICFI	Optional	Optional
creditorAddress	Address (valorized with parameters "country" and "city")	Optional	optional

remittance Information Unstructured	Max140Text	Mandatory	Mandatory

The country code required as input in the case of a foreign bank transfer is not the ISO code requested by the Berlin Group but the numeric one, Bdl code, specified by the Bank ofItaly at [https://infostat.bancaditalia.it/GIAVAInquiry-public/antit.html], that is represented by parameter "country" in creditorAddress.

[1] According to item 36 of the EBA Opinion of June 2020.

The debtor account can be selected later by the PSUs, directly from the ASPSP's interface.

In case a PSU has a unique PSD2 account, the selection of this account will occur automatically. This means that no other action will be required to the PSUs, effectively making their customer journey identical to the current one.

If National Bank Code is '03440' and 'PSU-ID-Type' is CORPORATE_IBK, field 'debtorAccount' is Mandatory.

In addition the following tags are used:

Tag	Type	Usage	Description
startDate	ISODate	Mandatory	The first applicable day of execution starting from this date is the first payment.
endDate	ISODate	Optional	The last applicable day of execution If not given, it is an infinite standing order.
frequency	Frequency Code	Mandatory	The frequency of the recurring payment resulting from this standing order. Possible values are: • Weekly

			• EveryTwoWeeks • Monthly • EveryTwoMonths • Quarterly • SemiAnnual • Annual • MonthlyVariable
dayOfExecution	Max2Text	Conditional	The format is following the regular expression \d{1,2}. If this field is set to "31" it indicates that the payment will be made at the end of the month, even if the "startDate" is not the last day of the month.
monthsOfExecution	Array of Max2Text	Conditional	The format is following the regular expression \d{1,2}. 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. This attribute is contained if and only if the frequency equals "MonthlyVariable". Example: An execution on January, April and October each year is addressed by ["1". "4", "10"].

The support for 'MonthlyVariable' type periodic payment depends on the ASPSP on which the payment is made, otherwise a "PAYMENT_FAILED" error will be returned. Currently this functionality is not supported for 'CORPORATE' and ‘CORPORATE_IBK’ PSU-ID-Type.

Response Code

The HTTP response code is 201.

Response Header

Attribute	Type	Condition	Description
Location	String	Mandatory	Location of the created resource (if created)
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
ASPSP-SCA-Approach	String	Mandatory	REDIRECT

Response Body

Attribute	Type	Condition	Description
transactionStatus	Transaction Status	Mandatory	Possible values are: RCVD, ACTC, CANC, RJCT, ACSC, ACCC, ACSP ACSP is set after a successful SCA
paymentId	String	Mandatory	Resource identification of the generated payment initiation resource.
transactionFees	Amount	Mandatory	It can be used by the ASPSP to transport transaction fees relevant for the underlying payments.
_links	Links	Mandatory	A list of hyperlinks to be recognised by the TPP. "scaRedirect": The link to which to redirect the PSU browser according to the SCA Redirect Approach. PSU lands on the ASPSP page in which it is shown a button to exit the payment initiation process and return

			to the TPP page; this is the "payment cancel link", as described in the document "Cedacri Sandbox - TPP Onboarding Procedure", chapter 3 "self": The link to the payment initiation resource created by this request. This link can be used to retrieve the resource data. "status": The link to retrieve the transaction status of the payment initiation. "scaStatus"[9]: The link to retrieve the scaStatus of the corresponding authorisation sub-resource. This link is only contained, if an authorisation sub-

[9] Strong Customer Authentication (SCA) Status for payments and consents currently is not available for 'CORPORATE_IBK' PSU-ID-Type, therefore in this case the scaStatus link will not be returned in response.

			resource has been already created.

Example

Request

```
POST https://api.cedacri.it/psd2/v1.2/06085/periodic-payments/sepa-credit-transfers
X-Request-ID: request-0001
PSU-IP-Address: 91.198.174.192
Content-Type: application/json
Authorization: Bearer ldiS526vZhi74oUZw2iJ6td4p5zR39mZ94tAy1vYqmFOKmtXl6SOpJ
{
 "debtorAccount": {
  "iban": "IT42Z0608500100000000100001"
 },
 "instructedAmount": {
  "currency": "EUR",
  "amount": "1.00"
 },
 "creditorAccount": {
  "iban": " IT42Z0608500120000000862916"
 },
 "creditorName": "Name",
 "remittanceInformationUnstructured": "Test 122345",
   "startDate": "2018-03-01",
   "frequency": "Monthly",
   "dayOfExecution": "01"
}
```

Response

```
HTTP/1.x 201
X-Request-ID: request-0001
ASPSP-SCA-Approach: REDIRECT
Location: https://api.cedacri.it/psd2/v1.2/06085/periodic-payments/sepa-credit-
transfers/8c929c62-53f3-4543-97c0-0aed02b1d9bc

{
 "transactionStatus": "ACTC",
 "paymentId": "Id-f718885c2c5e13b83dd689f4",
```

```
  "transactionFees": {
   "currency": "EUR",
   "amount": "5.160"
  },
  "_links": {
   "scaRedirect": {
   "href": "
https://api.cedacri.it:9090/payment/confirm?abi=06085&lang=IT&d=eyJlbmMiOiJBMTI4Q0JDL
UhTMjU2IiwiYWxnIjoiUlNBLU9BRVAtMjU2In0.cXJ3FK8eiYEyIhqD-
af54hYFb5jKkTR45eUgIITIdvFRjxan6fgY_uQX5vI4QxhqwDK2fBkbTylnpLRxYS9KTtDEA5we-
XJhTs4ZsO8QAZ6rC_J9AJ7597kTeH2lTtLyw1u4KRPg6R8RzgBByrD3WhpiDvL4T5Rncl_nByncHi1A
UuqGm1c9U1dbCUG61fGly74EpxIc2mP1NvvUKMk9wlJf6HZFJQWmAeMz2wptoFr6M_stpQflvHC
u41bx7kB-kQTLtyf0ssuDaTNZBnvxHpb3_kVgY6UGEDPj1mZbRLaaLTkK0YM-
Fm1voaj4wHm43xo03rLJxAS1t85vLtMkg.GdXxHtITSh0DHnGgXUtq9A.Yc-
TVVclmg73jxQsmK637UUzrA9UI_6SEiL8zHHI9-_W05aqHks0-
dlJPQBoHAlIUCF47aViGGGxip8IKSWuFkn7DwKw5-
7fsXZYAeDkPhdBJYiJ71suv3yunX2CZysOdPursNT4DoJSJtZdzENzSdgMi0VxOPT8Q_DgDi68L6dl4Ek
hhsj066z9xhOILLoOQymEJKObfF8hh6pFsdtTvlBR3kqdS0JcPDdGyuRLgemHT9HcABp1J8AqheXEd
oS-
b2X5owFoWdFwxFA40vBE0vVz0dfJlztYhhJBFX2V8W4f6si9nXg_zbQfH0mlARoiOp86EciBx2EUw3
kXDKIIPLGEx0ZnXLEBhRo9b_xkmhSRoVjMtDJfr_WeqVhNxALGL2V2NhCG_5v3YtOFvObPHQ.yUE
k5B0uK4VxV7aGdclVPg"
   },
   "scaStatus": {
     "href": "https://api.cedacri.it/psd2/v1.2/bg/06085/v1/ periodic-payments/sepa-credit-
transfers/Id-f718885c2c5e13b83dd689f4/authorisations/e63cf977-77ac-462d-a8a1-
761d64a9bda0"
     }
  }
}
```


10.3 Get Transaction Status Request

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

Possibility of checking the status of a payment initiation.

Path Parameters

Attribute	Type	Description
payment- product	String	The addressed payment product endpoint, e.g. for SEPA Credit Transfers (SCT). The list of products supported by Cedacri is: sepa-credit-transfers target-2-payments cross-border-credit-transfers instant-sepa-credit-transfers
payment-service	String	Possible values are: payments periodic-payments
paymentId	String	Resource Identification of the related payment.

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
Authorization	String	Mandatory	Bearer Token.
Accept	String	Optional	Only JSON format is supported.

PSU-ID-Type	String	Conditional[10]	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility and the TPP wants to specify which one the user should use to authenticate. Possible values are: RETAIL or CORPORATE.
PSU-Device-ID	String	Optional	UUID (Universally Unique Identifier) of the device used by the PSU. UUID can identify a fisical device or an application installed on the device.
PSU-Ip-Port	String	Optional	The Port used in the communication between PSU and TPP
PSU-Accept	String	Optional	The Accept request HTTP header advertises which content types, expressed as MIME types, the client is able to understand
PSU-Accept-Charset	String	Optional	The Accept-Charset request HTTP header advertises

[10] Some ASPSPs offer alternative corporate platforms, technically based on different systems. If national bank code is 03440, possible values are: RETAIL, CORPORATE or CORPORATE_IBK.
To ensure the service correctly, if national bank code is 03440, it is mandatory that the TPP specify which type of corporate platform the PSU needs to access. In order to correctly identify which type of corporate platform the PSU needs, the TPP has to specify CORPORATE or CORPORATE_IBK.

			which character encodings the client understands
PSU-Accept-Encoding	String	Optional	The Accept-Encoding request HTTP header advertises which content encoding, usually a compression algorithm, the client is able to understand
PSU-Accept-Language	String	Optional	The Accept-Language request HTTP header advertises which languages the client is able to understand, and which locale variant is preferred
PSU-User-Agent	String	Optional	The User-Agent request header is a characteristic string that lets servers and network peers identify the application, operating system, vendor, and/or version of the requesting user agent.
PSU-Http-Method	String	Optional	HTTP method used in the communication between PSU and TPP.

			Accepted values are: • GET • POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.
PSU-IP-Address	String	Optional	The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between the PSU and the TPP. If not available, the TPP shall use the IP Address used by the TPP when submitting this request.

Note: In the API transaction status request, it is mandatory to fill in the "authorization" field with a valid access token, otherwise the TPP will have to wait for the PSU to connect and log in again. In order to avoid making an API transaction status request with an expired access token, the TPP must update the access token before it expires. The TPP knows the expiration of the access token from the "expires_in", field in response of the OAuth token request (chapter 8.1, step 5), in which the remaining lifetime of the access token is specified in seconds.

To update the access token the TPP will have to callback the API transaction status without adding the "authorization" header, in order to receive a "401" response code and thus proceed again to the PSU login execution. This will allow the TPP to get a new token before it expires.

Query Parameters

No specific query parameter defined.

Request Body

No request body.

Response Code

The HTTP response code is 200.

Response Header

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

Response Body

Attribute	Type	Condition	Description
transactionStatus	Transaction Status	Mandatory	Possible values are: RCVD, ACTC, CANC, RJCT, ACSC, ACCC, ACSP, PNDG ACSP is set after a successful SCA ACCC status is not managed for payments abroad (cross-border-credit-transfer payment product).

			PNDG is only for SCT Instant Payment in doubt status and can be setted only after a successful SCA If the PSU does not complete a required SCA within the required timeframe (5 minutes) the payment resource's status will be set to 'RJCT'[11]

Example

Request
GET https://api.cedacri.it/psd2/v1.2/bg/06085/v1/payments/sepa-credit-transfers/Id-f718885c2c5e13b83dd689f4/status X-Request-ID: request-0001 Authorization: Bearer ldiS526vZhi74oUZw2iJ6td4p5zR39mZ94tAy1vYqmFOKmtXl6SOpJ
Response

HTTP/1.1 200
X-Request-ID: request-0001
Content-Type: application/json
{
"transactionStatus": "ACSC"
}

[11] This feature will be effective on all users, with the exception of NEXI type Corporate users.

10.4 Get Payment Request

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

Returns the content of a payment object.

Path Parameters

Attribute	Type	Description
payment- product	String	The addressed payment product endpoint, e.g. for SEPA Credit Transfers (SCT). The list of products supported by Cedacri is:

		sepa-credit-transfers target-2-payments cross-border-credit-transfers
payment-service	String	Possible values are: payments periodic-payments bulk-payments
paymentId	String	ID of the corresponding payment initiation object as returned by a Payment Initiation Request

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
Authorization	String	Mandatory	Bearer Token.
PSU-ID-Type	String	Conditional[12]	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility and the TPP wants to specify which one the user should use to authenticate. Possible values are:

[12] Some ASPSPs offer alternative corporate platforms, technically based on different systems. If national bank code is 03440, possible values are: RETAIL, CORPORATE or CORPORATE_IBK.
To ensure the service correctly, if national bank code is 03440, it is mandatory that the TPP specify which type of corporate platform the PSU needs to access. In order to correctly identify which type of corporate platform the PSU needs, the TPP has to specify CORPORATE or CORPORATE_IBK.

			RETAIL or CORPORATE.
PSU-Device-ID	String	Optional	UUID (Universally Unique Identifier) of the device used by the PSU. UUID can identify a fisical device or an application installed on the device.
PSU-Ip-Port	String	Optional	The Port used in the communication between PSU and TPP
PSU-Accept	String	Optional	The Accept request HTTP header advertises which content types, expressed as MIME types, the client is able to understand
PSU-Accept-Charset	String	Optional	The Accept-Charset request HTTP header advertises which character encodings the client understands
PSU-Accept-Encoding	String	Optional	The Accept-Encoding request HTTP header advertises which content encoding, usually a compression algorithm, the client is able to understand
PSU-Accept-Language	String	Optional	The Accept-Language request HTTP header advertises which

			languages the client is able to understand, and which locale variant is preferred
PSU-User-Agent	String	Optional	The User-Agent request header is a characteristic string that lets servers and network peers identify the application, operating system, vendor, and/or version of the requesting user agent.
PSU-Http-Method	String	Optional	HTTP method used in the communication between PSU and TPP. Accepted values are: • GET • POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.
PSU-IP-Address	String	Optional	The forwarded IP Address header field consists of the corresponding HTTP request IP Address

			field between the PSU and the TPP. If not available, the TPP shall use the IP Address used by the TPP when submitting this request.

Note: In the API payment request, it is mandatory to fill in the "authorization" field with a valid access token, otherwise the TPP will have to wait for the PSU to connect and log in again. In order to avoid making an API payment request with an expired access token, the TPP must update the access token before it expires. The TPP knows the expiration of the access token from the "expires_in", field in response of the OAuth token request (chapter 8.1, step 5), in which the remaining lifetime of the access token in seconds is specified.

To update the access token, the TPP will have to callback the API payment request without adding the "authorization" header, in order to receive a "401" response code and thus proceed again with the PSU login execution. So the TPP will be able to get a new token before it expires.

Query Parameters

No specific query parameter defined.

Request Body

No request body.

Response Code

The HTTP response code is 200.

Response Header

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

Response Body

The response body is dependent on the parameter {payment-service}. It contains the view of the ASPSP on the addressed payment resource.

Data Element	SCT EU Core	Target2 Paym. Core	Cross Border CT Core
debtorName	mandatory	mandatory	mandatory
debtorAccount (incl. type)	mandatory	mandatory	mandatory
instructedAmount (inc. Curr.)	mandatory	mandatory	mandatory
creditorAccount	mandatory	mandatory	mandatory
creditorName	mandatory	mandatory	mandatory
creditorAgent	optional	optional	mandatory
creditorAddress	optional	optional	mandatory
remittance Information Unstructured	optional	optional	optional
transactionStatus	mandatory	mandatory	mandatory
paymentId	mandatory	mandatory	mandatory
transactionFees	mandatory	mandatory	mandatory

Example

Request
GET https://api.cedacri.it/psd2/v1.2/bg/06085/v1/payments/sepa-credit-transfers/Id-f718885c2c5e13b83dd689f4 X-Request-ID: request-0001 Authorization: Bearer ldiS526vZhi74oUZw2iJ6td4p5zR39mZ94tAy1vYqmFOKmtXl6SOpJ
Response

HTTP/1.1 200
X-Request-ID: request-0001
Content-Type: application/json
{
"debtorName": "DebtorName",
"debtorAccount": {
"iban": "IT42Z0608500120000000862916"
},
"instructedAmount": {
"currency": "EUR",
"amount": "1"
},
"creditorAccount": {
"iban": "IT23J0542404010000001063502"
},
"creditorName": "name",
"remittanceInformationUnstructured": "description"
"transactionStatus": "ACSC"
"paymentId": "Id-f718885c2c5e13b83dd689f4",
"transactionFees": {
"currency": "EUR",
"amount": "5.160"
}
}

10.5 Payment Cancellation Request

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

It initiates the cancellation of a payment. Depending on the payment-service, the payment-product and the ASPSP's implementation, this TPP call might be sufficient to cancel a

payment. If an authorization of the payment cancellation is mandated by the ASPSP, a corresponding hyperlink will be contained in the response message.

Path Parameters

Attribute	Type	Description
payment- product	String	The payment product, under which the payment under paymentId has been initiated. The list of products supported by Cedacri is: sepa-credit-transfers target-2-payments
payment-service	String	Possible values are: payments (only for the future payments), periodic-payments
paymentId	String	Resource Identification of the related payment.

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
Authorization	String	Mandatory	Bearer Token.
PSU-ID-Type	String	Conditional[13]	Type of the PSU-ID, needed in scenarios

[13] Some ASPSPs offer alternative corporate platforms, technically based on different systems. If national bank code is 03440, possible values are: RETAIL, CORPORATE or CORPORATE_IBK.
To ensure the service correctly, if national bank code is 03440, it is mandatory that the TPP specify which type of corporate platform the PSU needs to access. In order to correctly identify which type of corporate platform the PSU needs, the TPP has to specify CORPORATE or CORPORATE_IBK.

			where PSUs have several PSU-IDs as access possibility and the TPP wants to specify which one the user should use to authenticate. Possible values are: RETAIL or CORPORATE.
PSU-Device-ID	String	Optional	UUID (Universally Unique Identifier) of the device used by the PSU. UUID can identify a fisical device or an application installed on the device.
PSU-Ip-Port	String	Optional	The Port used in the communication between PSU and TPP
PSU-Accept	String	Optional	The Accept request HTTP header advertises which content types, expressed as MIME types, the client is able to understand
PSU-Accept-Charset	String	Optional	The Accept-Charset request HTTP header advertises which character encodings the client understands

PSU-Accept-Encoding	String	Optional	The Accept-Encoding request HTTP header advertises which content encoding, usually a compression algorithm, the client is able to understand
PSU-Accept-Language	String	Optional	The Accept-Language request HTTP header advertises which languages the client is able to understand, and which locale variant is preferred
PSU-User-Agent	String	Optional	The User-Agent request header is a characteristic string that lets servers and network peers identify the application, operating system, vendor, and/or version of the requesting user agent.
PSU-Http-Method	String	Optional	HTTP method used in the communication between PSU and TPP. Accepted values are: • GET

			• POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.
PSU-IP-Address	String	Optional	The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between the PSU and the TPP. If not available, the TPP shall use the IP Address used by the TPP when submitting this request.
TPP-Redirect-URI	String	Mandatory	URI of the TPP, where the transaction flow shall be redirectedto after a SCA Redirect.
TPP-Nok-Redirect-URI	String	Optional	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

Query Parameters

No specific query parameters defined.

Request Body

No request body.

Response Code

If the DELETE is sufficient for cancelling the payment: HTTP response code is 204.

If the DELETE is not sufficient for cancelling the payment since an authorisation of the cancellation by the PSU is needed: HTTP response code is 202.

Response Header

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

Response Body

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

In case of HTTP code 202, the following body is used:

Attribute	Type	Condition	Description
transactionStatus	Transaction Status	Mandatory	Possible values are: RCVD, ACTC, CANC, RJCT, ACSC, ACCC, ACSP, PNDG
_links	Links	Mandatory	A list of hyperlinks to be recognized by the TPP. "scaRedirect": The

			link the PSU's browser is redirected to, according to the SCA Redirect Approach. PSU lands on the ASPSP page in which it is shown a button to exit the payment cancellation process and return to the TPP page; this is the "payment cancel link", as described in the document "Cedacri Sandbox - TPP Onboarding Procedure", chapter 3 "scaStatus": The link to retrieve the scaStatus of the corresponding cancellation authorisation sub-resource. This link is only contained, if an authorisation sub-resource has been already created.

Example

Request

```
DELETE https://api.cedacri.it/psd2/v1.2/bg/06085/v1/payments/sepa-credit-transfers/Id-f718885c2c5e13b83dd689f4
X-Request-ID: request-0001
Authorization: Bearer ldiS526vZhi74oUZw2iJ6td4p5zR39mZ94tAy1vYqmFOKmtXl6SOpJ
```

Response (204)

```
HTTP/1.1 204
X-Request-ID: request-0001
```

Response (202)

```
HTTP/1.1 202
X-Request-ID: request-0001

{
   "transactionStatus": "ACSP",
   "_links": {
      "scaRedirect": {
         "href": "https://api.cedacri.it:9090/payment/cancellation-confirm?abi=06085&lang=IT&d=eyJlbmMiOiJBMTI4Q0JDLUhTMjU2IiwiYWxnIjoiUlNBLU9BRVAtMjU2In0.nvEkajp8jdmrg6rXwVm60bbUhs6UJbn-iiggTAGp9r6StzzvcgEGewbSN-tNNRZN3OzUZKX-l6ER0pIB9vAS64hKnKZZZYew8djJL5TfbVWr5n3VfxLdLwBc-10uPCMZeVtjm8wqtUv-_3kdYzQJE2w5YBsJTbfruSw_MlkGqlEycFe5CziFPEGe_q6-yQX_EC4ZnZb3n12WTUM8fwEP-BwYClu3t6LfO6gaGpnxE2YQzjaY7QvGh4MN6PqasV2mwNk4vbu57m9owOOm1n5AWmcNOP4ZzyjKAwOFTexg7R68t6RelAyzk1LuFI3yQUSGq6Ld5UUaLdTJGCs1xaGIDQ.lzeifSsZheg9TGIMz-eI9g.c61Im7XIcGPtcywsoNzJYzuI83gelXMXPZVKFjS-l_GyYmKy4fDB1Sw9R4Dd57HXIZGWKYzCqzGAOKVxI0y958boGnWvXwesOT1nMLdpfaNgyXk6gt-r7BxnM8eVBDBIBLHzCZoRWreKEI5-0C9HK7HLWJnnzsThUF13bvWtRKMtQ0HX5E8qrwvWnPh6Vm0pIl2Mu8qouhD70xpQ1axRjCIzwsG-wJTSxYN4jApCiUttVeA0Did8IlGC2s6_I_7dK2qvG6nN022RzdV8DSqHmCL047rdjbXqXtMf0lv8ALFxp26JGMQyzD7UN_bayeyGTfOuKTQe12TVtgEtMR5vRjcqpFwnp-BysUVFzCra_b12Jwe1WSAYDfFPMQv_Xd7reDlvUd6hGAA7CjZWwRa67zRl3qVyFJP2MP7dSnpe2AgqS3POBWka_LHMKW9FsncQ-DX2Qr0BnkMHzputaSq9ct0CmKbi-7zaySDPYBfbgL2Z8tCvKodLnkE8ViQFonphbCkM1ea8z23qzjplm8tYKhnvwlSp61Sstus_epmID6EmexdqWoYc7-oifkuXwkB8YozhUBgBS84QcNr78p9dYC9tJ0Mssowh62RrJT52RE4FRWJAlcZRfWWTKbqZZoBit4eM6rpzYWOrH5WyhDDBYaG9tGBc6l44ldVOPdvK8dMu0S_4jyNVvUtqGHlHMjCYXqnm9sL7ymytHmRoXLNKqlYJ_J8wJrwpwgReTsoRjkF6kSFfZw-_AomTIu-J_ghnlBmE6OthVX4RzIkNb0MCRfsXL-taBh4w2d4HcAdtvAA8r5yonc15Q-qy3CGjlwg6YZaDrSSMB5qQNbyEFIerd2YYOTdgQe42Z1mhIejKpDM.-yz9HaNg4Du8wa00AYnMUA&cancel_link=https%3A%2F%2Fimg.freepik.com%2Ffree-
```

```
vector%2Fko-retro-comic-speech-bubble-effect-pop-art-style_1308-
134101.jpg%3Fsize%3D626%26ext%3Djpg&brand=Cedacri%20S.p.A."
      },
      "scaStatus": {
        "href": "https://api.cedacri.it/psd2/v1.2/bg/06085/v1/periodic-payments/sepa-credit-
transfers/Id-762c756670e0c6ec00e5e446/cancellation-authorisations/ee3eb2eb-7e09-45f0-
b09f-b479fcfa6e46"
      }
   }
}
```


Currently this functionality is not supported for 'CORPORATE_IBK' PSU-ID-Type, therefore in this case a DELETE payment request is sufficient to cancel the payment, resulting in an HTTP response code 204 (No Content).

10.6 Bulk Payments initiation and sign

Initiation of bulk Payments

NOTE: Bulk payments are supported only within Corporate Banking accounts and functionality. This functionality isn't intended for private banking accounts.

NOTE2: Valid Payment Products for Bulk Payments are only sepa-credit-transfers and cross-border payments.

General considerations for single payments are valid also in bulk-payments with some differences. Data types are the same but can change how they are handled or used withing a JSON encoded message to pack more than one payment in the same message. So there is an array of payments instead of a single creditor data as also explained in BerlinGropup documentation.

POST /v1/bulk-payments/{payment-product}

This creates a bulk payment initiation request at the ASPSP.

Path Parameters

Attribute	Type	Description
payment- product	String	The addressed payment product endpoint, e.g. for SEPA Credit Transfers (SCT). The list of products supported by Cedacri is:

		• sepa-credit-transfers • cross-border-credit-transfers

Query Parameters
No specific query parameters defined.

Request Header

Attribute	Type	Condition	Description
Content-Type	String	Mandatory	application/json
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
Authorization	String	Mandatory	Bearer Token.
PSU-IP-Address	String	Mandatory	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.
TPP-Redirect-URI	String	Mandatory	URI of the TPP, where the transaction flow shall be redirected to after a Redirect.
TPP-Nok-Redirect-URI	String	Optional	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.
PSU-ID-Type	String	Optional	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility. Possible value is: CORPORATE.

			Bulk payments are available only for corporate.If this field is not filled, PSU-ID-Type default value is RETAIL.
PSU-Device-ID	String	Optional	UUID (Universally Unique Identifier) of the device used by the PSU. UUID can identify a fisical device or an application installed on the device.
PSU-Ip-Port	String	Optional	The Port used in the communication between PSU and TPP
PSU-Accept	String	Optional	The Accept request HTTP header advertises which content types, expressed as MIME types, the client is able to understand
PSU-Accept-Charset	String	Optional	The Accept-Charset request HTTP header advertises which character encodings the client understands
PSU-Accept-Encoding	String	Optional	The Accept-Encoding request HTTP header advertises which content encoding, usually a compression algorithm, the client is able to understand
PSU-Accept-Language	String	Optional	The Accept-Language request HTTP header advertises which languages the client is able to understand, and which locale variant is preferred
PSU-User-Agent	String	Optional	The User-Agent request header is a characteristic string that lets servers and network peers identify the application, operating system, vendor, and/or

			version of the requesting user agent.
PSU-Http-Method	String	Optional	HTTP method used in the communication between PSU and TPP. Accepted values are: • GET • POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.
TPP-Notification-URI	String	Optional	URI for the Endpoint of the TPP-API to which the status of the payment initiation should be sent. URIs which are provided by TPPs in TPP-Notification-URI shall comply with the domain secured by the eIDAS QWAC certificate of the TPP in the field CN or SubjectAltName of the certificate.
TPP-Notification-Content-Preferred	String	Optional	String value is PROCESS or LAST. The usage of the constants supports the following semantics: • PROCESS: A notification on all changes on transactionStatus attributes is preferred by the TPP. • LAST: Only a notification on the last transactionStatus as available in the XS2A interface is preferred by the TPP.

Request Body
The following table gives an overview on the JSON structures of standard SEPA payment products for bulk payments:

Attribute	Type	Condition	Description
batchBookingPreferred	Boolean	Optional	If this element equals true, the PSU prefers only one booking entry. If this element equals false, the PSU prefers individual booking of all contained individual transactions. The ASPSP will follow this preference according to contracts agreed on with the PSU.
debtorAccount	Account Reference	Mandatory	
requestedExecutionDate	ISODate	Mandatory	The payments contained in this bulk will be executed at the addressed date. Mandatory for bulk payments.
payments	Bulk Entry	Mandatory	The Bulk Entry Type is a type which follows the JSON formats for the supported products for single payments

The country code required as input in the case of a foreign bank transfer is not the ISO code requested by the Berlin Group but the numeric one, Bdl code, specified by the Bank of Italy at [https://infostat.bancaditalia.it/GIAVAInquiry-public/antit.html],that is represented by parameter "country" in creditorAddress.

[1] According to item 36 of the EBA Opinion of June 2020.
The debtor account can be selected later by the PSUs, directly from the ASPSP's interface.
In case a PSU has a unique PSD2 account, the selection of this account will occur automatically.
This means that no other action will be required to the PSUs, effectively making their customer journey identical to the current one.

Specifically for bulk payments, had been added support for new json fields for a bulk entry:

Data Element	Type	SCT EU Core	Cross BorderCT Core	Description
purposeCode	*Purpose Code*	Mandatory	Mandatory	

chargeBearer	*Charge Bearer*	n.a.	Mandatory	Supported values: 'DEBT', 'CRED' and 'SHAR'. The value must be equal to 'SHAR' if the 'country' associated to 'creditorAddress' belongs to the European Economic Area (EEA).

Response Code
The HTTP response code equals 201.

Response Header

Attribute	Type	Condition	Description
Location	String	Mandatory	Location of the created resource (if created)
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
ASPSP-SCA-Approach	String	Mandatory	REDIRECT
ASPSP-Notification-Support	Boolean	Conditional	true if the ASPSP supports resource status notification services. false if the ASPSP supports resource status notification in general, but not for the current request
ASPSP-Notification-String	String	Conditional	This field must be provided if the ASPSP-Notification-Support =true. The ASPSP might consider the notification content as preferred by the TPP, but can also respond independently of the preferred request.

Response Body

Attribute	Type	Condition	Description
transactionStatus	Transaction Status	Mandatory	Possible values are:

			RCVD, ACTC, CANC, RJCT, ACSC, ACCC, ACSP ACSP is set after a successful SCA
paymentId	String	Mandatory	Resource identification of the generated payment initiation resource.
_links	Links	Mandatory	A list of hyperlinks to be recognised by the TPP. "scaRedirect": The link to which to redirect the PSU browser according to the SCA Redirect Approach. PSU lands on the ASPSP page in which it is shown a button to exit the payment initiation process and return to the TPP page; this is the "payment cancel link", as described in the document "Banca Cedacri Sandbox - TPP Onboarding Procedure", chapter 3 "self": The link to the payment initiation resource created by this request. This link can be used to retrieve the resource data. "status": The link to retrieve the transaction status of the payment initiation.

			"scaStatus": The link to retrieve the scaStatus of the corresponding authorisation sub-resource. This link is only contained if an authorisation sub-resource has been already created.

Example

Request SEPA

POST https:// ://api.cedacri.it/psd2/v1.2/bg/06085/v1/bulk-payments/*sepa-credit-transfers*
X-Request-ID: request-0001
PSU-IP-Address: 91.198.174.192
Content-Type: application/json
Authorization: Bearer ldiS526vZhi74oUZw2iJ6td4p5zR39mZ94tAy1vYqmFOKmtXl6SOpJ
PSU-ID-Type: CORPORATE


```
{
   "batchBookingPreferred": "true",
   "debtorAccount": {
      "iban": "IT43D0304822600000000081393"
   },
   "requestedExecutionDate": "2024-12-23",
   "payments": [{
         "instructedAmount": {
            "currency": "EUR",
            "amount": "3.50"
         },
         "creditorName": "Creditor name 123 sepa",
         "creditorAccount": {
            "iban": "IT42Z0542400100000000100001"
         },
         "remittanceInformationUnstructured": "Test payment 123",
         "purposeCode": "OTHR"
      }, {
         "instructedAmount": {
            "currency": "EUR",
            "amount": "4.11"
         },
         "creditorName": "Creditor name 456 sepa",
         "creditorAccount": {
            "iban": "IT42Z0603200100000000100001"
         },
         "remittanceInformationUnstructured": "Test payment 456",
         "purposeCode": "OTHR"
      }
   ]
}
```


Request Cross border

POST https://api.cedacri.it /psd2/v1.2/bg/06085/v1/bulk-payments/cross-border-credit-transfers
X-Request-ID: request-0001
PSU-IP-Address: 91.198.174.192
Content-Type: application/json
Authorization: Bearer ldiS526vZhi74oUZw2iJ6td4p5zR39mZ94tAy1vYqmFOKmtXl6SOpJ
PSU-ID-Type: CORPORATE


```
{
   "batchBookingPreferred": "true",
   "debtorAccount": {
      "iban": "IT43D0304822600000000081393"
   },
   "requestedExecutionDate": "2024-12-23",
   "payments": [{
         "instructedAmount": {
            "currency": "USD",
            "amount": "23.50"
         },
         "creditorName": "Creditor name 123 cross",
         "creditorAgent": "BOFAUS3N",
         "creditorAddress": {
            "city": "Dallas",
            "country": "US"
         },
         "creditorAccount": {
            "bban": "3751736507"
         },
         "remittanceInformationUnstructured": "Bank of America 123 payment",
         "purposeCode": "OTHR",
         "chargeBearer": "SHAR"
      }, {
         "instructedAmount": {
            "currency": "USD",
            "amount": "34.99"
         },
         "creditorName": "Creditor name 456 cross",
         "creditorAgent": "BOFAUS3N",
         "creditorAddress": {
            "city": "Dallas",
            "country": "US"
         },
         "creditorAccount": {
            "bban": "3751736509"
         },
         "remittanceInformationUnstructured": "Bank of America 456 payment",
         "purposeCode": "OTHR",
         "chargeBearer": "SHAR"
      }
   ]
}
```


Response


```
{
   "paymentId": "Id-45a620677cfec5ba3ef47928",
   "transactionStatus": "RCVD",
   "_links": {
      "scaRedirect": {
         "href":
"https://sandbox.cedacri.it:9091/payment/confirm?abi=03048&lang=IT&d=eyJlbmMiOiJBMTI4Q0JDLUhTMjU2IiwiYWxnIjoi
```

```
UlNBLU9BRVAtMjU2In0.ZQH0yQ1PQDubiT6Io0ojUxbK6miW1FAeHe6Pq4F1t33pRwmzpwKYTK7nzH66FGEw2ZmIJLSj38_M3
npN1U03Nodx0c-kAu90sZjxvQrSINj9vjia7vkNUDXI-
8J3KPE4MUBAgvILPDa_FdGHUGOaFH6nR67r4tQ1vILcoNl5vPmwLNbOQqjKrOzpk-ptbbIS5dFceXfv-
xUjGI3Fb3X61APPB0KZN1q0uI0_HCSzerjkfHkE1Tb6JmSMpLczwH5S692zuo3M2ujF-
GBGNU76UweJeuiCZx3FNMnlKmnuhuVk79Hz-
9xXwAmDRqM2XH7Og6M7otFDHhuRLMWOwxoeyw._NrW81bvKa0nYRicslGBpw.1pTD8yjlCDGCe3j9kAD0AiEubGZa-
sDB8ifQCiRSqQbciL-
tn5kLBP78txW_BCy25V__e6EbKl3DCVomPk13LVLV1ZG1hORRB1YvixoQ6it8_K1vbnY2Z1qxU5SyyS_moipzhrLKJL9plHrhjWm
W1SzW2KnprZM0tZ5N42hN2sLFKMBsX2MAiEW5LueHGKalfw3cINoi9_SPH7-
7XITtAKUBPJQEjDs6w5pHCnrfYCA8Xr8SEVfmLMgT_8Ln2vIrpWh3l_YyHvwYlj1nXlD0Ox0TQ9m_kDtd8gjDbIhV3jvYgsBT-
fgV4O9G3YR_lmMIVPfjSGNCPuPlFeL0UN7LnES7w6S4GkWYI3wh-8PzRXaH1mDRTwgOSy8QKooBxA9-
xLdWVYmMiMVqX_0McHotZ-Fb0I8IC0veWN5BKB0Qx0bYacxSU2C-fINmZobfKxtILTK5XBNkELjJJv12kEOHp7LvFveG-
Td8NzPy4jONWjkrbx-
KEPkbz1JXBSKEykobZME_7ya1Gr5LBWutDPoYXbIqc9lJ8JzXK059hRTw20WmT5EV1PTUSm6VLfRsxEuYEqRmrmvVPS_jOKbLj
2QIk_DiGL8w0HqYZ3RmIfGUIdXThfwv-
Mll1jFWIu7F0ozAO32PUuR3QAYG7m6vOPg9Nesh_p8CB1WDfn5oIlyGDA1FJuiaIlQbBZrCq9M8adoOaTJUgHde8oHsuiUhzwog
uA.D0X7HKov4brGXQ0An6FC0A&cancel_link=https%3A%2F%2Fwww.google.it"
      },
      "scaStatus": {
         "href": "https://sandbox.cedacri.it/psd2/v1.2/bg/03048/v1/bulk-payments/sepa-credit-transfers/Id-
45a620677cfec5ba3ef47928/authorisations/88fc3ba2-8a7a-4420-9fd0-dfc087c99999"
      }
   }
}
```


Sign of bulk Payments

PUT /psd2bg/custom/{abi}/v1/bulk-payments/{paymentProduct}/sign/{paymentId}

This custom API is used to sign a bulk payment. Signing process will go thru a SCA process like with usual single payments. Actual execution is done after sign process had been completed by every signee approver.

Path Parameters

Attribute	Type	Description
abi	String	The bank identification code, which is the only path parameter, the user is identified through headers
payment-product	String	The addressed payment product endpoint, e.g. for SEPA Credit Transfers (SCT). The list of supported products are: • sepa-credit-transfers • cross-border-credit-transfers

paymentId	String	Resource Identification of the related bulk payment that need signing.

Query Parameters
No specific query parameters defined.

Request Header

Attribute	Type	Condition	Description
Content-Type	String	Mandatory	application/json
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
Authorization	String	Mandatory	Bearer Token.
PSU-IP-Address	String	Mandatory	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.
TPP-Redirect-URI	String	Mandatory	URI of the TPP, where the transaction flow shall be redirected to after a Redirect.
TPP-Nok-Redirect-URI	String	Optional	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.
PSU-ID-Type	String	Optional	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility. Possible value is: CORPORATE.

			Bulk payments are available only for corporate.
PSU-Device-ID	String	Optional	UUID (Universally Unique Identifier) of the device used by the PSU. UUID can identify a fisical device or an application installed on the device.
PSU-Ip-Port	String	Optional	The Port used in the communication between PSU and TPP
PSU-Accept	String	Optional	The Accept request HTTP header advertises which content types, expressed as MIME types, the client is able to understand
PSU-Accept-Charset	String	Optional	The Accept-Charset request HTTP header advertises which character encodings the client understands
PSU-Accept-Encoding	String	Optional	The Accept-Encoding request HTTP header advertises which content encoding, usually a compression algorithm, the client is able to understand
PSU-Accept-Language	String	Optional	The Accept-Language request HTTP header advertises which languages the client is able to understand, and which locale variant is preferred
PSU-User-Agent	String	Optional	The User-Agent request header is a characteristic string that lets servers and network peers identify the application, operating system, vendor, and/or version of the requesting user agent.

PSU-Http-Method	String	Optional	HTTP method used in the communication between PSU and TPP. Accepted values are: • GET • POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.
TPP-Notification-URI	String	Optional	URI for the Endpoint of the TPP-API to which the status of the payment initiation should be sent. URIs which are provided by TPPs in TPP-Notification-URI shall comply with the domain secured by the eIDAS QWAC certificate of the TPP in the field CN or SubjectAltName of the certificate.
TPP-Notification-Content-Preferred	String	Optional	String value is PROCESS or LAST. The usage of the constants supports the following semantics: • PROCESS: A notification on all changes on transactionStatus attributes is preferred by the TPP. • LAST: Only a notification on the last transactionStatus as available in the XS2A interface is preferred by the TPP.

Request Body
No specific query parameters defined.

Example

Request signing process
GET https://api.cedacri.it/psd2bg/custom/06085/v1/bulk-payments/sepa-credit-transfers/sign/Id-4fa15167527e8327d9eb2fe4 X-Request-ID: request-0001 Authorization: Bearer ldiS526vZhi74oUZw2iJ6td4p5zR39mZ94tAy1vYqmFOKmtXl6SOpJ
Response

{
"_links": {
"scaRedirect": {
"href": "https://sandbox.cedacri.it:9090/payment/signature-confirm?abi=06085&lang=IT&d=eyJlbmMiOiJBMTI4Q0JDLUhTMjU2IiwiYWxnIjoiUlNBLU9BRVAtMjU2In0.Kgf1OSna1B1FjhBQveuQP4YRNGjyMdrqY5BvTIz_ZUWO4BBWXVpzsiIIGk3LRCScNgCvcr-lmDz2VnTW-gKFktRmgqkLllEan_ovcgo_PUGNN1RUBCK8EtnKfgJiIrE9Rbcks5NgBl_3438umIfBd2M1f5hE0nBXQnjqp5E11YuiM9oyfMChFxRau-5G76AtBgKILQnQOCry1kd6EvKc00GcAPXicaztqcrpD7FgfY-A32q8Z4wOMpM3ILY53iDx3FovDVHqV_XYjFvMpAJTuTeawd_cwVluApaycDT2gNIagXRyfjT1W5yxSKp8u2FNRpP5RFDHk8erE1DR30AGZw.0lgW7oQtG7-0YUVkOpB8bw.SIfo3VuB52iybPAUNUMG1qDYZtvd7dDh8NdiIdWSJAA43EVm-WWCJqrQrXN6Pg2zMgTyQBhx0-Cr2pXBIBeShYqRgxbbxZNp8LZSMcW1WsQ3OoLedUA131fpUbeD1H5CxadJKx85YgKjgHakkKt4iu7TY2HgbtnvxVTmxMHz1j9XYO9PtF8wqEzSi6oDqseR5GWUhzz4LnB5r2wplp4WLBaJc37UjQBxhmAp5wLmVQwC4q4oXiWsrBLfSa3d_ZYbnmn72DCcZ9oEARP9G3U9F5MSJipRBJuYnFkwLia5q6WN-tm4M32Ud3qKwQcGDQqPrCJKRe5xMBpU0FJyo9b5DUpPnwhLSbyOa1Ad9uMA2YLxwAVjJhW7dpkmiSRi_b8kihgpFitNkZna0jRKXlE95ExESkMU5rv0lvjMeKr3yLUoixt8qv1mJbCxUvk0c6D-z6Xes10JT_vaVbp_Qa4MXEfwX-w32FfygNvOyE2Dl1E9VYbYfCf6FT_3eRt9G4lzuqBvNc52GUpRSLxjIcjbcD3l-o78fkk8NEqFgrwimPKl2FXxT8_MXnJhvgtbRdX-JCLYPWFkLQomPnKZYRXkLf_LPo0kfwErw6-7eDZuVM0Ins7F2M_nWE3SBfuli_2LOTbzgcx_YDw3U_Mn7j4HLQ5AX6LrwlE0ggy8094G1vWJkjlM-285uwapc-i3rVHLDOMc-CSLeiOZU-88vwuxNl49Ocy4qR-eBBSyP1mXUmy01b2De10GpLz6qVOUJaw5GhexXergD1gK4j3BBvtWGw.EkfGn62zlSz6EyPo9to1NA&cancel_link=https%3A%2F%2Fwww.google.it%3Fparam3%3Dnok%26param4%3Dmacchianera"
},
"scaStatus": {
"href": "https://sandbox.cedacri.it/psd2/v1.2/bg/06085/v1/bulk-payments/sepa-credit-transfers/Id-4fa15167527e8327d9eb2fe4/authorisations/88fc3ba2-8a7a-4420-9fd0-dfc087c99999"
}
}
}

10.7 Bulk Payment List Request

GET psd2/custom/{abi}/v1/bulk-payments/bulk-list

This is a custom API that returns the list of bulk payments that are linked to the account, the returned payments can be filtered with query parameters to specify:

- the date range of the payments
- the exclusion of already signed payments from the list

Request Body

No request body.

Path Parameters

Attribute	Type	Description
abi	String	The bank identification code, which is the only path parameter, the user is identified through headers

Query Parameters

Attribute	Type	Condition	Description
onlyWaitingForSign	Boolean	Mandatory	Query Parameter that specifies a request containing only the payments that need confirmation via signature
dateFrom	ISODate	Mandatory	Date value for the lower value of the list
dateTo	ISODate	Optional	Date value for the upper value of the list, if not present the default automatic value is the date of the request

Request Header

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

Consent-ID	String	Mandatory	Shall be contained since "Establish Consent Transaction" was performed via thisAPI before.
PSU-ID-Type	String	Conditional[14]	Type of the PSU-ID, needed in scenarios
			where PSUs have several PSU-IDs as access possibility and the TPP wants to specify which one the user should use to authenticate. Possible values are: RETAIL or CORPORATE.
PSU-Device-ID	String	Optional	UUID (Universally Unique Identifier) of the device used by the PSU. UUID can identify a fisical device or an application installed on the device.
PSU-Ip-Port	String	Optional	The Port used in the communication between PSU and TPP
PSU-Accept	String	Optional	The Accept request HTTP header advertises which content types, expressed as MIME types, the client is able to understand

[14] Some ASPSPs offer alternative corporate platforms, technically based on different systems. If national bank code is 03440, possible values are: RETAIL, CORPORATE or CORPORATE_IBK.
To ensure the service correctly, if national bank code is 03440, it is mandatory that the TPP specify which type of corporate platform the PSU needs to access. In order to correctly identify which type of corporate platform the PSU needs, the TPP has to specify CORPORATE or CORPORATE_IBK.

PSU-Accept-Charset	String	Optional	The Accept-Charset request HTTP header advertises which character encodings the client understands
PSU-Accept-Encoding	String	Optional	The Accept-Encoding request HTTP header advertises which content encoding, usually a compression algorithm, the client is able to understand
PSU-Accept-Language	String	Optional	The Accept-Language request HTTP header advertises which languages the client is able to understand, and which locale variant is preferred
PSU-User-Agent	String	Optional	The User-Agent request header is a characteristic string that lets servers and network peers identify the application, operating system, vendor, and/or version of the requesting user agent.

PSU-Http-Method	String	Optional	HTTP method used in the communication between PSU and TPP. Accepted values are: • GET

			• POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.
PSU-IP-Address	String	Optional	The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between the PSU and the TPP. If not available, the TPP shall use the IP Address used by the TPP when submitting this request.
TPP-Redirect-URI	String	Mandatory	URI of the TPP, where the transaction flow shall be redirectedto after a SCA Redirect.
TPP-Nok-Redirect-URI	String	Optional	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

Example

Request

GET https://api.cedacri.it/psd2bg/custom/06085/v1/bulk-payments/bulk-list?onlyWaitingForSign=1&dateFrom=2024-01-01&dateTo=2024-12-31
X-Request-ID: request-0001
Authorization: Bearer ldiS526vZhi74oUZw2iJ6td4p5zR39mZ94tAy1vYqmFOKmtXl6SOpJ

Response


```
[
{
 "paymentId": "Id-f718885c2c5e13b83dd689f4",
 "transactionStatus": "ACTC",
 "executionDate": 21-11-2024,
 "creationTimestamp": 1730212650000,
 "updateTimestamp": 1730212650000,
 "debtorAccount": {
      "iban": "IT42Z0608500100000000100001"
  },
 "instructedAmount": {
       "currency": "EUR",
       "amount": "30.00"
  },
  "numberOfDispositions":2,
  "paymentProduct": "sepa-credit-transfer"
},
{
 "paymentId": "Id-f718885c2c5e13b83dd4432f",
 "transactionStatus": "ACTC",
 "executionDate": 21-11-2024,
 "creationTimestamp": 1730212650000,
 "updateTimestamp": 1730212650000,
 "debtorAccount": {
      "iban": "IT42Z0608500100000000100001"
  },
 "instructedAmount": {
       "currency": "EUR",
       "amount": "20.00"
  },
  "numberOfDispositions":3,
  "paymentProduct": "sepa-credit-transfer"
},
]
```

11 Account Information Service

The Account Information Consent Flow that Cedacri has adopted is the Redirect SCA Approach with Implicit Start of the Authorization Process. With this flow, the Account Information Consent Request is followed by a redirection to the ASPSP SCA authorization website.

Here below is the base URL to access the API for the account information service in production environment.

[Base URL: api.cedacri.it/psd2/v1.2/bg/{national bank code}]

11.1 Consent Request on Dedicated Accounts

POST /v1/consents

Creates an account information consent resource on the ASPSP regarding access to accounts specified in this request.

Path Parameters

No specific path parameter defined.

Query Parameters

No specific query parameter defined.

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
Authorization	String	Mandatory	Bearer Token.
TPP-Redirect-URI	String	Mandatory	URI of the TPP, where the transaction flow shall be redirected to after a Redirect.
TPP-Nok-Redirect-URI	String	Optional	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.
PSU-IP-Address	String	Mandatory	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.
PSU-ID-Type	String	Conditional[15]	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility and the TPP wants to specify which one the user should use to authenticate. Possible values are: RETAIL or CORPORATE.
PSU-Device-ID	String	Optional	UUID (Universally Unique Identifier) of the device used by the PSU.

[15] Some ASPSPs offer alternative corporate platforms, technically based on different systems. If national bank code is 03440, possible values are: RETAIL, CORPORATE or CORPORATE_IBK.
To ensure the service correctly, if national bank code is 03440, it is mandatory that the TPP specify which type of corporate platform the PSU needs to access. In order to correctly identify which type of corporate platform the PSU needs, the TPP has to specify CORPORATE or CORPORATE_IBK.

			UUID can identify a fisical device or an application installed on the device.
PSU-Ip-Port	String	Optional	The Port used in the communication between PSU and TPP
PSU-Accept	String	Optional	The Accept request HTTP header advertises which content types, expressed as MIME types, the client is able to understand
PSU-Accept-Charset	String	Optional	The Accept-Charset request HTTP header advertises which character encodings the client understands
PSU-Accept-Encoding	String	Optional	The Accept-Encoding request HTTP header advertises which content encoding, usually a compression algorithm, the client is able to understand
PSU-Accept-Language	String	Optional	The Accept-Language request HTTP header advertises which languages the client is able to understand, and which locale variant is preferred

PSU-User-Agent	String	Optional	The User-Agent request header is a characteristic string that lets servers and network peers identify the application, operating system, vendor, and/or version of the requesting user agent.
PSU-Http-Method	String	Optional	HTTP method used in the communication between PSU and TPP. Accepted values are: • GET • POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.

Request Body

Attribute	Type	Condition	Description
access	Account Access	Mandatory	Supported values are: … {"availableAccounts": "allAccounts"} …

recurringIndicator	Boolean	Mandatory	true, if the consent isfor recurring access to the account data false, if the consentis for one access to each of the account data APIs.
validUntil	ISODate	Mandatory	This parameter callsfor a valid expirationdate for the requested consent. The content is the local ASPSP date in ISODate Format, e.g. 2017-10-30. If a maximal available date is requested, a date in the distant future is to be used: "9999- 12-31". The consentobject to be retrieved by the GET Consent Request will contain the adjusted date.
frequencyPerDay	Integer	Mandatory	This field indicates the requested maximum frequencyfor an access per day. If recurringIndicator is true, this attribute isset to “4”, if recurringIndicator is false this attribute isset to “1”
combinedService Indicator	Boolean	Mandatory	false

Response Code

The HTTP response code is 201.

Response Header

Attribute	Type	Condition	Description
Location	String	Mandatory	Location of the created resource.
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
ASPSP-SCA-Approach	String	Mandatory	REDIRECT

Response Body

Attribute	Type	Condition	Description
consentStatus	Consent Status	Mandatory	authentication status of the consent
consentId	String	Mandatory	Identification of the consent resource as it is used in the API structure
_links	Links	Mandatory	A list of hyperlinks to be recognised by the TPP. Type of links admitted in this response (which might be extended by single ASPSPs as

			indicated in its XS2A documentation): "scaRedirect": In case of an SCA Redirect Approach, the ASPSP is transmitting the link to redirect the PSU browser to. "scaStatus"[16]: The link to retrieve the scaStatus of the corresponding authorisation sub-resource. This link is only contained, if an authorisation sub-resource has been already created.

Example

Request
POST https://api.cedacri.it/psd2/v1.2/bg/06085/v1/consents X-Request-ID: request-0001 PSU-IP-Address: 91.198.174.192 TPP-Redirect-URI: https://tpp-redirect-ok-url Content-Type: application/json TPP-Nok-Redirect-URI: https://tpp-redirect-nok-url Authorization: Bearer o9xcq8V2zUg893gm6ROpO7XDUhaBkIOyilSHG0M11XCXFgjMPP7U6R

[16] Strong Customer Authentication (SCA) Status for payments and consents currently is not available for 'CORPORATE_IBK' PSU-ID-Type, therefore in this case the scaStatus link will not be returned in response.

```
{
  "access": {
    "availableAccounts": "allAccounts"
  },
  "recurringIndicator": false,
  "validUntil": "2019-10-10",
  "frequencyPerDay": 1,
  "combinedServiceIndicator": false
}
```


Response


```
HTTP/1.1 201
ASPSP-SCA-Approach: REDIRECT
X-Request-ID: request-0001
Content-Type: application/json
{
  "consentStatus": "received",
  "consentId": "8c929c62-53f3-4543-97c0-0aed02b1d9bc",
  "_links": {
    "scaRedirect": {
      "href":        "https://api.cedacri.it:9090/consent/init?consent_id=8c929c62-53f3-4543-97c0-
0aed02b1d9bc&d=eyJlbmMiOiJBMTI4Q0JDLUhTMjU2IiwiYWxnIjoiUlNBLU9BRVAtMjU2In0.A5W
Azn0nw3g2t8yBD6k0_J9gwhhaOpJBVtm53TgWv4Goo1wkWoe4MWPlmzZeysle9sTiG3y3CbViuA
qgpvH_pY-WKic2ZQgoTtJtgSexp3FN78FHrxuThrQDvzX8hC3Q2W4cJjL9n70rPwTycZaJI-
GsHwGIN8Bi95AsgQk0lXMAgU2a-Zlb1lxTMHl_VXewppjhw_-
Xe7jcn1V6cd3UHsfVj6oLXTM4FkhVItDO73ueFpdqWm8oTykrnCifhdt4mTGhgtSdBqDjJlyDHMzt7E
theVPXbPFcw84Y-
ESXjSS1ubTZYxHNI87B0idEXXpZOIKghtN0GG4h5sjtAEO_cw.ZRkTBQ1u2GoIaWxIYiU-
Bg.hKKNAvLi1_hWnCgXAsXoYGZrPpQaGw1bRPrQWMF9dXFJf_DO8cz-
E3CejjqBZSkSDibT2kBfafZJkPONaPxmQTtTc6aUTfERxMqX-ImID57fOEZkiSoJz_n7ANg-
tkx7BP13eW5nTyNAYryVyyaEoELwRBeTeuUbOpADsWuZV4cXXOKsdSfde0cphMj7euWtmaYFuth
EzELuXAoGZDqqKu3ENhVotbzdH0n_vKUs35Y.BHls0M-oxoStLfFTPUb4lQ"
    },
    "scaStatus": {
      "href": "https://api.cedacri.it/psd2/v1.2/bg/06085/v1/consents/8c929c62-53f3-4543-97c0-
0aed02b1d9bc/authorisations/e63cf977-77ac-462d-a8a1-761d64a9bda0"
      }
  }
}
```

11.2 Get Status Request

GET /v1/consents/{consentId}/status

Possibility of checking the status of an account information consent resource.

Path Parameters

Attribute	Type	Description
consentId	String	The consent identification assigned to the created resource.

Query Parameters

No specific query parameter defined.

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
Authorization	String	Mandatory	Bearer Token.
PSU-ID-Type	String	Conditional[17]	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility

[17] Some ASPSPs offer alternative corporate platforms, technically based on different systems. If national bank code is 03440, possible values are: RETAIL, CORPORATE or CORPORATE_IBK.
To ensure the service correctly, if national bank code is 03440, it is mandatory that the TPP specify which type of corporate platform the PSU needs to access. In order to correctly identify which type of corporate platform the PSU needs, the TPP has to specify CORPORATE or CORPORATE_IBK.

			and the TPP wants to specify which one the user should use to authenticate. Possible values are: RETAIL or CORPORATE.
PSU-Device-ID	String	Optional	UUID (Universally Unique Identifier) of the device used by the PSU. UUID can identify a fisical device or an application installed on the device.
PSU-Ip-Port	String	Optional	The Port used in the communication between PSU and TPP
PSU-Accept	String	Optional	The Accept request HTTP header advertises which content types, expressed as MIME types, the client is able to understand
PSU-Accept-Charset	String	Optional	The Accept-Charset request HTTP header advertises which character encodings the client understands
PSU-Accept-Encoding	String	Optional	The Accept-Encoding request HTTP header advertises which content encoding, usually a compression algorithm, the client

			is able to understand
PSU-Accept-Language	String	Optional	The Accept-Language request HTTP header advertises which languages the client is able to understand, and which locale variant is preferred
PSU-User-Agent	String	Optional	The User-Agent request header is a characteristic string that lets servers and network peers identify the application, operating system, vendor, and/or version of the requesting user agent.
PSU-Http-Method	String	Optional	HTTP method used in the communication between PSU and TPP. Accepted values are: • GET • POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.

PSU-IP-Address	String	Optional	The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between the PSU and the TPP. If not available, the TPP shall use the IP Address used by the TPP when submitting this request.

Request Body

No request body.

Response Code

The HTTP response code is 200.

Response Header

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

Response Body

Attribute	Type	Condition	Description
consentStatus	Consent Status	Mandatory	This is the overall lifecycle status of the consent.

			Possible values are: received, valid, revokedByPsu, expired, terminatedByTpp.

Example

Request
GET https://api.cedacri.it/psd2/v1.2/bg/06085/v1/consents/8c929c62-53f3-4543-97c0-0aed02b1d9bc/status X-Request-ID: request-0001 Authorization: Bearer o9xcq8V2zUg893gm6ROpO7XDUhaBkIOyilSHG0M11XCXFgjMPP7U6R
Response

HTTP/1.1 200
X-Request-ID: request-0001
Content-Type: application/json
{
"consentStatus": "received"
}

11.3 Get Consent Request

GET /v1/consents/{consentId}

Returns the content of an account information consent object. This is returning the data for the TPP especially in cases, where the consent was directly managed between ASPSP and the PSU e.g. in a re-direct SCA Approach.

Path Parameters

Attribute	Type	Description
consentId	String	ID of the corresponding consent object as returned by an Account Information Consent Request.

Query Parameters

No specific query parameter defined.

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
Authorization	String	Mandatory	Bearer Token.
PSU-ID-Type	String	Conditional[18]	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility and the TPP wants to specify which one the user should use to authenticate. Possible values are: RETAIL or CORPORATE.
PSU-Device-ID	String	Optional	UUID (Universally Unique Identifier) of the device used by the PSU. UUID can identify a fisical device or an

[18] Some ASPSPs offer alternative corporate platforms, technically based on different systems. If national bank code is 03440, possible values are: RETAIL, CORPORATE or CORPORATE_IBK.
To ensure the service correctly, if national bank code is 03440, it is mandatory that the TPP specify which type of corporate platform the PSU needs to access. In order to correctly identify which type of corporate platform the PSU needs, the TPP has to specify CORPORATE or CORPORATE_IBK.

			application installed on the device.
PSU-Ip-Port	String	Optional	The Port used in the communication between PSU and TPP
PSU-Accept	String	Optional	The Accept request HTTP header advertises which content types, expressed as MIME types, the client is able to understand
PSU-Accept-Charset	String	Optional	The Accept-Charset request HTTP header advertises which character encodings the client understands
PSU-Accept-Encoding	String	Optional	The Accept-Encoding request HTTP header advertises which content encoding, usually a compression algorithm, the client is able to understand
PSU-Accept-Language	String	Optional	The Accept-Language request HTTP header advertises which languages the client is able to understand, and which locale variant is preferred
PSU-User-Agent	String	Optional	The User-Agent request header is a

			characteristic string that lets servers and network peers identify the application, operating system, vendor, and/or version of the requesting user agent.
PSU-Http-Method	String	Optional	HTTP method used in the communication between PSU and TPP. Accepted values are: • GET • POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.
PSU-IP-Address	String	Optional	The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between the PSU and the TPP. If not available, the TPP shall use the IP Address

			used by the TPP when submitting this request.

Request Body

No request body.

Response Code

The HTTP response code is 200.

Response Header

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

Response Body

Attribute	Type	Condition	Description
access	Account Access	Mandatory	
recurringIndicator	Boolean	Mandatory	
validUntil	ISODate	Mandatory	
frequencyPerDay	Integer	Mandatory	
lastActionDate	ISODate	Mandatory	This date is containing the date of the last action on the consent object either through the XS2A interface or

			the PSU/ASPSP interface having an impact on the status.
consentStatus	Consent Status	Mandatory	The status of the consent resource. Possible values are: received, valid, revokedByPsu, expired, terminatedByTpp.

Example

Request
GET https://api.cedacri.it/psd2/v1.2/bg/06085/v1/consents/8c929c62-53f3-4543-97c0-0aed02b1d9bc X-Request-ID: request-0001 Authorization: Bearer o9xcq8V2zUg893gm6ROpO7XDUhaBkIOyilSHG0M11XCXFgjMPP7U6R
Response

HTTP/1.1 200
X-Request-ID: request-0001
Content-Type: application/json
{
"access": {
"availableAccounts": "allAccounts"
},
"recurringIndicator": false,
"validUntil": "2019-10-10",
"frequencyPerDay": 1,
"lastActionDate": "2019-03-09",
"consentStatus": "received"
}

11.4 Delete an Account Information Consent Object

DELETE /v1/consents/{consentId}

Deletes a given consent (sets the status to terminatedByTpp).

Path Parameters

Attribute	Type	Description
consentId	String	Contains the resource-ID of the consent to be deleted.

Query Parameters

No specific query parameter defined.

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
Authorization	String	Mandatory	Bearer Token.
PSU-ID-Type	String	Conditional[19]	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility

[19] Some ASPSPs offer alternative corporate platforms, technically based on different systems. If national bank code is 03440, possible values are: RETAIL, CORPORATE or CORPORATE_IBK.
To ensure the service correctly, if national bank code is 03440, it is mandatory that the TPP specify which type of corporate platform the PSU needs to access. In order to correctly identify which type of corporate platform the PSU needs, the TPP has to specify CORPORATE or CORPORATE_IBK.

			and the TPP wants to specify which one the user should use to authenticate. Possible values are: RETAIL or CORPORATE.
PSU-Device-ID	String	Optional	UUID (Universally Unique Identifier) of the device used by the PSU. UUID can identify a fisical device or an application installed on the device.
PSU-Ip-Port	String	Optional	The Port used in the communication between PSU and TPP
PSU-Accept	String	Optional	The Accept request HTTP header advertises which content types, expressed as MIME types, the client is able to understand
PSU-Accept-Charset	String	Optional	The Accept-Charset request HTTP header advertises which character encodings the client understands
PSU-Accept-Encoding	String	Optional	The Accept-Encoding request HTTP header advertises which content encoding, usually a compression algorithm, the client

			is able to understand
PSU-Accept-Language	String	Optional	The Accept-Language request HTTP header advertises which languages the client is able to understand, and which locale variant is preferred
PSU-User-Agent	String	Optional	The User-Agent request header is a characteristic string that lets servers and network peers identify the application, operating system, vendor, and/or version of the requesting user agent.
PSU-Http-Method	String	Optional	HTTP method used in the communication between PSU and TPP. Accepted values are: • GET • POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.

PSU-IP-Address	String	Optional	The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between the PSU and the TPP. If not available, the TPP shall use the IP Address used by the TPP when submitting this request.

Request Body

No request body.

Response Code

The HTTP response code is 204.

Response Header

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

Response Body

No response body.

Example

Request
DELETE https://api.cedacri.it/psd2/v1.2/bg/06085/v1/consents/8c929c62-53f3-4543-97c0-0aed02b1d9bc X-Request-ID: request-0001 Authorization: Bearer o9xcq8V2zUg893gm6ROpO7XDUhaBkIOyilSHG0M11XCXFgjMPP7U6R
Response
HTTP/1.1 204 No Content X-Request-ID: request-0001

11.5 Read Account List

GET /v1/accounts {query-parameters}

Reads a list of bank accounts, with balances where required. It is assumed that a consent of the PSU to this access is already given and stored on the ASPSP system. The addressed list of accounts depends then on the PSU ID and the stored consent addressed by consentId, respectively the OAuth2 access token.

Path Parameters

No specific path parameter defined.

Query Parameters

Attribute	Type	Condition	Description
withBalance	Boolean	Optional	If contained, this function reads the

			list of accessible payment accounts including the booking balance, if granted by the PSU in the related consent and available by the ASPSP. This parameter might be ignored by the ASPSP.

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
Consent-ID	String	Mandatory	Shall be contained since "Establish Consent Transaction" was performed via this API before.
Authorization	String	Conditional	Bearer Token.
PSU-IP-Address	String	Conditional	The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between PSU and TPP. It shall be contained if and only if this request was actively initiated by the PSU.

PSU-ID-Type	String	Conditional[20]	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility and the TPP wants to specify which one the user should use to authenticate. Possible values are: RETAIL or CORPORATE.
PSU-Device-ID	String	Optional	UUID (Universally Unique Identifier) of the device used by the PSU. UUID can identify a fisical device or an application installed on the device.
PSU-Ip-Port	String	Optional	The Port used in the communication between PSU and TPP
PSU-Accept	String	Optional	The Accept request HTTP header advertises which content types, expressed as MIME types, the client is able to understand
PSU-Accept-Charset	String	Optional	The Accept-Charset request HTTP header advertises

[20] Some ASPSPs offer alternative corporate platforms, technically based on different systems. If national bank code is 03440, possible values are: RETAIL, CORPORATE or CORPORATE_IBK.
To ensure the service correctly, if national bank code is 03440, it is mandatory that the TPP specify which type of corporate platform the PSU needs to access. In order to correctly identify which type of corporate platform the PSU needs, the TPP has to specify CORPORATE or CORPORATE_IBK.

			which character encodings the client understands
PSU-Accept-Encoding	String	Optional	The Accept-Encoding request HTTP header advertises which content encoding, usually a compression algorithm, the client is able to understand
PSU-Accept-Language	String	Optional	The Accept-Language request HTTP header advertises which languages the client is able to understand, and which locale variant is preferred
PSU-User-Agent	String	Optional	The User-Agent request header is a characteristic string that lets servers and network peers identify the application, operating system, vendor, and/or version of the requesting user agent.
PSU-Http-Method	String	Optional	HTTP method used in the communication between PSU and TPP.

			Accepted values are: • GET • POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.

Request Body

No request body.

Response Code

The HTTP response code is 200.

Response Header

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

Response Body

Attribute	Type	Condition	Description
accounts	Array of Account Details	Mandatory	

Example

Sample response, where the consent is given on two different IBANs:

Request

```
GET https://api.cedacri.it/psd2/v1.2/bg/06085/v1/accounts
X-Request-ID: request-0001
Consent-ID: 8c929c62-53f3-4543-97c0-0aed02b1d9bc
PSU-IP-Address: 91.198.174.192
Authorization: Bearer o9xcq8V2zUg893gm6ROpO7XDUhaBkIOyilSHG0M11XCXFgjMPP7U6R
```

Response

```
HTTP/1.1 200
X-Request-ID: request-0001
Content-Type: application/json
{
  "accounts": [
    { "resourceId": "IT42Z0608500120000000616474_EUR",
      "iban": "IT42Z0608500120000000616474",
      "ownerName": "LAZER 33 S.R.L.",
      "currency": "EUR"
    },
    { "resourceId": "IT42Z0608500120000000862916_EUR",
      "iban": "IT42Z0608500120000000862916",
      "ownerName": "LAZER 33 S.R.L.",
      "currency": "EUR"
    }
  ]
}
```

Sample response, where consent on balances and transactions has been given to a multicurrency account with both EUR and USD and where the ASPSP is giving the data access on aggregation level and on the sub-account level:

Request

```
GET https://api.cedacri.it/psd2/v1.2/bg/06085/v1/accounts?withBalance
X-Request-ID: request-0001
Consent-ID: 8c929c62-53f3-4543-97c0-0aed02b1d9bc
PSU-IP-Address: 91.198.174.192
Authorization: Bearer o9xcq8V2zUg893gm6ROpO7XDUhaBkIOyilSHG0M11XCXFgjMPP7U6R
```

Response

```
HTTP/1.1 200
X-Request-ID: request-0001
Content-Type: application/json
{
  "accounts": [
   { "resourceId": "IT42Z0608500120000000616474_EUR"
     "iban": "IT42Z0608500120000000616474",
     "ownerName": "LAZER 33 S.R.L.",
     "currency": "EUR"
       "balances": [
       {
         "balanceAmount": {
          "currency": "EUR",
          "amount": "3"
         },
         "balanceType": "expected",
         "referenceDate": "2019-02-23"
       },
       {
         "balanceAmount": {
          "currency": "EUR",
          "amount": "3"
         },
         "balanceType": "interimAvailable",
         "referenceDate": "2019-02-23"
       }
      ]
   },
   { "resourceId": "IT42Z0608500120000000616474_USD"
     "iban": "IT42Z0608500120000000616474",
     "ownerName": "LAZER 33 S.R.L.",
     "currency": "USD"
       "balances": [
       {
         "balanceAmount": {
          "currency": "USD",
          "amount": "3"
         },
```

```
        "balanceType": "expected",
        "referenceDate": "2019-02-23"
       },
       {
        "balanceAmount": {
         "currency": "USD",
         "amount": "3"
        },
        "balanceType": "interimAvailable",
        "referenceDate": "2019-02-23"
       }
      ]
     },
   { "resourceId": "IT42Z0608500120000000616474_XXX"
    "iban": "IT42Z0608500120000000616474",
    "ownerName": "LAZER 33 S.R.L.",
    "currency": "XXX"
      "balances": [
       {
        "balanceAmount": {
         "currency": "XXX",
         "amount": "3"
        },
        "balanceType": "expected",
        "referenceDate": "2019-02-23"
       },
       {
        "balanceAmount": {
         "currency": "XXX",
         "amount": "3"
        },
        "balanceType": "interimAvailable",
        "referenceDate": "2019-02-23"
       }
      ]
   }
  ]
}
```

11.6 Read Account Details

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

Reads details about an account.

Reads details about an account, with balances where required. It is assumed that the PSU consent to this access is already given and stored on the ASPSP system. The addressed details of this account depend on the stored consent addressed by consentId, respectively the OAuth2 access token.

Path Parameters

Attribute	Type	Description
accountId	String	This identification is denoting the addressed account. The accountId is retrieved by using a "Read Account List" call. The accountId is the "resourceId" attribute of the account structure. Its value is constant at least throughout the lifecycle of a given consent.

Query Parameters

Attribute	Type	Condition	Description
withBalance	Boolean	Optional	If contained, this function reads the details of the addressed account including the

			booking balance, if granted by the PSU's consent and if supported by ASPSP. This data element might be ignored by the ASPSP.

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
Consent-ID	String	Mandatory	Shall be contained since "Establish Consent Transaction" was performed via this API before.
Authorization	String	Conditional	Bearer Token.
PSU-IP-Address	String	Conditional	The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between PSU and TPP. It shall be contained if and only if this request was actively initiated by the PSU.

PSU-ID-Type	String	Conditional[21]	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility and the TPP wants to specify which one the user should use to authenticate. Possible values are: RETAIL or CORPORATE.
PSU-Device-ID	String	Optional	UUID (Universally Unique Identifier) of the device used by the PSU. UUID can identify a fisical device or an application installed on the device.
PSU-Ip-Port	String	Optional	The Port used in the communication between PSU and TPP
PSU-Accept	String	Optional	The Accept request HTTP header advertises which content types, expressed as MIME types, the client is able to understand
PSU-Accept-Charset	String	Optional	The Accept-Charset request HTTP header advertises

[21] Some ASPSPs offer alternative corporate platforms, technically based on different systems. If national bank code is 03440, possible values are: RETAIL, CORPORATE or CORPORATE_IBK.
To ensure the service correctly, if national bank code is 03440, it is mandatory that the TPP specify which type of corporate platform the PSU needs to access. In order to correctly identify which type of corporate platform the PSU needs, the TPP has to specify CORPORATE or CORPORATE_IBK.

			which character encodings the client understands
PSU-Accept-Encoding	String	Optional	The Accept-Encoding request HTTP header advertises which content encoding, usually a compression algorithm, the client is able to understand
PSU-Accept-Language	String	Optional	The Accept-Language request HTTP header advertises which languages the client is able to understand, and which locale variant is preferred
PSU-User-Agent	String	Optional	The User-Agent request header is a characteristic string that lets servers and network peers identify the application, operating system, vendor, and/or version of the requesting user agent.
PSU-Http-Method	String	Optional	HTTP method used in the communication between PSU and TPP.

			Accepted values are: • GET • POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.

Request Body

No request body.

Response Code

The HTTP response code is 200.

Response Header

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

Response Body

Attribute	Type	Condition	Description
account	Account Details	Mandatory	

Example

Response body for a regular account

Request
GET https://api.cedacri.it/psd2/v1.2/bg/06085/v1/accounts/IT42Z0608500120000000616474_EUR X-Request-ID: request-0001 Consent-ID: 8c929c62-53f3-4543-97c0-0aed02b1d9bc PSU-IP-Address: 91.198.174.192 Authorization: Bearer o9xcq8V2zUg893gm6ROpO7XDUhaBkIOyilSHG0M11XCXFgjMPP7U6R
Response

HTTP/1.1 200
X-Request-ID: request-0001
Content-Type: application/json
{
"account": {
“resourceId”:” IT42Z0608500120000000616474_EUR”
"iban": "IT42Z0608500120000000616474",
"ownerName": "LAZER 33 S.R.L.",
"currency": "EUR"
}
}

Response body for a multi-currency account

Request
GET https://api.cedacri.it/psd2/v1.2/bg/06085/v1/accounts?withBalance/IT42Z06085001200000006 16474_XXX X-Request-ID: request-0001 Consent-ID: 8c929c62-53f3-4543-97c0-0aed02b1d9bc PSU-IP-Address: 91.198.174.192 Authorization: Bearer o9xcq8V2zUg893gm6ROpO7XDUhaBkIOyilSHG0M11XCXFgjMPP7U6R
Response
HTTP/1.1 200 X-Request-ID: request-0001 Content-Type: application/json { "account": { "resourceId": "IT42Z0608500120000000616474_XXX", "iban": "IT42Z0608500120000000616474",

```
    "ownerName": "LAZER 33 S.R.L.",
    "currency": "XXX"
      "balances":[
      {
       "balanceAmount": {
        "currency": "EUR",
        "amount": "5"
       },
       "balanceType": "expected",
       "referenceDate": "2019-02-23"
      },
      {
       "balanceAmount": {
        "currency": "EUR",
        "amount": "5"
       },
       "balanceType": "interimAvailable",
       "referenceDate": "2019-02-23"
      },
     {
       "balanceAmount": {
        "currency": "USD",
        "amount": "5.5"
       },
       "balanceType": "expected",
       "referenceDate": "2019-02-23"
      },
      {
       "balanceAmount": {
        "currency": "USD",
        "amount": "5.5"
       },
       "balanceType": "interimAvailable",
       "referenceDate": "2019-02-23"
      }
     ]
   }
}
```

11.7 Read Balance

GET /v1/accounts/{accountId}/balances

Reads account data from a given account addressed by "accountId".

Path Parameters

Attribute	Type	Description
accountId	String	This identification is denoting the addressed account. The accountId is retrieved by using a "Read Account List" call. The accountId is the "resourceId" attribute of the account structure. Its value is constant at least throughout the lifecycle of a given consent.

Query Parameters

No specific query parameter defined.

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
Consent-ID	String	Mandatory	Shall be contained since "Establish Consent

			Transaction" was performed via this API before.
Authorization	String	Conditional	Bearer Token.
PSU-IP-Address	String	Conditional	The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between PSU and TPP. It shall be contained if and only if this request was actively initiated by the PSU.
PSU-ID-Type	String	Conditional[22]	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility and the TPP wants to specify which one the user should use to authenticate. Possible values are: RETAIL or CORPORATE.
PSU-Device-ID	String	Optional	UUID (Universally Unique Identifier) of the device used by the PSU.

[22] Some ASPSPs offer alternative corporate platforms, technically based on different systems. If national bank code is 03440, possible values are: RETAIL, CORPORATE or CORPORATE_IBK.
To ensure the service correctly, if national bank code is 03440, it is mandatory that the TPP specify which type of corporate platform the PSU needs to access. In order to correctly identify which type of corporate platform the PSU needs, the TPP has to specify CORPORATE or CORPORATE_IBK.

			UUID can identify a fisical device or an application installed on the device.
PSU-Ip-Port	String	Optional	The Port used in the communication between PSU and TPP
PSU-Accept	String	Optional	The Accept request HTTP header advertises which content types, expressed as MIME types, the client is able to understand
PSU-Accept-Charset	String	Optional	The Accept-Charset request HTTP header advertises which character encodings the client understands
PSU-Accept-Encoding	String	Optional	The Accept-Encoding request HTTP header advertises which content encoding, usually a compression algorithm, the client is able to understand
PSU-Accept-Language	String	Optional	The Accept-Language request HTTP header advertises which languages the client is able to understand, and which locale variant is preferred

PSU-User-Agent	String	Optional	The User-Agent request header is a characteristic string that lets servers and network peers identify the application, operating system, vendor, and/or version of the requesting user agent.
PSU-Http-Method	String	Optional	HTTP method used in the communication between PSU and TPP. Accepted values are: • GET • POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.

Request Body

No request body.

Response Code

The HTTP response code is 200.

Response Header

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

Response Body

Attribute	Type	Condition	Description
balances	Array of Balance	Mandatory	A list of balances regarding this account, e.g. the current balance, the last balance booked.

Balance

Attribute	Type	Condition	Description
balanceAmount	Amount	Mandatory	The Amount Type is composed by "currency" and "amount"
balanceType	Balance Type	Mandatory	Balance Type permitted are: - expected - interimAvailable

Example

Request
GET https://api.cedacri.it/psd2/v1.2/bg/06085/v1/accounts/IT42Z0608500120000000616474/balances X-Request-ID: request-0001 Consent-ID: 8c929c62-53f3-4543-97c0-0aed02b1d9bc

PSU-IP-Address: 91.198.174.192
Authorization: Bearer o9xcq8V2zUg893gm6ROpO7XDUhaBkIOyilSHG0M11XCXFgjMPP7U6R

Response

```
HTTP/1.1 200
X-Request-ID: request-0001
Content-Type: application/json
{
  "account": {
    "iban": "IT42Z0608500120000000616474"
  },
  "balances": [
    {
      "balanceAmount": {
        "currency": "EUR",
        "amount": "3"
      },
      "balanceType": "expected",
      "referenceDate": "2019-02-23"
    },
    {
      "balanceAmount": {
        "currency": "EUR",
        "amount": "3"
      },
      "balanceType": "interimAvailable",
      "referenceDate": "2019-02-23"
    }
  ]
}
```

11.8 Read Transactions

GET /v1/accounts/{accountId}/transactions {query-parameters}

Reads a list of transactions from a given account addressed by "accountId".

Path Parameters

Attribute	Type	Description
accountId	String	This identification indicates the addressed account. The accountId is retrieved by using a "Read Account List" call. The accountId is the "resourceId" attribute of the account structure. Its value is constant at least throughout the lifecycle of a given consent.

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
Consent-ID	String	Mandatory	
Authorization	String	Conditional	Bearer Token.
Accept	String	Optional	Only JSON format is supported.
PSU-IP-Address	String	Conditional	The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between PSU

			and TPP. It shall be contained if and only if this request was actively initiated by the PSU.
PSU-ID-Type	String	Conditional[23]	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility and the TPP wants to specify which one the user should use to authenticate. Possible values are: RETAIL or CORPORATE.
PSU-Device-ID	String	Optional	UUID (Universally Unique Identifier) of the device used by the PSU. UUID can identify a fisical device or an application installed on the device.
PSU-Ip-Port	String	Optional	The Port used in the communication between PSU and TPP
PSU-Accept	String	Optional	The Accept request HTTP header advertises which content types, expressed as MIME

[23] Some ASPSPs offer alternative corporate platforms, technically based on different systems. If national bank code is 03440, possible values are: RETAIL, CORPORATE or CORPORATE_IBK.
To ensure the service correctly, if national bank code is 03440, it is mandatory that the TPP specify which type of corporate platform the PSU needs to access. In order to correctly identify which type of corporate platform the PSU needs, the TPP has to specify CORPORATE or CORPORATE_IBK.

			types, the client is able to understand
PSU-Accept-Charset	String	Optional	The Accept-Charset request HTTP header advertises which character encodings the client understands
PSU-Accept-Encoding	String	Optional	The Accept-Encoding request HTTP header advertises which content encoding, usually a compression algorithm, the client is able to understand
PSU-Accept-Language	String	Optional	The Accept-Language request HTTP header advertises which languages the client is able to understand, and which locale variant is preferred
PSU-User-Agent	String	Optional	The User-Agent request header is a characteristic string that lets servers and network peers identify the application, operating system, vendor, and/or version of the requesting user agent.

PSU-Http-Method	String	Optional	HTTP method used in the communication between PSU and TPP. Accepted values are: • GET • POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.

Query Parameters

Attribute	Type	Condition	Description
dateFrom	ISODate	Mandatory	Starting date (including the date dateFrom) of the transaction list, provided that no delta access is required.
dateTo	ISODate	Optional	End date (including the data dateTo) of the transaction list, default is "now".
bookingStatus	String	Mandatory	Permitted code is "booked".
withBalance	Boolean	Optional	If contained, this function reads the list of transactions including the booking balance, if granted by the PSU

			in the related consent and available by the ASPSP. This parameter might be ignored by the ASPSP.

Request Body

No request body.

Response Code

The HTTP response code is 200.

Response Header

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

Response Body

A JSON response is defined as follows:

Attribute	Type	Condition	Description
account	Account Reference	Optional	IBAN witch the transactions list is requested
transactions	Account Report	Mandatory	JSON based account report.

balances	Balances	Optional	A list of balances regarding this account, which might be restricted to the current balance.

Note: for foreign accounts a maximum of 300 occurrences are returned.

Pagination mechanism

If not all transactions can be returned in a single call, a pagination mechanism is included to manage the historical depth of transactions to return through a "page" query parameter. Response body include navigation links for paginated account reports which allow redirection to first, next, previous or last page.

By default, the first page is indexed as 1.

Details for transactions object

Attribute	Type	Condition	Description
additionalInformation	Max500Text	Conditional	The field shows only the transaction of the day[24]. Possible values are: transactionOfTheDay
valueDate	ISODate	Mandatory	The field contains the date at which assets become available to the account owner in case of a credit entry or cease to be

[24] Transaction of the day waiting for confirmation.

			available to the account owner in case of a debit entry.
remittance Information Unstructured	Max140Text	Mandatory	The field returns only the reason for the transfer.
remittance Information UnstructuredArray	Array of Max140Text	Mandatory	The field returns the additional description for the transaction.

Examples

Response body for a regular account:

Request
GET https://api.cedacri.it/psd2/v1.2/bg/06085/v1/accounts/IT42Z0608500120000000616474_EUR/transactions?bookingStatus=booked&dateFrom=2018-12-31&dateTo=2019-03-01 X-Request-ID: request-0001 Consent-ID: 8c929c62-53f3-4543-97c0-0aed02b1d9bc Authorization: Bearer Ac85Cpl45c03tZiS5NcZlcLAVCSLM8HUkL3HU2e6ddgFq494mCM5o8
Response

HTTP/1.1 200
X-Request-ID: request-0001
Content-Type: application/json
{
"account": {
"iban": "IT80N0608510301000000052632"
},
"transactions": {
"booked": [{
"transactionAmount": {
"currency": "EUR",
"amount": "1"

```
            },
            "bookingDate": "2020-06-24",
            "valueDate": "2020-06-24",
            "remittanceInformationUnstructured": "TEST",
            "remittanceInformationUnstructuredArray": ["DEMO", "(NR)"],
            "additionalInformation": "transactionOfTheDay"
        },
        {
            "transactionAmount": {
                    "currency": "EUR",
                    "amount": "2"
                    },
            "bookingDate": "2020-06-24",
            "valueDate": "2020-06-24",
            "remittanceInformationUnstructured": "TEST",
            "remittanceInformationUnstructuredArray": ["DEMO", "(NR)"],
            "additionalInformation": "transactionOfTheDay"

         },
         {
            "transactionAmount": {
                    "currency": "EUR",
                    "amount": "3"
            },
            "bookingDate": "2020-06-24",
            "valueDate": "2020-06-24",
            "remittanceInformationUnstructured": "TEST",
            "remittanceInformationUnstructuredArray": ["DEMO", "(NR)"],
            "additionalInformation": "transactionOfTheDay"
        },
        {
            "transactionAmount": {
                    "currency": "EUR",
                    "amount": "4"
            },
            "bookingDate": "2020-06-24",
            "valueDate": "2020-06-24",
            "remittanceInformationUnstructured": "TEST",
            "remittanceInformationUnstructuredArray": ["DEMO", "(NR)"],
```

```
            "additionalInformation": "transactionOfTheDay"

        },
        {
            "transactionAmount": {
                "currency": "EUR",
                "amount": "5"
            },
            "bookingDate": "2020-06-24",
            "valueDate": "2020-06-24",
            "remittanceInformationUnstructured": "TEST",
            "remittanceInformationUnstructuredArray": ["DEMO", "(NR)"],
            "additionalInformation": "transactionOfTheDay"
        },
        {
            "transactionAmount": {
                "currency": "EUR",
                "amount": "6"
            },
            "bookingDate": "2020-06-24",
            "remittanceInformationUnstructured": "TEST",
            "remittanceInformationUnstructuredArray": ["DEMO"]

        },
        {
            "transactionAmount": {
                "currency": "EUR",
                "amount": "7"
            },
            "bookingDate": "2020-06-24",
            "valueDate": "2020-06-24",
            "remittanceInformationUnstructured": "TEST",
            "remittanceInformationUnstructuredArray": ["DEMO", "(NR)"],
            "additionalInformation": "transactionOfTheDay"

        },
        {
            "transactionAmount": {
                "currency": "EUR",
```

```
                        "amount": "8"
                },
                "bookingDate": "2020-06-24",
                "valueDate": "2020-06-24",
                "remittanceInformationUnstructured": "TEST",
                "remittanceInformationUnstructuredArray": ["DEMO", "(NR)"]
        },
        {
                "transactionAmount": {
                        "currency": "EUR",
                        "amount": "9"
                },
                "bookingDate": "2020-06-24",
                "valueDate": "2020-06-24",
                "remittanceInformationUnstructured": "TEST",
                "remittanceInformationUnstructuredArray": ["DEMO", "(NR)"],
                "additionalInformation": "transactionOfTheDay"

        },
        {
                "transactionAmount": {
                        "currency": "EUR",
                        "amount": "10"
                },
                "bookingDate": "2020-06-24",
                "valueDate": "2020-06-24",
                "remittanceInformationUnstructured": "TEST",
                "remittanceInformationUnstructuredArray": ["DEMO", "(NR)"]

        }],
        "_links": {
                "account": {
                        "href": "/v1/accounts/IT80N0608510301000000052632_EUR"
                },
                "next": {
        "href":"https://api.cedacri.it/psd2/v1.2/bg/06085/v1/accounts/IT80N060851030100000
0052632_EUR/transactions?bookingStatus=booked&dateFrom=2019-01-
01&page=2&cicsToken=97943e99-93b1-4550-8ad2-afa4f7240a21"
                },
```

```
                "last": {
        "href":“https://api.cedacri.it/psd2/v1.2/bg/06085/v1/accounts/IT80N060851030100000
0052632_EUR/transactions?bookingStatus=booked&dateFrom=2019-01-
01&page=3&cicsToken=97943e99-93b1-4550-8ad2-afa4f7240a21"
                        }
                }
        }
}
```

Response body for a multi-currency account with Balance.

Request

```
GET
https://api.cedacri.it/psd2/v1.2/bg/06085/v1/accounts/IT42Z0608500120000000616474_XXX/t
ransactions?bookingStatus=booked&dateFrom=2018-12-31&dateTo=2019-03-
01&withBalance=true
X-Request-ID: request-0001
Consent-ID: 8c929c62-53f3-4543-97c0-0aed02b1d9bc
Authorization: Bearer Ac85Cpl45c03tZiS5NcZlcLAVCSLM8HUkL3HU2e6ddgFq494mCM5o8
```

Response

```
HTTP/1.1 200
X-Request-ID: request-0001
Content-Type: application/json
{
 "account": {
  "iban": "IT42Z0608500120000000616474"
 },
 "transactions": {
  "booked": [
   {
    "transactionAmount": {
     "currency": "EUR",
     "amount": "-2"
    },
    "bookingDate": "2019-02-19",
    "valueDate": "2019-02-19",
    "remittanceInformationUnstructured": "example",
```

```
  "remittanceInformationUnstructuredArray": ["(880)"]

 },
 {
  "transactionAmount": {
   "currency": "USD",
   "amount": "-1"
  },
  "bookingDate": "2019-02-19",
  "valueDate": "2019-02-19",
  "remittanceInformationUnstructured": "example",
  "remittanceInformationUnstructuredArray": ["(880)"]
 },
 {
  "transactionAmount": {
   "currency": "XXX",
   "amount": "1"
  },
  "bookingDate": "2019-02-19",
  "valueDate": "2019-02-19",
  "remittanceInformationUnstructured": "example",
  "remittanceInformationUnstructuredArray": ["(880)"]
 },
 {
  "transactionAmount": {
   "currency": "EUR",
   "amount": "2"
  },
  "bookingDate": "2019-02-19",
  "valueDate": "2019-02-19",
  "remittanceInformationUnstructured": "example",
  "remittanceInformationUnstructuredArray": ["(880)"]
 },
 {
  "transactionAmount": {
   "currency": "EUR",
   "amount": "3"
  },
  "bookingDate": "2019-02-19",
```

```
      "valueDate": "2019-02-19",
      "remittanceInformationUnstructured": "example",
      "remittanceInformationUnstructuredArray": ["(880)"]
     }
    ]
   },
   "balances": [
    {
     "balanceAmount": {
      "currency": "EUR",
      "amount": "3"
     },
     "balanceType": "expected",
     "referenceDate": "2019-02-23"
    },
    {
     "balanceAmount": {
      "currency": "EUR",
      "amount": "3"
     },
     "balanceType": "interimAvailable",
     "referenceDate": "2019-02-23"
    }
   ]
}
```


11.9 Calculation rule for the maximum number of unattended calls per day

TPP can access each AISP resources at a maximum of 4 times per day.

For example:

GET ..v1/accounts -> 1st call on accounts
GET ..v1/accounts/account1/balances -> 1st call on Account 1 balances
GET ..v1/accounts -> 2nd call on accounts
GET ..v1/accounts/account2/transactions -> 1st call on Account 2 transactions
GET ..v1/accounts/account1/balances -> 2nd call on Account 1 balances

Read Transactions pagination mechanism

The counter is not incremented when calling the same endpoint with a different page after a previous request without page parameter in query string (which has obtained the first page). The call for a different page must be done using links provided by the last response of request to the same endpoint. The TPP could request all the pages available for the transactions list requested without incrementing counter. However, requesting more than once a page reduce the number of pages the TPP can access.

In case of a second call further in the day on the same endpoint without page query parameter, the counter increase is applied.

For example:

GET ..v1/accounts/account1/transactions -> 1st call, returned first page of list (3 pages available)
GET ..v1/accounts/account1/transactions?page=2 -> 1st call
GET ..v1/accounts/account1/transactions?page=3 -> 1st call
GET ..v1/accounts/account1/transactions -> 2nd call, returned first page of list (3 pages available)
... some time later, new transactions present in list
GET ..v1/accounts/account1/transactions -> 3rd call, returned first page of list (4 pages available)
GET ..v1/accounts/account1/transactions?page=2 -> 3rd call
GET ..v1/accounts/account1/transactions?page=3 -> 3rd call
GET ..v1/accounts/account1/transactions?page=3 -> 3rd call
GET ..v1/accounts/account1/transactions?page=4 -> Request refused (http error 429)
GET ..v1/accounts/account1/transactions -> 4th call, returned first page of list (4 pages available)
GET ..v1/accounts/account1/transactions?page=4 -> 4th call

Specific behaviour for old transactions

With a valid AISP consent, only in case of unattended calls, it's not allowed to retrieve transactions prior to 90 days (starting from the day before the request).

11.10 Calculation rule for the number of calls per one-off consent

TPP can access each AISP resources once per one-off consent.

For example:

GET ..v1/accounts -> 1st call on accounts
GET ..v1/accounts/account1/balances -> 1st call on Account 1 balances
GET ..v1/accounts -> 2nd call on accounts -> 429 Too Many Requests
GET ..v1/accounts/account2/transactions -> 1st call on Account 2 transactions
GET ..v1/accounts/account1/balances -> 2nd call -> 429 Too Many Requests

Read Transactions pagination mechanism

The call is not blocked when calling the same endpoint with a different page after previous request without page parameter in query string (which has obtained the first page). The call for a different page must be done using links provided by the last response of request to the same endpoint. The TPP could request all the pages available for the transactions list requested without incrementing counter. However, requesting more than once a page reduce the number of pages the TPP can access.

For example:

GET ..v1/accounts/account1/transactions -> 1st call, returned first page of list (3 pages available)
GET ..v1/accounts/account1/transactions?page=2 -> 1st call
GET ..v1/accounts/account1/transactions?page=3 -> 1st call
GET ..v1/accounts/account1/transactions -> 2nd call -> 429 Too Many Requests

12 Confirmation of Funds Service

Here below is the base URL to access the API for the confirmation of funds service in production environment.

[Base URL: api.cedacri.it/psd2/v1.2/bg/{national bank code}]

12.1 Confirmation of Funds Request

POST /v1/funds-confirmations

Creates a confirmation of funds request on the ASPSP.

Path Parameters

No specific path parameter defined.

Query Parameters

No specific query parameter defined.

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
Consent-ID	String	Mandatory	The consent identification assigned to the created resource.
Authorization	String	Conditional	Bearer Token.

PSU-ID-Type	String	Conditional[25]	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility and the TPP wants to specify which one the user should use to authenticate. Possible values are: RETAIL or CORPORATE.
PSU-Device-ID	String	Optional	UUID (Universally Unique Identifier) of the device used by the PSU. UUID can identify a fisical device or an application installed on the device.
PSU-Ip-Port	String	Optional	The Port used in the communication between PSU and TPP
PSU-Accept	String	Optional	The Accept request HTTP header advertises which content types, expressed as MIME types, the client is able to understand
PSU-Accept-Charset	String	Optional	The Accept-Charset request HTTP header advertises

[25] Some ASPSPs offer alternative corporate platforms, technically based on different systems. If national bank code is 03440, possible values are: RETAIL, CORPORATE or CORPORATE_IBK.
To ensure the service correctly, if national bank code is 03440, it is mandatory that the TPP specify which type of corporate platform the PSU needs to access. In order to correctly identify which type of corporate platform the PSU needs, the TPP has to specify CORPORATE or CORPORATE_IBK.

			which character encodings the client understands
PSU-Accept-Encoding	String	Optional	The Accept-Encoding request HTTP header advertises which content encoding, usually a compression algorithm, the client is able to understand
PSU-Accept-Language	String	Optional	The Accept-Language request HTTP header advertises which languages the client is able to understand, and which locale variant is preferred
PSU-User-Agent	String	Optional	The User-Agent request header is a characteristic string that lets servers and network peers identify the application, operating system, vendor, and/or version of the requesting user agent.
PSU-Http-Method	String	Optional	HTTP method used in the communication between PSU and TPP.

			Accepted values are: • GET • POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.
PSU-IP-Address	String	Optional	The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between the PSU and the TPP. If not available, the TPP shall use the IP Address used by the TPP when submitting this request.

Request Body

Attribute	Type	Condition	Description
account	Account Reference	Mandatory	PSU's account number.
instructedAmount	Amount	Mandatory	Transaction amount to be checked within the funds check mechanism.

Response Code

The HTTP response code is 200.

Response Header

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

Response Body

Attribute	Type	Condition	Description
fundsAvailable	Boolean	Mandatory	Equals true if sufficient funds are available at the time of the request, otherwise false.

Example

Request

```
POST https://api.cedacri.it/psd2/v1.2/bg/06085/v1/funds-confirmations
X-Request-ID: request-0001
Consent-ID: 8c929c62-53f3-4543-97c0-0aed02b1d9bc
PSU-IP-Address: 91.198.174.192
Authorization: Bearer o9xcq8V2zUg893gm6ROpO7XDUhaBkIOyilSHG0M11XCXFgjMPP7U6R {
  "account": {
    "iban": "IT42Z0608500120000000616474"
  },
  "instructedAmount": {
    "currency": "EUR",
    "amount": "1"
  }
}
```

Response

```
HTTP/1.1 200
X-Request-ID: request-0001
Content-Type: application/json
```

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

12.2 Confirmation of Funds Consent Request

POST /v2/consents/confirmation-of-funds

Creates a confirmation of funds consent resource on the ASPSP regarding confirmation of funds access to an account specified in this request.

Path Parameters

No specific path parameter defined.

Query Parameters

No specific query parameter defined.

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
Authorization	String	Mandatory	Bearer Token.
TPP-Redirect-URI	String	Mandatory	URI of the TPP, where the transaction flow shall be redirected to after a Redirect.

TPP-Nok-Redirect-URI	String	Optional	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.
PSU-IP-Address	String	Optional	The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between PSU and TPP.
PSU-ID-Type	String	Conditional[26]	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility and the TPP wants to specify which one the user should use to authenticate. Possible values are: RETAIL or CORPORATE.
PSU-Device-ID	String	Optional	UUID (Universally Unique Identifier) of

[26] Some ASPSPs offer alternative corporate platforms, technically based on different systems. If national bank code is 03440, possible values are: RETAIL, CORPORATE or CORPORATE_IBK.
To ensure the service correctly, if national bank code is 03440, it is mandatory that the TPP specify which type of corporate platform the PSU needs to access. In order to correctly identify which type of corporate platform the PSU needs, the TPP has to specify CORPORATE or CORPORATE_IBK.

			the device used by the PSU. UUID can identify a fisical device or an application installed on the device.
PSU-Ip-Port	String	Optional	The Port used in the communication between PSU and TPP
PSU-Accept	String	Optional	The Accept request HTTP header advertises which content types, expressed as MIME types, the client is able to understand
PSU-Accept-Charset	String	Optional	The Accept-Charset request HTTP header advertises which character encodings the client understands
PSU-Accept-Encoding	String	Optional	The Accept-Encoding request HTTP header advertises which content encoding, usually a compression algorithm, the client is able to understand
PSU-Accept-Language	String	Optional	The Accept-Language request HTTP header advertises which languages the client is able to understand, and

			which locale variant is preferred
PSU-User-Agent	String	Optional	The User-Agent request header is a characteristic string that lets servers and network peers identify the application, operating system, vendor, and/or version of the requesting user agent.
PSU-Http-Method	String	Optional	HTTP method used in the communication between PSU and TPP. Accepted values are: • GET • POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.

Request Body

Attribute	Type	Condition	Description
account	Account Reference	Mandatory	Account, where the confirmation of funds service is aimed to be submitted to.

registrationInformation	Max140Text	Optional	Additional information about the registration process for the PSU, e.g. a reference to the TPP / PSU contract

Response Code

The HTTP response code is 201.

Response Header

Attribute	Type	Condition	Description
Location	String	Mandatory	Location of the created resource.
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
ASPSP-SCA-Approach	String	Mandatory	REDIRECT

Response Body

Attribute	Type	Condition	Description
consentStatus	Consent Status	Mandatory	authentication status of the consent
consentId	String	Mandatory	Identification of the consent resource as it is used in the API structure
_links	Links	Mandatory	A list of hyperlinks to be recognised by the TPP.

			Type of links admitted in this response (which might be extended by single ASPSPs as indicated in its XS2A documentation): "scaRedirect": In case of an SCA Redirect Approach, the ASPSP is transmitting the link to which to redirect the PSU browser. "scaStatus"[27]: The link to retrieve the scaStatus of the corresponding authorisation sub-resource. This link is only contained, if an authorisation sub-resource has been already created.

Example

Request
POST https://api.cedacri.it/psd2/v1.2/bg/06085/v2/consents/confirmation-of-funds X-Request-ID: request-0001 PSU-IP-Address: 91.198.174.192

[27] Strong Customer Authentication (SCA) Status for payments and consents currently is not available for 'CORPORATE_IBK' PSU-ID-Type, therefore in this case the scaStatus link will not be returned in response.

```
TPP-Redirect-URI: https://tpp-redirect-ok-url
Content-Type: application/json
TPP-Nok-Redirect-URI: https://tpp-redirect-nok-url
Authorization: Bearer o9xcq8V2zUg893gm6ROpO7XDUhaBkIOyilSHG0M11XCXFgjMPP7U6R
{
"account":
{ "iban": "IT42Z0608500120000000616474",
  "currency": "EUR"
 },
"registrationInformation": "Your contract Number 1234 with MyMerchant is completed with the registration with your bank."
}
```

Response

```
HTTP/1.x 201
X-Request-ID: request-0001
ASPSP-SCA-Approach: REDIRECT
Location: https://api.cedacri.it/psd2/v1.2/bg/06085/v2/consents/confirmation-of-funds/8c929c62-53f3-4543-97c0-0aed02b1d9bc
{
  "consentStatus": "received",
  "consentId": "8c929c62-53f3-4543-97c0-0aed02b1d9bc",
  "_links": {
    "scaRedirect": {
      "href": "https://api.cedacri.it:9090/consent/init?consent_id=8c929c62-53f3-4543-97c0-0aed02b1d9bc&d=eyJlbmMiOiJBMTI4Q0JDLUhTMjU2IiwiYWxnIjoiUlNBLU9BRVAtMjU2In0.A5WAzn0nw3g2t8yBD6k0_J9gwhhaOpJBVtm53TgWv4Goo1wkWoe4MWPlmzZeysle9sTiG3y3CbViuAqgpvH_pY-WKic2ZQgoTtJtgSexp3FN78FHrxuThrQDvzX8hC3Q2W4cJjL9n70rPwTycZaJI-GsHwGIN8Bi95AsgQk0lXMAgU2a-Zlb1lxTMHl_VXewppjhw_-Xe7jcn1V6cd3UHsfVj6oLXTM4FkhVItDO73ueFpdqWm8oTykrnCifhdt4mTGhgtSdBqDjJlyDHMzt7EtheVPXbPFcw84Y-ESXjSS1ubTZYxHNI87B0idEXXpZOIKghtN0GG4h5sjtAEO_cw.ZRkTBQ1u2GoIaWxIYiU-Bg.hKKNAvLi1_hWnCgXAsXoYGZrPpQaGw1bRPrQWMF9dXFJf_DO8cz-E3CejjqBZSkSDibT2kBfafZJkPONaPxmQTtTc6aUTfERxMqX-ImID57fOEZkiSoJz_n7ANg-tkx7BP13eW5nTyNAYryVyyaEoELwRBeTeuUbOpADsWuZV4cXXOKsdSfde0cphMj7euWtmaYFuthEzELuXAoGZDqqKu3ENhVotbzdH0n_vKUs35Y.BHls0M-oxoStLfFTPUb4lQ"
    }
    "scaStatus": {
      "href": "https://api.cedacri.it/psd2/v1.2/bg/06085/v1/consents/8c929c62-53f3-4543-97c0-0aed02b1d9bc/authorisations/e63cf977-77ac-462d-a8a1-761d64a9bda0"
      }
```

```
  }
}
```

12.3 Get Status Request

GET /v2/consents/confirmation-of-funds/{consentId}/status

Can check the status of an account information consent resource.

Path Parameters

Attribute	Type	Description
consentId	String	The consent identification assigned to the created resource.

Query Parameters

No specific query parameter defined.

Request Header

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

PSU-Device-ID	String	Optional	UUID (Universally Unique Identifier) of the device used by the PSU. UUID can identify a fisical device or an application installed on the device.

PSU-Ip-Port	String	Optional	The Port used in the communication between PSU and TPP
PSU-Accept	String	Optional	The Accept request HTTP header advertises which content types, expressed as MIME types, the client is able to understand
PSU-Accept-Charset	String	Optional	The Accept-Charset request HTTP header advertises which character encodings the client understands
PSU-Accept-Encoding	String	Optional	The Accept-Encoding request HTTP header advertises which content encoding, usually a compression algorithm, the client is able to understand
PSU-Accept-Language	String	Optional	The Accept-Language request HTTP header advertises which languages the client is able to understand, and which locale variant is preferred
PSU-User-Agent	String	Optional	The User-Agent request header is a characteristic string that lets servers and

			network peers identify the application, operating system, vendor, and/or version of the requesting user agent.
PSU-Http-Method	String	Optional	HTTP method used in the communication between PSU and TPP. Accepted values are: • GET • POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.
PSU-IP-Address	String	Optional	The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between PSU and TPP.

Request Body

No request body.

Response Code

The HTTP response code is 200.

Response Header

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

Response Body

Attribute	Type	Condition	Description
consentStatus	Consent Status	Mandatory	This is the overall lifecycle status of the consent. Possible values are: received, valid, revokedByPsu, expired, terminatedByTpp.

Example

Request

```
GET https://api.cedacri.it/psd2/v1.2/bg/06085/v2/consents/confirmation-of-funds/8c929c62-53f3-4543-97c0-0aed02b1d9bc/status
X-Request-ID: request-0001
Authorization: Bearer o9xcq8V2zUg893gm6ROpO7XDUhaBkIOyilSHG0M11XCXFgjMPP7U6R
```

Response

```
HTTP/1.1 200
X-Request-ID: request-0001
Content-Type: application/json
{
  "consentStatus": "received"
}
```

12.4 Get Consent Request

GET /v2/consents/confirmation-of-funds/{consentId}

Returns the content of an account information consent object. This is returning the data for the TPP especially in cases, where the consent was directly managed between the ASPSP and the PSU e.g. in a re-direct SCA Approach.

Path Parameters

Attribute	Type	Description
consentId	String	ID of the corresponding consent object as returned by an Account Information Consent Request

Query Parameters

No specific query parameter defined.

Request Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
Authorization	String	Mandatory	Bearer Token.
PSU-Device-ID	String	Optional	UUID (Universally Unique Identifier) of the device used by the PSU. UUID can identify a fisical device or an application installed on the device.

PSU-Ip-Port	String	Optional	The Port used in the communication between PSU and TPP
PSU-Accept	String	Optional	The Accept request HTTP header advertises which content types, expressed as MIME types, the client is able to understand
PSU-Accept-Charset	String	Optional	The Accept-Charset request HTTP header advertises which character encodings the client understands
PSU-Accept-Encoding	String	Optional	The Accept-Encoding request HTTP header advertises which content encoding, usually a compression algorithm, the client is able to understand
PSU-Accept-Language	String	Optional	The Accept-Language request HTTP header advertises which languages the client is able to understand, and which locale variant is preferred
PSU-User-Agent	String	Optional	The User-Agent request header is a characteristic string that lets servers and

			network peers identify the application, operating system, vendor, and/or version of the requesting user agent.
PSU-Http-Method	String	Optional	HTTP method used in the communication between PSU and TPP. Accepted values are: • GET • POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.
PSU-IP-Address	String	Optional	The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between PSU and TPP.

Request Body

No request body.

Response Code

The HTTP response code is 200.

Response Header

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

Response Body

Attribute	Type	Condition	Description
account	Account Reference	Mandatory	Account, where the confirmation of funds service is aimed to be submitted to.
registrationInformation	Max140Text	Optional	Additional registration information.
consentStatus	Consent Status	Mandatory	The status of the consent resource. Possible values are: received, valid, revokedByPsu, expired, terminatedByTpp.

Example

Request
GET https://api.cedacri.it/psd2/v1.2/bg/06085/v1/consents/confirimation-of-funds/8c929c62-53f3-4543-97c0-0aed02b1d9bc X-Request-ID: request-0001 Authorization: Bearer o9xcq8V2zUg893gm6ROpO7XDUhaBkIOyilSHG0M11XCXFgjMPP7U6R

Response

HTTP/1.1 200
X-Request-ID: request-0001
Content-Type: application/json
{
"account":
{ "iban": "IT42Z0608500120000000616474",
"currency": "EUR"
},
"consentStatus": "valid"
}

12.5 Revoke a Confirmation of Funds Consent

The TPP can revoke an account information consent object if needed with the following call:

DELETE /v2/consents/confirmation-of-funds/{consentId}

Deletes a given consent (sets the status to terminatedByTpp).

Path Parameters

Attribute	Type	Description
consentId	String	Contains the resource-ID of the consent to be deleted.

Query Parameters

No specific query parameter defined.

Request Header

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

Authorization	String	Mandatory	Bearer Token.

Request Body

No request body.

Response Code

The HTTP response code is 204 for a successful cancellation.

Response Header

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

Response Body

No response body.

Example

Request
DELETE https://api.cedacri.it/psd2/v1.2/bg/06085/v2/consents/confirmation-of-funds/8c929c62-53f3-4543-97c0-0aed02b1d9bc X-Request-ID: request-0001 Authorization: Bearer o9xcq8V2zUg893gm6ROpO7XDUhaBkIOyilSHG0M11XCXFgjMPP7U6R
Response
HTTP/1.1 204 No Content X-Request-ID: request-0001

13 Processes used commonly in AIS and PIS Services

13.1 Start Authorisation process

The object "authorisations" will be created at the same time as the creation of a new consent, new payment or cancellation payment initiation. It will be updated during the authorization process executed by the PSU throughout SCA on the authentication/authorization front-end.

The creation of "authorisations" resources will not affect the TPP and PSU processes, in accordance with the SCA approach adopted by Cedacri XS2A PSD2 Gateway and the optimisation criteria process provided by the Berlin Group specifications (Rif. BG - "4.6 Authorisation Endpoint - Optimisation process for the submission of single payments", "5.1.3 - Redirect SCA Approach: Implicit Start of the Authorisation Process").

13.2 SCA Status

The status of the SCA on Cedacri XS2A PSD2 Gateway may have the same code as Berlin Group code (Ref. BG - "14.15 - SCA Status") during the authorization process of a consent or payment, as defined below.

Code	Description
scaMethodSelected	The PSU/TPP has selected the related SCA routine. If the SCA method is chosen implicitly since only one SCA method is available, then this is the first status to be reported instead of "received".
started	The addressed SCA routine has been started.
finalised	The SCA routine has been finalised successfully (including a potential confirmation command). This is a final status of the authorisation resource.
exempted	SCA was exempted for the related transaction, the related authorisation is successful. This is a final status of the authorisation resource.
failed	The SCA routine failed. This is a final status of the authorisation resource.

Strong Customer Authentication (SCA) Status for payments and consents currently is not available for 'CORPORATE_IBK' PSU-ID-Type.

13.3 Get Authorisation Sub-Resources Request

Call in context of a Payment Initiation Request

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

Will deliver an array of resource identifications of all generated authorisation sub-resources.

Call in context of an Account Information Consent Request

GET /v1/consents/{consentId}/authorisations

Will deliver an array of resource identifications of all generated authorisation sub-resources.

Call in context of a Cancellation Payment Request

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

Will deliver an array of resource identifications of all generated authorisation sub-resources.

Path Parameters

Attribute	Type	Description
payment-service	String	The possible values are "payments" and "periodic-payments" and "bulk-payments"
payment-product	String	The payment product, under which the payment under

		paymentId has been initiated. It shall be checked by the ASPSP, if the payment-product is matching the payment addressed by paymentId
paymentId or consentId	String	Resource identification of the related payment or consent resource.

Query Parameters

No specific query parameter defined.

Request Header

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

Request Body

No request body.

Response Code

The HTTP response code equals 200.

Response Header

Attribute	Type	Condition	Description

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

Response Body

Attribute	Type	Condition	Description
authorisationIds	Array of String	Mandatory	An array of all authorisationIds connected to this payment, signing basket or consent resource.

Example

Request
GET https://api.cedacri.it/psd2/v1.2/bg/06085/v1/payments/sepa-credit-transfers/Id-f718885c2c5e13b83dd689f4/authorisations X-Request-ID: request-0001 Accept: application/json Authorization: Bearer o9xcq8V2zUg893gm6ROpO7XDUhaBkIOyilSHG0M11XCXFgjMPP7U6R
Response
HTTP/1.1 200 Ok X-Request-ID: request-0001 Content-Type: application/json { "authorisationIds": ["e63cf977-77ac-462d-a8a1-761d64a9bda0"] }

13.4 Get SCA Status Request

Call in context of a Payment Initiation Request

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

Checks the SCA status of an authorisation sub-resource.

Call in context of an Account Information Consent Request

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

Checks the SCA status of an authorisation sub-resource.

Call in context of a Cancellation Payment Request

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

Checks the SCA status of an authorisation sub-resource

Path Parameters

Attribute	Type	Description
payment-service	String	The possible values are "payments" and "periodic-payments" and "bulk-payments"
payment-product	String	The payment product, under which the payment under paymentId has been initiated. It shall be checked by the ASPSP, if the payment-product is matching the payment addressed by paymentId
paymentId or consentId	String	Resource identification of the related payment or consent resource.
authorisationId	String	Resource identifciation ofthe related Payment or Consent authorisation sub-resource

Query Parameters

No specific query parameter defined.

Request Header

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

Query Parameters

No specific query parameters defined.

Request Body

No request body.

Response Code

The HTTP response code equals 200.

Response Header

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

Response Body

Attribute	Type	Condition	Description
scaStatus	SCA Status	Mandatory	This data element is containing information about the status of the SCA

			method applied.

Example

Request
GET https://api.cedacri.it/psd2/v1.2/bg/06085/v1/payments/sepa-credit-transfers/Id-f718885c2c5e13b83dd689f4/authorisations/e63cf977-77ac-462d-a8a1-761d64a9bda0 X-Request-ID: request-0001 Accept: application/json Authorization: Bearer o9xcq8V2zUg893gm6ROpO7XDUhaBkIOyilSHG0M11XCXFgjMPP7U6R
Response

HTTP/1.1 200 Ok
X-Request-ID: request-0001
Content-Type: application/json
{
"scaStatus": "finalised"
}

14 App Linking

The App Linking is a new feature implemented within the Cedacri XS2A PSD2 Gateway. The main goal of this new implementation is to facilitate the authorization process during the phases of consents confirmation and payment confirmation on mobile device. Going more specifically, when the PSU opens one of the pages of consents confirmation or payment confirmation, through the App Linking he will be allowed to automatically open the ASPSP's mobile application installed on his own device in order to authorize the operation.

Nevertheless, after completing the Strong Customer Authentication (SCA) through the ASPSP's mobile application, the PSU must come back to the TPP application in order to verify that the operation has been successfully completed.

For a successful integration of this new feature within your mobile application, we suggest following the official IOS and Android guidelines.

14.1 App to App

The main "App to App" implementation's objective is to improve the user experience of the PSUs by reducing the number of operations they usually have to manage manually on their devices.

The "App to App" feature allows to the ASPSP's application to execute both the Strong Customer Authentication (SCA) and the confirmation of the operations, redirecting directly to the URL specified by the TPP through the "Tpp-Redirect-URI" field declaration.

More specifically, in order to benefit of this new functionality, every payment initiation and consents initiation request must provide the string "psd2-apptoapp" inside of the "Tpp-Redirect-URI" field declaration as shown in the following example:

Example

Request

```
POST https://api.cedacri.it/psd2/v1.2/bg/06085/v1/consents
X-Request-ID: request-0001
PSU-IP-Address: 91.198.174.192
TPP-Redirect-URI: https://tpp-redirect-ok-url/psd2-apptoapp
Content-Type: application/json
TPP-Nok-Redirect-URI: https://tpp-redirect-nok-url
Authorization: Bearer o9xcq8V2zUg893gm6ROpO7XDUhaBkIOyilSHG0M11XCXFgjMPP7U6R
{
 "access": {
  "availableAccounts": "allAccounts"
 },
 "recurringIndicator": false,
 "validUntil": "2019-10-10",
 "frequencyPerDay": 1,
 "combinedServiceIndicator": false
}
```

Response

```
HTTP/1.1 201
ASPSP-SCA-Approach: REDIRECT
X-Request-ID: request-0001
Content-Type: application/json
{
 "consentStatus": "received",
 "consentId": "8c929c62-53f3-4543-97c0-0aed02b1d9bc",
```

```
  "_links": {
    "scaRedirect": {
      "href":        "https://api.cedacri.it:9090/consent/init?consent_id=8c929c62-53f3-4543-97c0-
0aed02b1d9bc&d=eyJlbmMiOiJBMTI4Q0JDLUhTMjU2IiwiYWxnIjoiUlNBLU9BRVAtMjU2In0.A5W
Azn0nw3g2t8yBD6k0_J9gwhhaOpJBVtm53TgWv4Goo1wkWoe4MWPlmzZeysle9sTiG3y3CbViuA
qgpvH_pY-WKic2ZQgoTtJtgSexp3FN78FHrxuThrQDvzX8hC3Q2W4cJjL9n70rPwTycZaJI-
GsHwGIN8Bi95AsgQk0lXMAgU2a-Zlb1lxTMHl_VXewppjhw_-
Xe7jcn1V6cd3UHsfVj6oLXTM4FkhVItDO73ueFpdqWm8oTykrnCifhdt4mTGhgtSdBqDjJlyDHMzt7E
theVPXbPFcw84Y-
ESXjSS1ubTZYxHNI87B0idEXXpZOIKghtN0GG4h5sjtAEO_cw.ZRkTBQ1u2GoIaWxIYiU-
Bg.hKKNAvLi1_hWnCgXAsXoYGZrPpQaGw1bRPrQWMF9dXFJf_DO8cz-
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tkx7BP13eW5nTyNAYryVyyaEoELwRBeTeuUbOpADsWuZV4cXXOKsdSfde0cphMj7euWtmaYFuth
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    },
    "scaStatus": {
      "href": "https://api.cedacri.it/psd2/v1.2/bg/06085/v1/consents/8c929c62-53f3-4543-97c0-
0aed02b1d9bc/authorisations/e63cf977-77ac-462d-a8a1-761d64a9bda0"
      }
  }
}
```


The example above, is related to the Consent Request on Dedicated Accounts, but the same "psd2-apptoapp" parameter can be used also for payment initialization requests.

The "App to app" implementation can be used only with the latest Cedacri's ASPSP applications version. Therefore, we suggest asking the PSUs who want to use this feature to update the mobile applications installed on their own devices.

If used in concurrence with other out-of-date applications, the "App to app" will not work and the PSU will be forced to move manually from the ASPSP application to the confirmation page as before mentioned in the App Linking general section. If used on Desktop, the new parameter will not affect the workflow since this functionality is exclusive for Mobile devices, but the parameter will be propagated through the procedure.