

Banca Mediolanum NextGenPSD2 XS2A Framework Implementation

Version 1.1.10

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1 Aim of the document

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

2 References

The Banca Mediolanum 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		15/07/2021
1.0.1	Errata Corrige	This version replaces the 1.0.0 version due to a publication mistake	22/07/2021
1.0.2	Errata Corrige	'PSU-IP-Address' description adapted to BG description	16/09/2021
1.1	New feature	Introduced Strong Customer Autentication (SCA) Status for payments and consents created by PSUs Field 'debtorAccount' changed to Conditional in Payment Initiation api	21/03/2022
1.1.1	New feature	Chapter 11.8: Read Transaction updated with the two new fields 'additionalInformation', 'valueDate'	22/09/2022
		Chapter 11.8: Read Transaction value modification for the two fields 'remittanceInformationUnstructured' and 'remittanceInformationUnstructuredArray'	
1.1.2	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
1.1.3	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
1.1.4	Errata Corrige	expires_in parameter description for Access token revisited to clarify LIVE release date	20/03/2023
1.1.5	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
1.1.6	New Feature	Introduced 'instant-sepa-credit-transfer' payment product	29/06/2023
1.1.7	Errata Corrige	Chapter 11.8: Read Transaction updated Response Example	26/07/2023
1.1.8	New Feature	Introduced App-to-App for consent confirmation and payment confirmation	13/09/2023

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1.1.9	New Feature	<p>payment resource's status set to RJCT if exceeded the maximum required timeframe of the SCA .</p> <p>For further details, please refer to Section 5.4 of the original document:</p> <p>NextGenPSD2 XS2A Framework Implementation Guidelines https://www.berlin-group.org/nextgenpsd2-downloads</p>	12/01/2024
1.1.10	Addendum	<p>Chapter 8.1: added a note about the field "status_message" described in step 1</p>	21/03/2024

4 Introduction

Banca Mediolanum 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.mediolanum.it>
- <https://sandbox.mediolanum.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 isolated from it.

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

For this reason, resources of Banca Mediolanum's XS2A Interface can be addressed under the following API endpoints¹:

- <https://api.mediolanum.it/psd2/v1.2/bg/03062/{BG-version}/{service}{?query-parameters}>
- <https://sandbox.mediolanum.it/psd2/v1.2/bg/03062/{BG-version}/{service}{?query-parameters}>

using additional content parameters {parameters}

where

- 03062: Mediolanum's national bank code
- {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. for filtering content data
- {parameters} are content attributes defined in JSON encoding

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

¹ TPP registration endpoint doesn't follow the Banca Mediolanum XS2A interface API versioning. Refer to the specific chapter.

- 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 tables gives an overview on the HTTP access methods supported by the API endpoints and by resources created through this API:

Endpoints/Resources	Method
payments/{payment-product}	POST
periodic-payments/{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
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	<p>PUT, GET Response Codes</p> <p>This return code is permitted if a request was repeated due to a time-out.</p> <p>The POST for a Funds request will also return 200 since it does not create a new resource.</p>

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 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.
401 Unauthorized	The TPP or the PSU is not correctly authorized to perform the request. Retry the request with correct authentication information.
404 Not found	Returned if the resource or endpoint that was referenced in 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 allowed by 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 are 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.mediolanum.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 informations used to identify the TPP itself and PSP roles.

The following tables 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 the last available EBA register² will be reported with the following error response:

http status code :400

```
{
  "tppMessages": [
```

² EBA register is downloaded twice a day, if available on the EBA site.

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

5 Secure connection

The communication between the TPP and the Banca Mediolanum 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 be compliant with the requirements of EBA – RTS on SCA and SCS, Article 34. The certificate of the TPP has to indicate all roles the TPP is authorized for.

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

6 Third Party Validation

Banca Mediolanum NextGenPSD2 XS2A has to validate TPP identity and authorization status.

For identity validation, Banca Mediolanum NextGenPSD2 XS2A relies on eIDAS certificate information that are verified through the inquiry on the Certificate Status Service provided by the QTSP who released 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, Banca Mediolanum NextGenPSD2 XS2A has to verify online if 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 of a TPP registered within the portal in sandbox environment.

7 TPP On Boarding

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 exposed by 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.

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

[Base URL: api.mediolanum.it/psd2/v1]

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 AN³ identifier) that has associated 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.

7.1 Register a new TPP via API

POST/tpv

Registers a new TPP via API.

³ 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.

Path Parameter

No specific path parameters defined.

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 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 url
PISP	Array of String	Mandatory	This field identifies the redirect url

CISP	Array of String	Mandatory	This field identifies the redirect urls
------	-----------------	-----------	---

Response Code

The HTTP response code equals 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 TPP, which the ASPSP can use for any communications.

Example

Request
<pre>POST https://api.mediolanum.it/psd2/v1/tpp {</pre>

```
"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 registration data of the TPP.

Path Parameter

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

Query Header

No request header

Request Body

No request body.

Response Code

The HTTP response code equals 200.

Response Body

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

Parameters

No specific query parameters defined.

Request 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 call back 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

			TPP, which the ASPSP can use for any communications.
--	--	--	--

Example

Request
GET https://api.mediolanum.it/psd2/v1/tpp/f123456b-4bc6-331e-a8b6-ba806a549c62
Response
<pre>{ "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" } }</pre>

7.3 Updated a TPP registration

PUT /tpp/{uuid}

Updates the registration data of a TPP.

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 communications.
redirect_url	redirect_object	Mandatory	TPP defines the call back url on which it wants 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 url
PISP	Array of String	Mandatory	This field identifies the redirect url

Response Code

The HTTP response code equals 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

OAuth2 Credentials

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

Example

Request
<pre>PUT https://api.mediolanum.it/psd2/v1/tpf/f123456b-4bc6-331e-a8b6-ba806a549c62 { "email": "info@ttp.com", "redirect_url": { "AISP": ["https://www.ttp.com", "https://www.ttp.com"], "PISP": ["https://www.ttp.com"], }, "cancel_link": "https://www.test.com" }</pre>
Response
<pre>{ "uuid": "f123456b-4bc6-331e-a8b6-ba806a549c62", "AISP": { "redirect_url": ["https://www.ttp.com", "https://www.ttp.com"], "client_id": "8843e662-c45c-63c8-342e-123456f6bcef", "client_secret": "cb31234f-1b8a-3b45-a132-ad4be4efb4dc", }, }</pre>

```
"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"
}
}
```

7.4 Delete a TPP registration

DELETE/ tpp/{uuid}

Deletes a TPP registration.

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

No request body

Response Code

The HTTP response code equals 204.

Response Body

No response body.

Example

Request
DELETE https://api.mediolanum.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 TPP's application

Query Parameters

No specific query parameters defined.

Request Header

No request header

Request Body

No request body

Response Code

The HTTP response code equals 200.

Response Body

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

Example

Request
POST https://api.mediolanum.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

Banca Mediolanum implements OAuth2 as a support for the authorisation 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, Banca Mediolanum supports it as an authentication of a PSU in a pre-step, translating this authentication into an access token to be used at 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 TPP's application interacts with Banca Mediolanum 's OAuth 2.0 server to obtain a PSU's consent to perform an API request on the PSU's behalf. TPP's application must have that consent before it can execute a call to NextGenPSD2 XS2A API that requires PSU authorization.

The list below quickly summarizes these steps:

1. TPP's application identifies the permissions it needs.
2. TPP's application redirects the PSU to ASPSP along with the requested permission.

3. PSU decides whether to grant the permission to TPP's application.
4. TPP's application finds out what the PSU decided.
5. If the PSU grants the requested permissions, TPP's application retrieves tokens needed to make API requests on the PSU's behalf.

Step 1: Set authorization parameters

TPP's first step 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 TPP's application.

In order to obtain Banca Mediolanum 's OAuth 2.0 endpoint, TPP has to call one the NextGenPSD2 XS2A APIs without a valid access token. In this case, Banca Mediolanum 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 refused. This endpoint will be different based on the type of environment in which the TPP operates: production or sandbox.

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 of the TPP via API (chapter 7.1) SANDBOX: the client id generated by the TPP Onboarding Sandbox (document "Banca Mediolanum Sandbox - TPP Onboarding Procedure", chapter 3)
redirect_uri	Required.

	<p>PRODUCTION: the call back URL chosen by TPP (chapter 7.1).</p> <p>SANDBOX: the redirect uri chosen by TPP in the client id creation in TPP Onboarding Sandbox (document "Banca Mediolanum Sandbox - TPP Onboarding Procedure", chapter 3).</p>
scope	<p>Required. One of the scopes that identify the resources that TPP's application could access on the PSU's behalf.</p> <p>Acceptable scopes are:</p> <ul style="list-style-type: none"> • "pisp.pagamento": to access Payment Initiation Service • "aisp.base": to access Account Information Service
state	<p>Recommended. Specifies any string value that TPP's application uses to maintain state between its authorization request and the authorization server's response. The server returns the exact value that 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.</p> <p>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 increase the assurance 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.</p>

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 PSU to exit the authentication

process and return to the TPP page: this is the “cancel link” as described in the document “Banca Mediolanum Sandbox - TPP Onboarding Procedure”, chapter 3.

Step 2: Redirect to Banca Mediolanum’s OAuth 2.0 server

TPP redirects the PSU to Banca Mediolanum’s OAuth 2.0 server to initiate the authentication and authorization process.

Step 3: Banca Mediolanum prompts user for consent

In this step, PSU decides whether to grant TPP’s application the requested access. At this stage, Banca Mediolanum 's OAuth 2.0 server authenticates the PSU and obtains consent from the PSU for 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 Banca Mediolanum 's OAuth 2.0 server indicating whether the access was granted. That response is explained in the following step.

Step 4: Handle the OAuth 2.0 server response

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

If PSU approves the access request, then the response contains an authorization code. If 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 TPP and above described.

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

Step 5: Exchange authorization code for refresh and access tokens

After 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, 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.mediolanum.it:9090/oauth/token>
- Sandbox: <https://sandbox.mediolanum.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 of the TPP via API (chapter 7.1) SANDBOX: the client id generated by the TPP Onboarding Sandbox (document "Banca Mediolanum 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 "Banca Mediolanum 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 "Banca Mediolanum 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
```

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Banca Mediolanum 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 a sample 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 Payment Initiation Service and Account Information Service, is the Redirect SCA Approach with Implicit Start of the Authorisation Process.

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

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

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

Once PSU has authorised or rejected, 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 Banca Mediolanum has adopted is the Redirect SCA Approach with Implicit Start of the Authorisation Process. With this flow, the Account Information Consent Request is followed by a redirection to the ASPSP SCA authorization site.

[Base URL: api.mediolanum.it/psd2/v1.2/bg/03062]

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	<p>The addressed payment product endpoint, e.g. for SEPA Credit Transfers (SCT). The list of products supported by Banca Mediolanum is:</p> <ul style="list-style-type: none"> • sepa-credit-transfers • cross-border-credit-transfers • instant-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	Optional	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility. Possible values are: RETAIL or 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 physical 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • PROCESS: A notification on all changes on

			<p>transactionStatus attributes is preferred by the TPP.</p> <ul style="list-style-type: none"> • 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 single payments:

Data Element	Type	SCT EU Core	Target2 Paym. Core	Cross Border CT Core
debtorAccount (incl. type)	Account Reference	Conditional ¹	Conditional ¹	Conditional ¹
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, 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.

If 'PSU-ID-Type' is RETAIL or CORPORATE, field 'debtorAccount' is Optional.

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.
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

			<p>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 Mediolanum Sandbox - TPP Onboarding Procedure", chapter 3</p> <p>"self": The link to the payment initiation resource created by this request. This link can be used to retrieve the resource data.</p> <p>"status": The link to retrieve the transaction status of the payment initiation.</p> <p>"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.</p>
--	--	--	---

Example

Request
POST https://api.mediolanum.it/psd2/v1.2/bg/03062/v1/payments/cross-border-credit-transfers X-Request-ID: request-0001

```
PSU-IP-Address: 91.198.174.192
Content-Type: application/json
Authorization: Bearer IdIS526vZhi74oUZw2iJ6td4p5zR39mZ94tAy1vYqmFOKmtXL6SOpJ
PSU-ID-Type: RETAIL
{
  "debtorAccount": {
    "iban": "IT42Z0306200100000000100001"
  },
  "instructedAmount": {
    "currency": "EUR",
    "amount": "1.00"
  },
  "creditorAccount": {
    "iban": "TR780006261118715142297663"
  },
  "creditorName": "Name",
  "creditorAgent": "AKBKTRIS005",
  "creditorAddress": {
    "city": "Ankara",
    "country": "076"
  },
  "remittanceInformationUnstructured": "Test 122345",
}
```

Response

```
{
  "transactionStatus": "RCVD",
  "paymentId": "Id-f718885c2c5e13b83dd689f4",
  "transactionFees": {
    "currency": "EUR",
    "amount": "5.160"
  },
  "_links": {
    "scaRedirect": {
      "href": "https://api.mediolanum.it:9090/payment/confirm?abi=03062&lang=IT&d=eyJlbnMiOiJBMTI4Q0JDLUhmTmJmU2liwYXnljoiUINBLU9BRVAtMjU2In0.cXJ3FK8eiYEylhqD-af54hYFb5jKkTR45eUglITIdvFRjxan6fgY__uQX5vl4QxhqwDK2fBkbTyInpLRxYS9KTtDEA5we-XJhTs4ZsO8QAZ6rC_J9AJ7597kTeH2ITtLyw1u4KRPg6R8RzgBBYrD3WhpiDvL4T5Rncl_nByncHi1AUuqGm1c9U1dbCUG61fGly74Epxlc2mP1NvvUKMk9wIlf6HZFJQWmAeMz2wptoFr6M_stpQflvHCu41bx7kB-kQTLtyf0ssuDaTNZBnvxHpb3_kVgY6UGEDPj1mZbRLaaLTkK0YM-Fm1voaj4wHm43xo03rLjxAS1t85vLtMkg.GdXxHtITSh0DHnGgXUtq9A.Yc-TVVclmg73jxQsmK637UUzrA9UI_6SEiL8zHHI9-_W05aqHks0-dlJJPQBoHAIUCF47aViGGGxip8IKSWuFkn7DwKw5-7fsXZYAeDkPhdBJYiJ71suv3yunX2CZysOdPursNT4DoJSJtZdzENzSdgMi0VxOPT8Q_DgDi68L6dl4Ekhhsj066z9xhOILLoOQymEJKObfF8hh6pFsdTvlBR3kqdS0JcPDDGyuRLgemHT9HcAbp1J8AqheXED"
```

```

oS-
b2X5owFoWdFwxFA40vBE0vVz0dfJlztYhhJBFX2V8W4f6si9nXg_zbQfH0mlARoiOp86EciBx2EUw3
kXDKIIPLGEx0ZnXLEBhRo9b_xkmhSRoVjMtDJfr_WeqVhNxALGL2V2NhCG_5v3YtOFvObPHQ.yUE
k5B0uK4VxV7aGdclVPg"
  },
  "scaStatus": {
    "href": "https://api.mediolanum.it/psd2/v1.2/bg/03062/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 Banca mediolanum 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	Optional	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 physical 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: <ul style="list-style-type: none"> • 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 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.

If 'PSU-ID-Type' is RETAIL or CORPORATE, field 'debtorAccount' is Optional.

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: <ul style="list-style-type: none"> • Weekly • EveryTwoWeeks • Monthly • EveryTwoMonths • Quarterly

			<ul style="list-style-type: none"> • SemiAnnual • Annual
dayOfExecution	Max2Text	Conditional	<p>The format is following the regular expression <code>\d{1,2}</code>.</p> <p>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.</p>

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	<p>Possible values are: RCVD, ACTC, CANC, RJCT, ACSC, ACCC, ACSP</p> <p>ACSP is set after a successful SCA</p>
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	<p>A list of hyperlinks to be recognised by the TPP.</p> <p>"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 mediolanum Sandbox - TPP Onboarding Procedure", chapter 3</p> <p>"self": The link to the payment initiation resource created by this request. This link can be used to retrieve the resource data.</p>

			<p>"status": The link to retrieve the transaction status of the payment initiation.</p> <p>"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.</p>
--	--	--	--

Example

Request
POST https://api.mediolanum.it/psd2/v1.2/03062/periodic-payments/sepa-credit-transfers X-Request-ID: request-0001 PSU-IP-Address: 91.198.174.192 Content-Type: application/json Authorization: Bearer ldiS526vZhi74oUZw2iJ6td4p5zR39mZ94tAy1vYqmFOKmtXl6SOpJ <pre>{ "debtorAccount": { "iban": "IT42Z0306200100000000100001" }, "instructedAmount": { "currency": "EUR", "amount": "1.00" }, "creditorAccount": { "iban": "IT42Z06085001200000000862916" }, "creditorName": "Name", "remittanceInformationUnstructured": "Test 122345", "startDate": "2018-03-01", "frequency": "Monthly", "dayOfExecution": "01" }</pre>
Response
HTTP/1.x 201

```
X-Request-ID: request-0001
ASPSP-SCA-Approach: REDIRECT
Location: https://api.mediolanum.it/psd2/v1.2/03062/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.mediolanum.it:9090/payment/confirm?abi=03062&lang=IT&d=eyJlbmMiOiJBMTI4Q0JDLUhTMjU2IiwieWVwbnljoiiUINBLU9BRVAtMjU2In0.cXJ3FK8eiYElhqD-af54hYFb5jKkTR45eUgIITdvFRjxan6fgY__uQX5vi4QxhqwDK2fBkbTyInpLRxYS9KTtDEA5we-XJhTs4ZsO8QAZ6rC_J9AJ7597kTeH2ITtLyw1u4KRPg6R8RzgBByrD3WhpiDvL4T5Rncl_nByncHi1AUuqGm1c9U1dbCUG61fGly74Epxlc2mP1NvvUKMk9wJf6HZFJQWmAeMz2wptoFr6M_stpQflvHCu41bx7kB-kQTLtyf0ssuDaTNZBnvxHpb3_kVgY6UGEDPj1mZbRLaaLTkK0YM-Fm1voaj4wHm43xo03rLjxAS1t85vLtMkg.GdXxHtITSh0DHnGgXUtq9A.Yc-TVVclmg73jxQsmK637UUzrA9UI_6SEiL8zHHI9-_W05aqHks0-dlJPQBoHALIUCF47aViGGGxip8IKSWuFkn7DwKw5-7fsXZYAeDkPhdBJYiJ71suv3yunX2CZysOdPursNT4DoJSJtZdzEnzSdgMi0VxOPT8Q_DgDi68L6dl4Ek hhsj066z9xhOILLoOQymEJKObfF8hh6pFsdtTvIBR3kqdS0JcPDdGyuRLgemHT9HcABp1J8AqheXEdoS-b2X5owFoWdFwxFA40vBE0vVz0dfJlztYhhJBFX2V8W4f6si9nXg_zbQfH0mlARoiOp86EciBx2EUw3kXDKIIPLGEx0ZnXLEBhRo9b_xkmhSRoVjMtDJfr_WeqVhNxALGL2V2NhCG_5v3YtOFvObPHQ.yUEk5B0uK4VxV7aGdcIVPg"
    }
  },
  "scaStatus": {
    "href": "https://api.mediolanum.it/psd2/v1.2/bg/03062/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

Can check 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 Banca mediolanum is: <ul style="list-style-type: none"> • sepa-credit-transfers • cross-border-credit-transfers • instant- sepa-credit-transfers
payment-service	String	The only admitted value is: 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	Optional	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility. Possible values are: RETAIL or 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 physical 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: <ul style="list-style-type: none"> • GET • POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.

Note: In the transaction status request API, it is mandatory to fill in the "authorization" field with the access token not expired, otherwise the TPP will have to wait for the PSU to connect and log in again. To avoid making a transaction status request API with expired access token, the TPP must update the access token in time for its expiration. 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 call back the transaction status API without adding the "authorization" header, in order to receive a "401" response code and thus proceed again to the PSU login execution. So the TPP will be able to get a new token before it expires.

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
transactionStatus	Transaction Status	Mandatory	<p>Possible values are: RCVD, ACTC, CANC, RJCT, ACSC, ACCC, ACSP</p> <p>ACSP is set after a successful SCA</p> <p>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'</p>

Example

Request
GET https://api.mediolanum.it/psd2/v1.2/bg/03062/v1/payments/sepa-credit-transfers/Id-f718885c2c5e13b83dd689f4/status X-Request-ID: request-0001 Authorization: Bearer ldiS526vZhi74oUZw2iJ6td4p5zR39mZ94tAy1vYqmFOKmtXl6SOpJ PSU-ID-Type: RETAIL
Response

```

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

```

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 Banca mediolanum is: <ul style="list-style-type: none"> • sepa-credit-transfers • cross-border-credit-transfers • instant-sepa-credit-transfers
payment-service	String	payments
paymentId	String	ID of the corresponding payment initiation object as returned by an 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	Optional	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility. Possible values are: RETAIL or 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 physical 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: <ul style="list-style-type: none"> • 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.
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Note: In the payment request API, it is mandatory to fill in the "authorization" field with the access token not expired, otherwise the TPP will have to wait for the PSU to connect and log in again. To avoid making a payment request API with expired access token, the TPP must update the access token in time for its expiration. 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 call back the payment request API without adding the "authorization" header, in order to receive a "401" response code and thus proceed again to the PSU login execution. So the TPP will be able to get a new token before it expires.

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

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 Core	Paym.	Cross Border CT Core
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.mediolanum.it/psd2/v1.2/bg/03062/v1/payments/sepa-credit-transfers/Id-f718885c2c5e13b83dd689f4 X-Request-ID: request-0001 Authorization: Bearer IIdiS526vZhi74oUZw2iJ6td4p5zR39mZ94tAy1vYqmFOKmtXl6SOpJ PSU-ID-Type: RETAIL
Response
HTTP/1.1 200 X-Request-ID: request-0001 Content-Type: application/json <pre>{ "debtorAccount": { "iban": "IT42Z0306200120000000862916" }, "instructedAmount": { "currency": "EUR", "amount": "1" }, }</pre>

```

"creditorAccount": {
  "iban": "IT23J0306204010000001063502"
},
"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 Banca mediolanum is: <ul style="list-style-type: none"> 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
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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	Optional	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 physical 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: <ul style="list-style-type: none"> • 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

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

Query Parameters

No specific query parameters defined.

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.mediolanum.it/psd2/v1.2/bg/03062/v1/payments/sepa-credit-transfers/Id-f718885c2c5e13b83dd689f4 X-Request-ID: request-0001 Authorization: Bearer ldiS526vZhi74oUZw2iJ6td4p5zR39mZ94tAy1vYqmFOKmtXl6SOpj

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

11 Account Information Service

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

11.1 Consent Request on Dedicated Accounts

POST /v1/consents

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

Path Parameters

No specific path parameters defined.

Query Parameters

No specific query parameters 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	Optional	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility. Possible values are: RETAIL or 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 physical 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: <ul style="list-style-type: none"> • 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 is for recurring access to the account data false, if the consent is for one access to the account data.
validUntil	ISODate	Mandatory	This parameter is requesting a valid until date 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 far future is to be used: "9999-12-31". The consent object to be retrieved by the GET Consent Request will contain the adjusted date.
frequencyPerDay	Integer	Mandatory	This field indicates the requested maximum frequency for an access per day. If recurringIndicator is true, this attribute is set to "4", if recurringIndicator is false this attribute is set to "1"
combinedServiceIndicator	Boolean	Mandatory	false

Response Code

The HTTP response code equals 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
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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	<p>A list of hyperlinks to be recognised by the TPP.</p> <p>Type of links admitted in this response (which might be extended by single ASPSPs as indicated in its XS2A documentation):</p> <p>"scaRedirect": In case of an SCA Redirect Approach, the ASPSP is transmitting the link to which to redirect the PSU browser.</p> <p>"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.</p>

Example

Request
POST https://api.mediolanum.it/psd2/v1.2/bg/03062/v1/consents X-Request-ID: request-0001 TPP-Redirect-URI: https://tpp-redirect-ok-url

```
Content-Type: application/json
PSU-IP-Address: 91.198.174.192
TPP-Nok-Redirect-URI: https://tpp-redirect-nok-url
Authorization: Bearer o9xcq8V2zUg893gm6ROpO7XDUhaBkiOyilSHG0M11XCXFgjMPP7U6R
PSU-ID-Type: RETAIL
{
  "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.mediolanum.it:9090/consent/init?consent_id=8c929c62-53f3-4543-97c0-0aed02b1d9bc&d=eyJlbmMiOiJBMTI4Q0JDLUhTMjU2liwiYWxnIjoilUINBLU9BRVAtMjU2In0.A5W Azn0nw3g2t8yBD6k0_J9gwhhaOpJBVtm53TgWv4Goo1wkWoe4MWPlmzZeysle9sTiG3y3CbViuA qgpvH_pY-WKic2ZQgoTtJtgSexp3FN78FHrxuThrQDvzX8hC3Q2W4cJjL9n70rPwTycZaJl-GsHwGIN8Bi95AsgQk0IXMAGU2a-Zlb1lxTMHI_VXewppjhw_-Xe7jcn1V6cd3UHsfVj6oLXTM4FkhVItDO73ueFpdqWm8oTykrnCifhdt4mTGhgtSdBqDjJlyDHMzt7E theVPXbPFcw84Y-ESXjSS1ubTZYxHNI87B0idEXXpZOIKghtN0GG4h5sjtAEO_cw.ZRkTBQ1u2GolaWxIYiU-Bg.hKKNAvLi1_hWnCgXAsXoYGRpPpQaGw1bRPrQWMF9dXFJf_DO8cz-E3CejjqBZSkSDibT2kbfafZJKPONaPxmQTtTc6aUTfERxMqX-ImID57fOEZkiSoJz_n7ANg-tkx7BP13eW5nTyNAYryVyyaEoELwRBeTeuUbOpADsWuZV4cXXOKsdSfde0cphMj7euWtmaYFuth EzELuXAoGZDqqKu3ENhVotbzdH0n_vKUs35Y.BHls0M-oxoStLFTPub4lQ"
    }
  },
  "scaStatus": {
    "href": "https://api.mediolanum.it/psd2/v1.2/bg/03062/v1/consents/8c929c62-53f3-4543-97c0-0aed02b1d9bc/authorisations/e63cf977-77ac-462d-a8a1-761d64a9bda0"
  }
}
```

11.2 Get Status Request

GET /v1/consents/{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 parameters 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	Optional	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility. Possible values are: RETAIL or 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 physical 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	<p>HTTP method used in the communication between PSU and TPP.</p> <p>Accepted values are:</p> <ul style="list-style-type: none"> • GET • POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.
PSU-IP-Address	String	Optional	<p>The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between the PSU and the TPP.</p> <p>If not available, the TPP shall use the IP Address used by the TPP when submitting this request.</p>

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
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.mediolanum.it/psd2/v1.2/bg/03062/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 <pre>{ "consentStatus": "received" }</pre>

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 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 parameters 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	Optional	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility. Possible values are: RETAIL or 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 physical 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

			<p>communication between PSU and TPP. Accepted values are:</p> <ul style="list-style-type: none"> • GET • POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.
PSU-IP-Address	String	Optional	<p>The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between the PSU and the TPP.</p> <p>If not available, the TPP shall use the IP Address used by the TPP when submitting this request.</p>

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
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.mediolanum.it/psd2/v1.2/bg/03062/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 <pre>{ "access": { "availableAccounts": "allAccounts" }, "recurringIndicator": false,</pre>

```

"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 parameters 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	Optional	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility. Possible values are: RETAIL or 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 physical 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	<p>HTTP method used in the communication between PSU and TPP.</p> <p>Accepted values are:</p> <ul style="list-style-type: none"> • GET • POST • PUT • PATCH • DELETE
PSU-Geo-Location	String	Optional	Stores the information about the location of the PSU.
PSU-IP-Address	String	Optional	<p>The forwarded IP Address header field consists of the corresponding HTTP request IP Address field between the PSU and the TPP.</p> <p>If not available, the TPP shall use the IP Address used by the TPP when submitting this request.</p>

Request Body

No request body.

Response Code

The HTTP response code equals 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.mediolanum.it/psd2/v1.2/bg/03062/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 parameters 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	Optional	Type of the PSU-ID, needed in scenarios

			where PSUs have several PSU-IDs as access possibility. Possible values are: RETAIL or 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 physical 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: <ul style="list-style-type: none"> • 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 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
accounts	Array of Account Details	Mandatory	

Example

Response in case of an example, where the consent has been given on two different IBANs:

Request
GET https://api.mediolanum.it/psd2/v1.2/bg/03062/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 <pre>{ "accounts": [{ "resourceId": "IT42Z0306200120000000616474_EUR", "iban": "IT42Z0306200120000000616474", "currency": "EUR" }, { "resourceId": "IT42Z0306200120000000862916_EUR", "iban": "IT42Z0306200120000000862916", "currency": "EUR" }] }</pre>

Response in case of an example where consent on balances and transactions has been given to a multicurrency account with currencies EUR and USD and where the ASPSP is giving the data access on aggregation level and on sub-account level:

Request
GET https://api.mediolanum.it/psd2/v1.2/bg/03062/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": "IT42Z0306200120000000616474_EUR" "iban": "IT42Z0306200120000000616474", "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": "IT42Z0306200120000000616474_USD" "iban": "IT42Z0306200120000000616474", "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": "IT42Z03062001200000000616474_XXX"
    "iban": "IT42Z03062001200000000616474",
    "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 a consent of the PSU to this access is already given and stored on the ASPSP system. The addressed detail of this account depends then 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	Optional	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility. Possible values are: RETAIL or 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 physical 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: <ul style="list-style-type: none"> • 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 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
account	Account Details	Mandatory	

Example

Response body for a regular account

Request
GET https://api.mediolanum.it/psd2/v1.2/bg/03062/v1/accounts/IT42Z0306200120000000616474_EUR X-Request-ID: request-0001 Consent-ID: 8c929c62-53f3-4543-97c0-0aed02b1d9bc PSU-IP-Address: 91.198.174.192 Authorization: Bearer o9xcq8V2zUg893gm6ROpO7XDUhaBklOyilSHG0M11XCXFgjMPP7U6R
Response
HTTP/1.1 200 X-Request-ID: request-0001 Content-Type: application/json { "account": { "resourceId": "IT42Z0306200120000000616474_EUR" "iban": "IT42Z0306200120000000616474",

```
"currency": "EUR"  
}  
}
```

Response body for a multi-currency account

Request
GET https://api.mediolanum.it/psd2/v1.2/bg/03062/v1/accounts?withBalance/IT42Z0306200120000000616474_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": "IT42Z0306200120000000616474_XXX", "iban": "IT42Z0306200120000000616474", "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 parameters 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	Optional	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility. Possible values are: RETAIL or 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 physical 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: <ul style="list-style-type: none"> • 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 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
balances	Array of Balance	Mandatory	A list of balances regarding this account, e.g. the current balance, the last booked balance.

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.mediolanum.it/psd2/v1.2/bg/03062/v1/accounts/IT42Z0306200120000000616474/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 <pre>{ "account": { "iban": "IT42Z0306200120000000616474" }, "balances": [{ "balanceAmount": { "currency": "EUR", "amount": "3" }, "balanceType": "expected", "referenceDate": "2019-02-23" }, { "balanceAmount": { "currency": "EUR", "amount": "3" } }] }</pre>

```

"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 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.

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	Optional	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility. Possible values are: RETAIL or 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 physical 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: <ul style="list-style-type: none"> • 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 (inclusive the date dateFrom) of the transaction list, mandated if no delta access is required.
dateTo	ISODate	Optional	End date (inclusive 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 equals 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

Attribute	Type	Condition	Description
account	Account Reference	Optional	IBAN with 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 ⁴ . Possible values are: transactionOfTheDay
valueDate	ISODate	Mandatory	The field contains the date at which assets become available to the

⁴ Transaction of the day waiting for confirmation

			account owner in case of a credit entry or cease to be 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.

Example

Response body for a regular account:

Request
GET https://api.mediolanum.it/psd2/v1.2/bg/03062/v1/accounts/IT42Z0306200120000000616474/transactions?bookingStatus=booked&dateFrom=2018-12-31&dateTo=2019-01-01 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 <pre>{ "account": { "iban": "IT42Z0306200120000000616474" }, "transactions": { "booked": [{ "transactionAmount": { "currency": "EUR", "amount": "1" }, "bookingDate": "2020-06-24", "valueDate": "2020-06-24",</pre>

```
"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",  
    "valueDate": "2020-06-24",  
    "remittanceInformationUnstructured": "TEST",  
    "remittanceInformationUnstructuredArray": ["DEMO", "(NR)"]  
  },  
  {  
    "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/IT42Z0306200120000000616474_EUR"
  },
  "next": {
    "href": "https://api.mediolanum.it/psd2/v1.2/bg/03062/v1/accounts/IT42Z0306200120000000616474_EUR/transactions?bookingStatus=booked&dateFrom=2019-01-01&page=2&cicsToken=97943e99-93b1-4550-8ad2-afa4f7240a21"
  },
  "last": {
    "href": "https://api.mediolanum.it/psd2/v1.2/bg/03062/v1/accounts/IT42Z0306200120000000616474_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.mediolanum.it/psd2/v1.2/bg/06085/v1/accounts/IT42Z0608500120000000616474_XXX/transactions?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).

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.mediolanum.it/psd2/v1.2/bg/03062]

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	Optional	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 physical 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: <ul style="list-style-type: none"> • 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.mediolanum.it/psd2/v1.2/bg/03062/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": "IT42Z0306200120000000616474" }, "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	Optional	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 physical 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: <ul style="list-style-type: none"> • 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.

			<p>Type of links admitted in this response (which might be extended by single ASPSPs as indicated in its XS2A documentation):</p> <p>"scaRedirect": In case of an SCA Redirect Approach, the ASPSP is transmitting the link to which to redirect the PSU browser.</p> <p>"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.</p>
--	--	--	--

Example

Request
<pre> POST https://api.mediolanum.it/psd2/v1.2/bg/03062/v2/consents/confirmation-of-funds 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 { "account": { "iban": "IT42Z0306200120000000616474", "currency": "EUR" }, "registrationInformation": "Your contract Number 1234 with MyMerchant is completed with the registration with your bank." </pre>

Response
<pre> } HTTP/1.x 201 X-Request-ID: request-0001 ASPSP-SCA-Approach: REDIRECT Location: https://api.mediolanum.it/psd2/v1.2/bg/03062/v2/consents/confirmation-of-funds/8c929c62-53f3-4543-97c0-0aed02b1d9bc { "consentStatus": "received", "consentId": "8c929c62-53f3-4543-97c0-0aed02b1d9bc", "_links": { "scaRedirect": { "href": "https://api.mediolanum.it:9090/consent/init?consent_id=8c929c62-53f3-4543-97c0-0aed02b1d9bc&d=eyJlbmMiOiJBMTI4Q0JDLUhTMjU2liwiYWxnIjoiUINBLU9BRVAtMjU2In0.A5W Azn0nw3g2t8yBD6k0_J9gwhhaOpJBVtm53TgWv4Goo1wkWoe4MWPlmzZeysle9sTiG3y3CbViuA qgpvh_pY-WKic2ZQgoTtJtgSexp3FN78FHRxuThrQDvzX8hC3Q2W4cJlL9n70rPwTycZaJl-GsHwGIN8Bi95AsgQk0IXMAGU2a-Zlb1lxTMHI_VXewppjhw_-Xe7jcn1V6cd3UHsfVj6oLXTM4FkhVltDO73ueFpdqWm8oTykrnCifhdt4mTGhgtSdBqDjJlyDHMzt7E theVPXbPFcw84Y-ESXjSS1ubTZYxHNI87B0idEXXpZOIKghtN0GG4h5sjtAEO_cw.ZRkTBQ1u2GolaWxIYiU-Bg.hKKNAvLi1_hWnCgXAsXoYGRzrPpQaGw1bRPrQWWMF9dXFJf_DO8cz-E3CejjqBZSkSDibT2kBfafZJkPONaPxmQTtTc6aUTfERxMqX-lmID57fOEZkiSoJz_n7ANg-tkx7BP13eW5nTyNAYryVyyaEoELwRBeTeuUbOpADsWuZV4cXXOKsdSfde0cphMj7euWtmaYFuth EzELuXAoGZDqqKu3ENhVotbzdH0n_vKUs35Y.BHls0M-oxoStLFTPUb4lQ" } }, "scaStatus": { "href": "https://api.mediolanum.it/psd2/v1.2/bg/03062/v1/consents/8c929c62-53f3-4543-97c0-0aed02b1d9bc/authorisations/e63cf977-77ac-462d-a8a1-761d64a9bda0" } } } } </pre>

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 physical 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: <ul style="list-style-type: none"> • 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

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

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

<pre>GET https://api.mediolanum.it/psd2/v1.2/bg/03062/v2/consents/confirmation-of-funds/8c929c62-53f3-4543-97c0-0aed02b1d9bc/status X-Request-ID: request-0001 Authorization: Bearer o9xcq8V2zUg893gm6ROpO7XDUhaBkIOyilSHG0M11XCXFgjMPP7U6R</pre>
Response
<pre>HTTP/1.1 200 X-Request-ID: request-0001 Content-Type: application/json { "consentStatus": "received" }</pre>

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 physical 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: <ul style="list-style-type: none"> • 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
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.mediolanum.it/psd2/v1.2/bg/03062/v1/consents/confirmation-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": "IT42Z0306200120000000616474"},

```
"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.mediolanum.it/psd2/v1.2/bg/03062/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 or a payment. 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 process will not affect the TPP and PSU processes, in accordance with the SCA approach adopted by Banca Mediolanum XS2A PSD2 Gateway and the process optimisation criteria 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 Banca Mediolanum 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.

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.

Path Parameters

Attribute	Type	Description
payment-service	String	The possible values are "payments" and "periodic-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 initiation addressed by paymentId
paymentId or consentId	String	Resource identification of the related payment initiation 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.mediolanum.it/psd2/v1.2/bg/03062/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.

Path Parameters

Attribute	Type	Description
payment-service	String	The possible values are "payments" and "periodic-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 initiation addressed by paymentId
paymentId or consentId	String	Resource identification of the related payment initiation or consent resource.
authorisationId	String	Resource identification of the related Payment Initiation 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.mediolanum.it/psd2/v1.2/bg/03062/v1/payments/sepa-credit-transfers/Id-f718885c2c5e13b83dd689f4/authorisations/e63cf977-77ac-462d-a8a1-761d64a9bda0 X-Request-ID: request-0001 Accept: application/json Authorization: Bearer o9xcq8V2zUg893gm6ROpO7XDUhaBklOyilSHG0M11XCXFgjMPP7U6R
Response
HTTP/1.1 200 Ok X-Request-ID: request-0001 Content-Type: application/json { "scaStatus": "finalised" }

14 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 "TppRedirect-URI" field declaration as shown in the following example:

Example

Request
<pre> https://api.mediolanum.it/psd2/v1.2/bg/03062/v1/payments/sepa-credit-transfers201 X-Request-ID: X-Request-ID PSU-IP-Address: PSU-IP-Address 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 8vnmWoRE2hIXqiN4JqoMNuyY3NhyArM4aBnqtbULbtNMP90C3B3igs { "debtorAccount": {"iban": "IT89U03*****925"}, "instructedAmount": {"currency": "EUR", "amount": "0.1"}, "creditorAccount": {"iban": "IT70B03*****195"}, "creditorName": "Name", "remittanceInformationUnstructured": "Prova" } </pre>
Response
<pre> HTTP/1.1 201 ASPSP-SCA-Approach: REDIRECT X-Request-ID: X-Request-ID Content-Type: application/json { "paymentId" : "Id-4a899n88b6240008bdmcc907", "transactionStatus" : "ACTC", "transactionFees" : { "currency" : "EUR", "amount" : "0.00" }, "_links" : { "scaRedirect" : { "href": "https://www.apimediolanum.it/ecm/payment?abi=03062&lang=IT&d=iAgInRpbWVzdGFtcClgO iAiMTY4ODExMTQzNSIsCiAgInRwcF9pZClgOiAiUFNESVQQtQkktMzA2MilsCiAgInRwcF9uYW1lIiA6I CJCYW5jYSBNZWRpb2xhbnVtIFNwYSIsCiAgInRwcF90eXBliA6ICJQSVNQIiwKICAiY3JlZGl0b3JfbmF tZSIgOiAiIlRQUC1SZWRpcmVjdC1VUkkiLAogICJ0cHBSZWRpcmVjdFVyaU5vT2siIDogIlRQUC1Ob2k cmVzcyIsCiAgImF1dGhvcmlzYXRpb25faWQilDogIjVmNDRlNmRjLTgwN2YtNGYyYi05MjQ3LTg5ZjB jMzdjOGYwNCIKfQ.t2MPPrV2RQlaeASOV0wsfczczm8TZkUo6oT7i4- W84X6r3jW02p6Pi7ZZq8aLI_dXCjJRw6il_28C17HQvucF95h34E9LbT6d19WBkYBt6uG8cJ- MieSlA7cu5cUI3bFPsS5tjieuy5tuG77m16ZFAsqUfDZXvSXiC9BVUyXky1WiCzKMQYsXEIEcD8xgbue yJhbGciOiJSUzI1Ni9.ewogICJhbW91bnQiIDogMC4xLAogICJjb21taXNzaW9uIiA6IDA5CiAgImJlbn VmaWNpYXJ5X2JpYyIiOiAiIiwuYyIiOiAiIiwuYyIiOiAiIiwuYyIiOiAiIiwuYyIiOiAiIiwuYyIiOiAi MDAwMDAwMjgzMTk1IiwuYyIiOiAiIiwuYyIiOiAiIiwuYyIiOiAiIiwuYyIiOiAiIiwuYyIiOiAiIiwuYy SlSjCiAgImN1cnJlbnN5IiA6ICJFVVliLAogICJleHRlcm5hbF90cmFuc2FjAsCiAgImNhbGxhdGwMDAsCi </pre>

```
AgImNhbGxGfdGVzZXIiDogIjAwMDA4NTI5MTA3liwKICAidXNlcl90egImV4cClgOiAxNXBliA6iCJSRV
RBSUwiLAogICJ1c2VyX2NvZGUiDogIjAwMDA4NTI5MTA3liwKICAIYWJpliA6iClwMzA2MiIsCiAgIm
NvdW50cnkiDogIiIsCiAgImNpdHkiDogIiIsCiAgInBheW1lbnRTZXJ2aWNlIiA6iCJwYXltZW50cyIsCiA
gInBheW1lbnRQcm9kdWN0IiA6iCJzZXBlLWNYZWRpdC10cmFuc2ZlcnMiLAogICJ2YWx1ZV9kYXRl
IiA6iDE2ODgzMzUyMDAidXN0YWIwIiA6iDE2ODgxMTE0MStUmVkaXJlY3QtVWJlIiwKICAIUHN1S
XBBZGRyZXNzIiA6iCJQU1UtSVAtQWRzQ2ODAsCiAgImRIYmdGlvlbl9pZCIgOiAiIiwKICAIYWNjb3Vu
dF9pZCIgOiAiSVQ4OVUwMzA2MjM0MjEwMDAwMDAwMDAsCiAgImNhbGxGfdGwMDI0X2RhdGU
iDogMTY4ODA3NjAwMDAwMCAwKICAidG90YWwiiDogIjAuMSIsCiAgImJhbmtfbmFtZSIgOiAiRklO
RUNPQkFOSyBTUEEiLAogICJhY2NyZWRpdGF0aW9uX2RhdGW2ludmFsaWQgZmlhY2V3RmkiID
ogUiDogMTY4ODMzNTIwMDAwMCAwKICAIcmVndWxhdGlvlbl9kYXRlIiA6iDE2ODgzMzUyMDAw
MDAsCiAgImFjY2VwdGFuY2VfZGF0ZSIgOiAxNjg4MDE0MDAwMDAwLAoB3AFjBc05XqeuqiAgICJ0
cHBOb3Rpb25VcmkiDogIiIsCiAgInRwcE5vdGlmaWNhdGlvlblByZWZlcnJlZCIgOiAiIiwKIC
AiZmVIQ3VycmVuY3kiDogIklVVUilsCiAgImIzcyIiGoiAiQ2VkyWNyaSIsCiAgInV1aWQiDogIklkLTRhO
Dk5ZTGRdliwKICAidHBwUmVkaXY0YjYyNDI5MjhiZGJjYzkyNylsCiA4MTE4MTE0MDAwMDAwLAogICJhY2Nlc3
NfdG9rZW4iDogIjhaXpXcUFFMmhsWHFpTjVKcW9aQm9pWTNEcnlBclM2YUJucXRiVUxidFZZUD
U2QzNCM2IncyIsCiAgImFyZWEiDogInlncGEtY3JlZGl0LXRyYW5zZmVycylsC
_EOzTU3aVYH8w2iyC4T9HIh4O0zblfg2IB7TmRrkXApPU8h8PdYj3eV83Fji4O5c8kJDWdbZU4B9uX
4GqiaLLjpcMAchdALdyrU3EQCjm_EX5OY4sdm-FGSjs08SBauyqch8RzmpQ&cancel_link=TPP-
Nok-Redirect-URI&app2app=false"
},

"scaStatus" : {
  "href": "https://api.mediolanum.it/psd2/v1.2/bg/03062/v1/payments/sepa-credit-transfers/
Id-4a899n88b6240008bdmcc907/authorisations/5f44e6dc-866g-4f2b-0001-89f0c98n7f99"
}
}
}
```

The example above, is related to the Payment Initiation Request SEPA, but the same "psd2-apptoapp" parameter can be used also for consents initiation requests.