Íslenskir staðlar

ÍST WA 310:2020

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Workshop agreement - Domestic payments and deposits

Vinnustofusamþykkt – Innlendar greiðslur og innlán

Íslenskir staðlar

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1. edition

ÍST WA 310:2020

Foreword

This IST workshop agreement was developed in accordance with “ÍST Reglur um tækniforskriftir, tækniskýrslur og vinnustofusamþykktir” (*e.* IST rules on Technical Specifications, Technical Reports and Workshop Agreements). It was agreed on 2019-12-12 in a workshop by representatives of interested parties, approved and supported by IST following a public call for participation within TN-FMÞ, the FUT technical committee on financial services. It does not necessarily reflect the views of all stakeholders that might have an interest in its subject matter.

The Workshop Agreement (ÍST WA) was funded by Íslandsbanki, Arion banki and Landsbankinn. This ÍST WA is based on the results of the work of two workgroups TN-FMÞ-VH-1 Technical requirements and TN-FMÞ-VH-2 Business requirements.

The final text of ÍST WA-310 was submitted to IST for publication on 2020-08-17. It was developed and approved by:

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Table of contents

Introduction

This workshop agreement (WA) is written to present a preferred way to implement payments and accounts according to the European initiative Berlin Group for implementing PSD2 in Icelandic finance and banking transactions.

One part of the WA is the confirmation of will to participate in the Berlin Group initiative and to recommend a common domestic platform for distributing and maintaining the products.

API interfaces enable accounting systems, payment systems, information systems and other systems to exchange data with the banks without registering in traditional online banking. An example of exchanging data with the banks can be through the accounting systems interface. With a click of a button in the accounting system exchange of data is performed by the system in background and latest deposits is shown in the accounting system.

The Icelandic banks together with RB (Clearing House of Iceland), Central Bank of Iceland, software companies, billing companies, fintech companies and other stakeholders within the TN FMÞ at the Icelandic Standards Council have written a standard on how the banks should conduct electronic interconnection in the construction of interfaces APIs. The first version of that standard was published in 2007 and was named IOBWS (Icelandic Online Banking Web Service). Six years later, version 2, IOBWS 2.0 of the standard was published. The work was developed to make corrections and upgrade to business operations that were not foreseen in the earlier standard. This document describes the results of the first phase of the third IOBWS project, IOBWS 3.0.

Next phases of the IOBWS 3.0 project will provide technical specifications of the of remaining domestic open banking platform.

This document is based on the results from two working groups of the TN-FMÞ, VH-1 Financial claims and VH-2 Technical claims, presented on the ÍST workshop VS-3 Innlendar greiðslur og innlán on the 12-12-2019. The following workshop agreement describes national modifications to Berlin-group NextGenPSD2 technical specifications and needed recommendation for national implementation.

The purpose is to fully support Payment Service Directive 2 (PSD2) by a domestic open banking platform and thereby enable stakeholders to trust the Icelandic environment.

ÍST WA 310:2020

1. Scope

The Icelandic banks joint effort to create third version of the IOBWS (Icelandic Online Banking Web Service) is described in this workshop agreement. The third version of IOBWS will support the domestic implementation of the Payment Service Directive (EU 2015/2366, also known as PSD2).

The workshop agreed to extend the Berlin Group NextGenPSD2 Framework and add Icelandic requirements to the framework. Berlin Group NextGenPSD2 includes payments, accounts and consent. NextGenPSD2 can be described as 'Access to Account (XS2A) Framework' with data model (at conceptual, logical and physical data levels) and associated messaging.

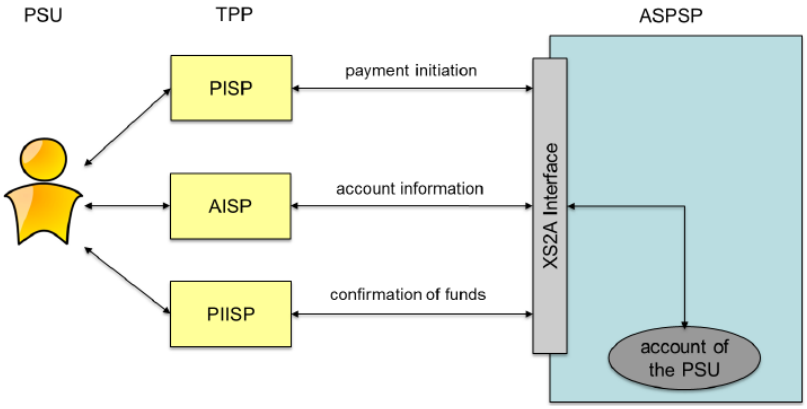
The workshop agreed to define three payment products and to make changes to the data model to include claim payments.

This document reflects the agreements made on the workshop ÍST VS-3 Innlendar greiðslur og innlán, and are based on the analysis of two working groups of TN-FMÞ on the matter.

2. Normative references, definitions and symbols

2.1 Definitions

- **Kennitala**: The Icelandic identification number (Icelandic: kennitala, abbreviated kt.) is a unique national identification number used by the Icelandic government to identify individuals and organisations in Iceland.
- **Icelandic IBAN** definition https://en.wikipedia.org/wiki/International_Bank_Account_Number ISO 13616:1997
- **ISO 20022** is an ISO standard for electronic data interchange between financial institutions.
- **eIDAS** – 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
- **AISP** – Account Information Service Provider – Being an authorised AISP means that business can ask for permission to connect to a bank account and use that bank account information to provide a service.
- **PISP** – Payment Initiation Service Provider – Businesses that are authorised PISP's can ask for permission to connect to a bank account and initiate payments on the customer's behalf, from their bank account.
- **3D** – 3D Secure (3DS) is an additional layer of security for online credit and debit card payments – the most well-known examples being Verified by Visa, Mastercard SecureCode and American Express SafeKey. At the final stage of checkout, it asks the buyer for a password so the bank can authorise the payment.
- **IOBWS 3.0** – This is the acronym of the third version of the Icelandic Open Banking Web Services project and its product.
- **FUT** is the IT sector council at Icelandic standards.
- **Berlin group** – The 'Berlin Group' is a pan-European payments interoperability standards and harmonisation initiative with the primary objective of defining open and common scheme- and processor-independent standards in the interbanking domain between Creditor Bank (Acquirer) and Debtor Bank (Issuer), complementing the work carried out by e.g. the European Payments Council. As such, the Berlin Group has been established as a pure technical standardisation body, focusing on detailed technical and organisational requirements to achieve this primary objective.
- **NextGenPSD2 framework - PSD2** – With [PSD2] the European Union has published a new directive on payment services in the internal market. Among others [PSD2] contains regulations of new services to be operated by so-called Third-Party Payment Service Providers (TPP) on behalf of a Payment Service User (PSU). These new services are:
    - **Payment Initiation Service** (PIS) to be operated by a Payment Initiation Service Provider (PISP) TPP as defined by article 66 of [PSD2]
    - **Account Information Service** (AIS) to be operated by an Account Information Service Provider (AISP) TPP as defined by article 67 of [PSD2], and
    - **Confirmation of the Availability of Funds Service** to be used by Payment Instrument Issuing Service Provider (PIISP) TPP as defined by article 65 of [PSD2].
- **PSU** – Payment Service User. The end-user of payment service.
- **SCA** – Strong Customer Authentication. Defined by the EBA in its RTS on SCA as "an authentication based on the use of two or more elements categorised as knowledge (something only the user knows [for example, a password]), possession (something only the user possesses [for example, a particular cell phone and number]) and inherence (something the user is [or has, for example, a fingerprint or iris pattern]) that are independent, [so] the breach of one does not compromise the others, and is designed in such a way as to protect the confidentiality of the authentication data."
- **Payment service directive** – PSD2 overview.



2.2 Definition of the payment product

The following elements are used to define the payment product. It is important to understand the meaning of each element to see how it fits in the big picture:

- **endToEndIdentification** (Max35Text): This element is optional and provided by the API consumer as the payment short description. Should be visible for both debtor and creditor and can be used as the customers unique identification of the business transaction.
- **debtorAccount** (Account Reference): Debtor account is the account used to transfer money from.
- **debtorId** (Max35Text): Can be used to define id of the debtor.
- **ultimateDebtor** (Max70Text): Ultimate Debtor identifies the party that owes the cash to the Creditor as a result of receipt of goods or services. To name the original recipient of the invoice, Ultimate Debtor, in cases where it is different from the Payer.
- **ultimateDebtorId** (Max35Text): Ultimate Debtor identifies the party that owes the cash to the Creditor as a result of receipt of goods or services. Ultimate Debtor is defined when it is different from the Debtor.
- **instructedAmount** (Amount): Amount and currency to be transferred.
- **creditorAccount** (Account Reference): Creditor account is the account used to transfer money to Beneficiary's account.
- **creditorId** (Max35Text): Can be used to define id of the creditor. Creditor is the party whose account is credited with the payment.
- **creditorName** (Max70Text): The creditor name is not necessary due to the fact that *kennitala* is part of the IBAN number.
- **creditorAddress** (Address): The creditor address is not necessary due to the fact that kennitala is part of the IBAN number and kennitala can be used as lookup key through the national registry.
- **ultimateCreditor** (Max70Text): The creditor (for example a finance company or an intermediary in a business transaction), may be different from the ultimate creditor. The payer can enter who the final/real beneficiary of the payment is.
- In the case of credit card deposit using the masked pan ultimate Creditor contains the owner of the card.
- **ultimateCreditorId** (Max35Text): In the case of credit card deposit using the masked pan ultimate Creditor contains *kennitala* of the owner of the card.
- **icelandicPurpose** (Purpose Code): Text key (*is.* textalykill).
- **remittanceInformationUnStructured** (Max140Text): My description for the payment.
- **executionDate** (ISODate): Execution date if not today, if used then set as a future date.
- **executionTime** (ISODateTime): Will be supported in the future. Would allow payment instruction to be performed at specific date and time.
- **partialPayment** (Boolean): Only used when a claim is paid by transferring amount from debtor Account to existing claim. If claim allows partial payment and API consumer want to pay for example ISK 500 of ISK 1000 claim, then this flag is used.

3. Icelandic domestic adaptions

This chapter concludes the domestic adaptation to the payment products and data model changes.

3.1 Payment products

The workshop concluded to define three following payment products, defined in detail in Annex:

- **Icelandic Credit Transfer:** Transfer the local currency between two accounts in the same bank or between two domestic banks.
- **Icelandic Claim Payment:** Make a withdrawal from account to pay bill (Claim). The claim can be created in any domestic bank.
- **Icelandic Credit Card Deposit:** Make a withdrawal from account to pay onto a payment card, in the same bank or between two domestic banks.

3.2 Functionally & data model changes

The Berlin Group data model NextGenPSD2 framework is described in the document PSD2-API 1.3.5 20191216v1.yaml.

The adapted Icelandic domestic data model which the workshop concluded is in the document IST-FUT-TN-FMTH-2020-08-17.yaml and is located in https://github.com/stadlar/IST-FUT-FMTH.

Changes to the data model are described in the chapter “Changes to the data model” with examples in the “Examples” chapter. The Open-API document can be viewed in the Github repository and viewed visually at the swagger-hub https://app.swaggerhub.com/apis/Openbanking.is/IcelandicBankB2B

New function was introduced ‘GetPaymentId’ that allows the caller to query the paymentId using X-RequestID. The function returns the paymentId in question.

4 Presumptions, future work, maintenance

4.1 Presumptions

The Icelandic financial sector must live up to the goals of the PSD2 directive in the near future. NextGenPSD2 technical standard from Berlin Group is written to fulfil the following goals:

- Make the European payments market more integrated and efficient.
- Improve the level playing field for payment service providers (including new players).
- Make payments safer and more secure.
- Protect consumers from fraud.

By extending the NextGenPSD2 Framework from Berlin Group the following goals of PSD2 will be fulfilled in the domestic open banking platform.

4.2 Future work

- The workshop agrees that it is important for the domestic fintech market to take part in the Berlin Group European standards initiative by establishing a working group/VH-BG. Berlin Group meetings are held in different locations over Europe and remote participation is possible as well. The task of the VH-BG participation in Berlin Group meetings is to align future versions of Berlin Groups NextGenPSD2 framework and the conclusions of the workshop agreement and its future versions.
- The workshop agrees to follow the naming convention to the yaml document as follows IST-FUT-TN-FMTH-(year)-(month)-(revision).
- The workshop agrees that the delivery of the yaml document will in the Github of FUT-TN-FMTH by versioned release 1.0.

4.3 Maintenance

The workshop agrees that the following maintenance tasks should be performed in the name of TN-FMÞ by participation in the work of Berlin Group to add Icelandic requirements to the NextGenPSD2 framework or develop the domestic document according to a development of the Berlin Group document.

The workshop agrees that FUTs Github (https://github.com/stadlar/IST-FUT-FMTH/wiki) should be used in this maintenance task and issues shall be raised and processed by VH-BG.

ÍST WA 310:2020

Annex

Icelandic Standard – www.stadlar.is – FUT TN-FMTH

ÍST WA 310 Domestic payments and accounts

Phase 2

Approved changes:

1. New attribute "partialPayment: Boolean" added to Payment Product only applicable to Claim Payments.
2. For account reference, bban is used to store the claim key.
3. The accountDetails object contains "creditLimit".
4. In the remittanceInformationStructured is used for my description.
5. Only support JSON messages.
6. The attribute “endToEndIdentification” is used for the short description.
7. The attribute " icelandicPurpose" is used for the text key (*is.* textalykill) and the text key description.
8. The attribute "ultimateDebtorId" and "ultimateCreditorId" can be used as referenced person example "0101714569".
9. The attribute "remittanceInformationStructured" is used as follows 9.1 "referenceissuer": "RF67123456780" used for reference (*is.* tilvísun) 9.2 "reference": "RF67123456780" used for bill number (*is.* seðilnúmer 7 stafir).
10. The attribute "remittanceInformationUnstructured" is used for payment description visible for both parties (*is.* skýring greiðslu).
11. The attribute "remittanceInformationUnStructuredArray contains payment definition (*is.* skýring greiðanda).
12. If a company has n-eyes payment confirmation process, then payment instruction is not done until all required people have confirmed the payment instruction.
13. Payment records in bulk payments shall include “resourceId” that identifies the record.
14. Payment initiation returns always on paymentId even for bulk payments or periodic payments.

Definition of elements

The following elements are used to define the payment product. It is important to understand the meaning of each element to see how it fits in the big picture:

- **endToEndIdentification** This element is optional and provided by the API consumer as the payment short description.
- **debtorAccount** (Account Reference): Debtor account is the account used to transfer money from.
- **debtorId** (Max35Text): Can be used to define id of the debtor.
- **ultimateDebtor** (Max70Text): Ultimate Debtor identifies the party that owes the cash to the Creditor as a result of receipt of goods or services.
- **ultimateDebtorId** (Max35Text): Ultimate Debtor identifies the party that owes the cash to the Creditor as a result of receipt of goods or services.
- **instructedAmount** (Amount): Amount and currency to be transferred.
- **creditorAccount** (Account Reference): Creditor account is the account used to transfer money to.
- **creditorId** (Max35Text): Can be used to define id of the creditor.
- **creditorName** (Max70Text): For domestic payments, the name of the creditor is not required, only the national registry number (kennitala).
- **creditorAddress** (Address): For domestic payments, the address of the creditor is not required, instead the address found in the national registry is used.
- **ultimateCreditor** (Max70Text): Party that owns the credit account that will be used to receive cash from the Debtor/originating party. It may the same as or different from the Creditor.
- **ultimateCreditorId** (Max35Text): Id of the party that owns the credit account that will be used to receive cash from the Debtor/originating party. It may be the same as or different from the Creditor.
- **icelandicPurpose** (icelandicPurpose): Text key (*is.* textalykill).
- **remittanceInformationUnStructured** (Max140Text): See approved changes.
- **ExecutionDate** (Date): Execution date if not today, if used then set as future date.
- **ExecutionTime** (Date-Time): Will be supported in the future.
- **partialPayment** (Boolean): Only used when a claim is paid by transferring amount from debtorAccount to existing claim. If claim allows partial payment and API consumer want to pay for example ISK 500 of ISK 1000 claim, then this flag is used.

Payment Definitions

Iceland - Payment Products

Only JSON is supported

Data Element	Type	Icelandic Domestic - Credit Transfer	Icelandic Domestic - Claim Payment	Icelandic Domestic - Credit Card Deposit	
endToEndIdentification	Max35Text	Optional	Optional	Optional	
debtorAccount	Account Reference	Mandatory	Mandatory	Mandatory	
debtorId	Max35Text	Optional	Optional	Optional	
ultimateDebtor	Max70Text	Optional	Optional	Optional	
ultimateDebtorId	Max35Text	Optional	Optional	Optional	
instructedAmount	Amount	Mandatory	Mandatory	Mandatory	
creditorAccount	Account Reference	Mandatory	Mandatory	Mandatory	
creditorId	Max35Text	Optional	Optional	Optional	
creditorName	Max70Text	n/a	n/a	n/a	
creditorAddress	Address	n/a	n/a	n/a	
ultimateCreditor	Max70Text	Optional	Optional	Optional	
ultimateCreditorId	Max35Text	Optional	Optional	Optional	
purposeCode	Purpose Code	n/a	n/a	n/a	
icelandicPurpose	icelandicPurpose	Optional	Optional	Optional	
remittanceInformation Structured	Remittance	Optional	Optional	Optional	
remittanceInformation UnStructured	Max140Text	Optional	Optional	Optional	
requested ExecutionDate	ISODate	Optional	Optional	Optional	
requested ExecutionTime	ISODateTime	n/a	n/a	n/a	
partialPayment	Boolean	n/a	Mandatory	n/a	

partialPayment describes the behaviour when the payment product offers a partial payment for a claim.

icelandicPurpose describes purpose of the transaction using Icelandic text keys.

Even if **remittanceInformationUnStructured** accepts 140 characters, only the first 16 characters are used.

Flows

The payment initiation flow depends heavily on the SCA approach implemented by the ASPSP. The most complex flow is the flow for the Embedded SCA Approach, which further differs on whether there are various authentication methods available for the PSU. In the following, the different API flows are provided as an overview of these different scenarios.

https://github.com/stadlar/IST-FUT-FMTH/tree/master/Vinnusvæði/Verkþáttur 2/Images/Flows

1. Redirect SCA Approach: Explicit Start of the Authorization Process

If the ASPSP supports the Redirect SCA Approach, the message flow within the payment initiation service is simple. The Payment Initiation Request is followed by an explicit request of the TPP to start the authorization. This is followed by a redirection to the ASPSP SCA authorization site. A status request might be requested by the TPP after the session is redirected to the TPP's system.

2. Redirect SCA Approach: Implicit Start of the Authorization Process

ASPSPs might start the authorization process implicitly in case of no additional data is needed from the TPP. This optimization process results in the following flow (which is exactly the Redirect SCA Approach flow from version 1.0 and 1.1 of the Implementation Guideline before authorization sub-resources have been established). In this case, the redirection of the PSU browser session happens directly after the Payment Initiation Response. In addition, an SCA status request can be sent by the TPP to follow the SCA process (not shown in the diagram).

3. OAuth2 SCA Approach: Implicit Start of the Authorization Process

If the ASPSP supports the OAuth2 SCA Approach, the flow is very similar to the Redirect SCA Approach with the implicit start of the Authorization Process. Instead of redirecting the PSU directly to an authentication server, the OAuth2 protocol is used for the transaction authorization process.

4. Decoupled SCA Approach: Implicit Start of the Authorization Process

The transaction flow in the Decoupled SCA Approach is similar to the Redirect SCA Approach. The difference is that the ASPSP is asking the PSU to authorize the payment e.g. via a dedicated mobile app, or any other application or device which is independent of the online banking frontend. The ASPSP is asking the TPP to inform the PSU about this authentication by sending a corresponding PSU Message like "Please use your xxx App to authorize the payment".

5. Embedded SCA Approach without SCA method

In the following, several exemplary flows are shown, where the ASPSP has chosen to process the SCA methods through the PISP – ASPSP interface. In any case, the PSU normally will need to authenticate himself with a first factor, before any account or SCA method details will be available to the PISP. So even in the case where the Payment Initiation is accepted without an SCA method due e.g. to an exemption list, the PSU is asked via the PISP to provide the PSU Identification and e.g. a password or an OTP. The later exemplary flows then will show scenarios, where complexities like SCA processing and choosing an SCA method will be added.

6. Embedded SCA Approach with only one SCA method available

In the case where only one SCA method is available, the "Authorize Transaction Request" is added to the flow, where the TPP is transmitting the authentication data of the customer, e.g. an OTP with included dynamic linking to the transaction details.

7. Embedded SCA Approach with Selection of an SCA method

In the following flow, there is a selection of an SCA method added in the case of the ASPSP supporting several SCA methods for the corresponding PSU. The ASPSP transmits first the available methods to the PISP. The PISP might filter them if not all authentication methods can be technically supported. The available methods then are presented to the PSU for choice.

Combination of Flows due to mixed SCA Approaches

8. Multilevel SCA Approach: Example of the Redirect SCA Approach

The multilevel SCA Approach supports the authorization of payment by several users, e.g. in a four eyes principle authorization. Multilevel SCA is always handled with the Explicit start of the several Authorization Mechanisms. In the following the flow for a four eyes principle authorization is shown, where both SCA are performed by a redirect.

Methods

Payment Methods

Payment Initiation

Creates a payment initiation request at the ASPSP.

Transaction Status

Check the status of payment initiation.

Payment Cancellation

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 authorization of the payment cancellation is mandated by the ASPSP, a corresponding hyperlink will be contained in the response message. These two cases will be separated also in using different 2xx HTTP response codes.

Cancellation Authorization Sub-Resources

Will deliver an array of resource identifications to all generated cancellation authorization sub-resources.

Payment Initiation

Payment Initiation Request

Request

Path Parameters

Attribute	Type	Description
payment- service	String	The possible values are “payments”, “bulk-payments” and “periodic-payments”. See Payment-Product
payment- product	String	The addressed payment product endpoint, e.g. for SEPA Credit Transfers (SCT). See Payment-Product

Request Header

All methods in the payment service have the same request header Payment Request Header.

Response

Response Header

All methods in the payment service have the same response header Payment Response Header.

Response Body

All methods in the payment service have the same response body Payment Response Body.

Single Payment

See Payment Product

Response Code

The HTTP response code equals 201.

Future Dated Payments

Use same Single Payment message with date in "requestedExecutionDate" field.

Batch Payments

See Payment Product

Data Element	Type	Condition	Description
batchBookingPreferred	Boolean	optional	If this element equals true, the PSU prefers only one booking entry. If this element equals false, the PSU prefers individual booking of all contained individual transactions. The ASPSP will follow this preference according to contracts agreed on with the PSU.
debtorAccount (incl. type)	Account Reference	mandatory	
paymentInformationId	Max35Text	Optional	Unique identification as assigned by the sending party to unambiguously identify this bulk payment. - This attribute may be used by ASPSPs or communities as an optional field. - Remark for Future: This attribute might be made mandatory in the next version of the specification.
requestedExecutionDate	ISODate	optional	If contained, the payments contained in this bulk will be executed at the addressed date. This field may not be used together with the field requestedExecutionTime.
requestedExecutionTime	ISODateTime	optional	If contained, the payments contained in this bulk will be executed at the addressed Date/Time. This field may not be used together with the field requestedExecutionDate.
payments	Bulk Entry	mandatory	The Bulk Entry Type is a type which follows the JSON formats for the supported products for single payments, excluding the data elements: debetorAccount, requestedExecutionDate, requestedExecutionTime. Those three data elements may not be contained in any bulk entry.

Transaction Status

Payment Definitions Transaction Status

Request

Path Parameters

Attribute	Type	Description
payment-service	String	The possible values are “payments”, “bulk-payments” and “periodic-payments”. See Payment-Service
payment-product	String	The addressed payment product endpoint, e.g. for SEPA Credit Transfers (SCT). See Payment-Product
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	Conditional	Is contained only, if an OAuth2 based authentication was performed in a pre-step or an OAuth2 based SCA was performed in the current PIS transaction or in a preceding AIS service in the same session if no such OAuth2 SCA approach was chosen in the current PIS transaction.
Accept	String	Optional	The TPP can indicate the formats of status reports supported together with prioritization following the HTTP header definition. The formats supported by this specification is JSON.

Response

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	In case where the Payment Initiation Request was JSON encoded as defined in Section 5.3.1, the status is returned in this JSON based encoding. transactionStatus defined
fundsAvailable	Boolean	Conditional	This data element is contained, if supported by the ASPSP, if a funds check has been performed and if the transactionStatus is "ATCT", "ACWC" or "ACCP".

Example

```
*Request*
GET /v1/{payment-service}/{payment-product}/{paymentId}/status
Accept: application/json
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7721
Date: Sun, 06 Aug 2017 15:04:07 GMT

*Response*
HTTP/1.x 200 Ok
```

```
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7721
Date: Sun, 06 Aug 2017 15:04:08 GMT
Content-Type: application/json
{
"transactionStatus": "ACCP",
"fundsAvailable": true
}
```

Get Payment

Payment Definitions Get Payment

Request

Path Parameters

Attribute	Type	Description
payment-service	String	The possible values are “payments”, “bulk-payments” and “periodic-payments”. See Payment-Service
payment-product	String	The addressed payment product endpoint, e.g. for SEPA Credit Transfers (SCT). See Payment-Product
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	Conditional	Is contained only, if an OAuth2 based authentication was performed in a pre-step or an OAuth2 based SCA was performed in the current PIS transaction or in a preceding AIS service in the same session if no such OAuth2 SCA approach was chosen in the current PIS transaction.
Accept	String	Optional	The TPP can indicate the formats of status reports supported together with prioritization following the HTTP header definition. The formats supported by this specification is JSON.

Response

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 Code

The HTTP response code equals 200.

Example - Single Payment

```
*Request*
GET /v1/{payment-service}/{payment-product}/{paymentId}
Accept: application/json
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7721
Date: Sun, 06 Aug 2017 15:04:07 GMT

*Response*
HTTP/1.x 200 Ok
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7721
Date: Sun, 06 Aug 2017 15:04:08 GMT
Content-Type: application/json
{
   "endToEndIdentification": "Short description",
   "debtorId": "0208714669",
   "debtorAccount": {
      "iban": "IS110100260000010208714669"
   },
   "creditorId": "0208714669",
   "creditorAccount": {
      "iban": "IS710100261234560208714669"
   },
   "instructedAmount": {
      "amount": 99123
   },
   "icelandicPurpose": {"code": "03"},
   "remittanceInformationUnstructured": "My description",
   "remittanceInformationStructured": {
      "reference": "ABC (16 char)"
   }
```

Example - Bulk Payments

```
*Request*
GET /v1/{payment-service}/{payment-product}/{paymentId}
Accept: application/json
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7721
Date: Sun, 06 Aug 2017 15:04:07 GMT

*Response*
HTTP/1.x 200 Ok
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7721
Date: Sun, 06 Aug 2017 15:04:08 GMT
Content-Type: application/json
{
    "paymentInformationId": "278f475b-cfd2-4247-b330-cabfb10f2721",
    "batchBookingPreferred": true,
    "requestedExecutionDate": "2020-08-01",
```

```
    "payments": [
    {
        "endToEndIdentification": "Short description",
        "debtorId": "0208714669",
        "debtorAccount": {
            "iban": "IS110100260000010208714669"
        },
        "creditorId": "0208714669",
        "creditorAccount": {
            "iban": "IS710100261234560208714669"
        },
        "instructedAmount": {
            "amount": 99123
        },
        "icelandicPurpose": {"code": "03"},
        "remittanceInformationUnstructured": "My description",
        "remittanceInformationStructured": {
            "reference": "ABC (16 char)"
        }
    }]
}
```

Example - Periodic Payments

```
*Request*
GET /v1/{payment-service}/{payment-product}/{paymentId}
Accept: application/json
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7721
Date: Sun, 06 Aug 2017 15:04:07 GMT

*Response*
HTTP/1.x 200 Ok
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7721
Date: Sun, 06 Aug 2017 15:04:08 GMT
Content-Type: application/json
{
    "endToEndIdentification": "Short description",
    "debtorId": "0208714669",
    "debtorAccount": {
        "iban": "IS110100260000010208714669"
    },
    "creditorId": "0208714669",
    "creditorAccount": {
        "iban": "IS710100261234560208714669"
    },
    "instructedAmount": {
        "amount": 99123
    },
```

```
    "icelandicPurpose": {"code": "03"},
    "remittanceInformationUnstructured": "My description",
    "remittanceInformationStructured": {
        "reference": "ABC (16 char)"
    },
    "startDate": "2020-03-01",
    "executionRule": "preceding",
    "frequency": "monthly",
    "dayOfExecution": "01"
}
```

Cancellation

Payment Definitions Payment Cancellation

Request

Path Parameters

Attribute	Type	Description
payment-service	String	The possible values are “payments”, “bulk-payments” and “periodic-payments”. See Payment-Service
payment-product	String	The addressed payment product endpoint, e.g. for SEPA Credit Transfers (SCT). See Payment-Product
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	Conditional	Is contained only, if an OAuth2 based authentication was performed in a pre-step or an OAuth2 based SCA was performed in the current PIS transaction or in a preceding AIS service in the same session if no such OAuth2 SCA approach was chosen in the current PIS transaction.
Accept	String	Optional	The TPP can indicate the formats of status reports supported together with prioritization following the HTTP header definition. The formats supported by this specification is JSON.

Response

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	In case where the Payment Initiation Request was JSON encoded as defined in Section 5.3.1, the status is returned in this JSON based encoding. transactionStatus defined
fundsAvailable	Boolean	Conditional	This data element is contained, if supported by the ASPSP, if a funds check has been performed and if the transactionStatus is "ATCT", "ACWC" or "ACCP".

Response Code

The HTTP response code equals 204.

Example

```
*Request*
DELETE /v1/{payment-service}/{payment-product}/{paymentId}
Content-Type application/json
X-Request-ID 99391c7e-ad88-49ec-a2ad-99ddcb1f7769
Date Sun, 13 Aug 2017 17:05:37 GMT

*Response*
HTTP/1.x 204
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7769
Date: Sun, 13 Aug 2017 17:05:38 GMT
```

Cancellation Authorization

Payment Definitions Cancellation Authorization Sub Resources

Not needed

Get Payment Id

Payment Definitions Get Payment Id

Call
GET /v1/{payment-service}/{payment-product}/info/{endToEndIdentification}

The response of any payment initiation request includes the attribute 'paymentId' that is a unique number to identify the payment initiation request. The attribute 'paymentId' is then used to get information about the payment initiation request or cancel the request if the corresponding banks have not yet started processing the request. In the case of any communication problems when payment initiation request is sent and the response gets lost, the get payment id request can be used to lookup the 'paymentId' from the x-request-id header value.

Request

Path Parameters

Attribute	Type	Description
payment- service	String	The possible values are “payments”, “bulk-payments” and “periodic-payments”. See Payment-Service

Attribute	Type	Description
payment-product	String	The addressed payment product endpoint, e.g. for SEPA Credit Transfers (SCT). See Payment-Product
x-request-id	String	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	Conditional	Is contained only, if an OAuth2 based authentication was performed in a pre-step or an OAuth2 based SCA was performed in the current PIS transaction or in a preceding AIS service in the same session if no such OAuth2 SCA approach was chosen in the current PIS transaction.
Accept	String	Optional	The TPP can indicate the formats of status reports supported together with prioritization following the HTTP header definition. The formats supported by this specification is JSON.

Response

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 Code

The HTTP response code equals 200.

Example

```
*Request*
GET /v1/{payment-service}/{payment-product}/info/{x-request-id}
Accept: application/json
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7721
Date: Sun, 06 Aug 2017 15:04:07 GMT

*Response*
HTTP/1.x 200 Ok
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7721
Date: Sun, 06 Aug 2017 15:04:08 GMT
Content-Type: application/json
{
    "paymentId": "278f475b-cfd2-4247-b330-cabfb10f2721",
}
```

Payment Service

ÍST WA 310:2020

Payment Service

Available payment services are:

- Payments
- Bulk Payments
- Periodic Payments

Payment Product

The request header requires the header field 'X-Request-ID'. The field is a unique value for the TPP and can be used to get the 'paymentId' for payment instruction already created by TPP.

Payment Product

```
Possible values for Icelandic Domestic products are:
* Icelandic Domestic Credit Transfer (Account -> Account)
  * In url use /credit-transfer/
* Icelandic Domestic Claim Payment (Account -> Claim)
  * In url use /claim-payment/
* Icelandic Domestic Credit Card Deposit (Account -> Credit card)
  * In url use /credit-card-deposit/
```

Credit Transfer

- **endToEndIdentification** (Max35Text): **optional**
- **debtorId**: (Max35Text): **optional**
- **debtorAccount** (incl. type) (Account Reference): **mandatory**
- **ultimateDebtor** (Max70Text): **optional**
- **ultimateDebtorId** (Max35Text): **optional**
- **instructedAmount** (inc. Curr.) (Amount): **mandatory**
- **creditorAccount** (Account Reference): **mandatory**
- **creditorId** (Max35Text): **optional**
- **ultimateCreditor** (Max70Text): **optional**
- **ultimateCreditorId** (Max35Text): **optional**
- **icelandicPurpose** (icelandicPurpose): **optional**
- **remittanceInformationUnStructured** (Max70Text): **optional**
- **requestedExecution** (Date): **optional**
- **partialPayment** (Boolean): **n/a**

Example

```
Url:
/v1/{payment-service}/credit-transfer

{
    "endToEndIdentification": "Short description",
    "debtorId": "0208714669",
    "debtorAccount": {
        "iban": "IS110100260000010208714669"
```

```
    },
    "creditorId": "0208714669",
    "creditorAccount": {
        "iban": "IS710100261234560208714669"
    },
    "instructedAmount": {
        "amount": 99123
    },
    "icelandicPurpose": {"code": "03"},
    "remittanceInformationUnstructured": "My description",
    "remittanceInformationStructured": {
        "reference": "ABC (16 char)"
    }
}
```

Icelandic Domestic Claim Payment (Account -> Claim)

- **endToEndIdentification** (Max35Text): **optional**
- **debtorAccount** (incl. type) (Account Reference): **mandatory**

- **endToEndIdentification** (Max35Text): **optional**
- **debtorId**: (Max35Text): **optional**
- **debtorAccount** (incl. type) (Account Reference): **mandatory**
- **ultimateDebtor** (Max70Text): **optional**
- **ultimateDebtorId** (Max35Text): **optional**
- **instructedAmount** (inc. Curr.) (Amount): **mandatory**
- **creditorAccount** (Account Reference): **mandatory**
- **creditorId** (Max35Text): **optional**
- **ultimateCreditor** (Max70Text): **optional**
- **ultimateCreditorId** (Max35Text): **optional**
- **icelandicPurpose** (icelandicPurpose): **optional**
- **remittanceInformationUnStructured** (Max70Text): **optional**
- **requestedExecution** (Date): **optional**
- **partialPayment** (Boolean): **mandatory**

Example

```
Url:
/v1/{payment-service}/claim-payment


{
    "endToEndIdentification": "Short description",
    "debtorId": "0208714669",
    "debtorAccount": {
        "iban": "IS110100260000010208714669"
    },
    "creditorId": "5205161230",
```

```
    "creditorAccount": {
        "bban": "02100100109307118603+20201001"
    },
    "instructedAmount": {
        "currency": "ISK",
        "amount": 99123
    },
    "ultimateDebtorId": "0808714569",
    "ultimateDebtor": "Jón Jónsson (Real payer)",
    "ultimateCreditorId": "0109722329",
    "ultimateCreditor": "Páll Pálsson (Real receiver)",
    "partialPayment": true,
    "icelandicPurpose": {"code": "03"},
    "remittanceInformationUnstructured": "My description",
    "remittanceInformationStructured": {
        "reference": "ABC (16 char)"
    }
}
```

Icelandic Domestic Credit Card Deposit (Account -> Credit card)

- **endToEndIdentification** (Max35Text): **optional**
- **debtorId**: (Max35Text): **optional**
- **debtorAccount** (incl. type) (Account Reference): **mandatory**
- **ultimateDebtor** (Max70Text): **optional**
- **ultimateDebtorId** (Max35Text): **optional**
- **instructedAmount** (inc. Curr.) (Amount): **mandatory**
- **creditorAccount** (Account Reference): **mandatory**
- **creditorId** (Max35Text): **optional**
- **ultimateCreditor** (Max70Text): **optional**
- **ultimateCreditorId** (Max35Text): **optional**
- **icelandicPurpose** (icelandicPurpose): **optional**
- **remittanceInformationUnStructured** (Max70Text): **optional**
- **requestedExecution** (Date): **optional**
- **partialPayment** (Boolean): **n/a**

Example 1

```
Url:
/v1/{payment-service}/credit-card-deposit

{
    "endToEndIdentification": "Short description",
    "debtorId": "0208714669",
    "debtorAccount": {
        "iban": "IS110100260000010208714669"
    },
```

```
    "creditorId": "0208714669",
    "creditorAccount": {
        "pan": "12345678"
    },
    "instructedAmount": {
    "currency": "ISK",
        "amount": 78698
    },
    "partialPayment": true,
    "icelandicPurpose": {"code": "87"},
    "remittanceInformationUnstructured": "My description",
    "remittanceInformationStructured": {
        "reference": "ABC (16 char)"
    }
}
```

Example 2

```
Description: Deposti 555 ISK to credit card by using PanId
Url: /v1/{payment-service}/credit-card-deposit

{
    "endToEndIdentification": "Short description",
    "debtorId": "0208714669",
    "debtorAccount": {
        "iban": "IS110100260000010208714669"
    },
    "creditorId": "0208714669",
    "creditorAccount": {
        "maskedPan": "4512********1234"
    },
    "instructedAmount": {
        "currency": "ISK",
        "amount": 78698
    },
    "partialPayment": true,
    "icelandicPurpose": {"code": "87"},
    "remittanceInformationUnstructured": "My description",
    "remittanceInformationStructured": {
        "reference": "ABC (16 char)"
    }
}
```

Bulk Payments

Payment Product

```
Possible values are:
* Icelandic Domestic Credit Transfer (Account -> Account)
```

ÍST WA 310:2020

```
* Icelandic Domestic Claim Payment (Account -> Claim)
* Icelandic Domestic Card Top-up (Account -> Credit card)
```

Attributes/Rules

- **paymentInformationId**:
  - Description: Define custom batch id, used to join two or more batches.
  - Values:
    - **New**: batch is created.
    - **Existing**: Transactions are added to an existing batch.

Icelandic Domestic Credit Transfer

- **endToEndIdentification** (Max35Text): **optional**
- **paymentInformationId** (Max35Text): **optional**
- **batchBookingPreferred** (Boolean): **optional**
- **requestedExecutionDate** (ISODate): **optional**
- **requestedExecutionTime** (ISODateTime): **optional**
- **payments** (Bulk Entry): **mandatory** Same structure as Payment Product except (requestedExecutionDate and requestedExecutionTime)

Example

```
Url: /v1/bulk-payments/icelandic-domestic-credit-transfer


{
    "paymentInformationId": "278f475b-cfd2-4247-b330-cabfb10f2721",
    "batchBookingPreferred": true,
    "requestedExecutionDate": "2020-08-01",
    "payments": [
    {
        "resourceId": "57cd8fbf-d845-406a-8585-de6f527a9e42",
        "endToEndIdentification": "Short description",
        "debtorId": "0208714669",
        "debtorAccount": {
            "iban": "IS110100260000010208714669"
        },
        "creditorId": "0208714669",
        "creditorAccount": {
            "iban": "IS710100261234560208714669"
        },
        "instructedAmount": {
            "amount": 99123
        },
        "icelandicPurpose": {"code": "03"},
        "remittanceInformationUnstructured": "My description",
        "remittanceInformationStructured": {
            "reference": "ABC (16 char)"
        }
    }]
```

```
}
```

Icelandic Domestic Claim Payment (Account -> Claim)

- **endToEndIdentification** (Max35Text): **optional**
- **paymentInformationId** (Max35Text): **optional**
- **batchBookingPreferred** (Boolean): **optional**
- **requestedExecutionDate** (ISODate): **optional**
- **requestedExecutionTime** (ISODateTime): **optional**
- **payments** (Bulk Entry): **mandatory** Same structure as Payment Product except (requestedExecutionDate and requestedExecutionTime)

Example

```
Url: /v1/bulk-payments/icelandic-domestic-claim-payment


{
    "paymentInformationId": "278f475b-cfd2-4247-b330-cabfb10f2721",
    "batchBookingPreferred": true,
    "requestedExecutionDate": "2020-08-01",
    "payments": [
    {
        "endToEndIdentification": "Short description",
        "debtorId": "0208714669",
        "debtorAccount": {
            "iban": "IS1101002600000102087146 69"
        },
        "creditorId": "0208714669",
        "creditorAccount": {
            "bban": "02100100109307118603"
        },
        "instructedAmount": {
            "amount": 99123
        },
        "icelandicPurpose": {"code": "03"},
        "remittanceInformationUnstructured": "My description",
        "remittanceInformationStructured": {
            "reference": "ABC (16 char)"
        }
    }]
}
```

Icelandic Domestic Credit Card Deposit (Account -> Credit card)

- **endToEndIdentification** (Max35Text): **optional.**
- **paymentInformationId** (Max35Text): **optional.**
- **batchBookingPreferred** (Boolean): **optional.**
- **requestedExecutionDate** (ISODate): **optional.**
- **requestedExecutionTime** (ISODateTime): **optional.**

- **payments** (Bulk Entry): **mandatory** Same structure as Payment Product except (requestedExecutionDate and requestedExecutionTime).

Example 1

```
Url: /v1/bulk-payments/icelandic-domestic-credit-card-deposit


{
    "paymentInformationId": "278f475b-cfd2-4247-b330-cabfb10f2721",
    "batchBookingPreferred": true,
    "requestedExecutionDate": "2020-08-01",
    "payments": [
    {
        "endToEndIdentification": "Short description",
        "debtorId": "0208714669",
        "debtorAccount": {
            "iban": "IS1101002600000102087146 69"
        },
        "creditorId": "0208714669",
        "creditorAccount": {
            "maskedPan": "4512********1234"
        },
        "ultimateCreditorId": "123456-1234"
        "instructedAmount": {
            "amount": 99123
        },
        "icelandicPurpose": {"code": "03"},
        "remittanceInformationUnstructured": "My description",
        "remittanceInformationStructured": {
            "reference": "ABC (16 char)"
        }
    }]
}
```

Example 2

```
Url: /v1/bulk-payments/icelandic-domestic-credit-card-deposit


{
    "paymentInformationId": "278f475b-cfd2-4247-b330-cabfb10f2721",
    "batchBookingPreferred": true,
    "requestedExecutionDate": "2020-08-01",
    "payments": [
    {
        "endToEndIdentification": "Short description",
        "debtorId": "0208714669",
        "debtorAccount": {
            "iban": "IS1101002600000102087146 69"
        },
        "creditorId": "0208714669",
```

```
        "creditorAccount": {
            "pan": "1234567890"
        },
        "instructedAmount": {
            "amount": 99123
        },
        "icelandicPurpose": {"code": "03"},
        "remittanceInformationUnstructured": "My description",
        "remittanceInformationStructured": {
            "reference": "ABC (16 char)"
        }
    }]
}
```

Periodic Payments

Payment Product

```
Possible values are:
* Icelandic Domestic Credit Transfer (Account -> Account)
* Icelandic Domestic Card Top-up (Account -> Credit card)
```

Icelandic Domestic Credit Transfer

- **endToEndIdentification** (Max35Text): **optional**
- **debtorAccount** (incl. type) (Account Reference): **mandatory**
- **instructedAmount** (inc. Curr.) (Amount): **mandatory**
- **creditorAccount** (Account Reference): **mandatory**
- **remittanceInformationUnstructured** (Max140Text): **optional**
- **startDate** (ISODate): **Mandatory**
- **executionRule** (String): **Optional**
- **endDate** (ISODate): **Optional**
- **frequency** (Frequency Code): **Mandatory**
- **dayOfExecution** (Max2Text): **Conditional**

Example

```
Url: /v1/periodic-payments/icelandic-domestic-credit-transfer


{
    "endToEndIdentification": "Short description",
    "debtorId": "0208714669",
    "debtorAccount": {
        "iban": "IS110100260000010208714669"
    },
    "creditorId": "0208714669",
    "creditorAccount": {
        "iban": "IS710100261234560208714669"
```

```
    },
    "instructedAmount": {
        "amount": 99123
    },
    "icelandicPurpose": {"code": "03"},
    "remittanceInformationUnstructured": "My description",
    "remittanceInformationStructured": {
      "reference": "ABC (16 char)"
    },
    "startDate": "2020-03-01",
    "executionRule": "preceding",
    "frequency": "monthly",
    "dayOfExecution": "01"
}
```

Icelandic Domestic Claim Payment (Account -> Claim)

- **endToEndIdentification** (Max35Text): **optional.**
- **debtorAccount** (incl. type) (Account Reference): **mandatory.**
- **instructedAmount** (inc. Curr.) (Amount): **mandatory.**
- **creditorAccount** (Account Reference): **mandatory.**
- **startDate** (ISODate): **mandatory.**
- **executionRule** (String): **optional.**
- **endDate** (ISODate): **optional.**
- **frequency** (Frequency Code): **mandatory.**
- **dayOfExecution** (Max2Text): **conditional.**

Example

```
Url: /v1/periodic-payments/icelandic-domestic-claim-payment


{
    "endToEndIdentification": "Short description",
    "debtorId": "0208714669",
    "debtorAccount": {
        "iban": "IS110100260000010208714669"
    },
    "creditorId": "0208714669",
    "creditorAccount": {
        "bban": "02100100109307118603"
    },
    "instructedAmount": {
        "amount": 99123
    },
    "icelandicPurpose": {"code": "03"},
    "remittanceInformationUnstructured": "My description",
    "remittanceInformationStructured": {
      "reference": "ABC (16 char)"
    },
    "startDate": "2020-03-01",
    "executionRule": "preceding",
```

```
    "frequency": "monthly",
    "dayOfExecution": "01"
}
```

Icelandic Domestic Credit Card Deposit (Account -> Credit card)

- **endToEndIdentification** (Max35Text): **optional.**
- **debtorAccount** (incl. type) (Account Reference): **mandatory.**
- **instructedAmount** (inc. Curr.) (Amount): **mandatory.**
- **creditorAccount** (Account Reference): **mandatory.**
- **remittanceInformationUnstructured** (Max140Text): **optional.**
- **ultimateCreditor** (Max140Text): **optional.**
- **startDate** (ISODate): **mandatory.**
- **executionRule** (String): **optional.**
- **endDate** (ISODate): **optional.**
- **frequency** (Frequency Code): **mandatory.**
- **dayOfExecution** (Max2Text): **conditional.**

Example 1

```
Url: /v1/periodic-payments/icelandic-domestic-credit-card-deposit


{
    "endToEndIdentification": "Short description",
    "debtorId": "0208714669",
    "debtorAccount": {
        "iban": "IS110100260000010208714669"
    },
    "creditorId": "0208714669",
    "creditorAccount": {
        "maskedPan": "4512********1234"
    },
    "ultimateCreditorId": "123456-1234",
    "instructedAmount": {
        "amount": 99123
    },
    "icelandicPurpose": {"code": "03"},
    "remittanceInformationUnstructured": "My description",
    "remittanceInformationStructured": {
      "reference": "ABC (16 char)"
    },
    "startDate": "2020-03-01",
    "executionRule": "preceding",
    "frequency": "monthly",
    "dayOfExecution": "01"
}
```

Example 2

```
Url: /v1/periodic-payments/icelandic-domestic-credit-card-deposit


{
```

```
    "endToEndIdentification": "Short description",
    "debtorId": "0208714669",
    "debtorAccount": {
        "iban": "IS110100260000010208714669"
    },
    "creditorId": "0208714669",
    "creditorAccount": {
        "pan": "1234567890"
    },
    "ultimateCreditorId": "123456-1234",
    "instructedAmount": {
        "amount": 99123
    },
    "icelandicPurpose": {"code": "03"},
    "remittanceInformationUnstructured": "My description",
    "remittanceInformationStructured": {
      "reference": "ABC (16 char)"
    },
    "startDate": "2020-03-01",
    "executionRule": "preceding",
    "frequency": "monthly",
    "dayOfExecution": "01"
}
```


Request Header

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.
			This is the unique ID of TPP for the payment.
			initiation regarding PSD2 article 47 and EBA RTS article 29.
PSU-ID	String	Conditional	Client ID of the PSU in the ASPSP client interface. Might be mandated in the ASPSP's documentation.
			It might be contained even if an OAuth2 based authentication was performed in a pre-step or an OAuth2 based SCA was performed in a preceding AIS service in the same session. In this case the ASPSP might check whether PSU-ID and token match, according to ASPSP documentation.
PSU-ID-Type	String	Conditional	Type of the PSU-ID; needed in scenarios where PSUs have several PSU-IDs as access possibility.
			In this case, the mean and use are then defined in the ASPSP's documentation.
PSU-Corporate-ID	String	Conditional	Identification of a Corporate in the Online Channels.

Attribute	Type	Condition	Description
			Might be mandated in the ASPSP's documentation. Only used in a corporate context.
PSU-Corporate-ID-Type	String	Conditional	This is describing the type of the identification needed by the ASPSP to identify the PSU-Corporate-ID content.
			Mean and use is defined in the ASPSP's documentation. Only used in a corporate context.
Authorization	String	Conditional	Bearer Token. Is contained only, if an OAuth2 based authentication was performed in a pre-step or an OAuth2 based SCA was performed in a preceding AIS service in the same session.
Consent-ID	String	Optional	This data element may be contained, if the payment initiation transaction is part of a session, i.e. combined AIS/PIS service. This then contains the "consentId" of the related AIS consent, which was performed prior to this payment initiation.
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-Preferred	Boolean	Optional	If it equals "true", the TPP prefers a redirect over an embedded SCA approach.
			If it equals "false", the TPP prefers not to be redirected for SCA. The ASPSP will then choose between the Embedded or the Decoupled SCA approach, depending on the choice of the SCA procedure by the TPP/PSU.
			If the parameter is not used, the ASPSP will choose the SCA approach to be applied depending on the SCA method chosen by the TPP/PSU.
TPP-Redirect-URI	String	Conditional	URI of the TPP, where the transaction flow shall be redirected to after a Redirect. Mandated for the Redirect SCA Approach, specifically when TPP-Redirect-Preferred equals "true". See Section 4.8 for further requirements on this header.
			It is recommended to always use this header field.
			Remark for Future: This field might be changed to mandatory in the next version of the specification.
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. This might be ignored by the ASPSP.
			See Section 4.8 for further requirements on this header.
TPP-Explicit-Authorization-Preferred	Boolean	Optional	If it equals "true", the TPP prefers to start the authorization process separately, e.g. because of the usage of a signing basket. This preference might be ignored by the ASPSP, if a signing basket is not supported as functionality.
			If it equals "false" or if the parameter is not used, there is no preference of the TPP. This especially indicates that the TPP assumes a direct authorization of the

Attribute	Type	Condition	Description
			transaction in the next step, without using a signing basket.
TPP-Rejection-NoFunds-Preferred	Boolean	Optional	If it equals "true" then the TPP prefers a rejection of the payment initiation in case the ASPSP is providing an integrated confirmation of funds request the result of this is that not sufficient funds are available.
			If it equals "false" then the TPP prefers that the ASPSP is dealing with the payment initiation like in the ASPSPs online channel, potentially waiting for a certain time for funds to arrive to initiate the payment.
			This parameter may be ignored by the ASPSP.
TPP-Notification-URI	String	Optional	URI for the Endpoint of the TPP-API to which the status of the payment initiation should be sent.
			This header field may by ignored by the ASPSP, cp. also the extended service definition in [XS2A-RSNS].
TPP-Notification-Content-Preferred	String	Optional	The string has the form
			status=X1, …, Xn
			where Xi is one of the constants SCA, PROCESS, LAST and where constants are not repeated.
			The usage of the constants supports the following semantics:
			SCA: A notification on every change of the scaStatus attribute for all related authorization processes is preferred by the TPP.
			PROCESS: A notification on all changes of consentStatus or transactionStatus attributes is preferred by the TPP.
			LAST: Only a notification on the last consentStatus
			or transactionStatus as available in the XS2A interface is preferred by the TPP.
			This header field may be ignored, if the ASPSP does not support resource notification services for the related TPP.

Request Body

Tag	Type	Usage	Description
startDate	ISODate	Mandatory	The first applicable day of execution starting from this date is the first payment.
executionRule	String	Optional	"following" or "preceding" supported as values. This data attribute defines the behaviour when recurring payment dates falls on a weekend or bank holiday. The payment is then executed either the "preceding" or "following" working day.

Tag	Type	Usage	Description
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.
dayOfExecution	Max2Text	Conditional	“31” The format is following the regular expression \d{1,2}. Example: The first day is addressed by "1".

Response Header

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	Conditional	This data element must be contained, if the SCA Approach is already fixed. Possible values are:
			• EMBEDDED
			• DECOUPLED
			• REDIRECT
			The OAuth SCA approach will be subsumed by 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.
			Not used, if resource status notification services are generally not supported by the ASPSP.
			Shall be supported if the ASPSP supports resource status notification services, see more details in the extended service definition [XS2A-RSNS].
ASPSP-Notification-Content	String	Conditional	The string has the form.
			status=X1, …, Xn
			where Xi is one of the constants SCA, PROCESS, LAST and where constants are not repeated.

Attribute	Type	Condition	Description
			The usage of the constants supports the following semantics:
			SCA: Notification on every change of the scaStatus attribute for all related authorization processes is provided by the ASPSP for the related resource.
			PROCESS: Notification on all changes of consentStatus or transactionStatus attributes is provided by the ASPSP for the related resource.
			LAST: Notification on the last consentStatus or transactionStatus as available in the XS2A interface is provided by the ASPSP for the related resource.
			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.

Confirmation of funds

Confirmation of funds Definitions

Methods

Confirmation Methods

Confirmation of Funds Consent

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

Get Status Request

Can check the status of an account information consent resource.

Get Consent Request

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.

Revoke a Confirmation of Funds Consent

The TPP can revoke an account information consent object if needed.

Confirmation of Funds Consent

Confirmation of Funds Consent Request

Request

Path Parameters

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.
PSU-ID	String	Conditional	Might be mandated in the ASPSP's documentation if OAuth is not chosen as Pre-Step.
PSU-ID-Type	String	Conditional	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility.
PSU-Corporate-ID	String	Conditional	Might be mandated in the ASPSP's documentation. Only used in a corporate context.
PSU-Corporate-ID-Type	String	Conditional	Might be mandated in the ASPSPs documentation. Only used in a corporate context.
Authorization	String	Conditional	If OAuth2 has been chosen as pre-step.
TPP-Redirect-Preferred	Boolean	Optional	Should be True. If it equals "true", the TPP prefers a redirect over an embedded SCA approach.
TPP-Redirect-URI	String	Conditional	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. This might be ignored by the ASPSP.
TPP-Explicit-Authorization-Preferred	Boolean	Optional	If it equals "true", the TPP prefers to start the authorization process separately, e.g. because of the usage of a signing basket. This preference might be ignored by the ASPSP, if a signing basket is not supported as functionality.

Request Body

Attribute	Type	Condition	Description
account	Account Reference	Mandatory	Account, where the confirmation of funds service is aimed to be submitted to.
cardNumber	Max35Text	Optional	Card Number of the card issued by the PIISP. Should be delivered if available.
cardExpiryDate	ISODate	Optional	Expiry date of the card issued by the PIISP.
cardInformation	Max140Text	Optional	Additional explanation for the card product.
registrationInformation	Max140Text	Optional	Additional information about the registration process for the PSU, e.g. a reference to the TPP / PSU contract.

Response

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.

Attribute	Type	Condition	Description
ASPSP-SCA-Approach	String	Conditional	OAuth will be subsumed by the constant value 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.
scaMethods	Array of Authentication Objects	Conditional	These methods shall be presented towards the PSU for selection by the TPP.
chosenScaMethod	Authentication Object	Conditional	Not required, except if banks support Embedded SCA Approach.
challengeData	Challenge	Conditional	Not required, except if banks support Embedded SCA Approach.
_links	Links	Mandatory	A list of hyperlinks to be recognised by the TPP.
psuMessage	Max512Text	Optional	Text to be displayed to the PSU, e.g. in a Decoupled SCA Approach.

Response Code

HTTP Response Code equals 201.

Example

```
POST /v2/consents/confirmation-of-funds

*Request*

POST https://api.testbank.com/v2/consents/confirmation-of-funds
Content-Type: application/json
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7756
PSU-IP-Address: 192.168.8.78
PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0
Date: Sun, 06 Aug 2017 15:05:37 GMT
{
  "account": { "iban": "IS401001001033071186O8" },
  "cardNumber": "1234567891234",
  "cardExpiryDate": "2020-12-31",
  "cardInformation": "MyMerchant Loyalty Card",
  "registrationInformation": "Your contract Number 1234 with MyMerchant is completed with the registrat
ion with your bank."
}

*Response*
HTTP/1.x 201 Created
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7721
```

```
ASPSP-SCA-Approach: REDIRECT
Date: Sun, 06 Aug 2017 15:05:47 GMT
Location: "v2/consents/confirmation-of-funds/1234-wertiq-983"
Content-Type: application/json
{
  "consentStatus": "received",
  "consentId": "1234-wertiq-983",
  "_links": {
    "scaRedirect": {"href": "https://www.testbank.com/authentication/1234-wertiq-983"},
    "status": {"href": "/v2/consents/confirmation-of-funds/1234-wertiq-983/status"},
    "scaStatus": {"href": "v2/consents/confirmation-of-funds/1234-wertiq-983/ authorisations/123auth567
"}
  }
}
```

Get Status Request

Get Status Request

Request

Path Parameters

Request Header

Response

Response Header

Response Body

Response Code

HTTP Response Code equals 201.

Example

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

*Request*
GET https://api.testbank.com/v2/consents/confirmation-of-funds/qwer3456tzui7890/status
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7721
PSU-IP-Address: 192.168.8.78
PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0
Date: Sun, 06 Aug 2017 15:05:46 GMT
```

```
*Response*
HTTP/1.x 200 Ok
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7721
Date: Sun, 06 Aug 2017 15:05:47 GMT
Content-Type: application/json
{
  "consentStatus": "valid"
}
```

Get Consent Request

Get Consent Request

Request

Path Parameters

Request Header

Response

Response Header

Response Body

Response Code

HTTP Response Code equals 201.

Example

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

*Request*

*Response*
HTTP/1.x 200 Ok
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7721
Date: Sun, 06 Aug 2017 15:05:47 GMT
Content-Type: application/json
{
  "account": { "iban": "IS40100100103307118608" },
  "cardNumber": "1234567891234",
```

```
  "cardExpiryDate": "2020-12-31",
  "cardInformation": "MyMerchant Loyalty Card",
  "consentStatus": "valid"
}
```

Revoke a Confirmation of Funds Consent

Request

Path Parameters

Request Header

Response

Response Header

Response Body

Response Code

HTTP Response Code equals 201.

Example

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

*Request*
DELETE https://api.testbank.com/v2/consents/confirmation-of-funds/qwer3456tzui7890
X-Request-ID 99391c7e-ad88-49ec-a2ad-99ddcb1f7757
Date Sun, 13 Aug 2017 17:05:37 GMT

*Response*
HTTP/1.x 204 No Content
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7757
Date: Sun, 06 Aug 2017 15:05:47 GMT
```

Account Overview Definitions

Account Overview Methods

Consent Request on Dedicated Accounts

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

Consent Request on Account List or without Indication of Accounts

This function is supported by the same call as the Consent Request on Dedicated Accounts. The only difference is that the call only contains the "availableAccounts" or “availableAccountsWithBalances” sub attribute within the "access" attribute with value "allAccounts".

In this case the call creates an account information consent resource at the ASPSP to return a list of all available accounts, resp. all available accounts with its balances. For the first of these specific Consent Requests, no assumptions are made for the SCA Approach by this specification since there are no balances or transaction information contained and this is then not unambiguously required by [EBA-RTS]. It is up to the ASPSP to implement the appropriate requirements on customer authentication.

Get Status Request

Can check the status of an account information consent resource.

Get Consent Request

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.

Delete an Account Information Consent Object

The TPP can delete an account information consent object if needed.

Read Account List

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.

Read Account Details

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 details of this account are dependent then on the stored consent addressed by consentId, respectively the OAuth2 access token.

Read Balance

Reads account data from a given account addressed by "account-id".

Read Transaction List

Reads account data from a given account addressed by "account-id".

Read Transaction Details

Reads transaction details from a given transaction addressed by “transactionId” on a given account addressed by "account-id". This call is only available on transactions as reported in a JSON format.

Phase 3

Read Card Account List

Reads a list of card accounts with additional information, e.g. balance information. 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 card accounts depends then on the PSU ID and the stored consent addressed by consentId, respectively the OAuth2 access token.

Read Card Account Details

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

Read Card Account Balance

Reads balance data from a given card account addressed by "account-id".

Read Card Account Transaction List

Reads account data from a given card account addressed by "account-id".

Consent Request (single)

Consent Request on Dedicated Accounts

Request

Path ParametersRequest Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
PSU-ID	String	Conditional	Client ID of the PSU in the ASPSP client interface. It might be mandated in the ASPSP's documentation. It might be contained even if an OAuth2 based authentication was performed in a pre-step. In this case the ASPSP might check whether PSU-ID and token match, according to ASPSP documentation.
PSU-ID-Type	String	Conditional	Type of the PSU-ID, needed in scenarios where PSUs have several PSU-IDs as access possibility.
PSU-Corporate-ID	String	Conditional	Might be mandated in the ASPSP's documentation. Only used in a corporate context.
PSU-Corporate-ID-Type	String	Conditional	Might be mandated in the ASPSPs documentation. Only used in a corporate context.
Authorization	String	Conditional	If OAuth2 has been chosen as pre-step to authenticate the PSU.
TPP-Redirect-Preferred	Boolean	Optional	If it equals "true", the TPP prefers a redirect.
TPP-Redirect-URI	String	Conditional	URI of the TPP, where the transaction flow shall be redirected to after a Redirect. Mandated for the Redirect SCA Approach (including OAuth2 SCA approach), specifically when TPP-Redirect-Preferred equals "true". See Section 4.8 for further requirements on this header. Always use this header field.
TPP-Nok-Redirect-URI	String	Optional	
TPP-Explicit-Authorization-Preferred	Boolean	Optional	If it equals "true", the TPP prefers to start the authorization process separately, e.g. because of the usage of a signing basket. This preference might be ignored by the ASPSP, if a signing basket is not supported as functionality.

Attribute	Type	Condition	Description
TPP-Notification-URI	String	Optional	URI for the Endpoint of the TPP-API to which the status of the consent should be sent.
TPP-Notification-Content-Preferred	String	Optional	The string has the form. status=X1, …, Xn where Xi is one of the constants SCA.

Request Body

Attribute	Type	Condition	Description
access	Account Access	Mandatory	Requested access services.
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.
frequencyPerDay	Integer	Mandatory	This field indicates the requested maximum frequency for an access without PSU involvement per day. For a one-off access, this attribute is set to "1".
combinedService Indicator	Boolean	Mandatory	If true indicates that a payment initiation service will be addressed in the same "session".

Response

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	Conditional	Possible values are: 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-Content	String	Conditional	The string has the form status=X1, …, Xn where Xi is one of the constants SCA, PROCESS, LAST and where constants are not repeated.

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.
scaMethods	Array of Authentication Objects	Conditional	This data element might be contained, if SCA is required and if the PSU has a choice between different authentication methods. Depending on the risk management of the ASPSP this choice might be offered before or after the PSU has been identified with the first relevant factor, or if an access token is transported.
chosenScaMethod	Authentication Object	Conditional	This data element is only contained in the response if the ASPSP has chosen the Embedded SCA Approach, if the PSU is already identified with the first relevant factor or alternatively an access token, if SCA is required and if the authentication method is implicitly selected.
challengeData	Challenge	Conditional	It is contained in addition to the data element chosenScaMethod if challenge data is needed for SCA. In rare cases this attribute is also used in the context of the startAuthorisationWithPsuAuthentication or startAuthorisationWithEncryptedPsuAuthentication link.
_links	Links	Mandatory	A list of hyperlinks to be recognized by the TPP. Type of links admitted in this response (which might be extended by single ASPSPs)
psuMessage	Max512Text	Optional	Text to be displayed to the PSU, e.g. in a Decoupled SCA Approach.

Response Code

HTTP Response Code equals 201.

Example

```
POST /v1/consents

*Request*
Content-Type: application/json
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7756
PSU-IP-Address: 192.168.8.78
PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0
Date: Sun, 06 Aug 2017 15:05:37 GMT
{
    "access": {
        "balances": [
            {"iban": "DE40100100103307118608"},
            {"iban": "DE02100100109307118603", "currency": "USD"},
            {"iban": "DE67100100101306118605"}
        ],
        "transactions": [
            {"iban": "DE40100100103307118608"},
            {"maskedPan": "123456xxxxxx1234"}
        ]
```

```
    },
    "recurringIndicator": true,
    "validUntil": "2017-11-01",
    "frequencyPerDay": "4"
}

*Response*
HTTP/1.x 201 Created
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7721
ASPSP-SCA-Approach: REDIRECT
Date: Sun, 06 Aug 2017 15:05:47 GMT
Location: "v1/consents/1234-wertiq-983"
Content-Type: application/json
{
  "consentStatus": "received",
  "consentId": "1234-wertiq-983",
  "_links": {
    "scaRedirect": {"href": "https://www.testbank.com/authentication/1234-wertiq-983"},
    "status": {"href": "/v1/consents/1234-wertiq-983/status"},
    "scaStatus": {"href": "v1/consents/1234-wertiq-983/ authorisations/123auth567"}
  }
}
```

Consent Request (list)

Consent Request on Dedicated Accounts

Request

Path Parameters

Request Header

(see previous)

Request Body

(see previous)

Response

Response Header

(see previous)

Response Body

(see previous)

Response Code

(see previous)

Example

```
POST /v1/consents

*Request*
Content-Type: application/json
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7756
PSU-IP-Address: 192.168.8.78
PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0
Date: Sun, 06 Aug 2017 15:05:37 GMT
{
  "access": {"availableAccounts": "allAccounts"},
  "recurringIndicator": false,
  "validUntil": "2017-08-06",
  "frequencyPerDay": "1"
}

*Response*
(see previous)
```

Get Status

Get Status Request

Request

Path Parameters

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

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	Conditional	Is contained only, if an OAuth2 based authentication was performed in a pre-step or an OAuth2 based SCA was performed in the current PIS transaction or in a preceding AIS service in the same session, if no such OAuth2 SCA approach was chosen in the current PIS transaction.

Request Body

.

Response

Response Header

Attribute	Type	Condition
X-Request-ID	UUID	Mandatory

Response Body

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

Response Code

HTTP Response Code equals 200.

Example

```
GET /v1/consents/{consentId}/status

*Request*
GET https://api.testbank.com/v1/consents/qwer3456tzui7890/status
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7721
PSU-IP-Address: 192.168.8.78
PSU-User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:54.0) Gecko/20100101 Firefox/54.0
Date: Sun, 06 Aug 2017 15:05:46 GMT

*Response*
HTTP/1.x 200 Ok
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7721
Date: Sun, 06 Aug 2017 15:05:47 GMT
Content-Type: application/json
{
  "consentStatus": "valid"
}
```

Get Consent

Consent Get Consent Request

Request

Path Parameters

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

Request Header

(see previous)

Request Body

No Request Body

Response

Response Header

(see previous)

Response Body

Attribute	Type	Condition	Description
access	Account	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.
_links	Links	Optional	Type of links recommended for this response is "account" and/or "cardAccount", depending on the nature of the consent.

Response Code

HTTP Response Code equals 200.

Example

```
GET /v1/consents/{consentId}

*Request*
HTTP/1.x 200 Ok
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7721
Date: Sun, 06 Aug 2017 15:05:47 GMT
Content-Type: application/json
{
  "access": {"balances":
    [
      {"iban": "DE2310010010123456789"}
    ],
    "transactions": [
      {"iban": "DE2310010010123456789"},
      {"pan": "123456xxxxxx3457"}]
    },
    "recurringIndicator": true,
    "validUntil": "2017-11-01",
    "frequencyPerDay": "4",
    "consentStatus": "valid",
```

```
    "_links": {"account": {"href": "/v1/accounts"}}
}

*Response*
```

Delete Consent

Delete an Account Information Consent Object

Request

Path Parameters

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

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	Conditional	Is contained only, if an OAuth2 based authentication was performed in a pre-step or an OAuth2 based SCA was performed in the current PIS transaction or in a preceding AIS service in the same session if no such OAuth2 SCA approach was chosen in the current PIS transaction.

Request Body

No request body

Response

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

.

Response Code

.

Example

```
DELETE /v1/consents/{consentId}

*Request*
```

```
DELETE https://api.testbank.com/v1/consents/qwer3456tzui7890
X-Request-ID 99391c7e-ad88-49ec-a2ad-99ddcb1f7757
Date Sun, 13 Aug 2017 17:05:37 GMT

*Response*
HTTP/1.x 204 No Content
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7757
Date: Sun, 06 Aug 2017 15:05:47 GMT
```

Get Accounts

Read Account List

Request

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.
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.
Authorization	String	Conditional	Is contained only, if an OAuth2 based authentication was performed in a pre-step or an OAuth2 based SCA was performed in the related consent authorization.

Request Body

No request body

Response

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

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Attribute	Type	Condition	Description
accounts	Array of Account Details	Mandatory	

Response Code

.

Example

```
GET /v1/accounts {query-parameters}

*Request*



*Response*
{"accounts":
  [
    {
      "resourceId": "3dc3d5b3-7023-4848-9853-f5400a64e80f",
      "iban": "IS761234598765012345678901 4",
      "currency": "ISK",
      "product": "Current Account",
      "name": "Aggregation Account",
      "status": "enabled",
      "creditLimit": {"currency": "ISK", "amount": "15000"},
      "balances": [
        {
          "balanceType": "interimAvailable",
          "balanceAmount": {"currency": "ISK", "amount": "14355"}
        },{
          "balanceType": "interimBooked",
          "balanceAmount": {"currency": "ISK", "amount": "4175"}
        }
      ],
      "_links": {
        "balances": {"href": "/v1/accounts/3dc3d5b3-7023-4848-9853-f5400a64e80f/balances"},
        "transactions": {"href": "/v1/accounts/3dc3d5b3-7023-4848-9853-f5400a64e80f/transactions"}
      }
    },
    {
      "resourceId": "3ec3d5b3-7023-4848-9853-f5400a64e80f",
      "iban": "IS341234598765012345678901 4",
      "currency": "ISK",
      "product": "Current Account",
      "cashAccountType": "CACC",
      "name": "Aggregation Account",
      "status": "enabled",
```

```
      "creditLimit": {"currency": "ISK", "amount": "15000"},
      "balances": [
        {
          "balanceType": "interimAvailable",
          "balanceAmount": {"currency": "ISK", "amount": "14355"}
        },{
          "balanceType": "interimBooked",
          "balanceAmount": {"currency": "ISK", "amount": "4175"}
        }
      ],
      "_links": {
        "balances": {"href": "/v1/accounts/3dc3d5b3-7023-4848-9853-f5400a64e80f/balances"},
        "transactions": {"href": "/v1/accounts/3dc3d5b3-7023-4848-9853-f5400a64e80f/transactions"}
      }
    }
]}
```


Get Account

Read Account Details

Request

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.
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.
Authorization	String	Conditional	Is contained only, if an OAuth2 based authentication was performed in a pre-step or an OAuth2 based SCA was performed in the related consent authorization.

Request Body

No request body

Response

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 Detail	Mandatory	

Response Code

.

Example

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

*Request*



*Response*
{
  "account":
    {
      "resourceId": "010026000001",
      "iban": "IS110100260000010208714669",
      "status": "enabled",
      "currency": "ISK",
      "product": "Reikningur",
      "name": "Launareikningur",
      "balances": [
        {"balanceAmount":  1500, "balanceType": "interimAvailable"},
        {"balanceAmount":  1000, "balanceType": "interimBooked"}
      ],
      "creditLimit": {"amount": 500},
      "_links":
        {
          "balances": {"href": "/v1/accounts/010026000001/balances"},
          "transactions": {"href": "/v1/accounts/010026000001/transactions"}
         }
    }
}
```

Get Balance

Read Balance

Request

Path Parameters

Attribute	Type	Description
account-id	String	This identification is denoting the addressed account. The account-id is retrieved by using a "Read Account List" call. The account-id 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	Shall be contained since "Establish Consent Transaction" was performed via this API before.
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.
Authorization	String	Conditional	Is contained only, if an OAuth2 based authentication was performed in a pre-step or an OAuth2 based SCA was performed in the related consent authorization.

Request Body

No request body

Response

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
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
account	Account Reference	optional	Identifier of the addressed account.
balances	Array of Balance	Mandatory	A list of balances regarding this account, e.g. the current balance, the last booked balance.

Response Code

HTTP Response Code equals 200.

Example

```
GET /v1/accounts/{account-id}/balances


*Request*
```

```
*Response*
{
    "account": {"iban": "FR7612345987650123456789014"},
    "balances": [
        {"balanceAmount":  1500, "balanceType": "interimAvailable"},
        {"balanceAmount":  1000, "balanceType": "interimBooked"}
    ]
}
```

Get Transactions

Consent Request on Dedicated Accounts

Request

Path Parameters

Attribute	Type	Description
account-id	String	This identification is denoting the addressed account. The account-id is retrieved by using a "Read Account List" call. The account-id 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
dateFrom	ISODate	Conditional	Starting date (inclusive the date dateFrom) of the transaction list, mandated if no delta access is required. Might be ignored if a delta function is used. For booked transactions, the relevant date is the booking date. For pending transactions, the relevant date is the entry date, which may not be transparent neither in this API nor other channels of the ASPSP.
dateTo	ISODate	Optional	End date (inclusive the data dateTo) of the transaction list, default is "now" if not given. Might be ignored if a delta function is used. For booked transactions, the relevant date is the booking date. For pending transactions, the relevant date is the entry date, which may not be transparent neither in this API nor other channels of the ASPSP.
entryReferenceFrom	String	Optional if supported by API provider	This data attribute is indicating that the AISP is in favour to get all transactions after the transaction with identification entryReferenceFrom alternatively to the above defined period. This is an implementation of a delta access. If this data element is contained, the entries "dateFrom" and "dateTo" might be ignored by the ASPSP if a delta report is supported.
bookingStatus	String	Mandatory	Permitted codes are "booked", "pending" and "both" "booked" shall be supported by the ASPSP. To support the "pending" and "both" features is optional for the ASPSP, Error code if not supported in the online banking frontend.

Attribute	Type	Condition	Description
deltaList	Boolean	Optional if supported by API provider	This data attribute is indicating that the AISP is in favour to get all transactions after the last report access for this PSU on the addressed account. This is another implementation of a delta access-report. This delta indicator might be rejected by the ASPSP if this function is not supported. If this data element is contained, the entries "dateFrom" and "dateTo" might be ignored by the ASPSP if a delta report is supported.
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 Header

Attribute	Type	Condition	Description
X-Request-ID	UUID	Mandatory	ID of the request, unique to the call, as determined by the initiating party.
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.
Consent-ID	String	Mandatory	
Authorization	String	Conditional	Is contained only, if an OAuth2 based authentication was performed in a pre-step or an OAuth2 based SCA was performed in the related consent authorization.
Accept	String	Optional	The TPP can indicate the formats of account reports supported together with a prisonization following the HTTP header definition.

Request Body

No request body.

Response

Response Header

.

Response Body

Attribute	Type	Condition	Description
account	Account Reference	optional	Identifier of the addressed account. Remark for Future: It is recommended to use this data element. The condition might change to "mandatory" in a next version of the specification.
transactions	Account Report	Optional	JSON based account report. This account report contains transactions resulting from the query parameters.
balances	Array of Balance	Optional	A list of balances regarding this account, which might be restricted to the current balance.
_links	Links	Optional	A list of hyperlinks to be recognized by the TPP.

Response Code

.

Example

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

*Request*



*Response*
HTTP/1.x 200 Ok
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7757
Date: Sun, 06 Aug 2017 15:05:47 GMT
Content-Type: application/json
{
  "account": {
    "iban": "IS110100260000010208714669"
  },
  "transactions":
    {
    "booked":
      [
        {
          "transactionId": "1234567",
          "entryReference": "adbb9665-a57e-4a2e-aa78-467d8792a113",
          "bankTransactionCode": "",
          "proprietaryBankTransactionCode": "",
          "endToEndId":  "Short description",
          "creditorId": "0208714669",
          "bookingDate": "2020-05-29",
          "valueDate": "2020-05-29",
          "transactionAmount": {
            "currency": "ISK", "amount": -99123
          },
          "creditorName": "Guðmundur Jón Halldórsson",
          "creditorAccount": {
            "iban": "IS710100261234560208714669"
          },
          "merchantCategoryCode": "??",
          "ultimateCreditor": "",
          "debtorName": "Guðmundur Jón Halldórsson",
          "debtorAccount": {
            "iban": "IS110100260000010208714669"
          },
          "ultimateDebtor": "",
          "remittanceInformationUnstructured": "My description",
          "remittanceInformationStructured": {
                    "reference": "ABC (16 char)"
           },
```

```
        "additionalInformation": "",
        "icelandicPurpose": { "code": "03" },
        "balanceAfterTransaction": {
          "balanceAmount": { "amount": 100000, "currency": "ISK" },
          "balanceType": "interimBooked",
          "creditLimitIncluded": false,
          "lastChangeDateTime": "2020-06-09 16:12:34:999",
          "referenceDate": "2020-06-09",
          "lastCommittedTransaction": "bcbb9665-a57e-4a2e-aa78-467d8792a114"
        }
      }
    ],
  "pending":
    [
      {
        "transactionId": "1234567",
        "entryReference": "adbb9665-a57e-4a2e-aa78-467d8792a113",
        "bankTransactionCode": "",
        "proprietaryBankTransactionCode": "",
        "endToEndId":  "Short description",
        "creditorId": "0208714669",
        "bookingDate": "2020-05-29",
        "valueDate": "2020-05-29",
        "transactionAmount": {
          "currency": "ISK", "amount": -99123
        },
        "creditorName": "Guðmundur Jón Halldórsson",
        "creditorAccount": {
          "iban": "IS7101002612345602087146 69"
        },
        "merchantCategoryCode": "??",
        "debtorName": "Guðmundur Jón Halldórsson",
        "debtorAccount": {
          "iban": "IS1101002600000102087146 69"
        },
        "ultimateDebtor": "",
        "remittanceInformationUnstructured": "My description",
        "remittanceInformationStructured": {
                  "reference": "ABC (16 char)"
        },
        "additionalInformation": "",
        "icelandicPurpose": { "code": "03" }
      }
    ],
  "_links": {
    "account": {
      "href": "/v1/accounts/3dc3d5b3-7023-4848-9853-f5400a64e80f"}
    }
```

```
    }
}
```

Get Transaction

Read Transaction Details

Request

Path Parameters

Attribute	Type	Description
account-id	String	This identification is denoting the addressed account, where the transaction has been performed.
transactionId	String	This identification is given by the attribute transactionId of the corresponding entry of a transaction list.

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.
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.
Consent-ID	String	Mandatory	
Authorization	String	Conditional	Is contained only, if an OAuth2 based authentication was performed in a pre-step or an OAuth2 based SCA was performed in the related consent authorization.

Request Body

No request body

Response

Response Header

Attribute	Type	Condition	Description
Content-Type	String	Mandatory	Possible values are: 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
transactionsDetails	Transactions	Optional	.

Response Code

.

Example

```
GET /v1/accounts/{account-id}/transactions/{transactionId}

*Request*
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7757
Date: Sun, 06 Aug 2017 15:05:46 GMT

*Response*
HTTP/1.x 200 Ok
X-Request-ID: 99391c7e-ad88-49ec-a2ad-99ddcb1f7757
Date: Sun, 06 Aug 2017 15:05:47 GMT
Content-Type: application/json
{
  "transactionsDetails":
        {
          "transactionId": "1234567",
          "entryReference": "adbb9665-a57e-4a2e-aa78-467d8792a113",
          "bankTransactionCode": "",
          "proprietaryBankTransactionCode": "",
          "endToEndId":  "Short description",
          "bookingDate": "2020-05-29",
          "valueDate": "2020-05-29",
          "transactionAmount": {
            "currency": "ISK", "amount": -99123
          },
           "creditorId": "0208714669",
          "creditorName": "Guðmundur Jón Halldórsson",
          "creditorAccount": {
            "iban": "IS710100261234560208714669"
          },
          "merchantCategoryCode": "??",
          "ultimateCreditor": "",
          "debtorName": "Guðmundur Jón Halldórsson",
          "debtorAccount": {
            "iban": "IS110100260000010208714669"
          },
          "ultimateDebtor": "",
          "remittanceInformationUnstructured": "My description",
          "remittanceInformationStructured": {
                    "reference": "ABC (16 char)"
           },
          "additionalInformation": "",
          "icelandicPurpose": { "code": "03" },
          "balanceAfterTransaction": {
            "balanceAmount": { "amount": 100000, "currency": "ISK" },
```

```
            "balanceType": "interimBooked",
            "creditLimitIncluded": false,
            "lastChangeDateTime": "2020-06-09 16:12:34:999",
            "referenceDate": "2020-06-09",
            "lastCommittedTransaction": "bcbb9665-a57e-4a2e-aa78-467d8792a114"
          }
        }
}
```


Account Header

Request Header

Attribute	Format	Condition	Description
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-IP-Port	String	Optional	The forwarded IP Port header field consists of the corresponding HTTP request IP Port field between PSU and TPP, if available.
PSU-Accept	String	Optional	The forwarded IP Accept header fields consist of the corresponding HTTP request Accept header fields between PSU and TPP, if available.
PSU-Accept-Charset	String	Optional	"Accept-Charset" header field sent by the PSU terminal when connecting to the TPP.
PSU-Accept-Encoding	String	Optional	"Accept-Encoding" header field sent by the PSU terminal when connecting to the TPP.
PSU-Accept-Language	String	Optional	"Accept-Language" header field sent by the PSU terminal when connecting to the TPP.
PSU-User-Agent	String	Optional	The forwarded Agent header field of the HTTP request between PSU and TPP, if available.
PSU-Http-Method	String	Optional	HTTP method used at the PSU – TPP interface, if available. Valid values are: GET, POST, PUT, PATCH, DELETE.
PSU-Device-ID	String	Optional	UUID (Universally Unique Identifier) for a device, which is used by the PSU, if available. UUID identifies either a device or a device dependent application installation. In case of an installation identification this ID need to be unaltered until removal from device.
PSU-Geo-Location	Geo Location	Optional	The forwarded Geo Location of the corresponding HTTP request between PSU and TPP if available.

Responses

Responses

Code	Key	Description
200	Ok	PUT, GET Response Codes.

Code	Key	Description
201	Created	POST response code where Payment Initiation or Consent Request was correctly performed.
202	Accepted	DELETE response code, where a payment resource can be cancelled in general, but where a cancellation authorization is needed in addition.
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.
403	Forbidden	Returned if the resource that was referenced in the path exists but cannot be accessed by the TPP or the PSU. This code should only be used for non-sensitive id references as it will reveal that the resource exists even though it cannot be accessed.
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. It has nothing to do with the consent, payment or account information data model.
406	Not Acceptable	The ASPSP cannot generate the content that the TPP specified in the Accept header.
408	Request Timeout	The server is still working correctly, but an individual request has timed out.
409	Conflict	The request could not be completed due to a conflict with the current state of the target resource.
415	Unsupported Media Type	The TPP has supplied a media type which the ASPSP does not support.
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 ASPSP server is currently unavailable. Generally, this is a temporary state.

Scenarios

The following scenarios are described in images located in Github.

https://github.com/stadlar/IST-FUT-FMTH/tree/master/Images/CreditTransferInitiation

- Credit Transfer Initiation
- Direct on behalf (1)
- Direct on behalf (2)
- Direct on behalf (3)
- Direct on behalf (4)
- Direct (1)
- Direct (2)

- Direct ePI (1)
- Direct ePI (2)
- Relay on behalf (1)
- Relay on behalf (2)
- Relay on behalf (3)
- Relay on behalf (4)
- Relay (1)
- Relay (2)

Changes to the data model

Data Model

accountDetails

Field	Rule	Description
resourceId	M	The account number
iban	M	The IBAN account number
bban	O	The BBAN account number
msisdn	NA	Not used
currency	M	ISO 4217 Alpha 3 currency code
name	O	Name of the account
product	O	Product name of the bank for this account
cashAccountType	NA	Not used
status	M	enabled, deleted, blocked
bic	O	BICFI
linkedAccounts	NA	Not used
usage	NA	Not used
details	O	Specifications that might be provided by the ASPSP
creditLimit	O	Overdraft limit rule on the account, in positive numbers
balances	O	A list of balances regarding this account
_links	M	Links to resources

Field rules

- M = Mandatory
- O = Optional
- C = Conditional
- NA = Not applicable / Not used
- IS = Icelandic

Query params

1. /v1/accounts:
    - (+) withCreditLimit (Query): Boolean 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.
2. /v1/accounts/{account-id}:
    - (+) withCreditLimit (Query): Boolean 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.

Glossary

- Overdraft vs. CreditLimit
    - Credit limit is the amount of credit extended to the customer. Overdue balance is the amount of money owned by the customer that has gone over its due date. The due date is calculated at posting by using the due date calculation field from the associated payment terms.

balance

Field	Rule	Description
balanceAmount	M	Amount and currency
balanceType	M	See 'Special cases'
creditLimitIncluded	O	Is credit limit of the corresponding account is included
lastChangeDateTime	O	??
referenceDate	M	Reference date of the balance
lastCommittedTransaction	O	Name of the account

Field rules

- M = Mandatory
- O = Optional
- C = Conditional
- NA = Not applicable / Not used
- IS = Icelandic

Special cases

BalanceType:

- closingBooked
    - EOD, end of day
    - Balance of the account at the end of the pre-agreed account reporting period. It is the sum of the opening booked balance at the beginning of the period and all entries booked to the account during the pre-agreed account reporting period.
- expected
    - Arriving
    - Balance composed of booked entries and pending items known at the time of calculation, which projects the end of day balance if everything is booked on the account and no other entry is posted.
- openingBooked
    - Same as last day closingBooked

    - Book balance of the account at the beginning of the account reporting period. It always equals the closing book balance from the previous report.
- interimAvailable
    - At your disposal when "creditLimitIncluded" is True
    - Available balance calculated during the account servicers business day, at the time specified, and subject to further changes during the business day. The interim balance is calculated based on booked credit and debit items during the calculation time/period specified.
- interimBooked
    - Without credit limit
    - Balance calculated in the course of the account service business day, at the time specified, and subject to further changes during the business day. The interim balance is calculated on the basis of booked credit and debit items during the calculation time/period specified.
- forwardAvailable
    - Status at reference date
    - Forward available balance of money that is at the disposal of the account owner on the date specified.
- nonInvoiced
    - Only for card accounts, to be checked yet.

icelandicPurpose

Field	Rule	Description
code	M	Text key
description	O	Description

Field rules

- M = Mandatory
- O = Optional
- C = Conditional
- NA = Not applicable / Not used
- IS = Icelandic

transactionDetails

Field	Rule	Description
transactionId	M	Unique identifier for this record
transactionTimestamp	M,IS	Execution datetime of the record
entryReference	M	Payment Correlation ID
endToEndId	O	Short description
mandateId	NA	Identification of Mandates
checkId	NA	Not used
currencyExchange	C	List. If transaction caused by any foreign exchange
bookingDate	O	The Date when an entry is booked
valueDate	M	The Date at which assets become available
transactionAmount	M	Amount and currency of this record
creditorId	O	Creditor id
creditorName	O	Creditor name

Field	Rule	Description
creditorAccount	O	Creditor account
creditorAgent	O	BICFI
ultimateCreditor	O	Ultimate creditor
ultimateCreditorId	O,IS	Ultimate creditor id
debtorId	O,IS	Debtor Id
debtorName	O	Debtor name
debtorAccount	O	Debtor account
debtorAgent	O	BICFI
ultimateDebtor	O	Ultimate debtor
ultimateDebtorId	O,IS	Ultimate debtor Id
remittanceInformationUnstructured	O	My description
remittanceInformationStructured	O	Reference field 16 characters
additionalInformation	O	Additional transaction related information
purposeCode	NA	Not used
icelandicPurpose	O,IS	Text code used as simple transaction categorization
bankTransactionCode	NA	Not used
proprietaryBankTransactionCode	NA	Not used
balanceAfterTransaction	O	Balance after the transaction has been performed
_links	O	Link to transaction details

Field rules

- M = Mandatory
- O = Optional
- C = Conditional
- NA = Not applicable / Not used
- IS = Icelandic

Special cases

1. In the case when source currency or destination currency is not 'ISK' then the transaction will contain exchange rates.
    - Exchange rate from source currency to destination currency
    - Exchange rate from foreign currency to Icelandic krona
2. balanceAfterTransaction is not used for pending transactions

Example 1000 ISK to 6.5 EUR


```
[{
  "sourceCurrency": "ISK",
  "exchangeRate": "152.0731",
```

```
  "unitCurrency": "ISK",
  "targetCurrency": "EUR",
  "quotationDate": "2020-06-09",
  "contractIdentification": "Financial Gain Tax Rate"
}]
```


Example 7.5 USD to 6 EUR


```
[{
  "sourceCurrency": "ISK",
  "exchangeRate": "132.28",
  "unitCurrency": "ISK",
  "targetCurrency": "USD",
  "quotationDate": "2020-06-09",
  "contractIdentification": "Financial Gain Tax Rate"
},{
  "sourceCurrency": "USD",
  "exchangeRate": "1.1274",
  "unitCurrency": "USD",
  "targetCurrency": "EUR",
  "quotationDate": "2020-06-09",
  "contractIdentification": ""
}]
```

Examples

Accounts

account


```
{
  "account":
    {
      "resourceId": "010026000001",
      "iban": "IS110100260000010208714669",
      "status": "enabled",
      "currency": "ISK",
      "product": "Reikningur",
      "name": "Launareikningur",
      "balances": [
        {"balanceAmount":  1500, "balanceType": "interimAvailable"},
        {"balanceAmount":  1000, "balanceType": "interimBooked"}
      ],
      "creditLimit": { "amount": 500 },
      "_links":
        {
          "balances": {"href": "/v1/accounts/010026000001/balances"},
          "transactions": {"href": "/v1/accounts/010026000001/transactions"}
         }
    }
}
```


account-transaction


```
{
  "account": {
    "iban": "IS110100260000010208714669"
  },
  "transactions":
    {
    "booked":
      [
        {
          "transactionId": "1234567",
          "entryReference": "adbb9665-a57e-4a2e-aa78-467d8792a113",
          "bankTransactionCode": "",
          "proprietaryBankTransactionCode": "",
          "mandateId": "",
          "endToEndId":  "Short description",
          "creditorId": "0208714669",
          "bookingDate": "2020-05-29",
          "valueDate": "2020-05-29",
          "transactionAmount": {
            "currency": "ISK", "amount": -99123
          },
          "creditorName": "Guðmundur Jón Halldórsson",
          "creditorAccount": {
            "iban": "IS710100261234560208714669"
          },
          "merchantCategoryCode": "??",
          "ultimateCreditor": "",
          "debtorName": "Guðmundur Jón Halldórsson",
          "debtorAccount": {
```

```
            "iban": "IS110100260000010208714669"
          },
          "ultimateDebtor": "",
          "remittanceInformationUnstructured": "My description",
          "remittanceInformationStructured": {"reference": "ABC (16 char)"},
          "additionalInformation": "",
          "icelandicPurpose": { "code": "03" },
          "balanceAfterTransaction": {
            "balanceAmount": { "amount": 100000, "currency": "ISK" },
            "balanceType": "interimBooked",
            "creditLimitIncluded": false,
            "lastChangeDateTime": "2020-06-09 16:12:34:999",
            "referenceDate": "2020-06-09",
            "lastCommittedTransaction": "bcbb9665-a57e-4a2e-aa78-467d8792a114"
          }
        }
      ],
    "pending":
      [
        {
          "transactionId": "1234567",
          "entryReference": "adbb9665-a57e-4a2e-aa78-467d8792a113",
          "bankTransactionCode": "",
          "proprietaryBankTransactionCode": "",
          "mandateId": "",
          "endToEndId":  "Short description",
          "creditorId": "0208714669",
          "bookingDate": "2020-05-29",
          "valueDate": "2020-05-29",
          "transactionAmount": {
            "currency": "ISK", "amount": -99123
          },
          "creditorName": "Guðmundur Jón Halldórsson",
          "creditorAccount": {
            "iban": "IS710100261234560208714669"
          },
          "merchantCategoryCode": "??",
          "ultimateCreditor": "",
          "debtorName": "Guðmundur Jón Halldórsson",
          "debtorAccount": {
            "iban": "IS110100260000010208714669"
          },
          "ultimateDebtor": "",
          "remittanceInformationUnstructured": "My description",
          "remittanceInformationStructured": {"reference": "ABC (16 char)"},
          "additionalInformation": "",
          "icelandicPurpose": { "code": "03" }
        }
      ],
    "_links": {
      "account": {
        "href": "/v1/accounts/3dc3d5b3-7023-4848-9853-f5400a64e80f"}
    }
    }
}
```


Payments

claimPayment

```
{
    "endToEndIdentification": "Short description",
    "debtorId": "0208714669",
    "debtorAccount": {
        "iban": "IS110100260000010208714669"
    },
    "creditorId": "5205161230",
    "creditorAccount": {
        "bban": "021001001093071186O3+20201001"
    },
    "instructedAmount": {
        "currency": "ISK",
        "amount": 99123
    },
    "ultimateDebtorId": "0808714569",
    "ultimateDebtor": "Jón Jónsson (Real payer)",
    "ultimateCreditorId": "0109722329",
    "ultimateCreditor": "Páll Pálsson (Real receiver)",
    "partialPayment": true,
    "icelandicPurpose": {"code": "03"},
    "remittanceInformationUnstructured": "My description",
    "remittanceInformationStructured": {
        "reference": "ABC (16 char)"
    }
}
```


creditCardDeposit


```
{
    "endToEndIdentification": "Short description",
    "debtorId": "0208714669",
    "debtorAccount": {
        "iban": "IS110100260000010208714669"
    },
    "creditorId": "0208714669",
    "creditorAccount": {
        "pan": "12345678"
    },
    "instructedAmount": {
        "currency": "ISK",
        "amount": 78698
    },
    "partialPayment": true,
    "icelandicPurpose": {"code": "87"},
    "remittanceInformationUnstructured": "My description",
    "remittanceInformationStructured": {
        "reference": "ABC (16 char)"
    }
}
```


creditTransfer


```
{
    "endToEndIdentification": "Short description",
    "debtorId": "0208714669",
    "debtorAccount": {
        "iban": "IS110100260000010208714669"
    },
    "creditorId": "0208714669",
```

```
    "creditorAccount": {
        "iban": "IS7101002612345602087146 69"
    },
    "instructedAmount": {
        "amount": 99123
    },
    "icelandicPurpose": {"code": "03"},
    "remittanceInformationUnstructured": "My description",
    "remittanceInformationStructured": {
        "reference": "ABC (16 char)"
    }
}
```

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