



Open Banking interface

Introduction & common parts

Version 1.0

Please visit openbanking.budapestbank.hu to get more information on Budapest Bank OpenBanking, including operational information on the live service.

Contact

In case you have a question or any problem regarding our services, please send us a message using the following email address and we will reply in 2 working days:

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1 Introduction

This documentation describes Budapest Bank Open Banking interface. The documentation is divided into four main parts:

1. **Budapest Bank Open Banking interface:** introduction, summary of the services, common structures, error handling
2. **Budapest Bank Open Banking interface – AccountInfo_V1:** description of account information operations
3. **Budapest Bank Open Banking interface – PaymentInitiation_V1:** description of payment initiation operations
4. **Budapest Bank Open Banking interface – TechnicalRegistration_V1:** descriptions of first TPP interactions with the Bank

2 Definitions

| Name | Definition |
|---------------|---|
| TPP | Based on the Payment Service Directive (PSD) 2 – 2015/2366, a third party provider who uses Budapest Bank's Open Banking interface. |
| Account | Through Open Banking interface, we handle and support all payment accounts identified by IBAN account number, held with Budapest Bank and accessible through one of our online banking channels, including bank accounts, retail and corporate bank / current accounts. |
| PSU | Payment service user is the owner of the accounts held by Budapest Bank and gives accreditations to the TPP in order to access his or her accounts information or initiate payment from these accounts. |
| AISP | Account information service provider who can initiate read only service calls to PSU's accounts. |
| PISP | Payment initiation service provider who can initiate read only service calls and payment requests to PSU's accounts. |
| PIISP | Payment instrument issuer service providers who can initiate confirmation of funds service calls to PSU's accounts. |
| SCA | Strong customer authentication. |
| Consent token | Unique id of the approved access (consent) to a given account linked to the TPP who initiated the request. This token is generated by Budapest Bank, based on PSU's SCA. |

3 Supported Services

The following table shows the scope of Open Banking interface.

| Service Name | Version | Operation Name | Description | Role of the TPP | SCA Approval required by PSU(s) | Consent token required |
|-----------------------|---------|-------------------------------|--|-------------------|---------------------------------|------------------------|
| TechnicalRegistration | 1 | initiateTechnicalRegistration | <p>TPP's first interaction with the Bank. Must share basic information, including the role of TPP and the public key used to TLS and sign messages.</p> <p>This API has to be called periodically aligned with TPP's certificate renewal process.</p> <p>In case of successful technical registration, the Bank grants access to the defined services (see in roles column).</p> | AISP, PISP, PIISP | no | no |
| TechnicalRegistration | 1 | getRegistrationStatus | Inquiry status of the registration. | AISP, PISP, PIISP | no | no |
| AccountInfo | 1 | initiateConsentRequest | <p>Get access to account information services for a limited period. It requires to complete approval process on the Bank's side.</p> <p>During consent request, the Bank determines the selection of accessible services based on TPP's technical registration.</p> | AISP, PISP, PIISP | yes | no |
| AccountInfo | 1 | getStatus | Inquiry status of approval or order completion process. In case of consent, if the initiateConsentRequest was approved it will contain the consent token in the response message. | AISP, PISP, PIISP | no | no |
| AccountInfo | 1 | getBalance | Inquiry available balance of the given account. | AISP, PISP | no | yes |
| AccountInfo | 1 | getConfirmationOfFunds | Inquiry fund availability of the given account and amount. | PIISP | no | yes |
| AccountInfo | 1 | getTransactionsList | Inquiry transaction history up to the last 90 days. | AISP, PISP | no | yes |

| | | | | | | |
|-------------------|---|------------------------|------------------------------------|-------------------|-----|-----|
| AccountInfo | 1 | getStandingOrderList | Inquiry standing order list. | AISP, PISP | no | yes |
| AccountInfo | 1 | revokeApproval | Revoke the given approval process. | AISP, PISP, PIISP | no | no |
| PaymentInitiation | 1 | initiateCreditTransfer | Initiate a new transfer order. | PISP | yes | no |
| PaymentInitiation | 1 | createStandingOrderHUF | Initiate a new HUF standing order. | PISP | yes | no |
| PaymentInitiation | 1 | deleteStandingOrder | Delete an existing standing order. | PISP | yes | no |
| PaymentInitiation | 1 | revokeCreditTransfer | Revoke / recall an order | PISP | yes | no |

All operations are available via SOAP over HTTPS interface.

4 Security

The Open Banking interface requires security in 2 levels:

1. Transport layer security: TLS v1.2 must be applied with mutual (two-way) authentication. Calling initiateTechnicalRegistration service doesn't require mutual authentication, it will be one-way only.
2. Message level signature - Web Services Security X.509 Certificate Token Profile. During webservice calls, TPPs must sign every message by their PSD2 certificate. Requirements of ws-security policy is defined in wsdl.

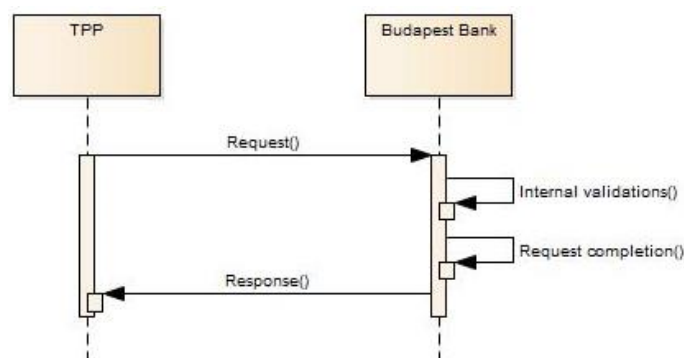
TPP's certificate has to be sent in initiateTechnicalRegistration request. Same certificate has to be used for both levels of security.

Budapest Bank's certificate will be published on Open Banking website.

5 Operation methods

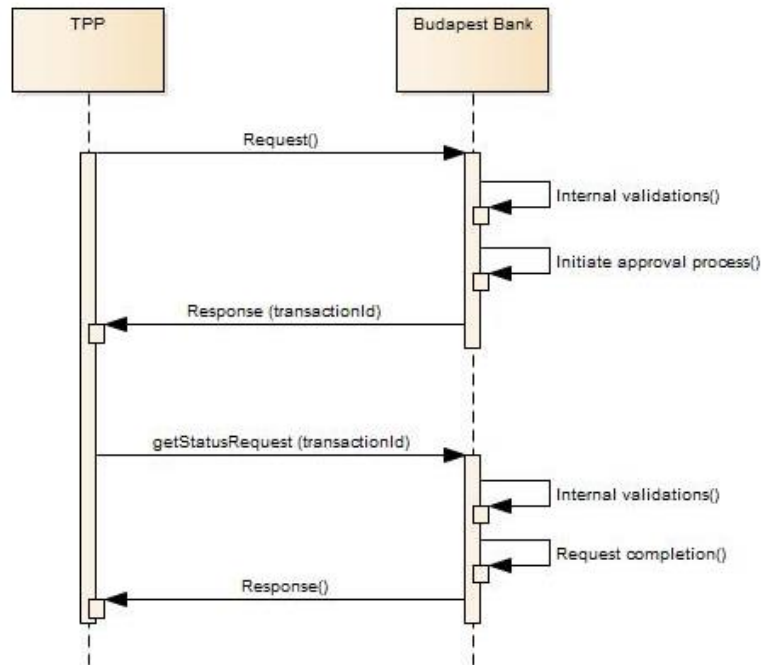
5.1 Without SCA Approval

While calling these types of services the TPP will get synchronous answer in the service response with the result of the request, such as available balance, transaction history, status etc.



5.2 With SCA Approval

While calling these types of services the TPP will get synchronous answer in the service response with receiving acknowledgement. In order to the TPP gather additional information from the request's further lifecycle, must call the getStatus service.



The Bank applies decoupled approach during SCA, however PSU(s) (after a successful login) can reach the approval list page in Budapest Internetbank via a direct link. This link will be included in the receiving acknowledgement response message, so TPP can redirect the PSU. The TPP must gather information from getStatus service (the Bank won't redirect back to TPP's side with approval result).

6 Common structures

This chapter describes the APIs common parts such as soap header structure and response codes.

6.1 Common Header Fields

All requests share a common header. Most fields in the header are the same. This is true for both the request and the response. Therefore the header fields are listed here separately.

6.1.1 Request Header Common Fields

The request header fields are listed below:

| # | Name | Type | Num | Description |
|-----|---------------|-------------------|--------|---|
| 1 | Head | HEADTYPE | [1..1] | The header of the request |
| 1.1 | RequestDate | xs:date | [1..1] | The date of the request sent by the TPP in UTC |
| 1.2 | RequestTime | xs:time | [1..1] | The time of the request sent by the TPP in UTC |
| 1.3 | RequestId | RequestId Type | [1..1] | Request identifier. Should be unique with the given ApplicationId. String, maximum length: 36 characters. |
| 1.4 | ApplicationId | AppName HeaderTyp | [0..1] | The id of the application approved by the bank during the app registration process. String, maximum length: |

| | | | | |
|------|-------------------|-------------------------------|--------|---|
| | | e | | 36 characters. |
| 1.10 | ClientIPAddress | ClientIPAd dressType | [0..1] | The IP address of the PSU. String, maximum length 45 characters, ###IPv6 address format |
| 1.11 | ClientGeoLocation | ClientGeoL ocationTyp e | [0..1] | The geolocation of the PSU as detected by the TPP. String, maximum 50 characters. |

All fields not listed in the table are ignored if sent in request.

6.1.2 Response Header Common Fields

The response header fields are listed below:

| # | Name | Type | Num | Description |
|-----|-------------------------|---------------------------------|--------|--|
| 1 | Head | HEADTYPE Response | [1..1] | The header of the response |
| 1.1 | RequestDate | xs:date | [1..1] | Original RequestDate |
| 1.2 | RequestTime | xs:time | [1..1] | Original RequestTime |
| 1.3 | RequestId | RequestId Type | [1..1] | Original RequestId |
| 1.4 | ResponseDate | xs:date | [1..1] | The date of the response sent by the API in UTC |
| 1.5 | ResponseTime | xs:time | [1..1] | The time of the response sent by the API in UTC |
| 1.6 | ResponseCode | tns:Respo nseCodeTy pe | [1..1] | The response code from the API see: 6.2 Response Codes |
| 1.7 | ResponseDescripti on | ResponseD escription Type | [1..1] | The description belonging to the response code. String, maximum length 200 characters. |

6.2 Response Codes

The service has the following response codes. The message codes are categorized:

- "0" – Normal run, no error, no warning
- "4" – Normal run with warning, for example the result is too big
- "8" – Business error
- "C" – Technical error

Response message details:

| SOAP message body content | responseCode | responseDescription | faultcode | faultstring | errorCode | errorDescription |
|---------------------------|--------------|--|----------------|----------------|-----------|--|
| normal response | 0 | | | | | |
| normal response | 4 | There are more results in the backend system, please change input parameters to get all data | | | | |
| fault | C | Technical error | soapenv:server | Security error | C001 | Certificate expired |
| fault | C | Technical error | soapenv:server | Security error | C002 | Certificate blocked or revoked |
| fault | C | Technical error | soapenv:server | Security error | C003 | The contents of the signature certificate are not matching PSD2 attribute requirements |
| fault | C | Technical error | soapenv:server | Security error | C004 | Signature check |

| | | | | | | |
|-------|---|-----------------|----------------|---|------|--|
| | | | | | | failed – signature is invalid |
| fault | C | Technical error | soapenv:server | Error occurred at message validation | C005 | Format of certain request fields are not matching the requirements |
| fault | C | Technical error | soapenv:server | Error occurred at message validation | C006 | Invalid IBAN, checksum not match |
| fault | C | Technical error | soapenv:server | Error occurred at role validation | C007 | TPP doesn't have right to call the requested operation |
| fault | C | Technical error | soapenv:server | Error occurred at role validation | C008 | Invalid consent |
| fault | C | Technical error | soapenv:server | Error occurred at internal message processing | C009 | Internal system error |
| fault | 8 | Business error | soapenv:server | Error occurred at account validation | 8001 | Requested account is not scope of PSD2 openAPI |
| fault | 8 | Business error | soapenv:server | Error occurred at account validation | 8002 | Requested account is blocked |
| fault | 8 | Business error | soapenv:server | Error occurred at account validation | 8003 | SCA requirement cannot be satisfied, one or more approver disabled openAPI channel |
| fault | 8 | Business error | soapenv:server | Error occurred at internal message processing | 8004 | Internal business error |