

**PSD2 API**

**INTERFACE SPECIFICATION**

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| --- | --- |
| **Name** | PSD2 API |
| **Subject** | Interface specification |
| **Version** | 2.00 |
|  |  |

# List of acronyms

List of acronyms

|  |  |  |
| --- | --- | --- |
| # | Acronym | Explanation |
|  | PABK | Poštová banka a.s. |
|  | PSD2 | Payment Service Directive 2 |
|  | TPP | Third Party Provider |
|  | MEP | Message Exchange Pattern |
|  | AI | Account Information |
|  | POI | Payment Order Initiation  |
|  | LOT | List Of Transactions |
|  | FAC | Funds Availability Confirmation |
|  | AI | Account Information |
|  | API GW | API Gateway |
|  | CA | Certificate authority |
|  | SSL | Secure Socket Layer |
|  | TLS | Transport Layer Security |
|  | PISP | Payment Information Service Provider |
|  | AISP | Account Information Service Provider |

# References

|  |  |  |
| --- | --- | --- |
| # | Name | Description |
|  | [PSD2](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2018.069.01.0023.01.ENG&toc=OJ:L:2018:069:TOC) | Payment Service Directive 2 |
|  | [RTS on SCA and CSC](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2018.069.01.0023.01.ENG&toc=OJ:L:2018:069:TOC) | Regulatory technical standards for strong customer authentication and common and secure open standards of communication |
|  | [eIDAS](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2014.257.01.0073.01.ENGhttps://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2014.257.01.0073.01.ENG) | REGULATION (EU) No 910/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC |

# Introduction

Document describes PSD2 directive interfaces which are provided by Poštová banka (PABK).

## Main focus

Document focuses on following topics:

* Describe interfaces which are provided by PABK for Third Party Providers (TPP)
* Define security requirements for TPP
* Describe invocation sequence for proper interface handling

# Overall description

Following interfaces from PSD2 directive will be provided for TPP by PaBk

* Account Information (AI)
* Payment Order Initiation (POI)
* List Of Transactions (LOT)
* Funds Availability Confirmation (FAC)

Communication pattern follow 2 scenarios from TPP point of view:

* Multi step pattern with online authorization by client (AISP, , PISP)
	+ Client puts inquiry via TPP
	+ Client authorize inquiry via 2 factor authentication (Internet banking)
	+ Client check result of inquiry via TPP
* Single step pattern with forward authorization by client (FAC)
	+ Result of the inquiry is immediate, client approved processing of the inquiry via different channels in the past

## Online authorization (AI, POI, LOT)

In case of the scenarios AI, POI, LOT it is required that inquiry is authorized with client via 2 factor authentication. Orchestration of the steps is depicted on the following sequence diagram.



Figure 1 – Sequence diagram for scenarios AI, POI, LOT

Description of the sequence diagram:

* Client puts inquiry (AI, POI, LOT) via TPP
* TPP calls provided API
* PABK validate TPP, creates Order and returns identification of created Order to TPP. Inquiry is processing in backend systems PABK
* TPP forward client to PABK Internet banking webpage
* Authentication and authorization is performed by client on Internet banking. Inquiry continues in processing. Authorization must be performed within in 10 minutes after inquiry, otherwise it will be rejected
* Client is forwarded to TPP webpage
* TPP validates result of processing based on identification of Order

In case of direct access:

* Client puts inquiry (AI, POI, LOT) via TPP
* TPP calls provided API with attributes Login and password
* Bank validate TPP and client, creates Order and returns identification of created Order to TPP. Inquiry is processing in backend systems
* Client is on TPP page
* Authentication and authorization is performed by TPP page. Client fill the OTP codes on the TPP page. TPP send OTP, bank validate OTP and than inquiry is processing in backend systems or declined with err msg (in case of bad OTP). Authorisation must be provided in 5 minutes.
* TPP validates result of processing based on identification of Order

## Forward authorization (FAC)

To successfully proceed of this scenario, it is necessary that client of PABK provides forward authorization for selected TPP to validate his account balances.



Figure 2 – Orchestration FAC

Sequence diagram description:

* Client puts inquiry (FAC) via TPP
* TPP invokes FAC API on API GW
* PABK verifies TPP and process inquiry online
* Result is presented to client via TPP

# Interfaces

## Security requirements

Client SW (TPP) willing to use PABK API has to follow security requirements described in this section.

Communication has to be initiated via TLS ([mutual authentication](https://en.wikipedia.org/wiki/Mutual_authentication)). Brief description is on the following figure.



Figure 3 – TPP authentication

Interactions with PaBk API has to be initiated with [TLS handshake](https://en.wikipedia.org/wiki/Transport_Layer_Security#Client-authenticated_TLS_handshake). Client has to use valid certificate (X.509 SSL type EV or qualified eIDAS certificate) issued via public certificate authority. Detailed requirements to initiate TLS could be found in [RFC 6125](https://tools.ietf.org/html/rfc6125). Client identification is verified and following attributes are validated:

1. Certification authority signature
2. Certificate validity
3. Certificate ownership

Client certificate requirements:

* Certificate meets X.509 standard
* Certificate is issued by CA
* Accepted certificate
	+ eIDAS qualified certificate for website authentication (eIDAS SSL must conform to requirements in section 45 directive EÚ nr. 910/2014 (list of accepted trust service providers <http://nbu.gov.sk/en/trust-services/index.html> or <http://tlbrowser.tsl.website/tools/index.jsp>)
* certificate includes (standard ETSI TS 119 495):
	+ name of TPP licence registrator,
	+ number of licence ID,
	+ roles of TPP licence

Immediately after the secure connection is established it is possible to call application interfaces which are described in following sections. Application interfaces are depicted as WS Request/WS Response on figure 3.

Client certificate requirements for test environment:

* TPP has PSD2 licence
	+ certificate meets requirements for production environment noted above
* TPP is in the process of PSD2 licence issuing:
	+ - Accepted certificate is type of Extended Validation SSL certificate
	+ TPP confirms his licence process, which is provided by the Regulator (confirmation included name of TPP, identification ID of TPP, role)
	+ TPP sends confirmation before start testing to support\_tpp@pabk.sk

## URL convention

Interface endpoints compose of these parts:

https://domainname/brand/servicename

example

https://psd2api.postovabanka.sk/pabksk/ws/AccountService/1.0/information

* domainname – psd2api.postovabanka.sk
* brand –
	+ pabksk – endpoint for services of Poštová banka Slovensko
* servicename – service which is initiated. For example for Account Information service use /ws/AccountService/1.0/information

For testing purpose there are mock services deployed on the following endpoints:

* https://psd2apitest.postovabanka.sk/mockup/ws/AccountService/1.0
* https://psd2apitest.postovabanka.sk/mockup/ws/PaymentService/1.0

For direct access (without redirect) are deployed following endpoints:

* https://psd2apitest.postovabanka.sk/mockup\_direct/ws/AccountService/1.0
* https://psd2apitest.postovabanka.sk/mockup\_direct/ws/PaymentService/1.0

In the following text, subsections names correspond to servicename part of the URL.

.XSD and Test cases are in the separate appendix.

## Account Information (AI)

### /ws/AccountService/1.0/information

|  |  |
| --- | --- |
|  |  |
| Transport  | HTTPS/XML |
| Method | POST |
| MIME Type | application/xml |
| MEP | Synchronous request-response |
| XSD schema | AccountService\_api.xsd |

|  |  |
| --- | --- |
| Request message |  |
| HTTP Header parameters | TPPUriRedirect | TPP webpage URL where will be client redirected after inquiry authorisation |
| Accept | application/xml |
| X-username | Client login to Internet banking |
| X-password | Client password to Internet banking |
| X-orderId | orderId of trx, which has to be authorisate |
| X-OTPkod | OTP authorisation code  |
| HTTP Content | InformationRequest |

|  |  |
| --- | --- |
| Response message |  |
| HTTP Header parameters | redirectUrl  | PaBk.sk webpage URL where will be client redirected for authorisation of his inquiry  |
| error  | Error code |
| errorDescription  | Error description |
| HTTP Content | InformationResponse |

#### Request message - InformationRequest

|  |  |  |  |
| --- | --- | --- | --- |
| Element name | Required | Type | Description |
| IBAN | yes | xsd:string | client IBAN |
| messageId  | yes | xsd:string | Unique identifier of TPP message |

#### Response message - InformationResponse

|  |  |  |  |
| --- | --- | --- | --- |
| Element name | Required | Type | Description |
| orderId | yes | xsd:string | Unique ID of Order corresponding to client inquiry  |
| SCA\_Type | yes | xsd:boolean | Attribute for requirement of additional authorisation .1 – is required0 – is not required |

### /ws/AccountService/1.0/informationResult

|  |  |
| --- | --- |
|  |  |
| Transport  | HTTPS/XML |
| Method | POST |
| MIME Type | application/xml |
| MEP | Synchronous request-response |
| XSD schema | AccountService\_api.xsd |

|  |  |
| --- | --- |
| Request message |  |
| HTTP Header parameters | Accept | application/xml |
| HTTP Content | InformationResultRequest |

|  |  |
| --- | --- |
| Response message |  |
| HTTP Header parameters | error  | Error code |
| errorDescription  | Error description |
| HTTP Content | InformationResultResponse |

#### Request message - InformationResultRequest

|  |  |  |  |
| --- | --- | --- | --- |
| Element name | Required | Type | Description |
| orderId | yes | xsd:string | Unique order id |
| messageId  | yes | xsd:string | Unique identifier of TPP message |

#### Response message - InformationResultResponse

|  |  |  |  |
| --- | --- | --- | --- |
| Element name | Required | Type | Description |
|  accountName | yes | xsd:string | Account name |
|  accountType | yes | xsd:string | Account type 0 – current account1 –saving account |
|  accountCurrency | yes | xsd:string | Account currency |
|  accountingBalance | yes | xsd:decimal | Accounting balance |
|  availableBalance | yes | xsd:decimal | Available balance |
|  ownFunds | yes | xsd:decimal | Own funds |
|  datetime | yes | xsd:date | Time of the balances snapshot |

## List Of Transactions (LOT)

### /ws/AccountService/1.0/transactions

|  |  |
| --- | --- |
|  |  |
| Transport  | HTTPS/XML |
| Method | POST |
| MIME Type | application/xml |
| MEP | Synchronous request-response |
| XSD schema  | AccountService\_api.xsd |

|  |  |
| --- | --- |
| Request message |  |
| HTTP Header parameters | TPPUriRedirect | TPP webpage URL where will be client redirected after inquiry authorisation |
| Accept | application/xml |
| X-username | Client login to Internet banking |
| X-password | Client password to Internet banking |
| X-orderId | orderId of trx, which has to be authorisate |
| X-OTPkod | OTP authorisation code  |
| HTTP Content | TransactionsRequest |

|  |  |
| --- | --- |
| Response message |  |
| HTTP Header parameters | redirectUrl  | PaBk.sk webpage URL where will be client redirected for authorisation of his inquiry  |
| error  | Error code |
| errorDescription  | Error description |
| HTTP Content | TransactionResponse |

#### Request message - TransactionsRequest

|  |  |  |  |
| --- | --- | --- | --- |
| Element name | Required | Type | Description |
| IBAN | yes | xsd:string | Client’s IBAN |
| dateFrom | yes | xsd:date | Date of first transaction |
| dateTo | yes | xsd:date | Date of last transaction |
| transactionType | yes | xsd:string | Transaction type:pendingrealized |
| messageId  | yes | xsd:string | Unique identifier of TPP message |

#### Response message - TransactionResponse

|  |  |  |  |
| --- | --- | --- | --- |
| Element name | Required | Type | Description |
| orderId | yes | xsd:string | Unique order id  |
| SCA\_Type | yes | xsd:boolean | Attribute for requirement of additional authorisation .1 – is required0 – is not required |

### /ws/AccountService/1.0/transactionsResult

|  |  |
| --- | --- |
|  |  |
| Transport  | HTTPS/XML |
| Method | POST |
| MIME Type | application/xml |
| MEP | Synchronous request-response |
| XSD schema | AccountService\_api.xsd |

|  |  |
| --- | --- |
| Request message |  |
| HTTP Header parameters | Accept | application/xml |
| HTTP Content | TransactionsResultRequest |

|  |  |
| --- | --- |
| Response message |  |
| HTTP Header parameters | error  | Error code |
| errorDescription  | Error description |
| HTTP Content | TransactionsResultResponse |

#### Request message - TransactionsResultRequest

|  |  |  |  |
| --- | --- | --- | --- |
| Element name | Required | Type | Description |
| orderId | yes | xsd:string | Unique order id |
| pageNr | yes | xsd:string | Page number |
| messageId | yes | xsd:string | Unique identifier of TPP message |

#### Response message – TransactionsResultResponse

Character = in column Element name represents one level in XML structure

|  |  |  |  |
| --- | --- | --- | --- |
| Element name | Required | Type | Description |
| transactionList |  |  |  |
| =pageNr | yes | xsd:integer | Actual page number |
| =totalPages | yes | xsd:integer | Total number of pages |
| =transaction | no |  | One transaction in page  |
| ==id | yes | xsd:string | Id of transaction |
| ==type | yes | xsd:string | Operation type |
| ==date | yes | xsd:date | Date of transaction |
| == amount | yes | xsd:string | Transaction amount  |
| == reference | yes | xsd:decimal | Reference |
| == note | no | xsd:string | Note |
| ==rowIDInPage | no | xsd:integer | Id of page number |
| ==accountNumber | yes | xsd:string | Account number |
| ==accountBankCode | no | xsd:string | Account bank code |
| ==accountName | no | xsd:string | Account name |
| ==correspondingAccountNumber | no | xsd:string | Counterparty account number |
| ==correspondingAccountBankCode | no | xsd:string | Counterparty bank code |

## Payment Order Initiation (POI)

Interface to be used to payment initiation. Based on the payment type there are 3 endpoints provided:

* sendPaymentEcommerce - immediate payment (SEPA)
* sendPaymentStandard – payment with future payment date (SEPA)
* sendPaymentInternational - international payment (Non SEPA)

### /ws/PaymentService/1.0/sendPaymentEcommerce

|  |  |
| --- | --- |
|  |  |
| Transport  | HTTPS/XML |
| Method | POST |
| MIME Type | application/xml |
| MEP | Synchronous request-response |
| Request XSD schema  | pain.001.001.07.PaBkCustomPOIecomm.xsdCustomised PAIN001 scheme is used as payload. See PAIN001 for element type specification.  |
| Response XSD schema | pain.002.001.08.xsdCustomised PAIN002 scheme is used as payload. See PAIN002 for element type specification. |

|  |  |
| --- | --- |
| Request message |  |
| HTTP Header parameters | TPPUriRedirect | TPP webpage URL where will be client redirected after inquiry authorisation |
| Accept | application/xml |
| X-username | Client login to Internet banking |
| X-password | Client password to Internet banking |
| X-orderId | orderId of trx, which has to be authorisate |
| X-OTPkod | OTP authorisation code  |
| HTTP Content | SendPaymentEcommerceRequest |

|  |  |
| --- | --- |
| Response message |  |
| HTTP Header parameters | redirectUrl  | PaBk.sk webpage URL where will be client redirected for authorisation of his inquiry  |
| error  | Error code |
| errorDescription  | Error description |
| HTTP Content | SendPaymentEcommerceResponse |

#### Request message - SendPaymentEcommerceRequest

Character = in column Element name represents one level in XML structure

|  |  |  |  |
| --- | --- | --- | --- |
| Element name | Required | Type | Description |
| CstmrCdtTrfInitn | yes |  |  |
| =GrpHdr | yes |  |  |
| ==MsgId | yes | Max35Text | Unique identifier of TPP messageNo diacritics or space is allowed. Only characters are allowed: A-Za-z0-9+?/-:().,'  |
| ==CreDtTm | yes | ISODateTime | Date and time that the request was created |
| =PmtInf | yes |  |  |
| ==Dbtr | yes |  |  |
| ===Nm | no | Max140Text | Name of the payer/originatorNo diacritic is allowed. Only characters are allowed: A-Za-z0-9+?/-:().,' and space |
| ==DbtrAcct | yes |  |  |
| ===Id | yes |  |  |
| ====IBAN | yes | IBAN2007Identifier | IBAN of the Payer/Originator that will be debited |
| ==CdtTrfTxInf | yes |  |  |
| ===PmtId | yes |  |  |
| ====InstrId | yes | Max35Text | Transaction IDNo diacritics or space is allowed. Only characters are allowed: A-Za-z0-9+?/-:().,'. |
| ====EndToEndId | no | Max35Text | E2E reference – max 35 charactersNo diacritic is allowed. Only characters are allowed: A-Za-z0-9+?/-:().,' and space |
| === Amt | yes |  |  |
| ==== InstdAmt | yes | ActiveOrHistoricCurrencyAndAmount | Amount of transaction and currency. Only EUR currency possible.The amount must be> = 0.01 and <= 999999999.99. The amount must be rounded to only 2 decimal places. Decimal places separator is "." (dot) |
| ===Cdtr | yes |  |  |
| ====Nm | yes | Max140Text | Creditor nameNo diacritic is allowed. Only characters are allowed: A-Za-z0-9+?/-:().,' and space |
| ===CdtrAcct | no |  |  |
| ====Id | yes |  |  |
| =====IBAN | yes | IBAN2007Identifier | Creditor IBAN  |
| ===RmtInf | no |  |  |
| ====Ustrd | no | Max140Text | Remittance Information - Free text provided for information purposesNo diacritic is allowed. Only characters are allowed: A-Za-z0-9+?/-:().,' and space |

#### Response message - SendPaymentEcommerceResponse

|  |  |  |  |
| --- | --- | --- | --- |
| Element name | Required | Type | Description |
| CstmrPmtStsRpt | yes |  |  |
| =GrpHdr | yes |  |  |
| ==MsgId | yes | Max35Text | Response message identification |
| ==CreDtTm | yes | ISODateTime | Date and time when the response was created |
| =OrgnlGrpInfAndSts | yes |  |  |
| ==OrgnlMsgId | yes | Max35Text | Copy of field GrpHdr/MsgId from Request |
| ==OrgnlMsgNmId | yes | Max35Text | pain.001.001.07 – constant value |
| =OrgnlPmtInfAndSts | no |  |  |
| ==OrgnlPmtInfId | yes | Max35Text | Copy of field PmtInf/CdtTrfTxInf/PmtId/InstrId from Request |
| ==TxInfAndSts | no |  |  |
| ===OrgnlInstrId | no | Max35Text | Order Id |
| ===TxSts | no | ExternalPaymentTransactionStatus1Code | RCVD = payment is processing ERR = error occurred COMP = payment processing completed WAIT = payment is waiting for processing SCA = additional authorization is required |
| === StsRsnInf | no |  |  |
| ====Rsn | no |  |  |
| =====Cd | yes | ExternalStatusReason1Code | Reason code |

### /ws/PaymentService/1.0/sendPaymentStandard

|  |  |
| --- | --- |
|  |  |
| Transport  | HTTPS/XML |
| Method | POST |
| MIME Type | application/xml |
| MEP | Synchronous request-response |
| Request XSD schema  | pain.001.001.07.PaBkCustomPOIecomm.xsdCustomised PAIN001 scheme is used as payload. See PAIN001 for element type specification. |
| Response XSD schema | pain.002.001.08.xsdCustomised PAIN002 scheme is used as payload. See PAIN002 for element type specification. |

|  |  |
| --- | --- |
| Request message |  |
| HTTP Header parameters | TPPUriRedirect | TPP webpage URL where will be client redirected after inquiry authorisation |
| Accept | application/xml |
| X-username | Client login to Internet banking |
| X-password | Client password to Internet banking |
| X-orderId | orderId of trx, which has to be authorisate |
| X-OTPkod | OTP authorisation code  |
| HTTP Content | SendPaymentStandardRequest |

|  |  |
| --- | --- |
| Response message |  |
| HTTP Header parameters | redirectUrl  | PaBk webpage URL where will be client redirected for authorisation of his inquiry  |
| error  | Error code |
| errorDescription  | Error description |
| HTTP Content | SendPaymentStandardResponse |

#### Request message - SendPaymentStandardRequest

Character = in column Element name represents one level in XML structure

|  |  |  |  |
| --- | --- | --- | --- |
| Element name | Required | Type | Description |
| CstmrCdtTrfInitn | yes |  |  |
| =GrpHdr | yes |  |  |
| ==MsgId | yes | Max35Text | Unique identifier of TPP messageNo diacritics or space is allowed. Only characters are allowed: A-Za-z0-9+?/-:().,' |
| ==CreDtTm | yes | ISODateTime | Date and time that the request was created |
| =PmtInf | yes |  |  |
| ==ReqdExctnDt | yes | ISODate | Requested execution date |
| ==Dbtr | no |  |  |
| ===Nm | yes | Max140Text | Name of the payer/originatorNo diacritic is allowed. Only characters are allowed: A-Za-z0-9+?/-:().,' and space |
| ==DbtrAcct | yes |  |  |
| ===Id | yes |  |  |
| ====IBAN | yes | IBAN2007Identifier | IBAN of the Payer/Originator that will be debited |
| ==CdtTrfTxInf | yes |  |  |
| ===PmtId | yes |  |  |
| ====InstrId | no | Max35Text | Transaction IDNo diacritics or space is allowed. Only characters are allowed: A-Za-z0-9+?/-:().,'. |
| ====EndToEndId | yes | Max35Text | E2E reference – maximum 35 characters are allowedNo diacritic is allowed. Only characters are allowed: A-Za-z0-9+?/-:().,' and space |
| === Amt | yes |  |  |
| ==== InstdAmt | yes | ActiveOrHistoricCurrencyAndAmount | Amount of transaction and currency. Only EUR currency possible.The amount must be > = 0.01 and <= 999999999.99. The amount must be rounded to only 2 decimal places. Decimal places separator is "." (dot) |
| ===Cdtr | yes |  |  |
| ====Nm | no | Max140Text | Creditor nameNo diacritic is allowed. Only characters are allowed: A-Za-z0-9+?/-:().,' and space |
| ===CdtrAcct | yes |  |  |
| ====Id | yes |  |  |
| =====IBAN | yes | IBAN2007Identifier | Creditor IBAN |
| ===RmtInf | no |  |  |
| ====Ustrd | no | Max140Text | Remittance Information - free text provided for information purposesNo diacritic is allowed. Only characters are allowed: A-Za-z0-9+?/-:().,' and space |

#### Response message - SendPaymentStandardResponse

|  |  |  |  |
| --- | --- | --- | --- |
| Element name | Required | Type | Description |
| CstmrPmtStsRpt | yes |  |  |
| =GrpHdr | yes |  |  |
| ==MsgId | yes | Max35Text | Response message identification |
| ==CreDtTm | yes | ISODateTime | Date and time when the response was created |
| =OrgnlGrpInfAndSts | yes |  |  |
| ==OrgnlMsgId | yes | Max35Text | Copy of field GrpHdr/MsgId from Request |
| ==OrgnlMsgNmId | yes | Max35Text | pain.001.001.07 – constant value |
| =OrgnlPmtInfAndSts | no |  |  |
| ==OrgnlPmtInfId | yes | Max35Text | Copy of field PmtInf/CdtTrfTxInf/PmtId/InstrId from Request |
| ==TxInfAndSts | no |  |  |
| ===OrgnlInstrId | no | Max35Text | Order Id |
| ===TxSts | no | ExternalPaymentTransactionStatus1Code | RCVD = payment is processing ERR = error occurred COMP = payment processing completedWAIT = payment is waiting for processing SCA = additional authorization is required |
| === StsRsnInf | no |  |  |
| ====Rsn | no |  |  |
| =====Cd | yes | ExternalStatusReason1Code | reason code |

### /ws/PaymentService/1.0/sendPaymentInternational

|  |  |
| --- | --- |
|  |  |
| Transport  | HTTPS/XML |
| Method | POST |
| MIME Type | application/xml |
| MEP | Synchronous request-response |
| Request XSD schema  | pain.001.001.07.PaBkCustomPOIecomm.xsdCustomised PAIN001 scheme is used as payload. See PAIN001 for element type specification. |
| Response XSD schema | pain.002.001.08.xsdCustomised PAIN002 scheme is used as payload. See PAIN002 for element type specification. |

|  |  |
| --- | --- |
| Request message |  |
| HTTP Header parameters | TPPUriRedirect | TPP webpage URL where will be client redirected after inquiry authorisation |
| Accept | application/xml |
| X-username | Client login to Internet banking |
| X-password | Client password to Internet banking |
| X-orderId | orderId of trx, which has to be authorisate |
| X-OTPkod | OTP authorisation code  |
| HTTP Content | SendPaymentInternationalRequest |

|  |  |
| --- | --- |
| Response message |  |
| HTTP Header parameters | redirectUrl  | PaBk webpage URL where will be client redirected for authorisation of his inquiry  |
| error  | Error code |
| errorDescription  | Error description |
| HTTP Content | SendPaymentInternationalResponse |

#### Request message - SendPaymentInternationalRequest

Character = in column Element name represents one level in XML structure

|  |  |  |  |
| --- | --- | --- | --- |
| Element name | Required | Type | Description |
| CstmrCdtTrfInitn | yes |  |  |
| =GrpHdr | yes |  |  |
| ==MsgId | yes | Max35Text | Unique identifier of TPP messageNo diacritics or space is allowed. Only characters are allowed: A-Za-z0-9+?/-:().,' |
| ==CreDtTm | yes | ISODateTime | Date and time that the request was created |
| =PmtInf | yes |  |  |
| ==ReqdExctnDt | yes | ISODate | Requested execution date |
| ==Dbtr | yes |  |  |
| ===Nm | no | Max140Text | Name of the payer/originatorNo diacritic is allowed. Only characters are allowed: A-Za-z0-9+?/-:().,' and space |
| ==DbtrAcct | yes |  |  |
| ===Id | yes |  |  |
| ====IBAN | yes | IBAN2007Identifier | IBAN of the Payer/Originator that will be debited |
| ==CdtTrfTxInf | yes |  |  |
| ===PmtId | yes |  |  |
| ====InstrId | yes | Max35Text | Transaction IDNo diacritics or space is allowed. Only characters are allowed: A-Za-z0-9+?/-:().,'.  |
| ====EndToEndId | no | Max35Text | E2E reference – maximum 35 characters are allowedNo diacritic is allowed. Only characters are allowed: A-Za-z0-9+?/-:().,' and space |
| === Amt | yes |  |  |
| ==== InstdAmt | yes | ActiveOrHistoricCurrencyAndAmount | Amount of transaction and currency. The amount must be> = 0.01 and <= 999999999.99. The amount must be rounded to only 2 decimal places. Decimal places separator is "." (dot). |
| ===ChrgBr | yes | ChargeBearerType1CodePaBk | Specifies which party/parties will bear the charges associated with the processing of the payment transaction (SHA, OUR, BEN) |
| ===CdtrAgt | no |  |  |
| ==== FinInstnId | yes |  |  |
| ===== BICFI | yes | BICFIIdentifier | Creditor bank SWIFT/BIC |
| ===Cdtr | no |  |  |
| ====Nm | yes | Max140Text | Creditor nameNo diacritic is allowed. Only characters are allowed: A-Za-z0-9+?/-:().,' and space |
| ====PstlAdr | yes |  | Creditor postal address |
| =====StrtNm | yes | Max70Text | Creditor street |
| =====TwnNm | yes | Max35Text | Creditor town |
| =====CtrySubDvsn | yes | Max35Text | Creditor country |
| =====Ctry | yes | CountryCode | Creditor address country - ISO 20022 |
| ===CdtrAcct | no |  |  |
| ====Id | yes |  |  |
| =====Othr | yes |  |  |
| ======Id | yes | Max34Text | Creditor account – IBAN or account format |
| ===RmtInf | no |  |  |
| ====Ustrd | no | Max140Text | Remittance Information - Free text provided for information purposesNo diacritic is allowed. Only characters are allowed: A-Za-z0-9+?/-:().,' and space |

#### Response message - SendPaymentInternationalResponse

|  |  |  |  |
| --- | --- | --- | --- |
| Element name | Required | Type | Description |
| CstmrPmtStsRpt | yes |  |  |
| =GrpHdr | yes |  |  |
| ==MsgId | yes | Max35Text | Response message identification |
| ==CreDtTm | yes | ISODateTime | Date and time when the response was created |
| =OrgnlGrpInfAndSts | yes |  |  |
| ==OrgnlMsgId | yes | Max35Text | Copy of field GrpHdr/MsgId from Request |
| ==OrgnlMsgNmId | yes | Max35Text | pain.001.001.07 – constant value |
| =OrgnlPmtInfAndSts | no |  |  |
| ==OrgnlPmtInfId | yes | Max35Text | Copy of field PmtInf/CdtTrfTxInf/PmtId/InstrId from Request |
| ==TxInfAndSts | no |  |  |
| ===OrgnlInstrId | no | Max35Text | Order Id |
| ===TxSts | no | ExternalPaymentTransactionStatus1Code | RCVD = payment is processing ERR = error occurred COMP = payment processing completedWAIT = payment is waiting for processing SCA = additional authorization is required |
| === StsRsnInf | no |  |  |
| ====Rsn | no |  |  |
| =====Cd | yes | ExternalStatusReason1Code | reason code |

### /ws/PaymentService/1.0/getPaymentStatus

|  |  |
| --- | --- |
|  |  |
| Transport  | HTTPS/XML |
| Method | POST |
| MIME Type | application/xml |
| MEP | Synchronous request-response |
| Request XSD schema  | PaymentService\_api.xsd |
| Response XSD schema | PaymentService\_api.xsd |

|  |  |
| --- | --- |
| Request message |  |
| HTTP Header parameters | Accept | application/xml |
| HTTP Content | GetPaymentStatusRequest |

|  |  |
| --- | --- |
| Response message |  |
| HTTP Header parameters | error  | Error code |
| errorDescription  | Error description |
| HTTP Content | GetPaymentStatusResponse |

#### Request message - GetPaymentStatusRequest

Character = in column Element name represents one level in XML structure

|  |  |  |  |
| --- | --- | --- | --- |
| Element name | Required | Type | Description |
| PaymentStatus |  |  |  |
| =GrpHdr | yes |  |  |
| ==MsgId | yes | xsd:string | Unique identifier of TPP message |
| ==CreDtTm | yes | xsd:dateTime | Date and time that the request was created |
| =Order | yes |  |  |
| ==OrderId | yes | xsd:string | Order id |

#### Response message - GetPaymentStatusResponse

|  |  |  |  |
| --- | --- | --- | --- |
| Element name | Required | Type | Description |
| CstmrPmtStsRpt | yes |  |  |
| =GrpHdr | yes |  |  |
| ==MsgId | yes | Max35Text | Response message identification |
| ==CreDtTm | yes | ISODateTime | Date and time when the response was created |
| =OrgnlGrpInfAndSts | yes |  |  |
| ==OrgnlMsgId | yes | Max35Text | Copy of field GrpHdr/MsgId from Request |
| ==OrgnlMsgNmId | yes | Max35Text | pain.001.001.07 – constant value |
| =OrgnlPmtInfAndSts | no |  |  |
| ==OrgnlPmtInfId | yes | Max35Text | Copy of field PmtInf/CdtTrfTxInf/PmtId/InstrId from Request |
| ==TxInfAndSts | no |  |  |
| ===OrgnlInstrId | no | Max35Text | Order Id |
| ===TxSts | no | ExternalPaymentTransactionStatus1Code | RCVD = payment is processing ERR = error occurred COMP = payment processing completedWAIT = payment is waiting for processing SCA = additional authorization is required |
| === StsRsnInf | no |  |  |
| ====Rsn | no |  |  |
| =====Cd | yes | ExternalStatusReason1Code | reason code |

## Funds Availability Confirmation (FAC)

### /ws/AccountService/1.0/balanceCheck

|  |  |
| --- | --- |
|  |  |
| Transport  | HTTPS/XML |
| Method | POST |
| MIME Type | application/xml |
| MEP | Synchronous request-response |
| XSD schema  | AccountService\_api.xsd |

|  |  |
| --- | --- |
| Request message |  |
| HTTP Header parameters | Accept | application/xml |
| HTTP Content | BalanceCheckRequest |

|  |  |
| --- | --- |
| Response message |  |
| HTTP Header parameters | error  | Error code |
| errorDescription  | Error description |
| HTTP Content | BalanceCheckResponse |

#### Request message - BalanceCheckRequest

|  |  |  |  |
| --- | --- | --- | --- |
| Element name | Required | Type | Description |
| IBAN | yes | xsd:string | Client IBAN |
| amount | yes | xsd:decimal | Amount balance to be checked |
| currency | yes | xsd:string | Currency |
| messageId  | yes | xsd:string | Unique identifier of TPP message |

#### Response message - BalanceCheckResponse

|  |  |  |  |
| --- | --- | --- | --- |
| Element name | Required | Type | Description |
| result | yes | xsd:boolean | Result of the check  |
| dateTime | yes | xsd:dateTime | Date and time when check was performed  |

# List of error codes

In case of error code and errorDescription is returned in HTTP header. HTTP header parameters:

* error - Error code
* errorDescription – Error description

| # | Error code | Error description |
| --- | --- | --- |
|  | Err\_out\_001 | Unauthorized characters in the InstrId field. The request could not be processed. Please verify the correctness of the entered data. |
|  | Err\_out\_002 | Incorrect amount entered. The request could not be processed. Please verify the correctness of the entered data. |
|  | Err\_out\_003 | The request could not be processed due to an incorrect due date. Please verify the correctness of the entered data. |
|  | Err\_out\_004 | The request could not be processed for insufficient dispo balance. |
|  | Err\_out\_005 | Could not process request due to invalid validity date since. Please verify the correctness of the entered data. |
|  | Err\_out\_006 | The request could not be processed due to an incorrect maturity date. Please verify the correctness of the entered data. |
|  | Err\_out\_007 | The request could not be processed because of an incorrect IBAN format. Please verify the correctness of the entered data. |
|  | Err\_out\_008 | The request could not be processed due to incorrect maturity date. Please verify the correctness of the entered data. |
|  | Err\_out\_009 | The request could not be processed because the recipient bank is not a SEPA bank. Please verify the correctness of the entered data. |
|  | Err\_out\_010 | The request could not be processed, there is not enough money for the account. Please verify the correctness of the entered data. |
|  | Err\_out\_011 | The request could not be processed, the payer's details are not filled in correctly. Please verify the correctness of the entered data. |
|  | Err\_out\_012 | The request could not be processed. Can not make a transfer to the same account. Please verify the correctness of the entered data. |
|  | Err\_out\_013 | The request could not be processed. Please verify the correctness of the entered data, especially the existence of the account and its limitations. |
|  | Err\_out\_014 | The request could not be processed. Please verify the correctness of the entered data, especially the existence of the account and its limitations. |
|  | Err\_out\_015 | The request could not be processed. Please verify the correctness of the entered data, or try again later. |
|  | Err\_out\_016 | The command could not be processed. Please verify the correctness of the entered data, especially the existence of the account (beneficiary) and its limitations. |
|  | Err\_out\_017 | The request was received and now is processing. |
|  | Err\_out\_018 | The request could not be processed. Please verify the correctness of the entered data, especially the account format. |
|  | Err\_out\_019 | The request could not be processed. Please verify the correctness of the entered data, especially the IBAN and BIC of the recipient. |
|  | Err\_out\_020 | The request could not be processed. Please verify the correctness of the entered data, especially the IBAN of the recipient. |
|  | Err\_out\_021 | The request could not be processed. Please verify the correctness of the entered data, especially the beneficiary's bank code. |
|  | Err\_out\_022 | The request could not be processed. Please verify the correctness of the entered data. |
|  | Err\_out\_023 | The request could not be processed. Account is inactive. |
|  | Err\_out\_024 | The request could not be processed. There was a problem converting your IBAN account number. Please verify the correctness of the entered data. |
|  | Err\_out\_025 | IBAN recipient account is incorrect. Please verify the correctness of the entered data |
|  | Err\_out\_026 | Priority transfer in this amount is not possible. |
|  | Err\_out\_027 | The request could not be processed. The time for authorization has expired. |
|  | Err\_out\_028 | The request could not be processed. Request was not authorized. |
|  | 401 Unauthorized | Client certificate isn´t owned by any registred TPP. |
|  | 403 Forbidden | TPP hasn´t required role for this request. |